



# HaiKoo®

## Use and Assembly Guide



Original use and assembly guide



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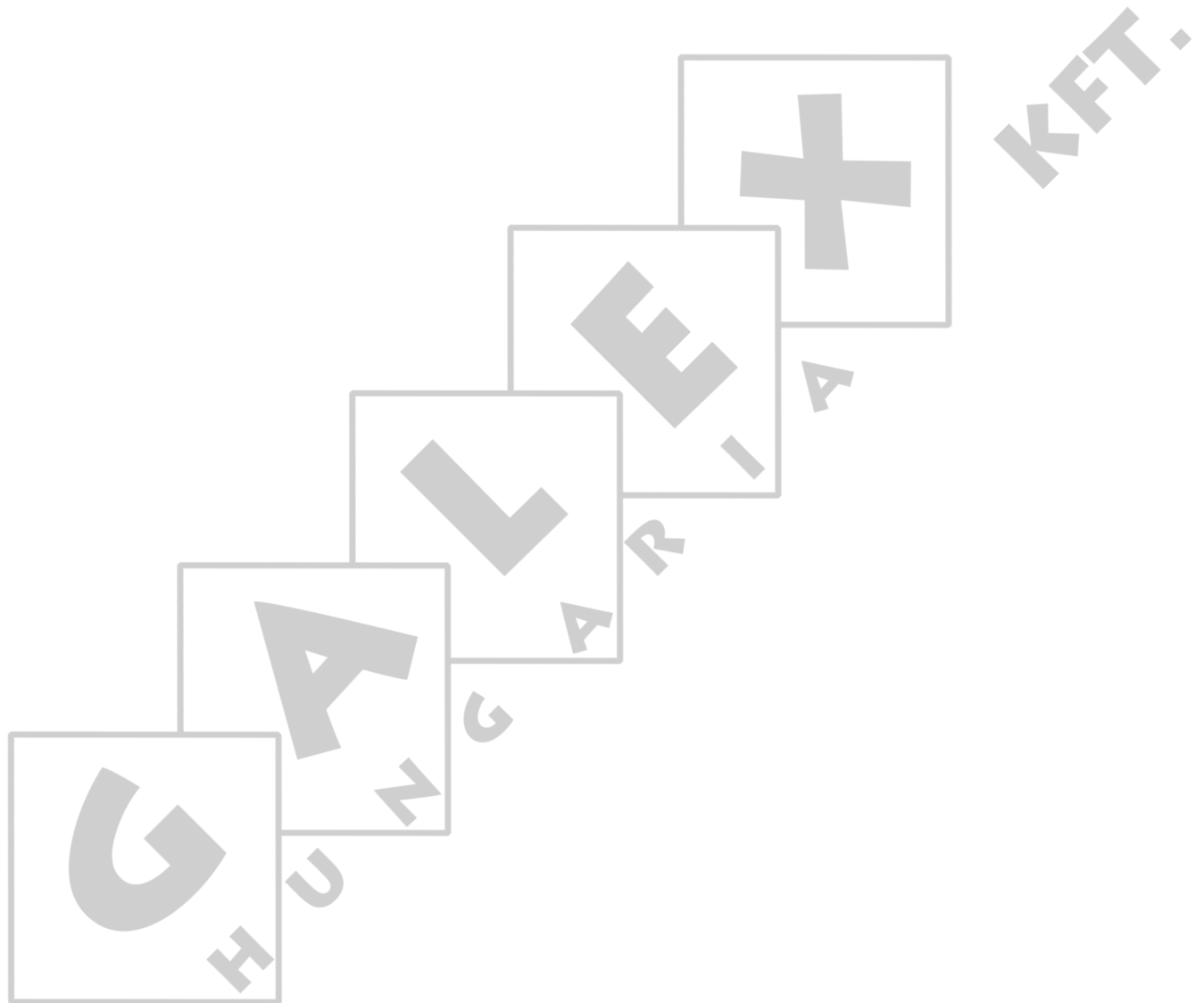
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## GENERAL INFORMATION

**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</p> <p><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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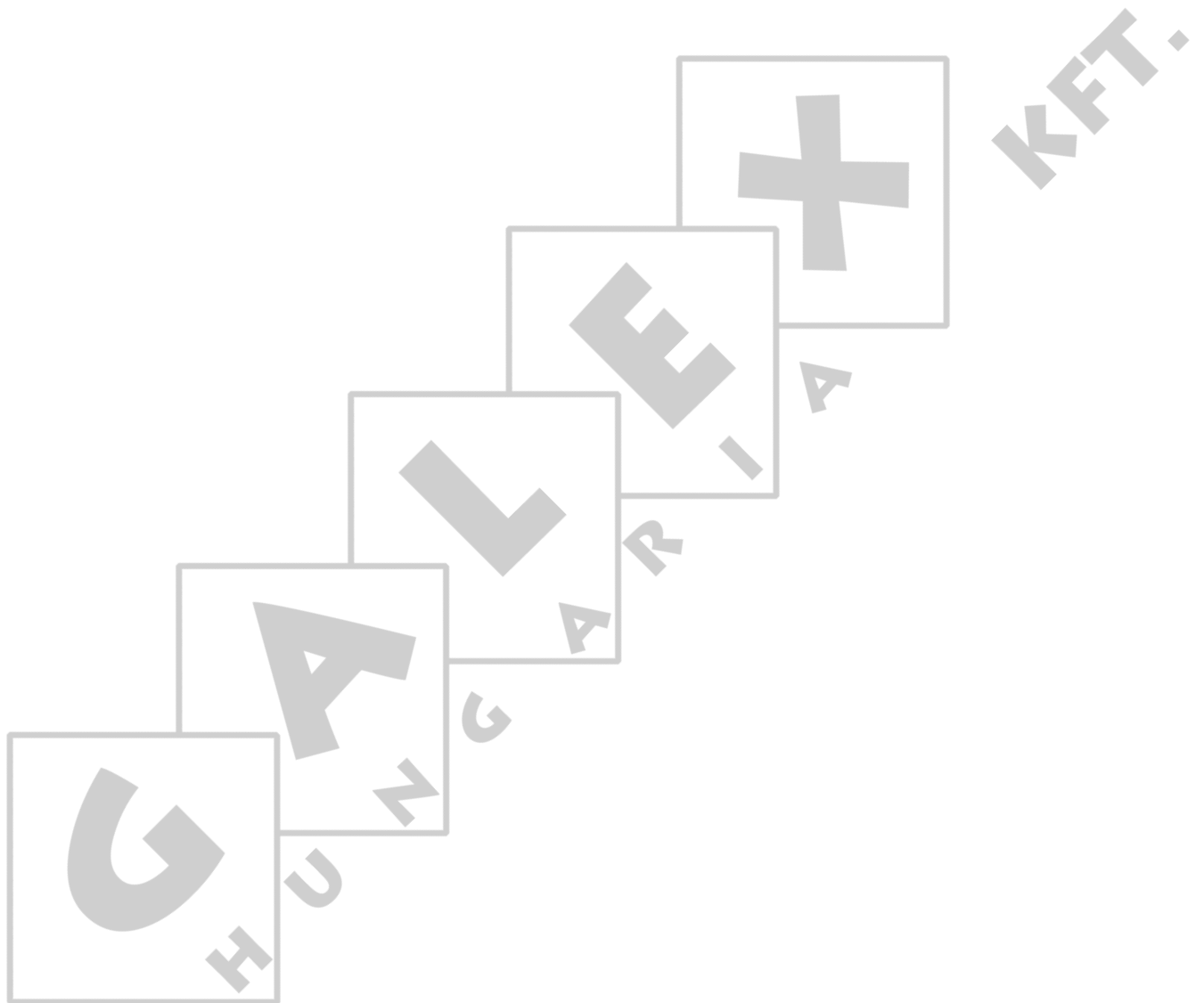
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# PART I

## INSTRUCTIONS FOR THE USER





## GENERAL SAFETY RULES

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

Automatisch pannen voedersysteem voor vleestkuijens

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.

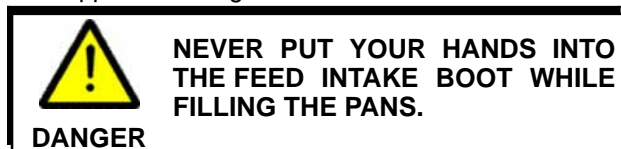
In short : **BE ALERT**. **IGNORING** these instructions can cause **SE-RIOUS INJURIES** or even **DEATH**.

## DIRECTIONS FOR OPERATING THE SYSTEM

### 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 (1/4) 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 unit) 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. 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 units if you install them at a distance of 2-3m from the end wall. Put the feed level ring of the control unit in position 7 (minimum) to assure a good feed flow.

### OPTION

In order to make the control pan more attractive for the birds, Roxell offers a LED light kit which fits on the standard Haikoo and the Haikoo for heavy broilers, both for intermediate and end control units.

This light is positioned inside the control unit which ensures an optimal light dispersion inside the feeding pan. Attracting the birds to the control unit will guarantee a completely filled feeding line and feeding pans.

Inform the technically trained person:

- to connect the LED light to the light in the house, ensuring the LED and house lights are lit simultaneously, or
- for **US**: to connect the LED light to the motor, ensuring the LED light is lit when the motor is in operation.

### 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 100 kg 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.

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, also after heating up the building!

3. Warm up the house and the litter at least 24 hours before placing the birds. Adjust the suspension cable of the control unit after heating up the building!

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 (in position 4) with open windows holds about 1,6 kg - about 0,8kg with closed windows.

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 unit. 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 unit.

After 10 days : feeding automatically :

= winch up the feeder line until all windows are closed

Birds get used to the lower feed level. Raise the feeder lines a little some days after closing the feed windows.

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. See Operateor's guide.

**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 1, 2, 3 or 4
- difficult flowing feed : feed level ring in position 5, 6, 7 or 8.

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

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


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.

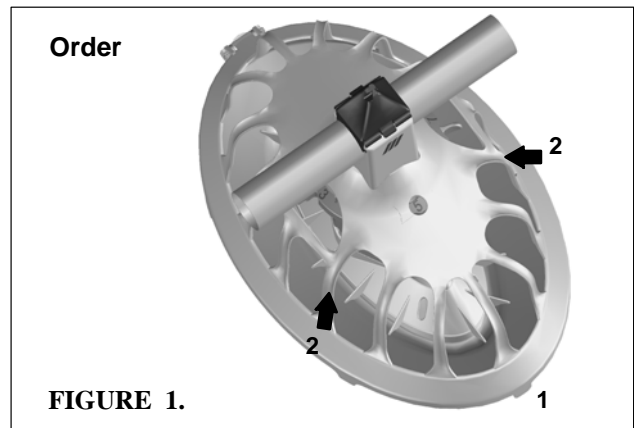
Winch up the complete installation to remove birds and manure.



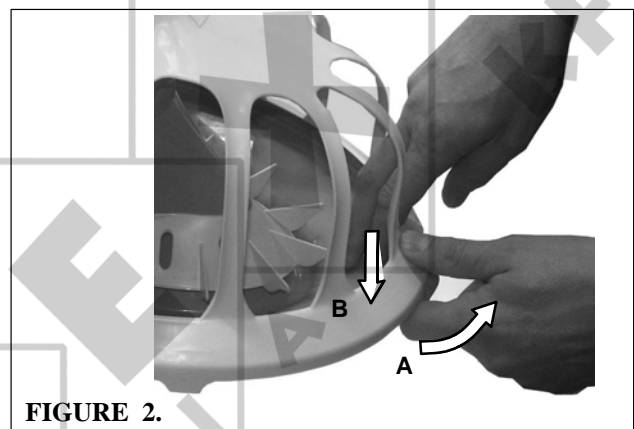
**NEVER STAY UNDERNEATH WHEN LOWERING OR WINCHING UP THE CIRCUITS. STOP IMMEDIATELY AT THE SLIGHTEST HITCH.**

**DANGER**

- If you use heavy objects or machines when emptying the house, you must avoid any damage to the system.
- Winch up the lines to a working height of about 1 m for easy cleaning.
- **To remove the pan** : in the correct order : (1 - 2 - 2).

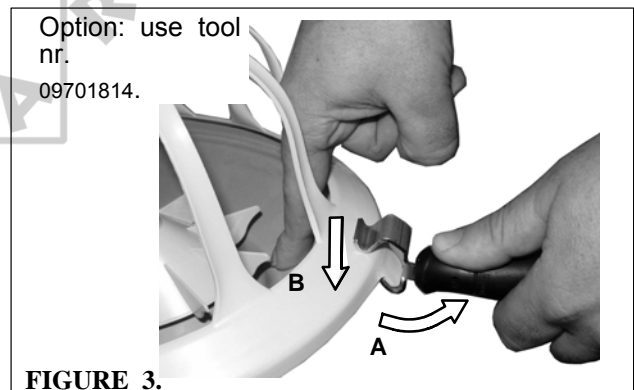


**FIGURE 1.**



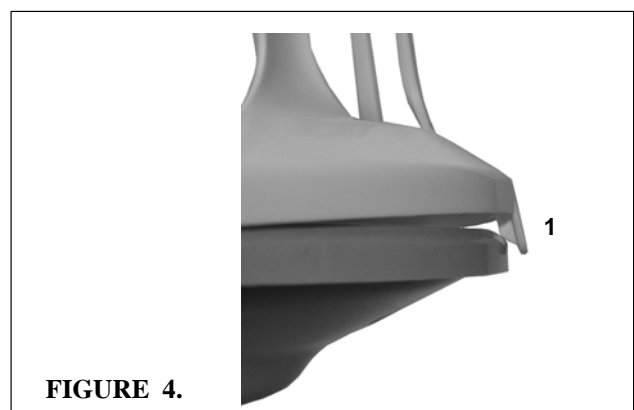
**FIGURE 2.**

- Pull the lip to the outside with one hand (A). Push the pan downward with the other hand (B).



**FIGURE 3.**

Option: use tool nr. 09701814.



**FIGURE 4.**

- Take the grill in both hands at the height of the **arrows (2)** and open the grill. The pan loosens completely from the grill.

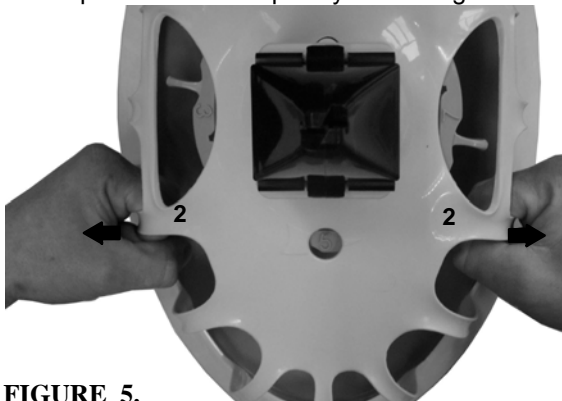
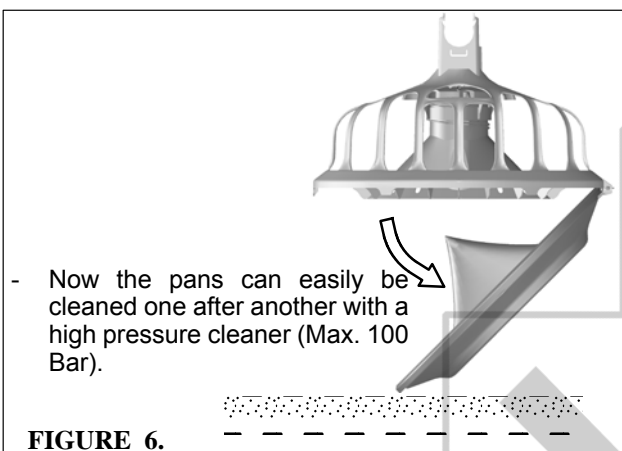


FIGURE 5.



- Now the pans can easily be cleaned one after another with a high pressure cleaner (Max. 100 Bar).

FIGURE 6.

- Push the pan back into the grill and click the clips one after another over the pan edge.
- If you want to replace a complete pan :

you can remove the top support **BY PRESSING THE CENTRAL LIPS.**

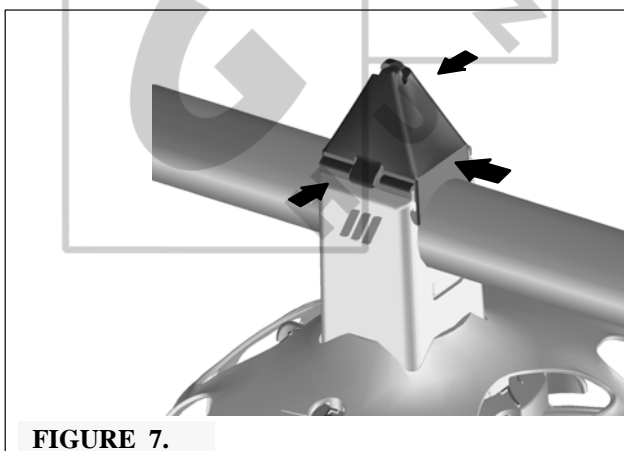


FIGURE 7.

**REMEMBER TO COVER THE MOTORS WITH WATERPROOF COVER !!**

Motors and switches are insulated IP55, which means that they resist splashing, but certainly not a high pressure cleaner.

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 100 kg hopper or fixing the hopper suspension chain to the feed intake boot.

The **feeder pan**, made of high **quality polypropylene**, resists practically all cleansers and disinfectants. However, if you want to use an aggressive product (1), you should contact your supplier.

Put the **OPERATOR'S MANUAL** on the house wall at an eye-catching spot.

**(1) NB : Gaseous formaldehyde (formalin), liquid caustic soda, hypochlorite or chlorine water, cresoles are very corrosive and affect the system in no time !**

**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 poultry perch wire is still stretched (springs must be stretched (about 6 cm )
- \* 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.

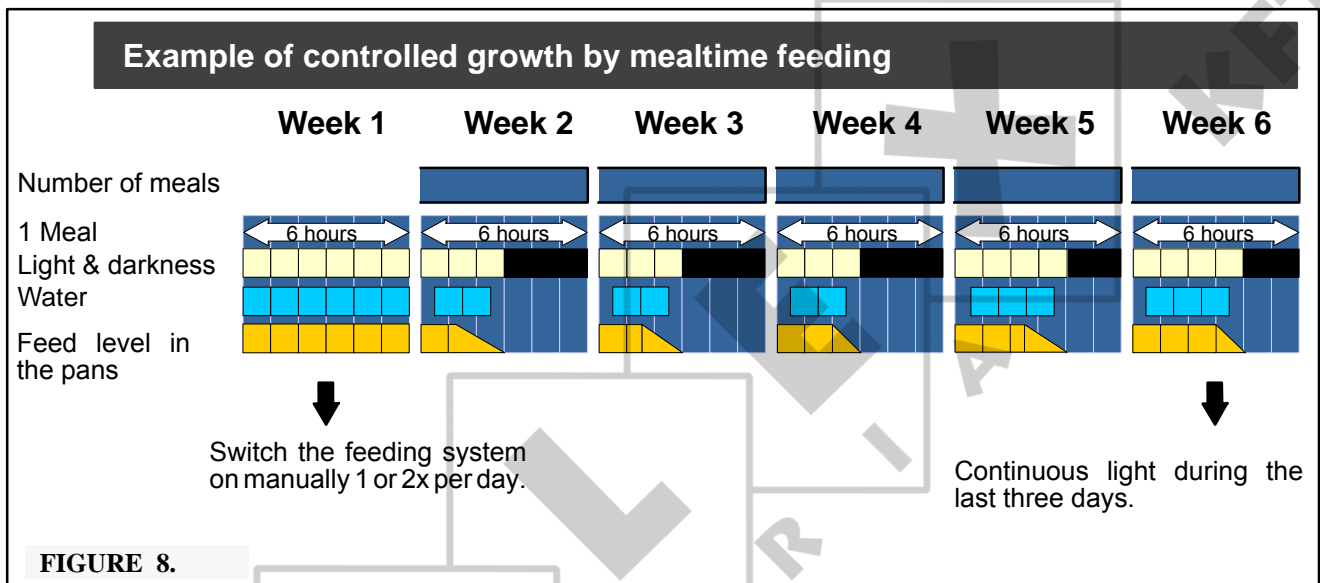
It also means : to make sure that no feed is supplied during certain periods.

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/off).
- \* less risk that the system runs empty. You have better control of the system's performance.

**HOW TO PROGRAMME :**



**FIGURE 8.**

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.

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 bvba**.

<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

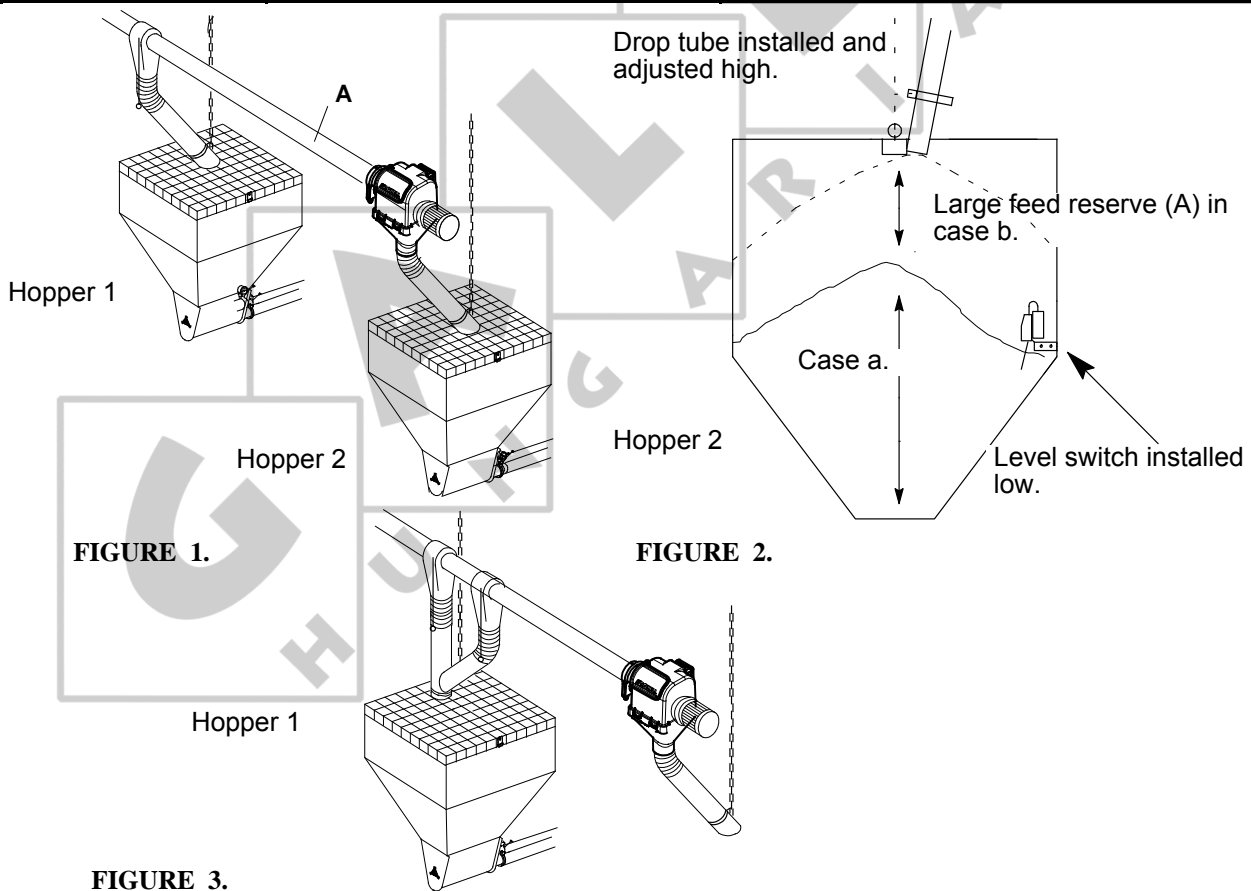


**DANGER**

**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 sensor in the control unit, or sensor not properly adjusted.	Check the good operation of the sensor. Replace if necessary.
	Control unit not functioning properly.	Put the feed level ring in a higher position. 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.
	The control unit does not function properly when the feed windows are open	Check the motor suspension. Hang the motor horizontally. Make sure that the main cable is stretched.
	Defective sensor/minimum switch control unit or 100kg hopper.	Check control unit sensor or switch. Replace if necessary.
3. Motor is often overloaded.	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.
	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.
4. Auger stalls.	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.
	Object blocks the auger.	Remove the object.
5. Tubes / boot wear rapidly, much noise when system runs.	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.

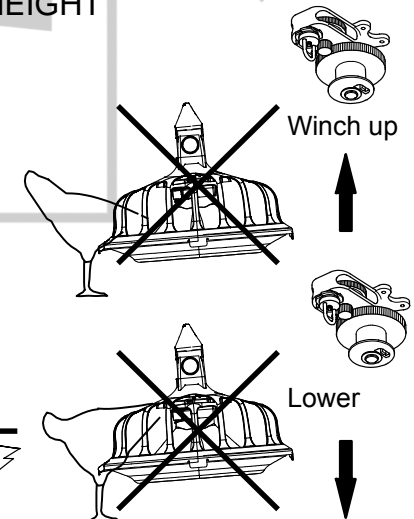
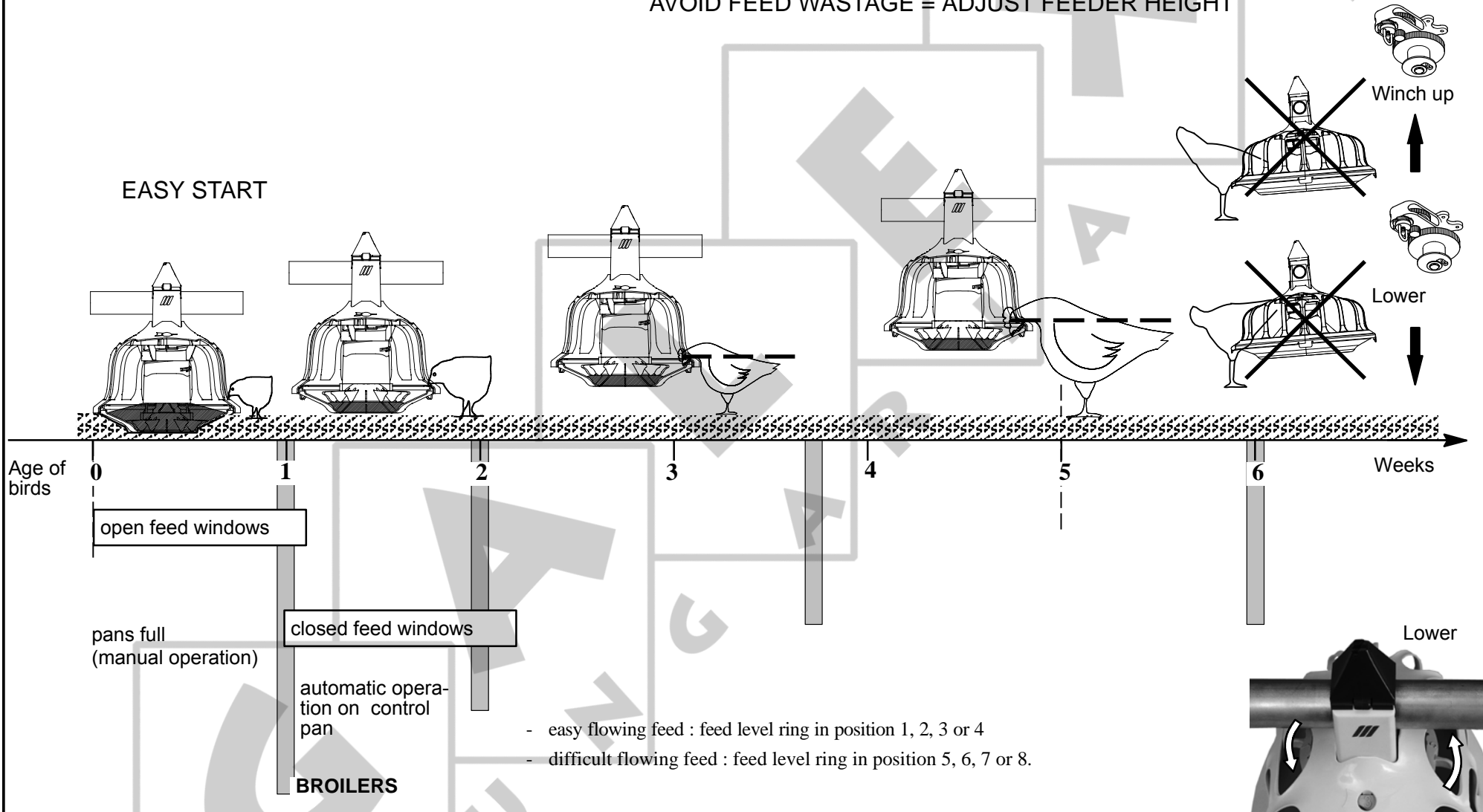
PROBLEM	CAUSE	CORRECTIVE ACTION
8.Windows are open and feed level is too low.	Some windows are actually closed.	Adjust height of feeder line until all windows completely open and close simultaneously.
9.Windows are closed and feed level is too high.	Adjuster ring set too high.	Adjust height. See OPERATOR'S 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>



For floor feeding - from day-old chicks to broilers

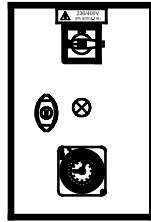
AVOID FEED WASTAGE = ADJUST FEEDER HEIGHT

### EASY START



- easy flowing feed : feed level ring in position 1, 2, 3 or 4
- difficult flowing feed : feed level ring in position 5, 6, 7 or 8.

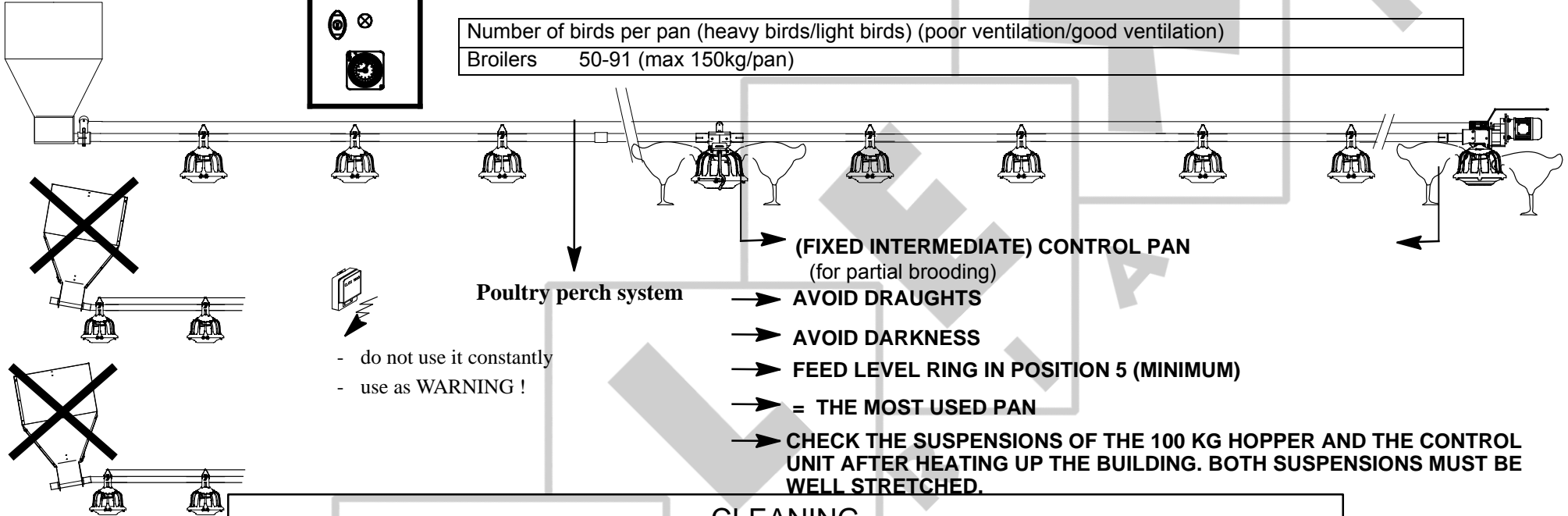
**BROILERS**



For controlled feeding : have the pans emptied once (to several times) a day.

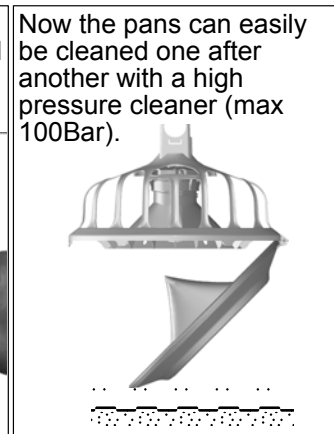
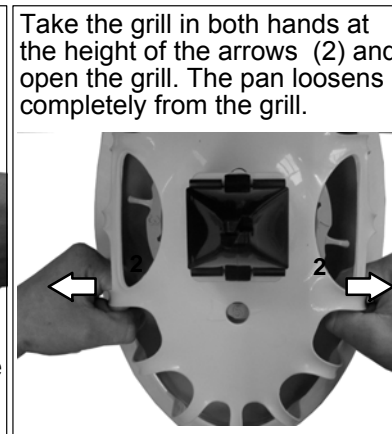
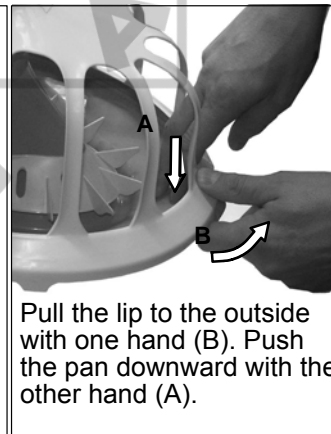
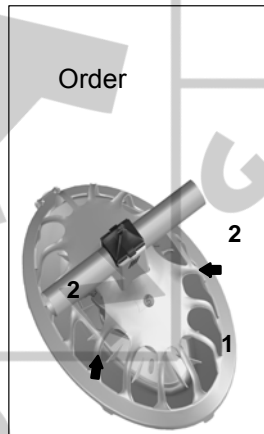
Number of birds per pan (heavy birds/light birds) (poor ventilation/good ventilation)

Broilers 50-91 (max 150kg/pan)



## CLEANING

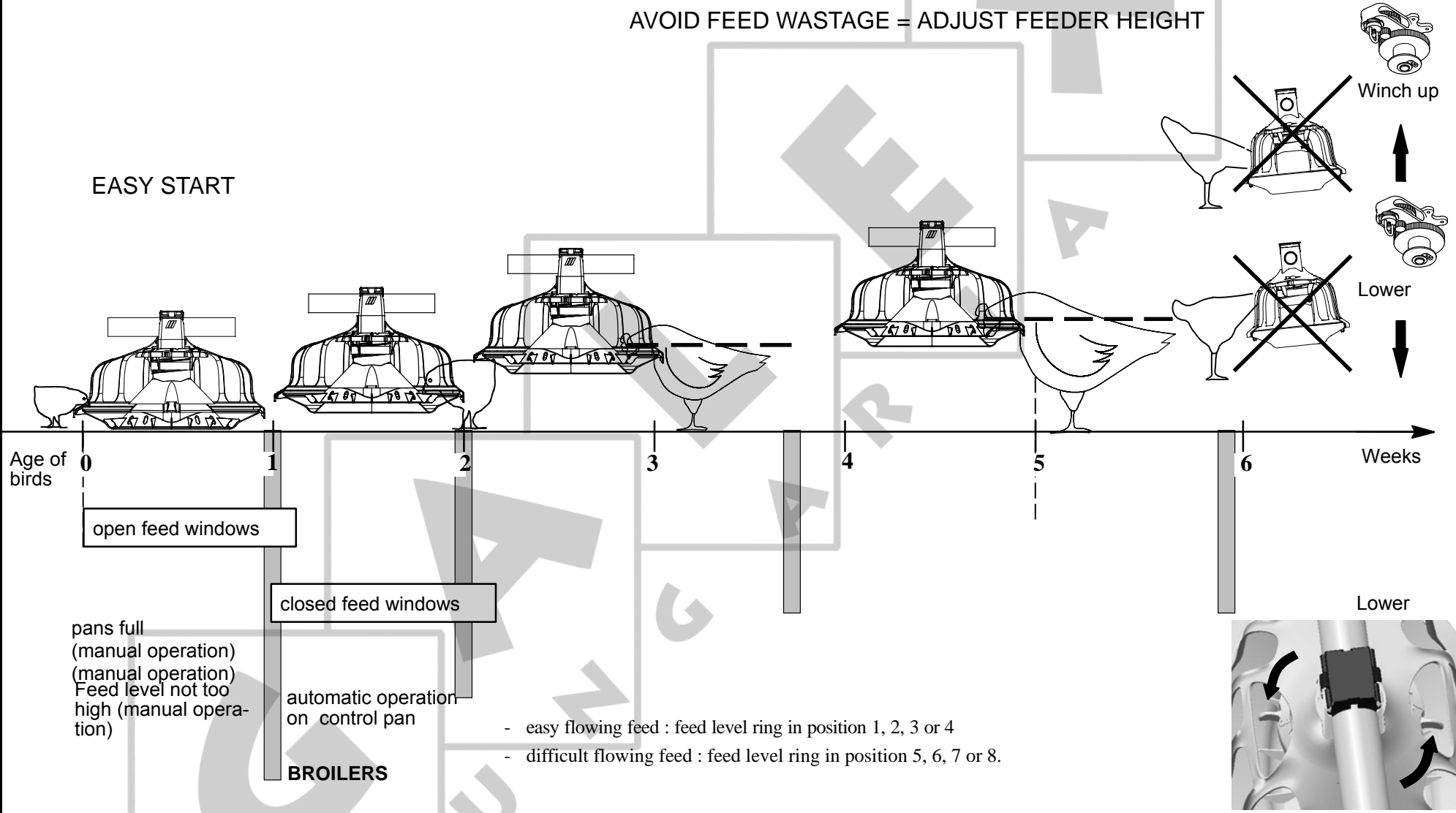
- \* The last day : run the tubes empty and let the birds empty the pans as much as possible.
- \* Collect the feed residues by opening all pans, and empty them.
- \* Protect electrical components against water.
- \* Clean the whole system by means of a high- pressure cleaner (max. 100 Bar).
- \* When using aggressive detergents or disinfectants consult your supplier.



For cage feeding - from day-old chicks to broilers

AVOID FEED WASTAGE = ADJUST FEEDER HEIGHT

### EASY START



Age of birds

Weeks

open feed windows

closed feed windows

pans full  
(manual operation)  
(manual operation)  
Feed level not too  
high (manual operation)

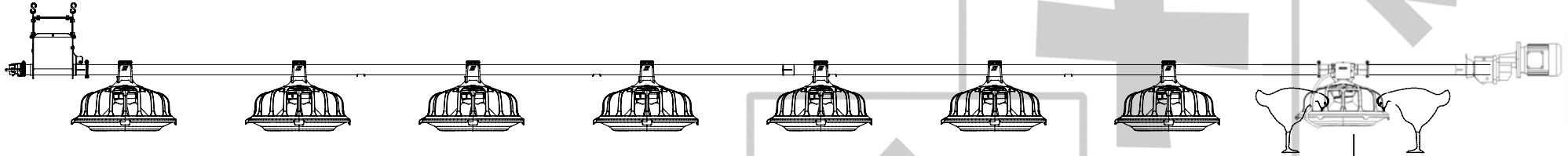
automatic operation  
on control pan

**BROILERS**

- easy flowing feed : feed level ring in position 1, 2, 3 or 4
- difficult flowing feed : feed level ring in position 5, 6, 7 or 8.

# HaiKoo CAGES

## OPERATOR'S GUIDE



Number of birds per pan (heavy birds/light birds) (poor ventilation/good ventilation)	
Broilers	50-91 (max 150kg body weight/pan)

- ➔ CONTROL PAN
- ➔ AVOID DRAUGHTS
- ➔ AVOID DARKNESS
- ➔ FEED LEVEL RING IN POSITION 5 (MINIMUM)
- ➔ = THE MOST USED PAN

### CLEANING

- \* The last day : run the tubes empty and let the birds empty the pans as much as possible.
- \* Collect the feed residues by opening all pans, and empty them.
- \* 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.

**Order**

(B). Push the pan downward with the other hand (A).

Take the grill in both hands at the height of the **arrows (2)** and open the grill. The pan loosens completely from the grill.

Now the pans can easily be cleaned one after another with a high pressure cleaner.



**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 intellectuele-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 voorvoer- 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



## PART II

## COMPONENTS



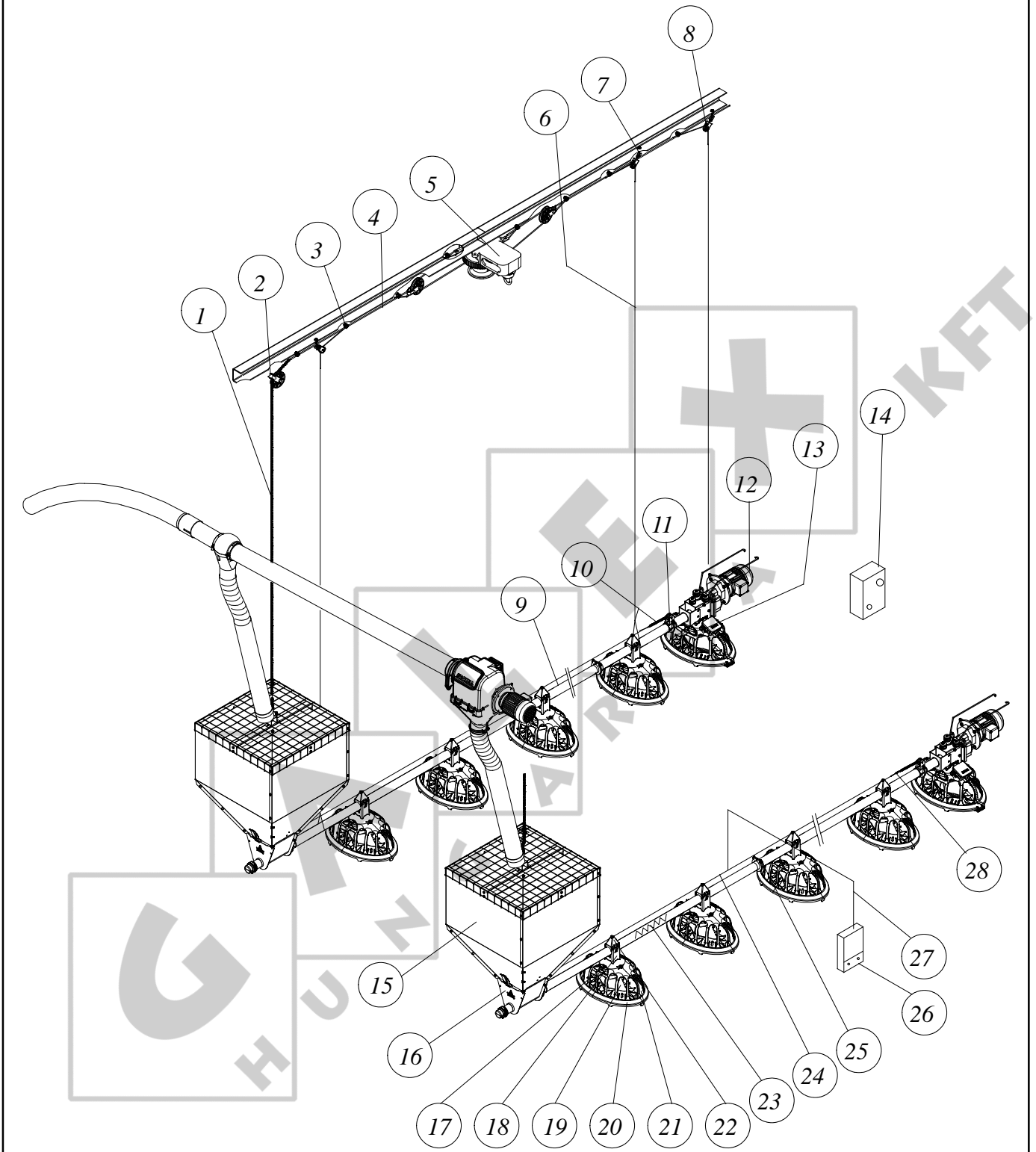
**Environmentally-friendly design**

The motors comply with the Ecodesign legislation.

**Communication**

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

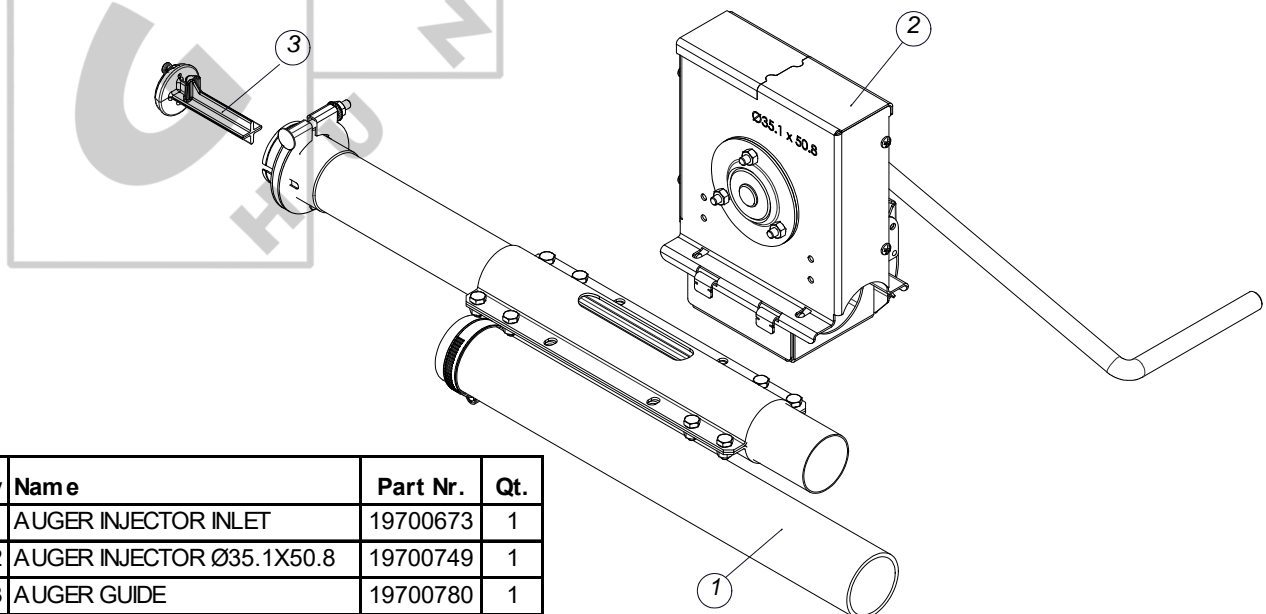
### GENERAL LAY-OUT



### COMPONENT NUMBERS

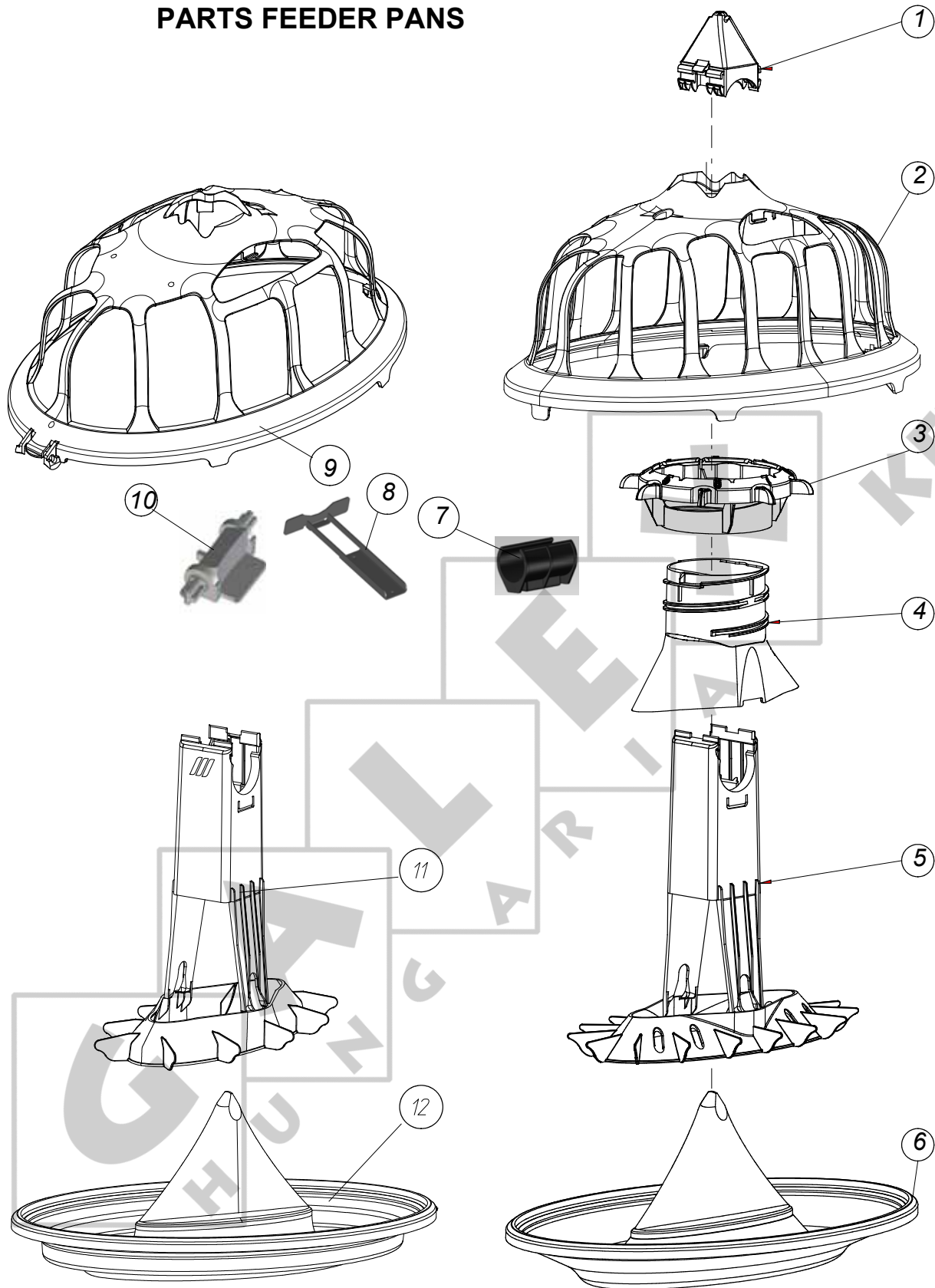
Key	Name	Number
1	CHAIN DIAM. 3,5 mm	00100750
2	HEAVY DUTY PULLEY	00100412
3	CABLE CLAMP NO. 5	00100545
4	CABLE DIAM. 5 mm	00100388
5	HAND OPERATED CENTR. WINCH	00102368
6	SUSPENSION CORD	00100610
7	SCREW HOOK 90 mm	05000872
	SCREW HOOK 160 mm	05000237
8	SMALL PULLEY WITH STAINLESS STEEL HOOK	00104349
9	TUBE 2.9 M - 0 HOLES	00500074
	TUBE 2.9 M W/3 RECTANGULAR HOLES	00101121
	TUBE 2.9 M W/4 RECTANGULAR HOLES	00101113
	TUBE 3.05M W/3 RECTANGULAR HOLES	00102293
	TUBE 3.05M W/4 RECTANGULAR HOLES	00102301
10	SPRING	00400077
11	ANCHOR BRACKET	00102681
12	POWER UNIT	SEVERAL
13	CONTROL PAN	SEVERAL
14	MOTOR STARTER	SEVERAL
15	100KG HOPPER	00100602
16	FEED INTAKE BOOT POULTRY	00106500
	POULTRY INTAKE BOOT WITH SENSOR - 230 V AC	00108952
	POULTRY INTAKE BOOT WITH SENSOR - 24 V DC	00108950
17	SHORT ADJUSTER RING	00900068
18	SUPPORT CONE	00900027
	SUPPORT CONE HB	00905478
19	SKIRT	00900035
20	GRILL	00900019
	12 STRUT GRILL	00901330
21	FEEDER PAN	00900001
	FEEDER PAN HB	00905470
22	TOP SUPPORT	00900050
23	AUGER	00100974
24	CABLE - 1/16" - 1.5MM - 250M	00106839
	CABLE - 1/16" - 1.5MM - 500M	00106831
25	TUBE CLAMP ASSY DIAM. 45 mm	00102921
26	POULTRY PERCH GUARD	00105692
27	CABLE FOR PERCH GUARD - 50M	00106847
	CABLE FOR PERCH GUARD - 100M	00106855
28	DUPLEX CABLE CLAMP ST. ST. - 3MM	00106945

### OPTION: AUGER INJECTOR KIT - 09701905



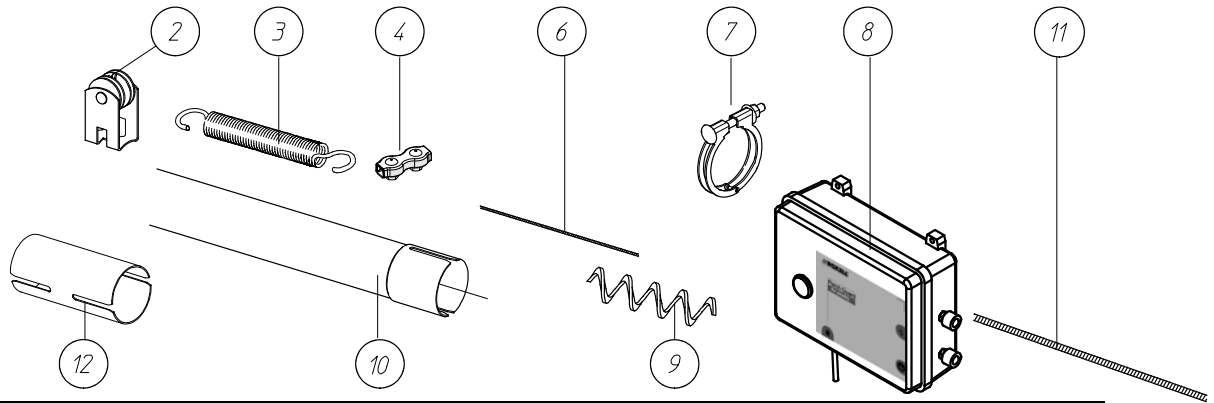
Key	Name	Part Nr.	Qt.
1	AUGER INJECTOR INLET	19700673	1
2	AUGER INJECTOR Ø35.1X50.8	19700749	1
3	AUGER GUIDE	19700780	1

**PARTS FEEDER PANS**



Key	Name	Part Nr.	Key	Name	Part Nr.
1	TOP SUPPORT	00900050	*8	SHUT OFF SLIDE	00900159
2	GRILL	00900019	9	12 STRUT GRILL	00901330
3	SHORT ADJUSTER RING	00900068	*10	HINGE CLICK	00901389
4	SKIRT	00900035	11	SUPPORT CONE - HB	00905478
5	SUPPORT CONE	00900027	12	FEEDER PAN - HB	00905470
6	FEEDER PAN	00900001	*	OPTION	
*7	SHUT-OFF SHELL	00105262			

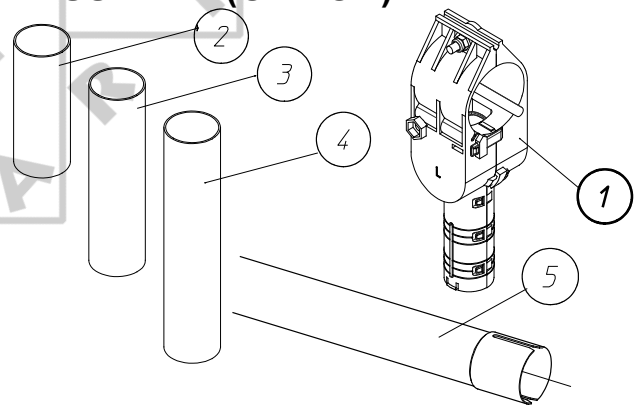
### FEEDER LINE COMPONENTS



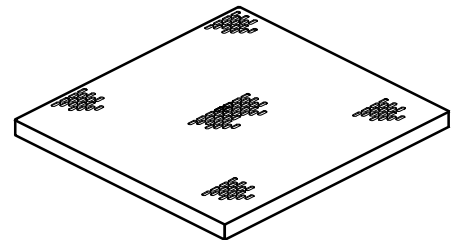
Key	Name	Part Nr.	Key	Name	Part Nr.
2	ANCHOR BRACKET - LOW	00102681	10	TUBE 2.74M W/1 RECTANG'R HOLE	00104182
3	SPRING	00400077		TUBE 2.74M W/2 RECT. HOLES	00104174
4	DUPLEX CABLE CLAMP ST.ST. - 3 MM	00106945		TUBE 2.74M W/3 RECTANG'R HOLES	00104166
6	CABLE 1/16" - 1.5 MM - 250 M	00106839		TUBE 2.74M W/4 RECTANGULAR HOLES	00104141
	CABLE 1/16" - 1.5 MM - 500 M	00106831	11	CABLE F. PERCH GUARD - 50 M	00106847
7	TUBE CLAMP ASSEMBLY Ø45 MM	00102921		CABLE F. PERCH GUARD - 100 M	00106855
8	POULTRY PERCH GUARD	00105692	12	TUBE CONNECTOR DIA. 45 MM	00100552
9	AUGER PF/ATF	00100974			
10	TUBE 2.90 M WITHOUT HOLES	00500074			
	TUBE 2.9 M W/3 RECTANGULAR HOLES	00101121			
	TUBE 2.9 M W/4 RECTANGULAR HOLES	00101113			
	TUBE 3.05M W/4 RECTANGULAR HOLES	00102301			
	TUBE 3.05M W/3 RECTANGULAR HOLES	00102293			

### 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

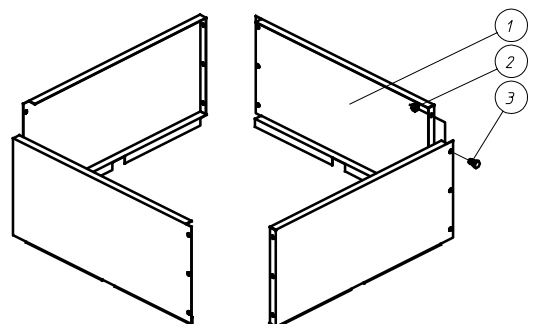


### STRAINER FOR 100KG HOPPER - 00100982

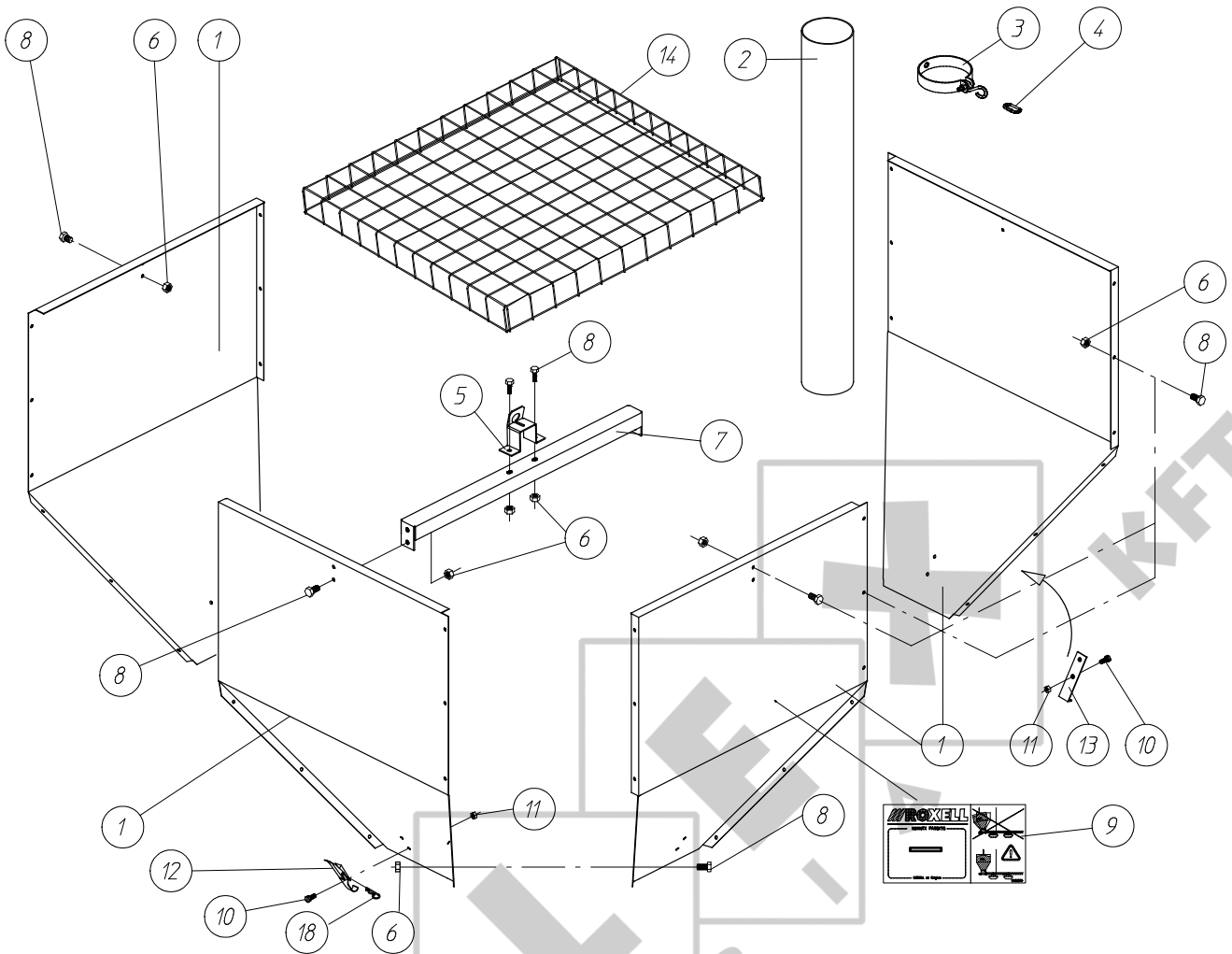


### HOPPER EXTENSION 50KG- 00101238

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

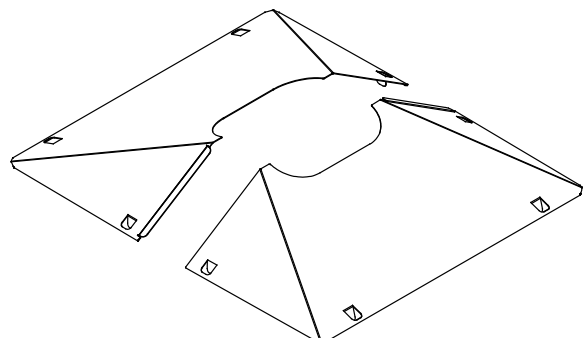


**100KG HOPPER - 00100602**



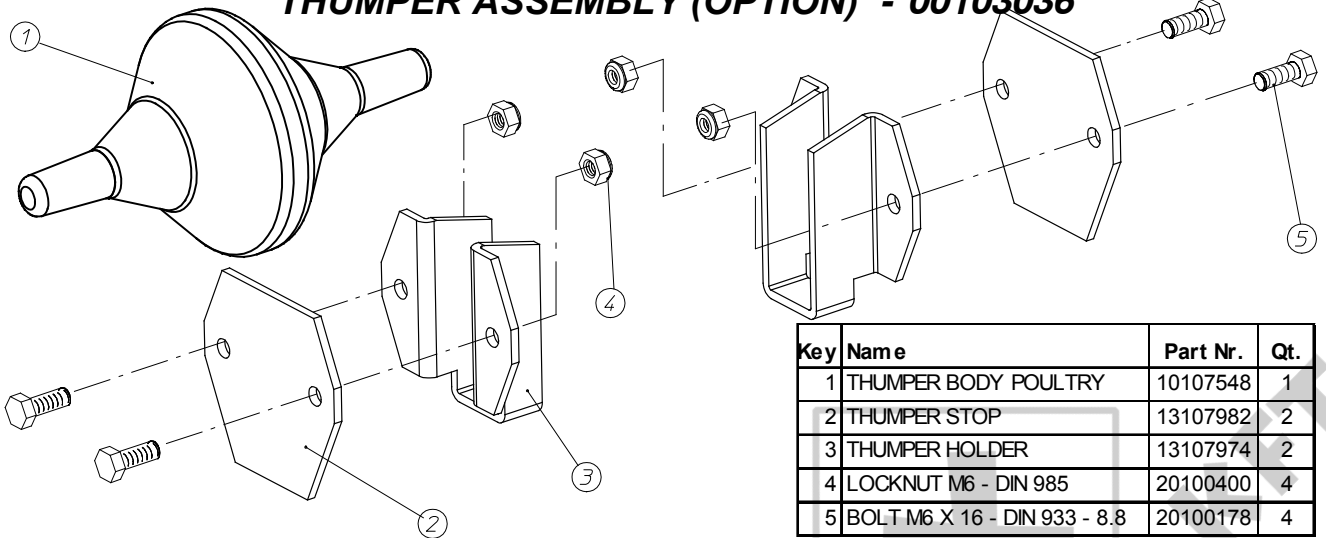
Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	HOPPER SIDE	10102259	4	9	PATENT DECAL COM-ATF-MINIMAX	10103893	1
2	PVC TUBE DIAM. 90 - L = 700 MM	10102382	1	*10	SCREW M4x10-DIN 84 - 4.8	20100806	8
*3	TUBE SUPPORT ASS'Y	10102390	1	*11	NUT M4	20100681	8
*4	SCREW LINK DIA. 3.5	10203156	1	*12	FASTENER 30-1056 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

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



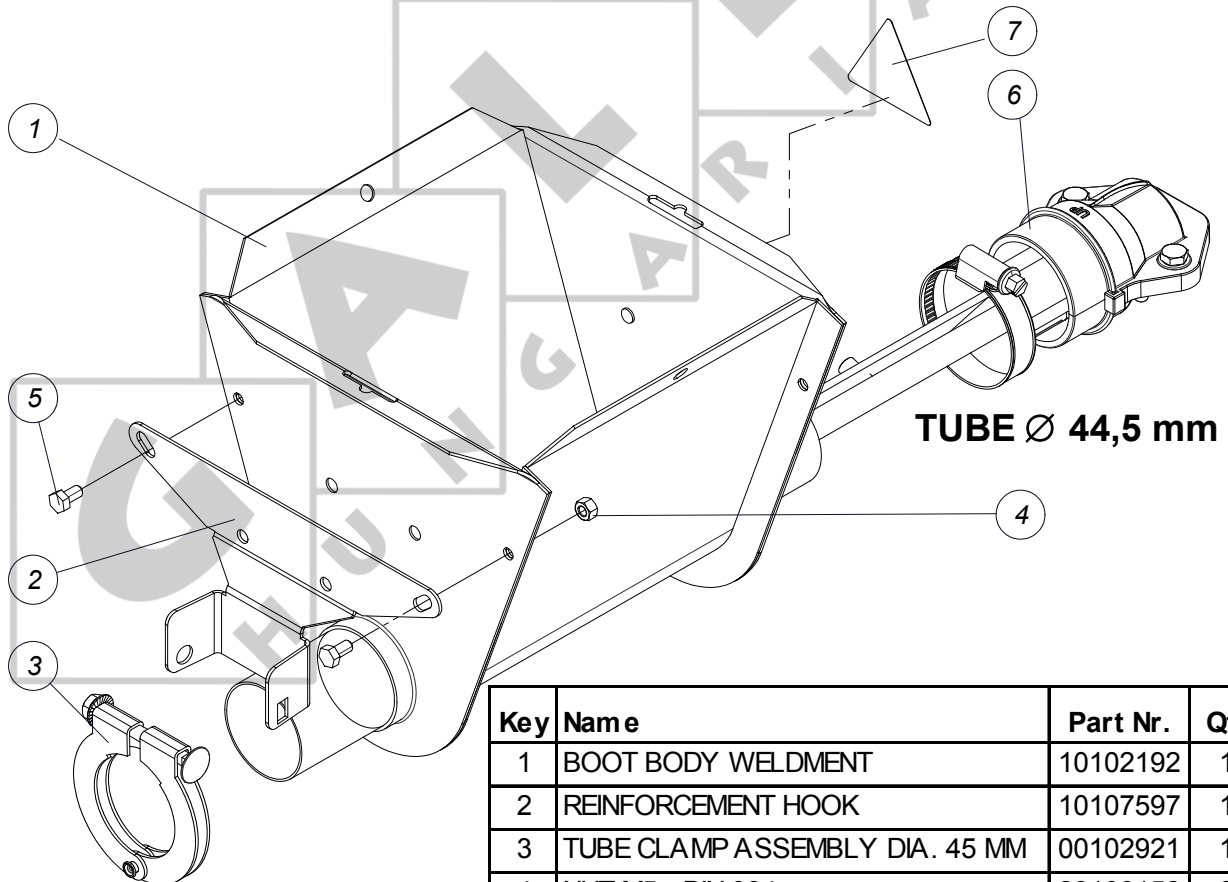
**CANNON BALL (OPTION) - 00102228**

**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

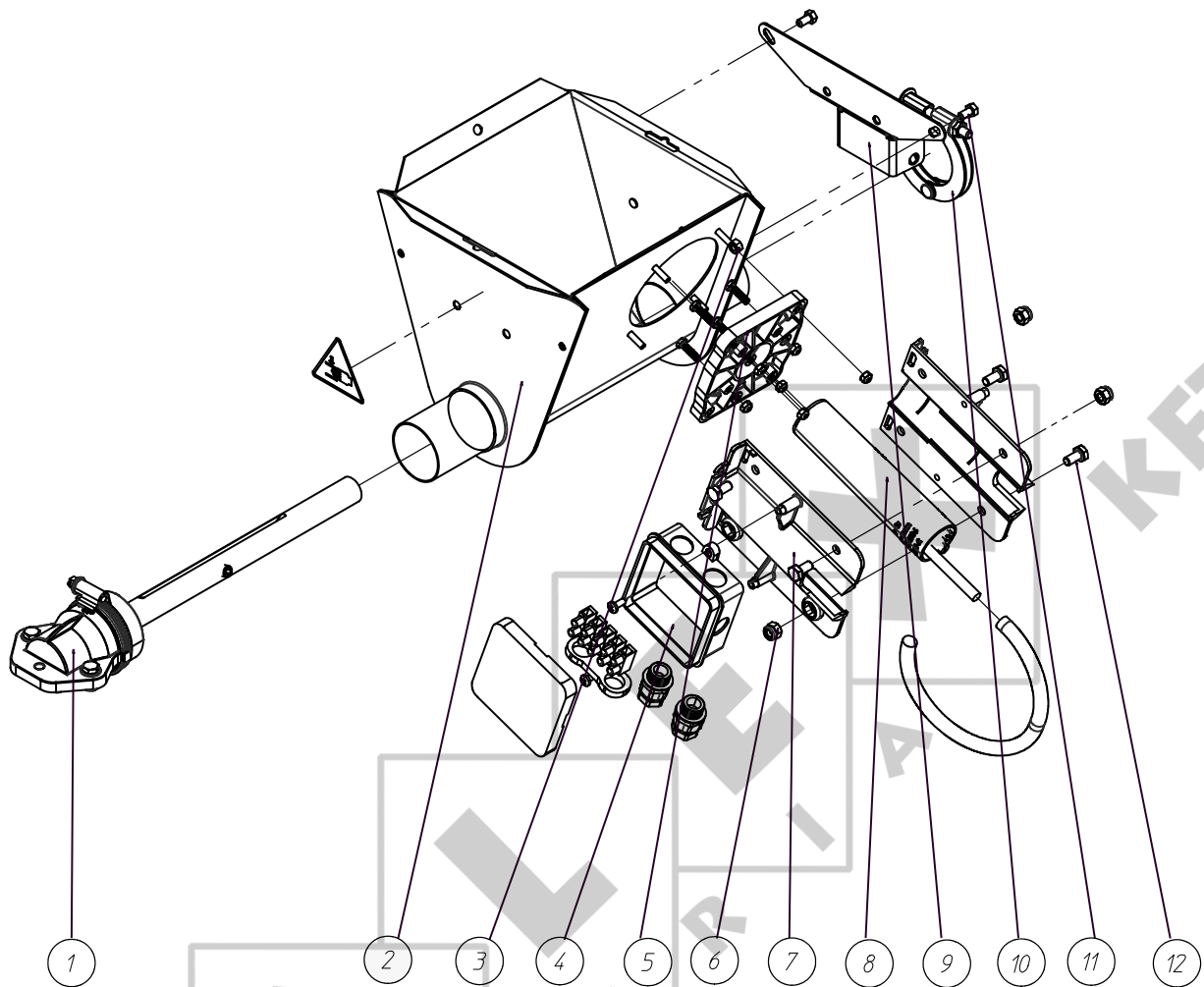
**FEED INTAKE BOOT - 00106500**



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

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

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

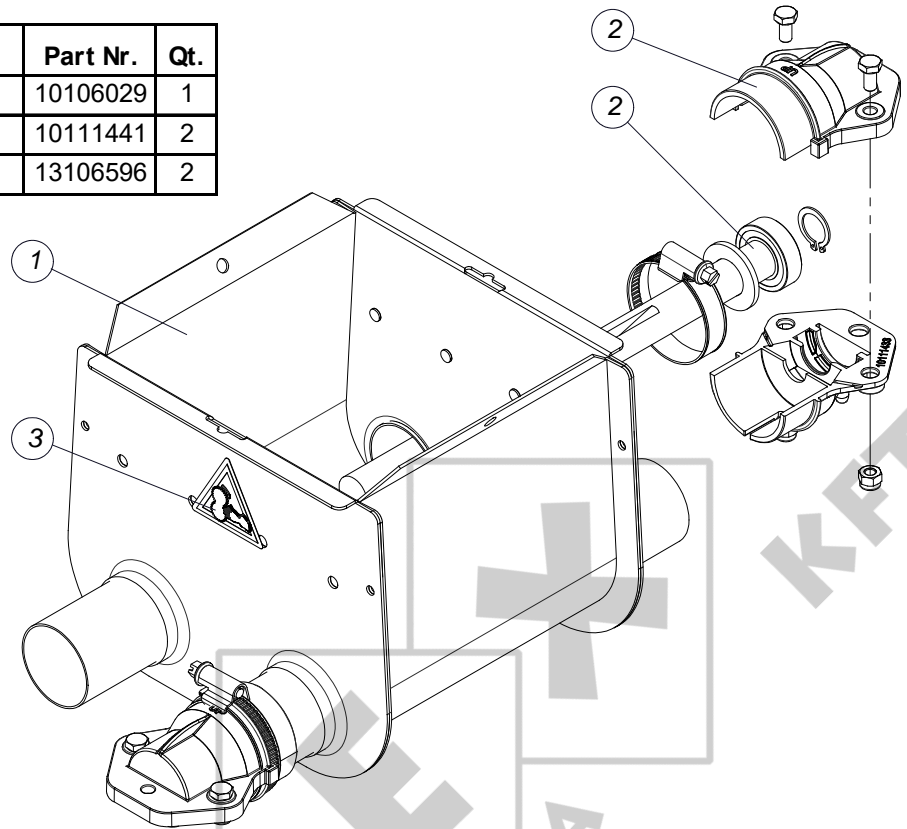


Key	Name	Part Nr.	Qt.
1	ANCHOR & BEARING ASS'Y	10111441	1
2	BOOT BODY WELDM F/SENSOR	10112428	1
3	NUT M5 - DIN 934	20100152	2
4	HANDY BOX OBO A8	15000037	1
5	SENSOR DISTANCE PIECE 80 MM	10112436	1
6	LOCKNUT M6 - DIN 985	20100400	4
7	SENSOR HOLDER	13000443	2
*8	SENSOR VC12RT230106821 S3 D1	03103678	1
**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



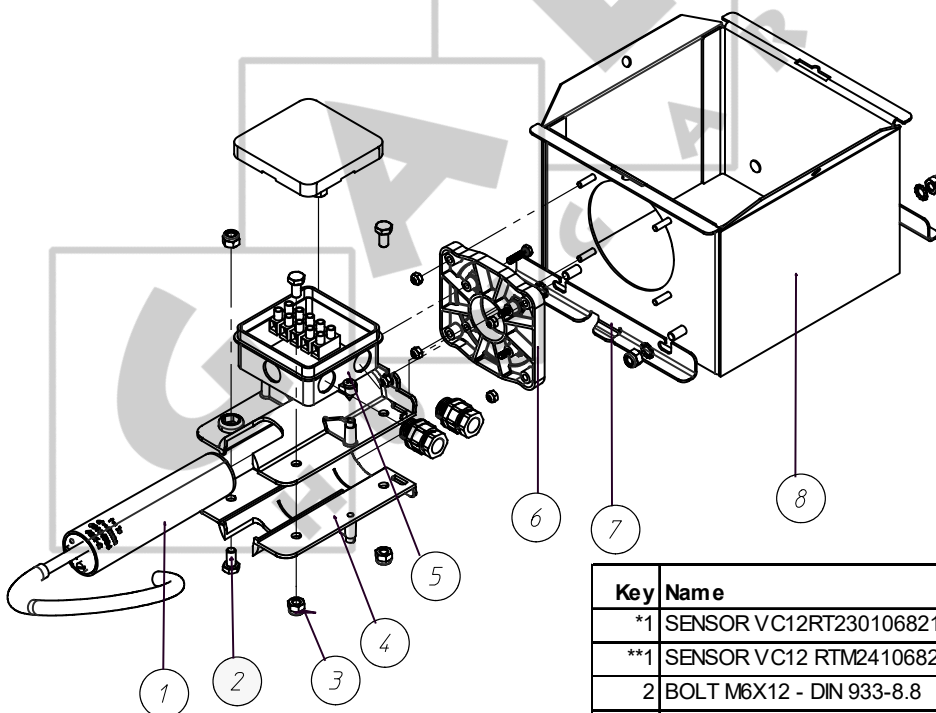
**OPTION: DOUBLE FEED INTAKE BOOT - 00106518**

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



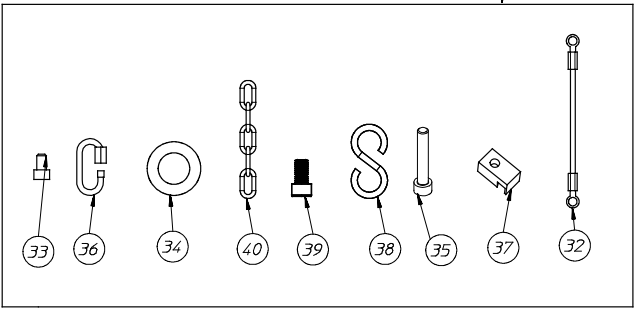
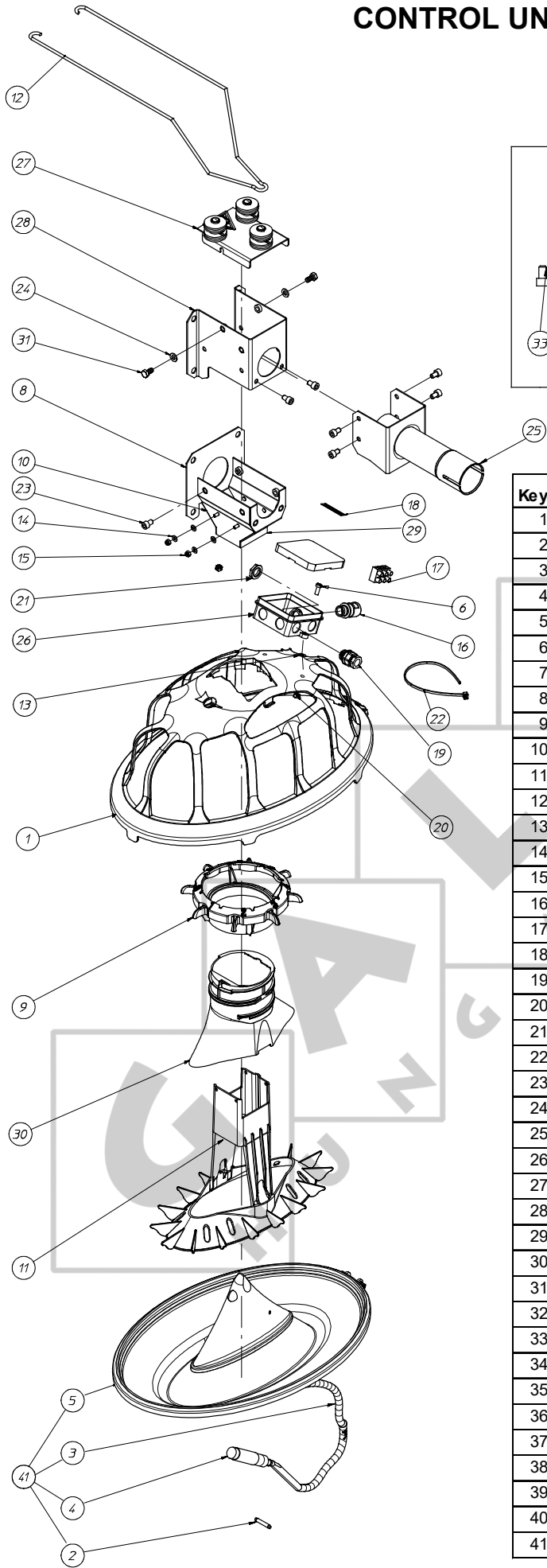
**\* OPTION: EXTENSION WITH SENSOR - 230 V AC - 03000901**

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

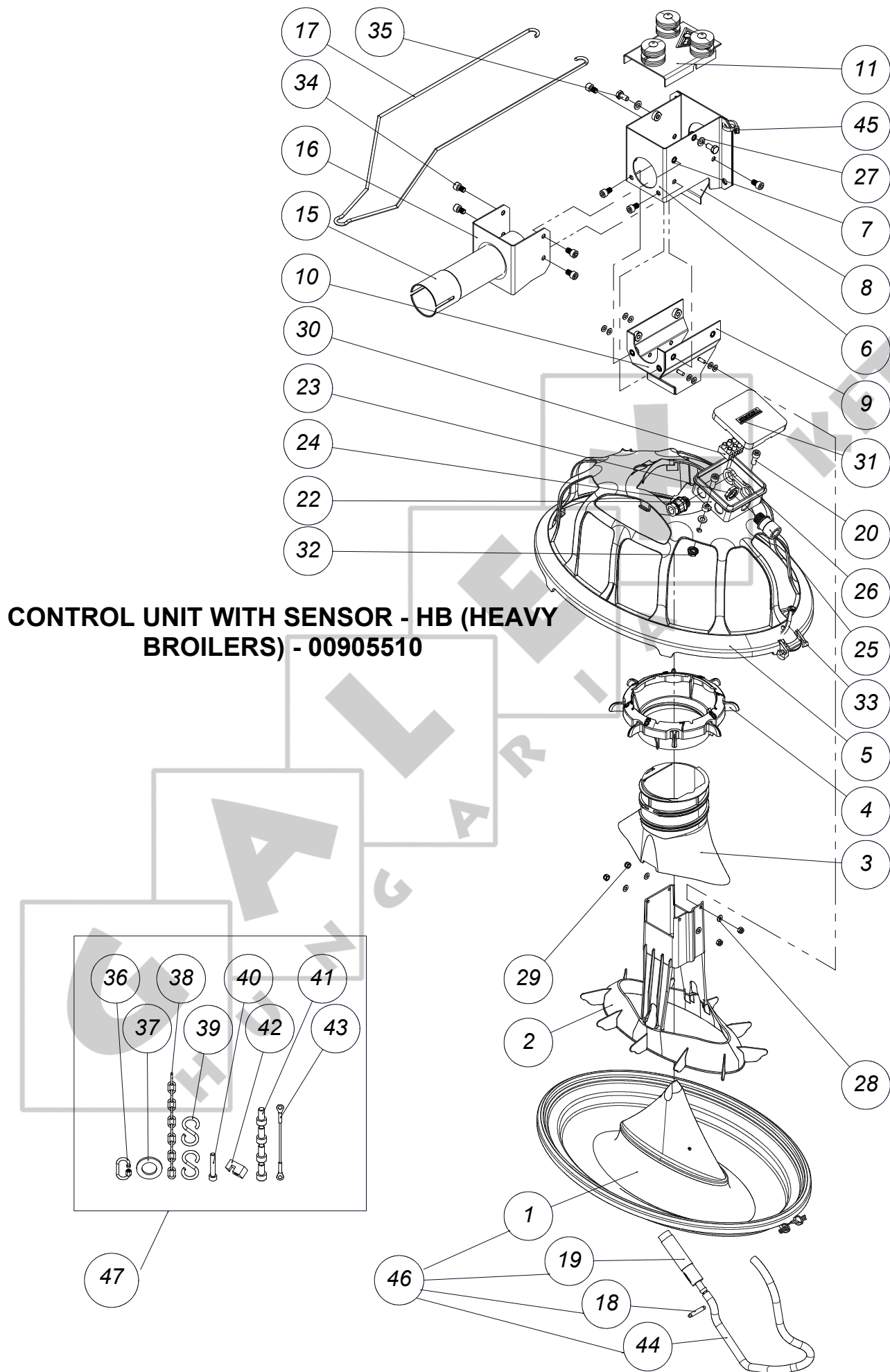


Key	Name	Part Nr.	Qt.
*1	SENSOR VC12RT230106821 S3 D1	03103678	1
**1	SENSOR VC12 RTM24106821-2 24-230VAC/DC	03104586	1
2	BOLT M6X12 - DIN 933-8.8	20100160	4
3	LOCKNUT M6 - DIN 985	20100400	8
4	SENSOR HOLDER	13000443	2
5	HANDY BOX OBO A8	15000037	1
6	SENSOR DISTANCE PIECE 80 MM	10112436	1
7	EXTENS. SENS. BOX LOCK PLATE	10704104	2
8	EXTENSION FOR SENSOR	03000897	1

### CONTROL UNIT WITH SENSOR- 00901645



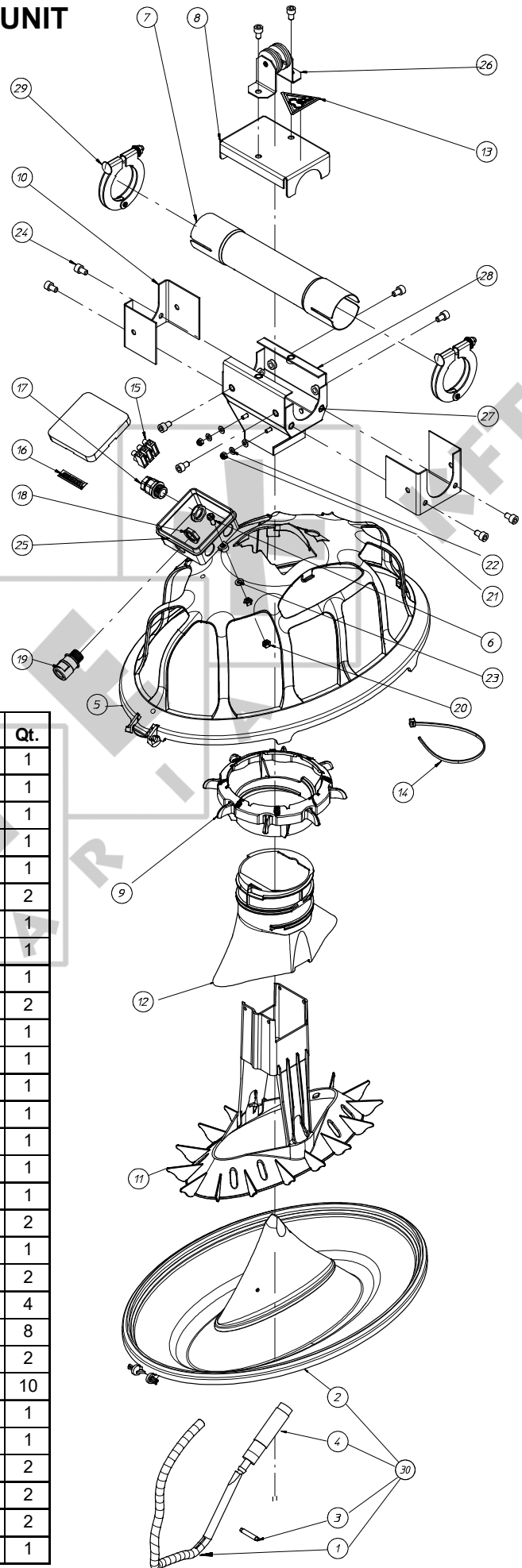
Key	Name	Part Nr.	Qt.
1	12 STRUT GRILL FOR CONTROL PAN	10900363	1
2	AXLE FOR SENSOR	10900348	1
3	FLEXTUBE	15009327	1
4	SENSOR CA 18CLN12TC1547-3-30SEC 230VAC	10800877	1
5	FEEDER PAN FOR SENSOR	10900355	1
6	SCREW M5X12 DIN 84-4.8	20101135	2
7	HARDWARE KIT	10900322	1
8	BACK PLATE DROP BOX	10900215	1
9	SHORT ADJUSTER RING	00900068	1
10	SIDE PLATE DROP BOX	10900223	2
11	SUPPORT CONE CONTROL PAN	10900249	1
12	ANTI ROOST GUARD	10107860	1
13	WASHER 5,3X10X1 - DIN 125 - A2	20102315	2
14	WASHER 4.3x9x0.8	20100566	8
15	LOCKNUT M4-DIN 985	20100657	4
16	FLEXTUBE CONNECTOR	15009319	1
17	CLAMP STROKE 27 20 6E/3	10103109	1
18	ROXELL DECAL - 42 x 10	13600598	1
19	CABLE RING PG 9	15001472	1
20	NUT M5 - DIN 934	20100152	2
21	CABLE RING NUT PG 9 poly. G.V.	10102978	2
22	HINGE JOINT	00101105	1
23	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	4
24	WASHER D.6.6x12x1.6-DIN 126	20100459	2
25	TUBE BRACKET ASS'Y	10900306	1
26	HANDY BOX OBO A8	15000037	1
27	TOP CLOSURE ASS'Y F/DROP BOX	10900181	1
28	PROTECTION PLATE F/DROP BOX	10900199	1
29	FRONT PLATE DROP BOX	10900207	1
30	SKIRT	00900035	1
31	BOLT M6X12 - DIN 933-8.8	20100160	2
32	CONNECTING WIRE	10107472	1
33	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	4
34	WASHER ø34x20x3-DIN126	20100483	1
35	SOCKET CAP SCREW M6X35	20102158	1
36	SCREW LINK DIA. 3.5	10203156	1
37	DRIVE BLOCK	10100782	1
38	"S" HOOK	05000013	2
39	SOCKET CAP SCREW M8 x 16 - 8.8	20103891	4
40	CHAIN DIA 2.5 LG=149 mm.	10107449	1
41	FEEDER PAN WITH SENSOR 230VAC	00901751	1



**CONTROL UNIT WITH SENSOR - HB (HEAVY BROILERS) - 00905510**

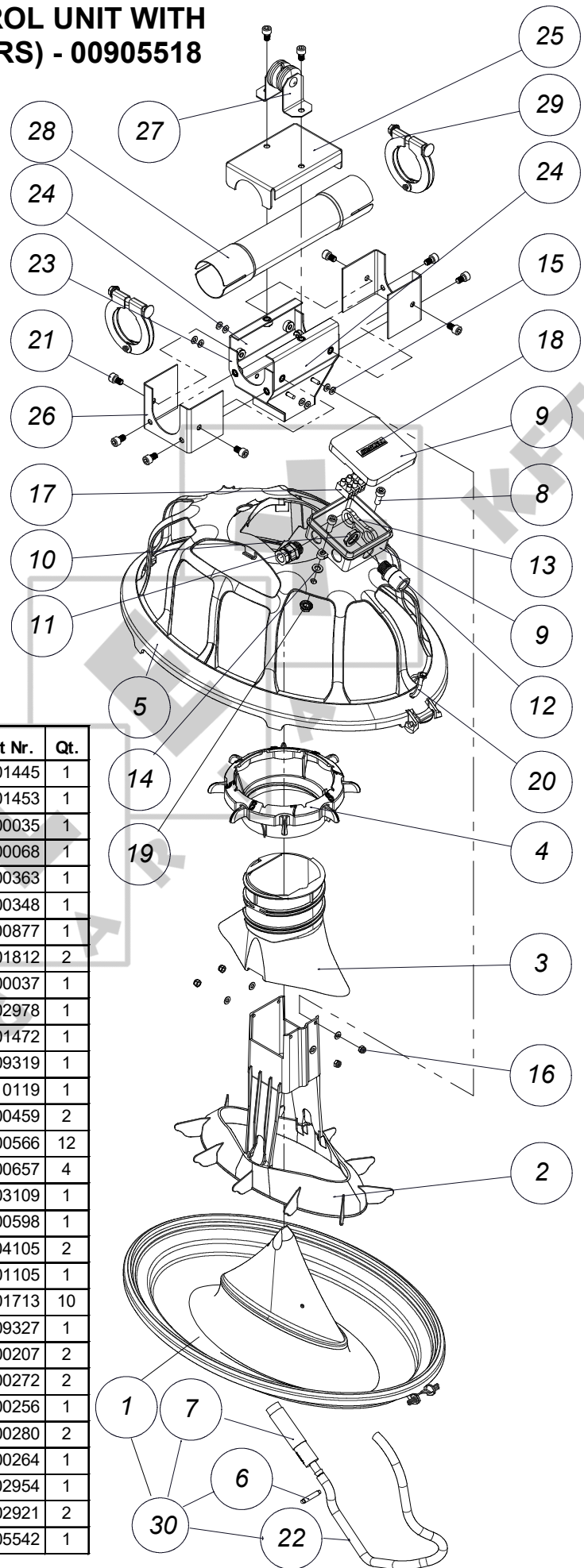
Key	Name	Part Nr.	Qt.
*1	FEEDER PAN HB FOR SENSOR	10901445	1
2	SUPPORT CONE CONTROL UNIT HB	10901453	1
3	SKIRT	00900035	1
4	SHORT ADJUSTER RING	00900068	1
5	12 STRUT GRILL FOR CONTROL PAN	10900363	1
6	PROTECTION PLATE F/DROP BOX	10900199	1
7	PRESS NUT M6 THICK.>=1.4 GALV.	27000355	6
8	BACK PLATE DROP BOX	10900215	1
9	SIDE PLATE DROP BOX	10900223	2
10	FRONT PLATE DROP BOX	10900462	1
11	TOP CLOSURE ASS'Y F/DROP BOX	10900181	1
15	OUTLET TUBE	10900314	1
16	TUBE BRACKET	10900298	1
17	ANTI ROOST GUARD	10107860	1
*18	AXLE FOR SENSOR	10900348	1
*19	SENSOR CA18CLN12TC1547-3-30SEC 230VAC	10800877	1
20	SOCKET CAP SCREW M6 x 16 - DIN 912	20101812	2
22	HANDY BOX OBO A8	15000037	1
23	CABLE RING NUT PG 9 poly. G.V.	10102978	1
24	CABLE RING PG 9	15001472	1
25	FLEXTUBE CONNECTOR	15009319	1
26	CABLE RING HOLDER (2xPG9)	15010119	1
27	WASHER D.6.6x12x1.6-DIN 126	20100459	4
28	WASHER 4.3x9x0.8	20100566	12
29	LOCKNUT M4-DIN 985	20100657	4
30	CLAMP STROKE 27 20 6E/3	10103109	1
31	ROXELL DECAL - 42 x 10	13600598	1
32	HEX. NUT W/FLANGE - M6 - DIN 6923	20104105	2
33	HINGE JOINT	00101105	1
34	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	8
35	BOLT M6X12 - DIN 933-8.8	20100160	2
**36	SCREW LINK DIA. 3.5	10203156	1
**37	WASHER ø34x20x3-DIN126	20100483	1
**38	CHAIN DIA 2.5 LG=149 mm.	10107449	12
**39	"S" HOOK	05000013	2
**40	SOCKET CAP SCREW M6X35	20102158	1
**41	SOCKET CAP SCREW M8 x 16 - 8.8	20103891	4
**42	DRIVE BLOCK	10100782	1
**43	CONNECTING WIRE	10107472	1
*44	FLEXTUBE	15009327	1
45	HINGE JOINT	00101105	1
*46	FEEDER PAN HB W/SENSOR 230VAC	<b>00905542</b>	<b>1</b>
**47	HARDWARE KIT	<b>10900322</b>	<b>1</b>

# FIXED INTERMEDIATE CONTROL UNIT WITH SENSOR - 00901405



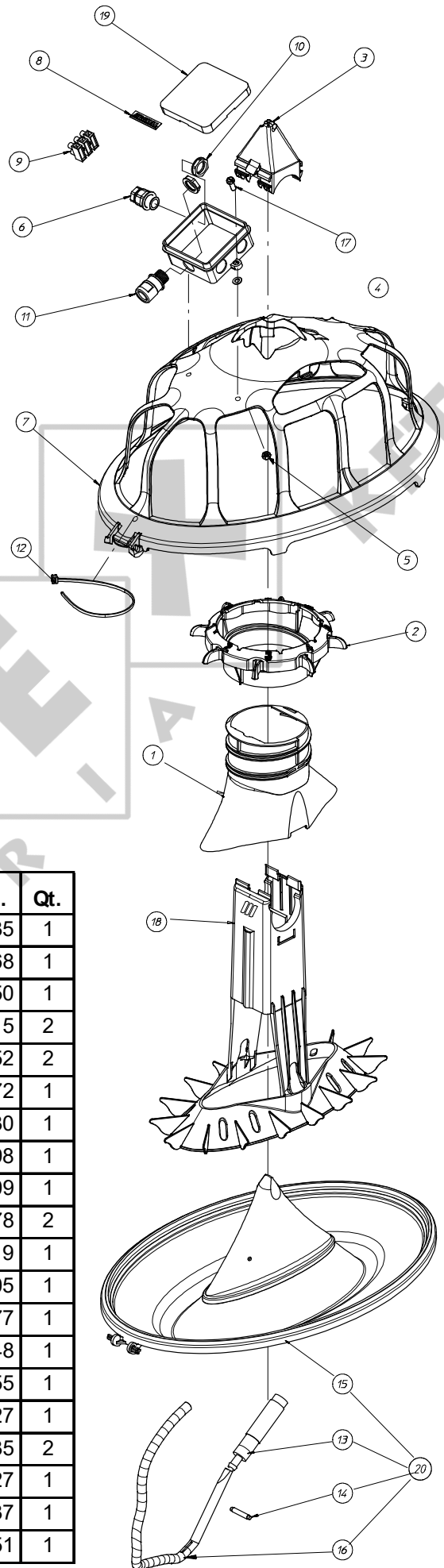
Key	Name	Part Nr.	Qt.
1	FLEXTUBE	15009327	1
2	FEEDER PAN FOR SENSOR	10900355	1
3	AXLE FOR SENSOR	10900348	1
4	SENSOR CA 18CLN12TC1547-3-30SEC 230VAC	10800877	1
5	12 STRUT GRILL FOR CONTROL PAN	10900363	1
6	SCREW M5X12 DIN 84-4.8	20101135	2
7	TUBE W/DROP HOLE (2 EXP. ENDS)- L=240MM	00102954	1
8	TOP CLOSURE ASS'Y F/DROP BOX	10900256	1
9	SHORT ADJUSTER RING	00900068	1
10	SIDE PLATE INTERM. DROP BOX	10900280	2
11	SUPPORT CONE CONTROL PAN	10900249	1
12	SKIRT	00900035	1
13	DECAL - HANDS WARNING	13106596	1
14	HINGE JOINT	00101105	1
15	CLAMP STROKE 27 20 6E/3	10103109	1
16	ROXELL DECAL - 42 x 10	13600598	1
17	CABLE RING PG 9	15001472	1
18	CABLE RING NUT PG 9 poly. G.V.	10102978	2
19	FLEXTUBE CONNECTOR	15009319	1
20	NUT M5 - DIN 934	20100152	2
21	LOCKNUT M4-DIN 985	20100657	4
22	WASHER 4.3x9x0.8	20100566	8
23	WASHER 5,3X10X1 - DIN 125 - A2	20102315	2
24	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	10
25	HANDY BOX OBO A8	15000037	1
26	INSULATOR SUPPORT	10900264	1
27	FRONT PLATE DROP BOX	10900207	2
28	SIDE PLATE INTERM. DROP BOX	10900272	2
29	TUBE CLAMP ASSEMBLY Ø45 MM	00102921	2
30	FEEDER PAN WITH SENSOR 230VAC	00901751	1

# FIXED INTERMEDIATE CONTROL UNIT WITH SENSOR HB (HEAVY BROILERS) - 00905518

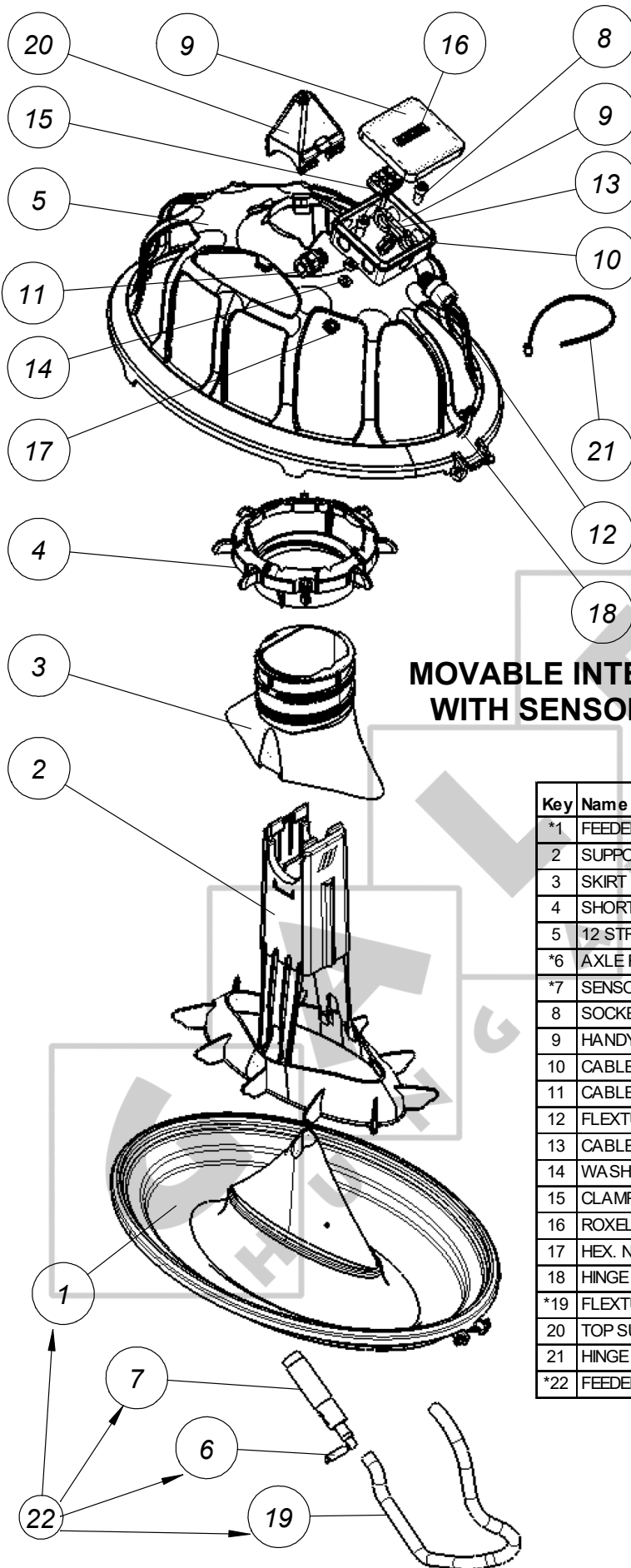


Key	Name	Part Nr.	Qt.
*1	FEEDER PAN HB FOR SENSOR	10901445	1
2	SUPPORT CONE CONTROL UNIT HB	10901453	1
3	SKIRT	00900035	1
4	SHORT ADJUSTER RING	00900068	1
5	12 STRUT GRILL FOR CONTROL PAN	10900363	1
*6	AXLE FOR SENSOR	10900348	1
*7	SENSOR CA18CLN12TC1547-3-30SEC 230VAC	10800877	1
8	SOCKET CAP SCREW M6 x 16 - DIN 912	20101812	2
9	HANDY BOX OBO A8	15000037	1
10	CABLE RING NUT PG 9 poly. G.V.	10102978	1
11	CABLE RING PG 9	15001472	1
12	FLEXTUBE CONNECTOR	15009319	1
13	CABLE RING HOLDER (2xPG9)	15010119	1
14	WASHER D.6.6x12x1.6-DIN 126	20100459	2
15	WASHER 4.3x9x0.8	20100566	12
16	LOCKNUT M4-DIN 985	20100657	4
17	CLAMP STROKE 27 20 6E/3	10103109	1
18	ROXELL DECAL - 42 x 10	13600598	1
19	HEX. NUT W/FLANGE - M6 - DIN 6923	20104105	2
20	HINGE JOINT	00101105	1
21	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	10
*22	FLEXTUBE	15009327	1
23	FRONT PLATE DROP BOX	10900207	2
24	SIDE PLATE INTERM. DROP BOX	10900272	2
25	TOP CLOSURE ASS'Y F/DROP BOX	10900256	1
26	SIDE PLATE INTERM. DROP BOX	10900280	2
27	INSULATOR SUPPORT	10900264	1
28	TUBE W/DROP HOLE (2 EXP. ENDS)- L=240MM	00102954	1
29	TUBE CLAMP ASSEMBLY Ø45 MM	00102921	2
*30	FEEDER PAN HB W/SENSOR 230VAC	00905542	1

# MOVABLE INTERMEDIATE CONTROL UNIT WITH SENSOR - 00901421



Key	Name	Part Nr.	Qt.
1	SKIRT	00900035	1
2	SHORT ADJUSTER RING	00900068	1
3	TOP SUPPORT	00900050	1
4	WASHER 5,3X10X1 - DIN 125 - A2	20102315	2
5	NUT M5 - DIN 934	20100152	2
6	CABLE RING PG 9	15001472	1
7	12 STRUT GRILL	00901330	1
8	ROXELL DECAL - 42 x 10	13600598	1
9	CLAMP STROKE 27 20 6E/3	10103109	1
10	CABLE RING NUT PG 9 poly. G.V.	10102978	2
11	FLEXTUBE CONNECTOR	15009319	1
12	HINGE JOINT	00101105	1
13	SENSOR CA18CLN12TC1547-3-30SEC 230VAC	10800877	1
14	AXLE FOR SENSOR	10900348	1
15	FEEDER PAN FOR SENSOR	10900355	1
16	FLEXTUBE	15009327	1
17	SCREW M5X12 DIN 84-4.8	20101135	2
18	SUPPORT CONE	00900027	1
19	HANDY BOX OBO A8	15000037	1
20	FEEDER PAN WITH SENSOR 230VAC	00901751	1



**MOVABLE INTERMEDIATE CONTROL UNIT  
WITH SENSOR HB (HEAVY BROILERS) -  
00905526**

Key	Name	Part Nr.	Qt.
*1	FEEDER PAN HB FOR SENSOR	10901445	1
2	SUPPORT CONE - HB	00905478	1
3	SKIRT	00900035	1
4	SHORT ADJUSTER RING	00900068	1
5	12 STRUT GRILL	00901330	1
*6	AXLE FOR SENSOR	10900348	1
*7	SENSOR CA 18CLN12TC1547-3-30SEC 230VAC	10800877	1
8	SOCKET CAP SCREW M6 x 16 - DIN 912	20101812	2
9	HANDY BOX OBO A8	15000037	1
10	CABLE RING NUT PG 9 poly. G.V.	10102978	1
11	CABLE RING PG 9	15001472	1
12	FLEXTUBE CONNECTOR	15009319	1
13	CABLE RING HOLDER (2xPG9)	15010119	1
14	WASHER D.6.6x12x1.6-DIN 126	20100459	2
15	CLAMP STROKE 27 20 6E/3	10103109	1
16	ROXELL DECAL - 42 x 10	13600598	1
17	HEX. NUT W/FLANGE - M6 - DIN 6923	20104105	2
18	HINGE JOINT	00101105	1
*19	FLEXTUBE	15009327	1
20	TOP SUPPORT	00900050	1
21	HINGE JOINT	00101105	1
*22	FEEDER PAN HB W/SENSOR 230VAC	00905542	1

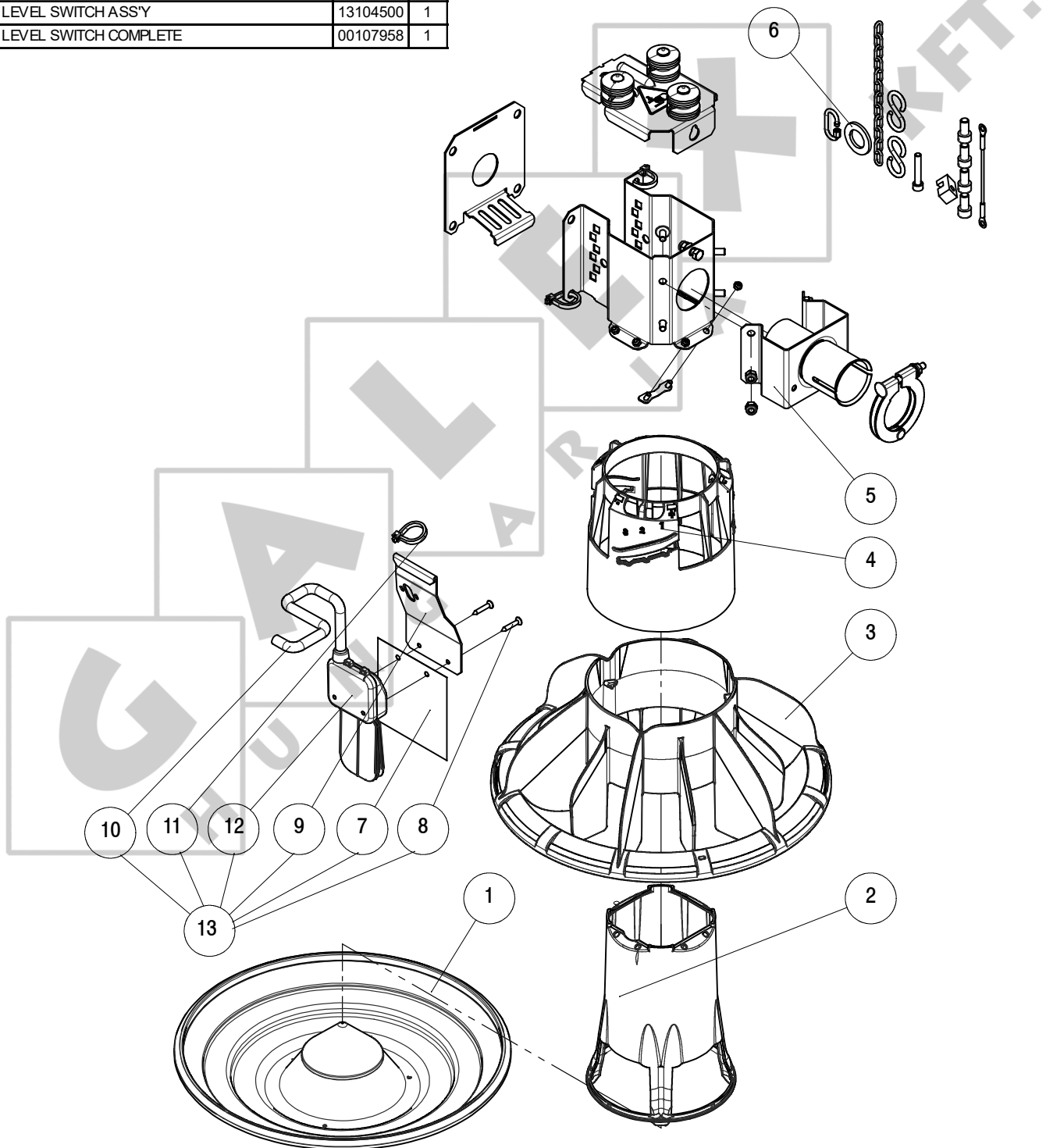
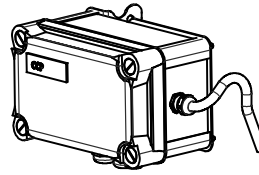


# CONTROL UNIT HAIKOO WITH SWITCH - 00109144

## FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	TUBE BRACKET ASS'Y	10111893	1
6	HARDWARE KIT	10900322	1
7	SWITCH SHIELD	10111941	1
8	WOOD SCREW PK Ø4X25-GALVANIZED	20108924	1
9	SUPPORT PLATE FOR LEVEL SWITCH	10111933	1
10	FLEXTUBE Ø7XØ10X250MM	10206199	1
11	HINGE JOINT	00101105	1
12	LEVEL SWITCH ASS'Y	13104500	1
13	LEVEL SWITCH COMPLETE	00107958	1

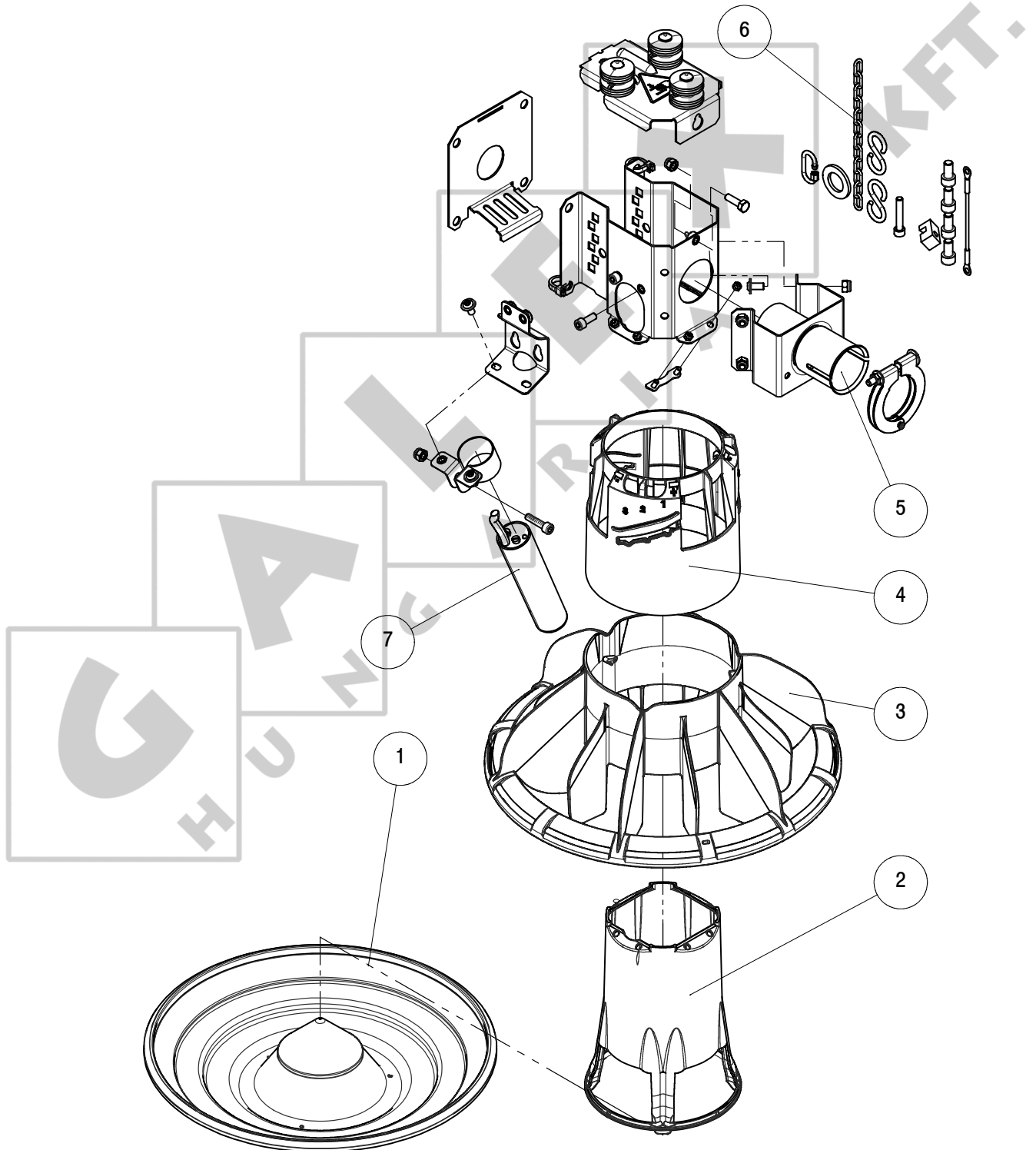
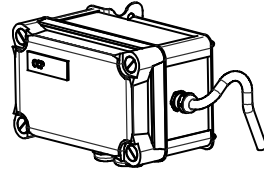
00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



## CONTROL UNIT HAIKOO WITH SENSOR - 00109152 FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	TUBE BRACKET ASS'Y	10111893	1
6	HARDWARE KIT	10900322	1
7	SENSOR VC12 RT230106821 OFF DELAY	03101185	1

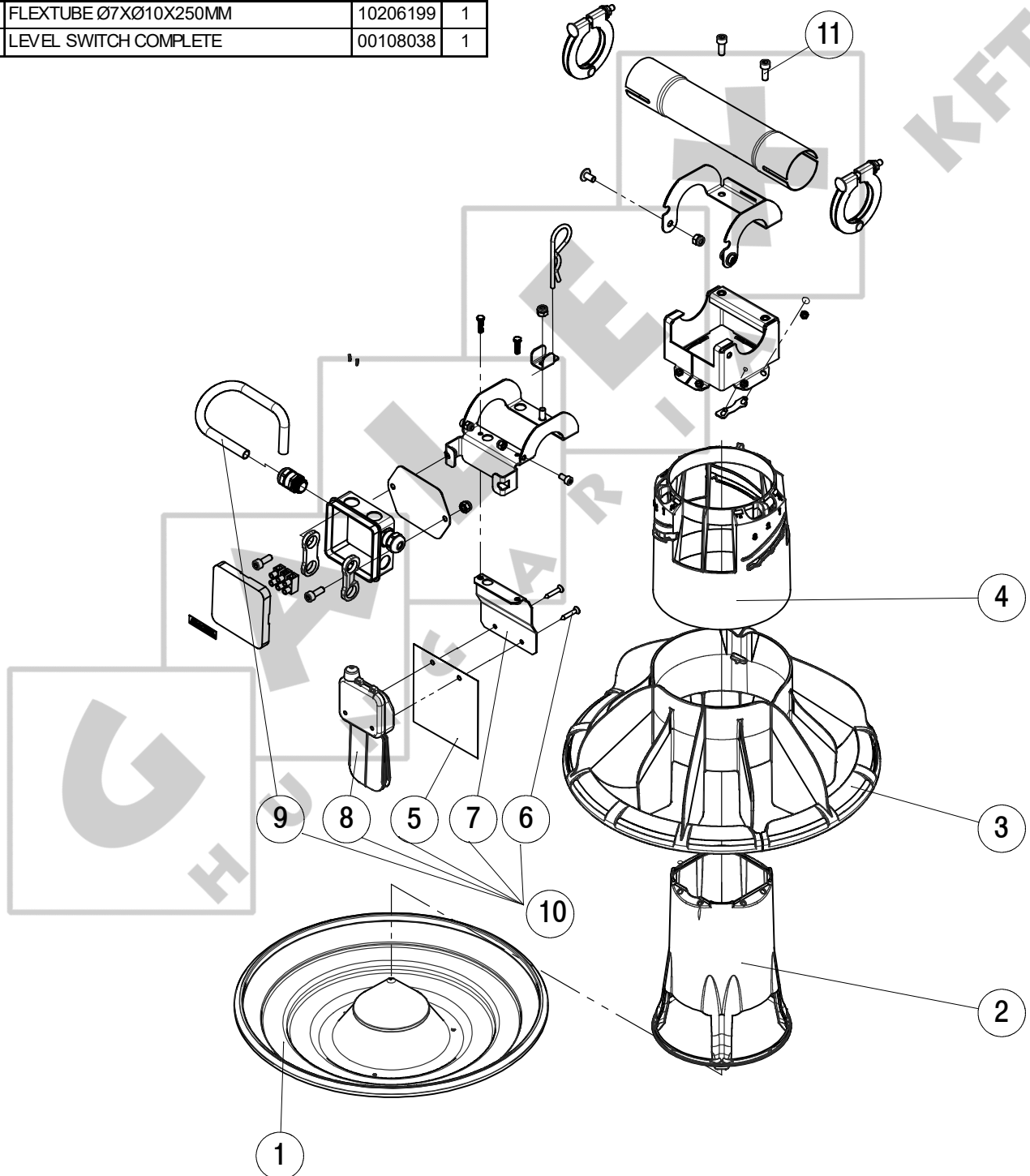
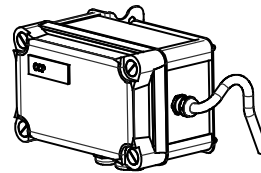
00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



## FIXED INTERM. CONTROL UNIT HAIKOO WITH SWITCH - 00109160 FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	SWITCH SHIELD	10111941	1
6	WOOD SCREW PK Ø4X25-GALVANIZED	20108924	2
7	PLATE SWITCH	10112005	1
8	LEVEL SWITCH ASSY	13104500	1
9	FLEXTUBE Ø7XØ10X250MM	10206199	1
10	LEVEL SWITCH COMPLETE	00108038	1

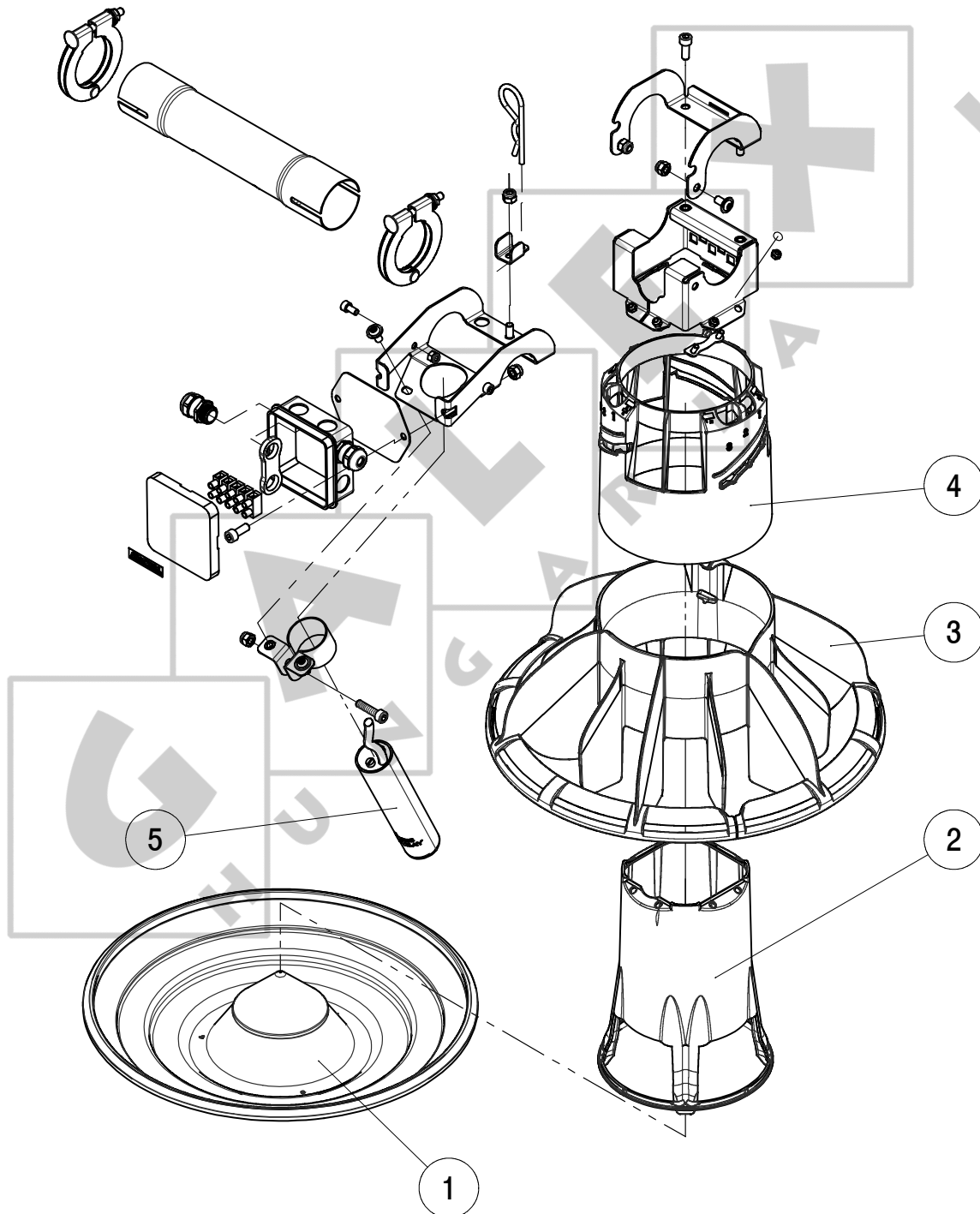
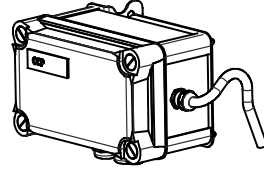
00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



## FIXED INTERM. CONTROL UNIT HAIKOO WITH SENSOR - 00109168 FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	SENSOR VC12 RT230106821 OFF DELAY	03101185	1

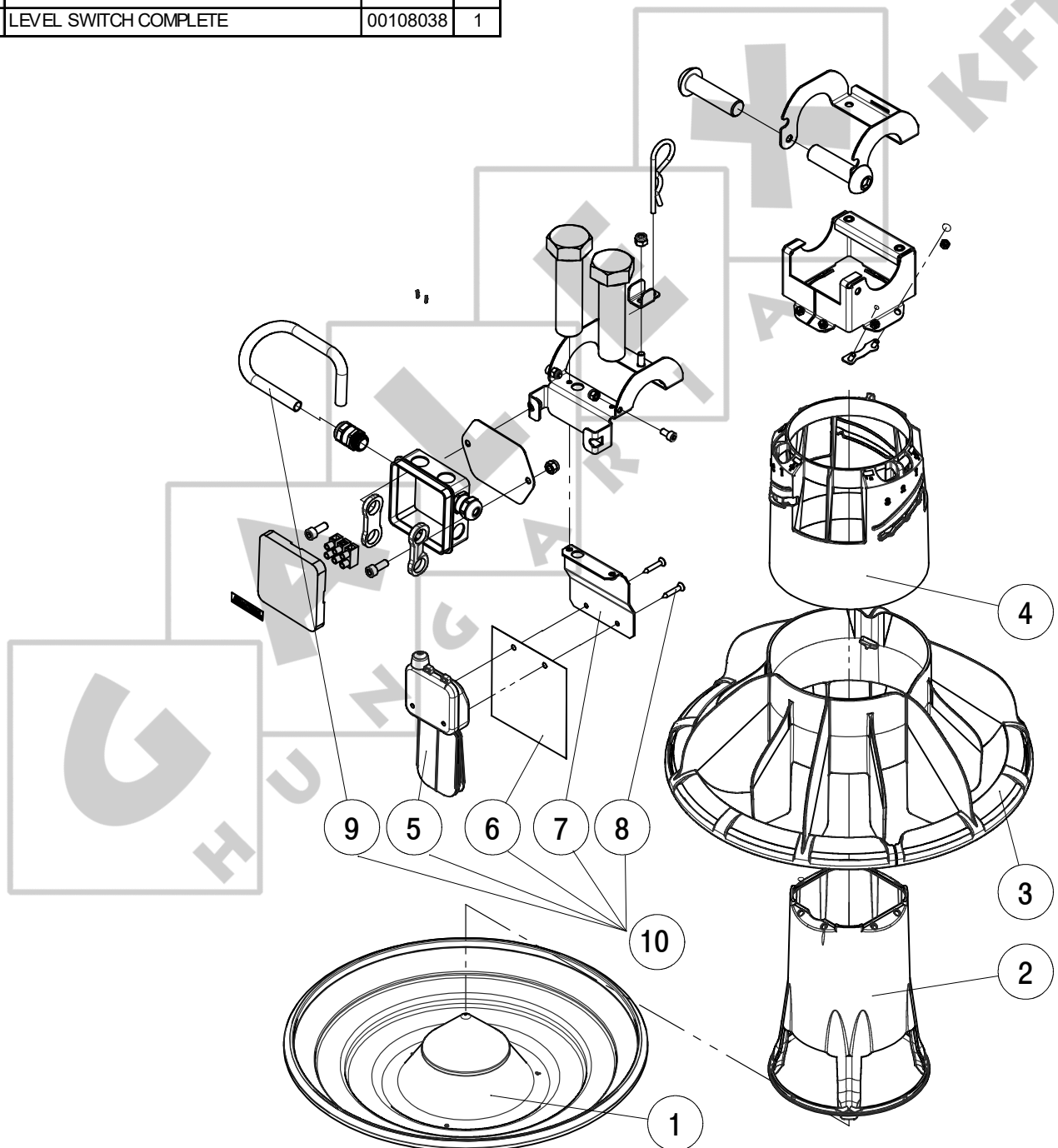
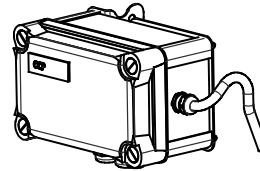
00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



## MOVABLE INTERM. CONTROL UNIT HAIKOO WITH SWITCH - 00109176 FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	SWITCH SHIELD	10111941	1
6	WOOD SCREW PK Ø4X25-GALVANIZED	20108924	2
7	PLATE SWITCH	10112005	1
8	LEVEL SWITCH ASSY	13104500	1
9	FLEXTUBE Ø7XØ10X250MM	10206199	1
10	LEVEL SWITCH COMPLETE	00108038	1

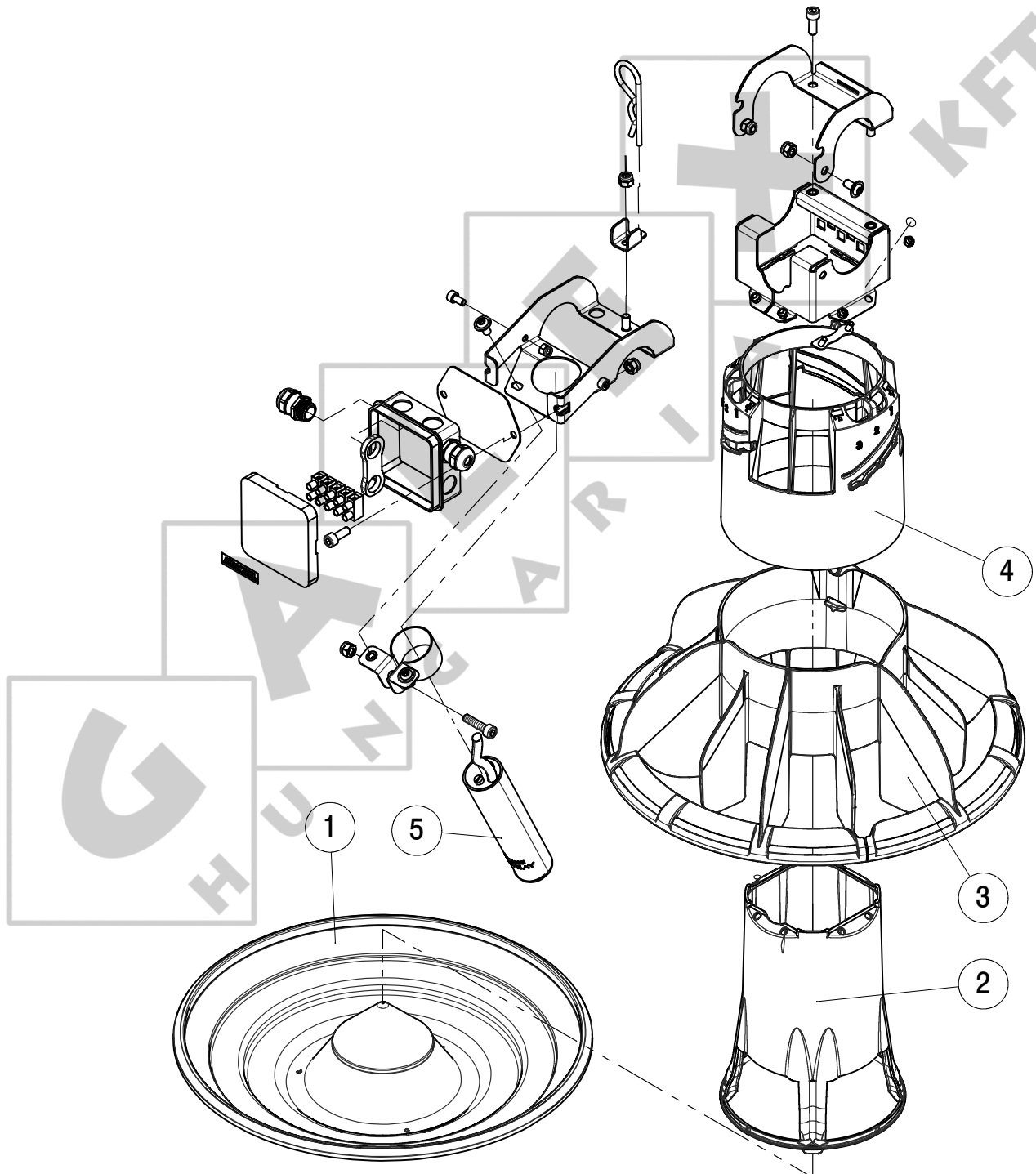
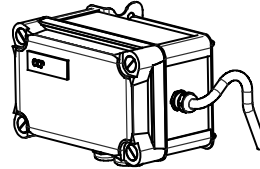
00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



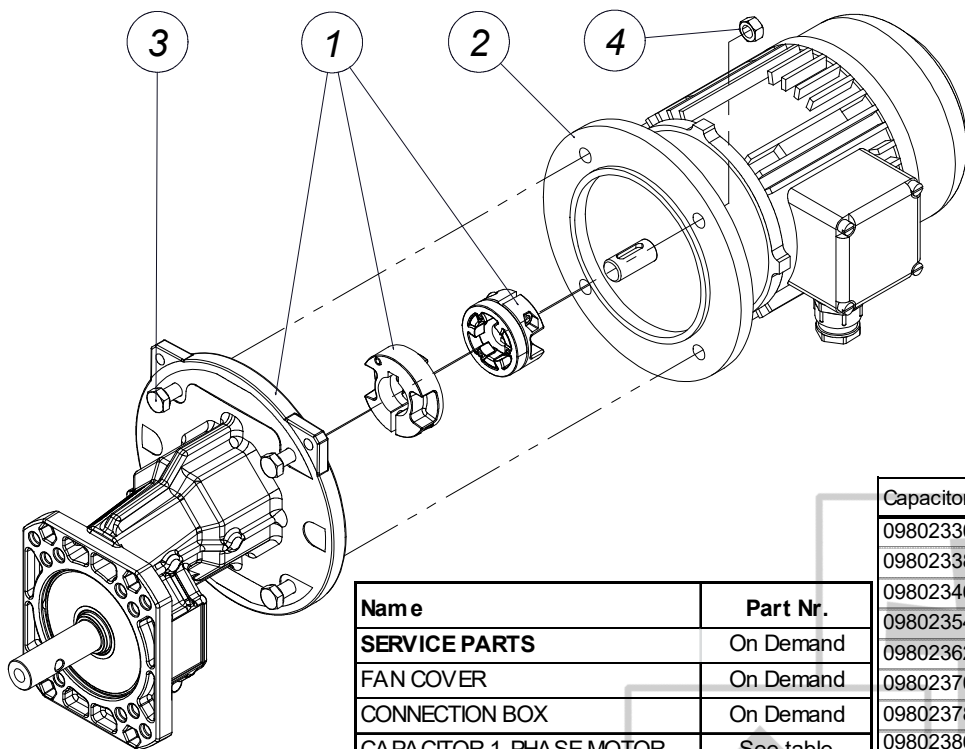
## MOVABLE INTERM. CONTROL UNIT HAIKOO WITH SENSOR - 00109184 FOR US ONLY

Key	Name	Part Nr.	Qt.
1	STEPPED ROUND FEEDER PAN	00106953	1
2	SUPPORT CONE F/ CONTROL PAN	00107076	1
3	12 FIN PAN SUPPORT	00108888	1
4	ADJUSTER RING F/ CONTROL PAN	00108896	1
5	SENSOR VC12 RT230106821 OFF DELAY	03101185	1

00109136: CONNECTION BOX KIT CONTR. PAN  
For US only; to be ordered separately



### POWER UNIT



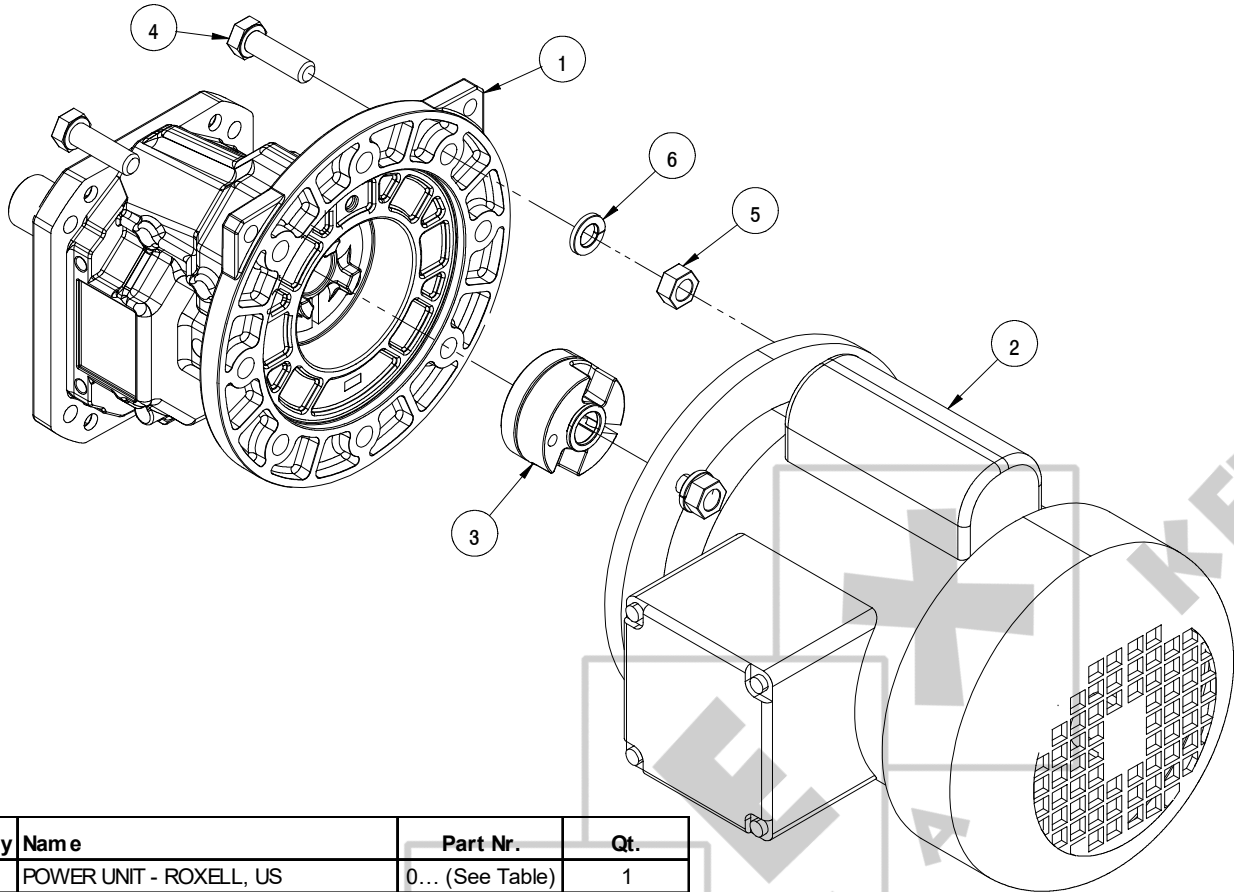
Name	Part Nr.
<b>SERVICE PARTS</b>	On Demand
FAN COVER	On Demand
CONNECTION BOX	On Demand
CAPACITOR 1-PHASE MOTOR	See table
CABLE RING	On Demand

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

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

System	Haikoo (50 Hz)	Haikoo (60 Hz)	Haikoo High Speed (560)
<b>Gearbox With Key</b>	10106441		10103539
<b>Gearbox With F-Coupling alu</b>	10111821	10112317	10111829
<b>Type Elastic Coupling Set (CS 71-80-90)</b>	<b>CS71 13204180</b>	<b>CS71 13204180</b>	<b>CS71 13204180</b>
<b>Motor Shaft</b>	<b>Ø14</b>	<b>Ø14</b>	<b>Ø14</b>
<b>Ratio</b>	3.867	4.73	5.1
<b>Output speed 50Hz</b>	350	NA	560
<b>Output speed 60Hz</b>	NA	360	670
<b>Construction size</b>	71	71	71
<b>Motor speed 50Hz(RPM)</b>	1500	NA	<b>3000</b>
<b>Motor speed 60Hz(RPM)</b>	NA	1800	<b>3600</b>
<b>Feed capacity kg</b>	520	520	700
<b>Drive 3x230/400V 50Hz IE1</b>	<b>00107092</b>		<b>00206849</b>
<b>Motor IE1</b>	10106482 (0,37kW)		10204188 (0,55kW)
<b>Drive 3x200/346V 50Hz</b>	<b>00107100</b>		<b>00206857</b>
<b>Motor</b>	10104487 (0,37kW)		10203032 (0,55kW)
<b>Drive 1x230V 50Hz</b>	<b>00107108</b>		<b>00206865</b>
<b>Motor</b>	10106656 (0,37kW)		10205185 (0,75kW)
<b>Drive 3x220-230/380-400V 60Hz</b>		<b>00108784</b>	<b>00206873</b>
<b>Motor</b>		10106482 (0,37kW)	19911916 (0,66kW)
<b>Drive 3x200/346V 60Hz</b>		<b>00108808</b>	<b>00206881</b>
<b>Motor</b>		10104487 (0,37kW)	10204048 (0,66kW)
<b>Drive 3x254/440V 60Hz</b>			<b>00206889</b>
<b>Motor</b>			19915511 (0,66kW)
<b>Drive 1x220V 60Hz</b>		<b>00108800</b>	<b>00206897</b>
<b>Motor</b>		10106656 (0,37kW)	10205755 (0,66kW)

**POWER UNITS (FOR US ONLY)**

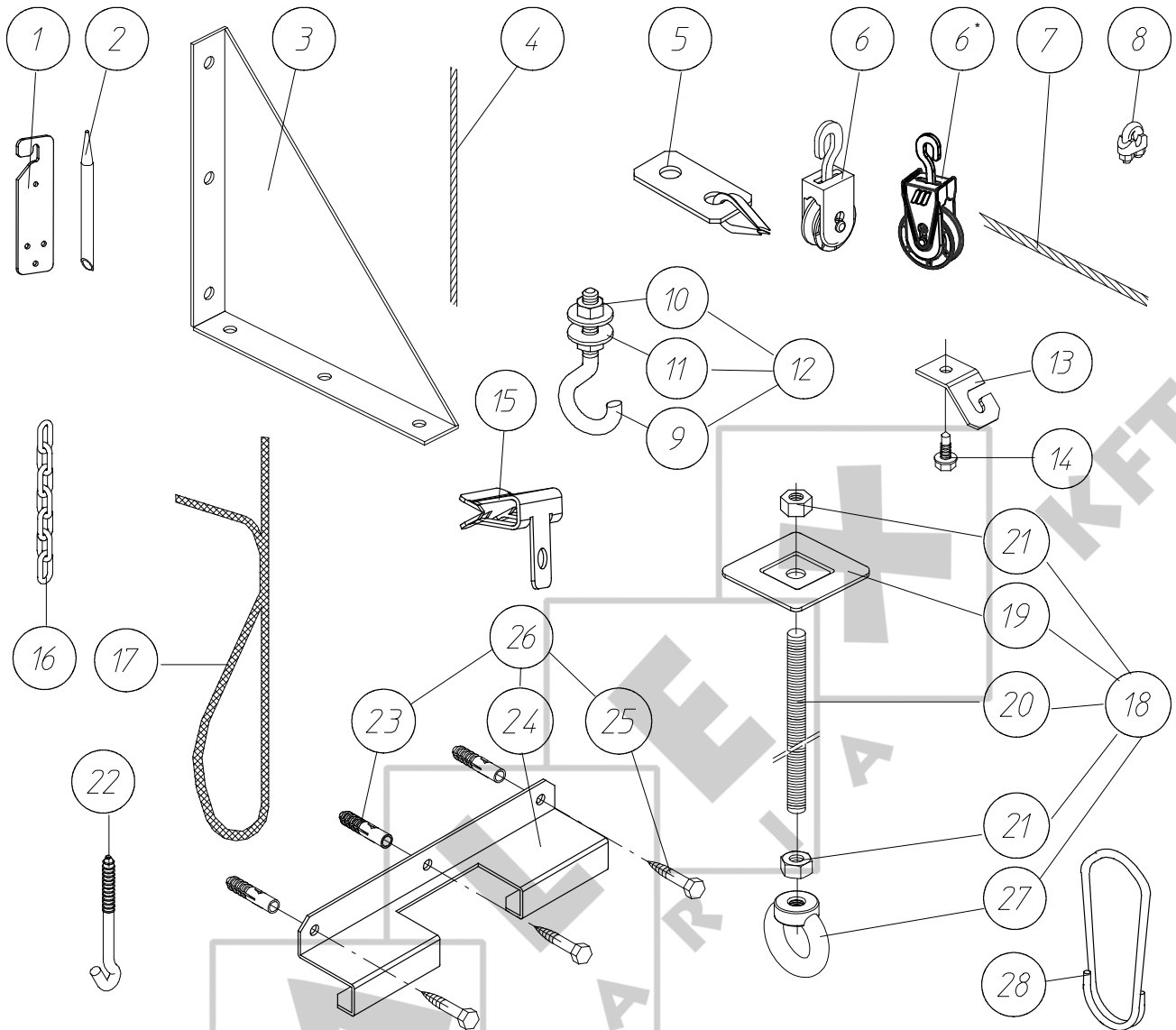


Key	Name	Part Nr.	Qt.
	POWER UNIT - ROXELL, US	0... (See Table)	1
1	GEARBOX WITH ELASTIC COUPLER	1... (See Table)	1
2	MOTOR - IEC FLANGE TYPE	1... (See Table)	1
3	COUPLER SET PKG, KG5.014/1	10702454	Repair Item
4	BOLT M8X30 ZINC	20103479	4
5	NUT M8-DIN 934	20200028	4
6	WASHER, M8 LOCK	20104303	4
7	HARDWARE KIT "ELECTRICAL"	10105468	Not Show n
7.1	HEYCO STRAIN RELIEF SR 7K-2	10106615	Not Show n
7.2	WIRE NUT 16 GA - BLUE	10106607	Not Show n

<b>Gearbox With Elastic Coupler Set</b>	10108223	10203909
<b>Motor Shaft Diameter</b>	5/8 Inch	5/8 Inch
<b>Speed Ratio</b>	4.73 : 1	2.52 : 1
<b>Output Speed (RPM)</b>	365	685
<b>Construction Size</b>	71	71
<b>Motor Speed 60 Hz (RPM)</b>	1725	1725
<b>Feed Capacity (Lb/Hr)</b>	1040	1730
P.U. ASSY 1PH x 115/230V x 60 Hz	00104083 (1/2 HP)	00201871 (1/2 HP)
MOTOR 1PH x 115/230V x 60 Hz	10109148 (1/2 HP)	10109148 (1/2 HP)
P.U. ASSY 1PH x 115/230V x 60 Hz	00104091 (3/4 HP)	N/A
MOTOR 1PH x 115/230V x 60 Hz	13107081 (3/4 HP)	N/A
P.U. ASSY 3PH x 230/400V x 50/60 Hz	00104109 (1/2 HP)	00201889 (1/2 HP)
MOTOR 3PH x 230/400V x 50/60 Hz	10112301 (1/2 HP)	10112301 (1/2 HP)



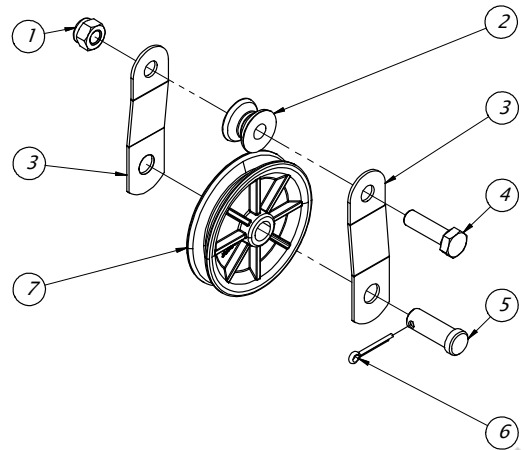
### SUSPENSION COMPONENTS



Key	Name	Part Nr.	Key	Name	Part Nr.
*1	ADJUSTMENT LEVELER	00602060	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	17	SUSPENSION CORD	00100610
*4	CABLE 3/32" - ø2.5 MM - 250M	00106887	18	ANCHOR BOLT ASSEMBLY	00100404
	CABLE 3/32" - ø2.5 MM - 500M	00106895	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 160 MM	05000237
8	CABLE CLAMP NO. 5	00100545	*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	HEX A.G.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
14	SUSPENSION PLATE	00103069	28	HANGER Ø45MM	00100354
14	SELF DRILLING SCREW 6.3X25	00103077	*	OPTION	

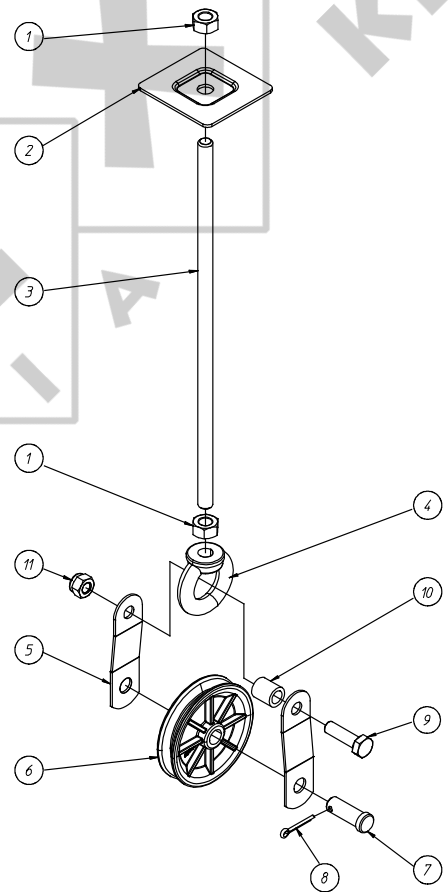
**SINGLE EYE PULLEY - 00100420**

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



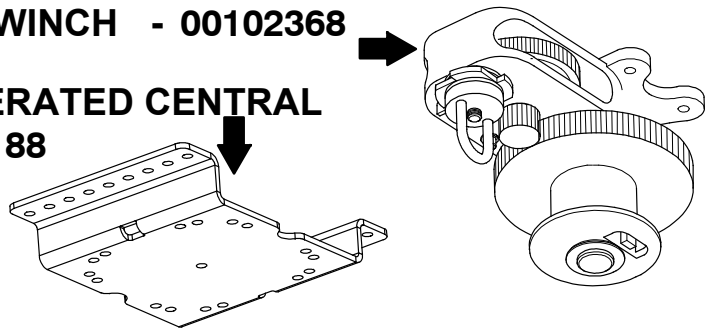
**HEAVY DUTY PULLEY - 00100412**

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

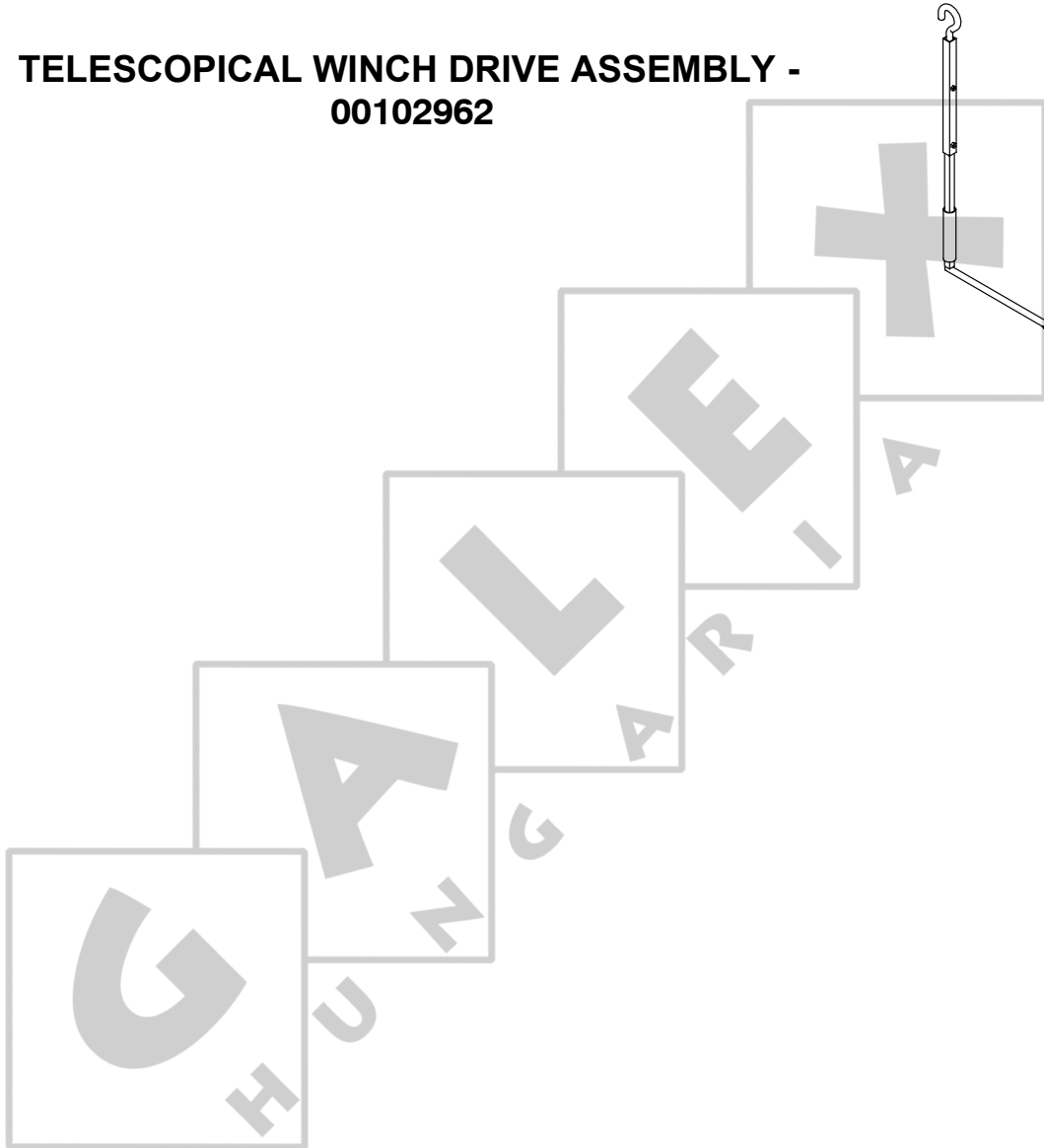


**HAND OPERATED CENTRAL WINCH - 00102368**

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



**TELESCOPICAL WINCH DRIVE ASSEMBLY - 00102962**



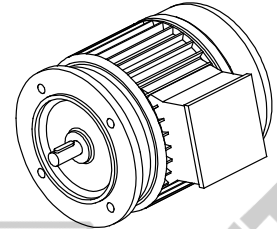
KFT.

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)

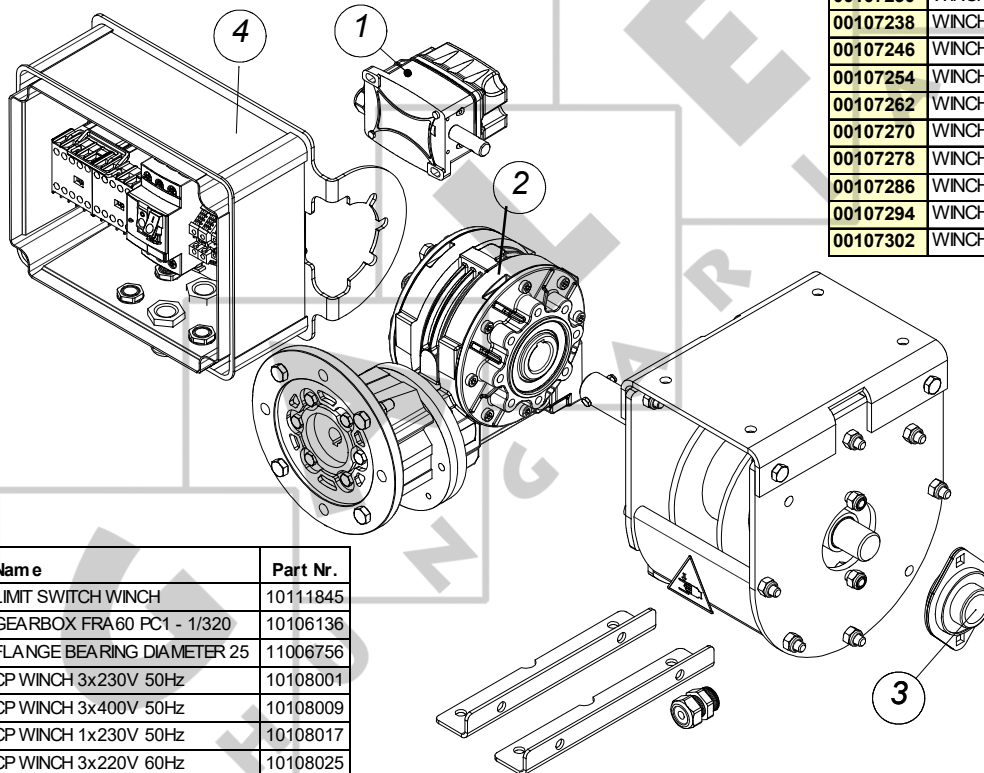
Capacitor 1 phase motor	
09802330	RUN CAPACITOR 10 µF
09802338	RUN CAPACITOR 12,5 µF
09802346	RUN CAPACITOR 18 µF
09802354	RUN CAPACITOR 20 µF
09802362	RUN CAPACITOR 25 µF
09802370	RUN CAPACITOR 30 µF
09802378	RUN CAPACITOR 45 µF
09802386	RUN CAPACITOR 50 µF
09802394	START CAPACITOR 12,5 µF
09802402	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



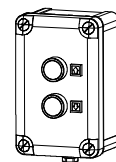
## WINCH W/SWITCH + CP - MOTOR OPERATED



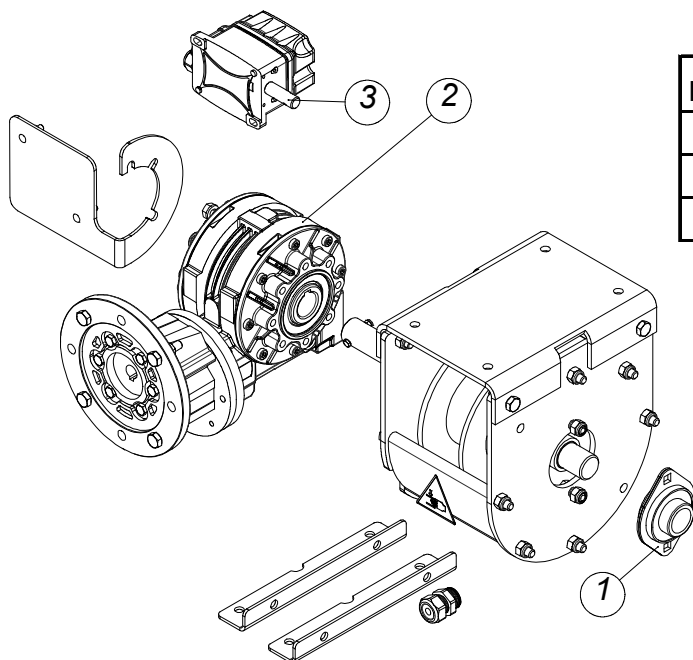
00107214	WINCH W/SWITCH+CP 3x230V 50Hz
00107222	WINCH W/SWITCH+CP 3x400V 50Hz
00107230	WINCH W/SWITCH+CP 1x230V 50Hz
00107238	WINCH W/SWITCH+CP 3x220V 60Hz
00107246	WINCH W/SWITCH+CP 3x230V 60Hz
00107254	WINCH W/SWITCH+CP 3x380V 60Hz
00107262	WINCH W/SWITCH+CP 3x400V 60Hz
00107270	WINCH W/SWITCH+CP 1x220V 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.

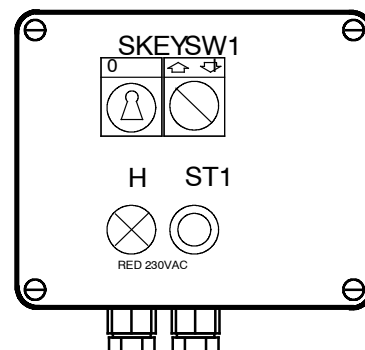
The motor must be protected against short circuits and overcurrents, in accordance with local regulations.

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

**Always ensure solid earthing!**



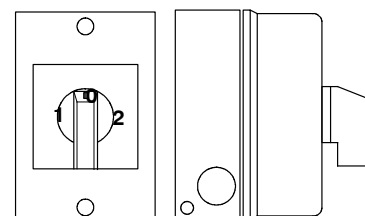
Used in combination with single-phase motors.



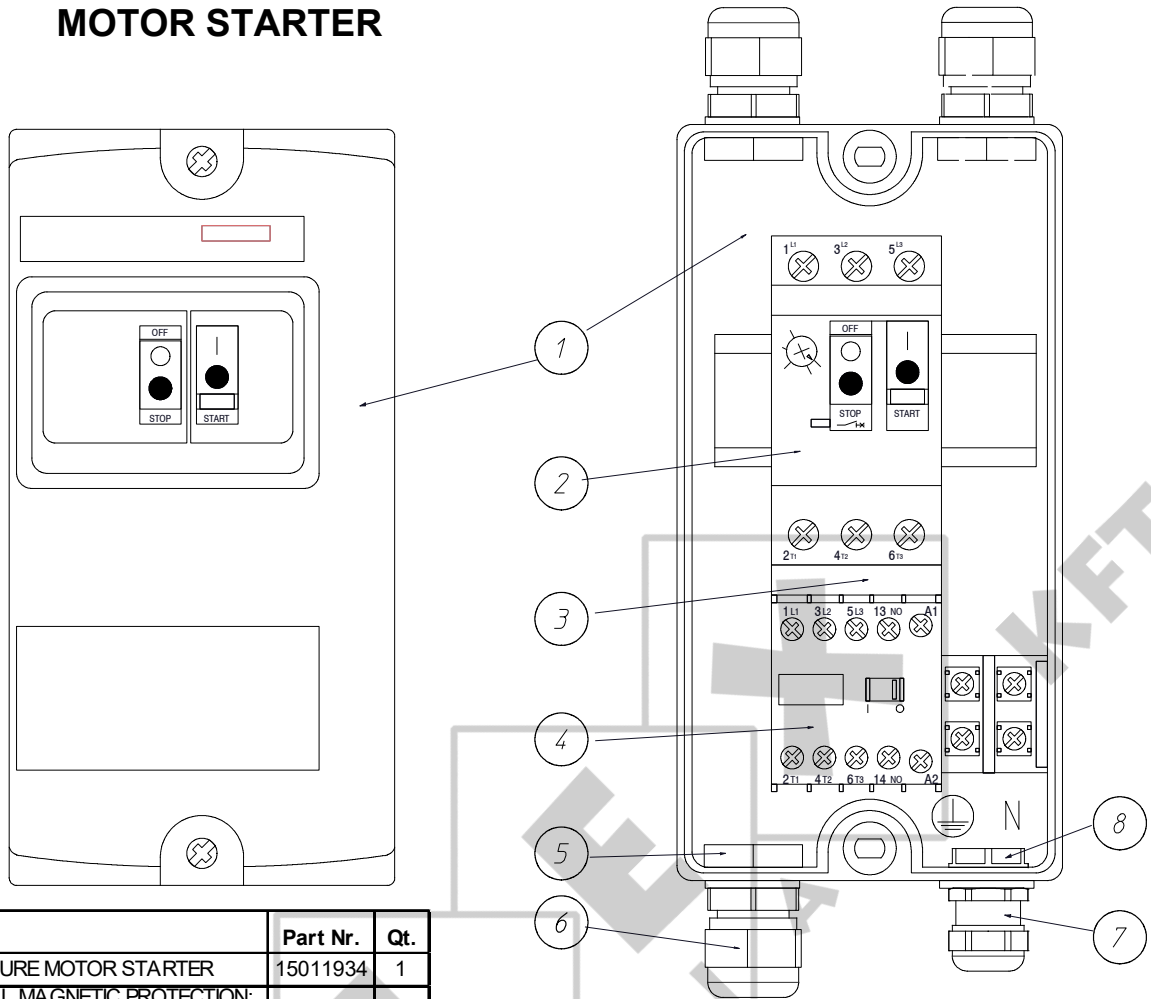
00101030	CONTROL PANEL FOR 1 WINCH MOTOR
00101048	CONTROL PANEL FOR 2 WINCH MOTORS
00101055	CONTROL PANEL FOR 3 WINCH MOTORS
00101063	CONTROL PANEL FOR 4 WINCH MOTORS
00101071	CONTROL PANEL FOR 5 WINCH MOTORS
00101089	CONTROL PANEL FOR 6 WINCH MOTORS

### OPTION: CONTROL SWITCH FOR WINCH - 00102327

(IN COMBINATION WITH THREE PHASE MOTORS)



# MOTOR STARTER



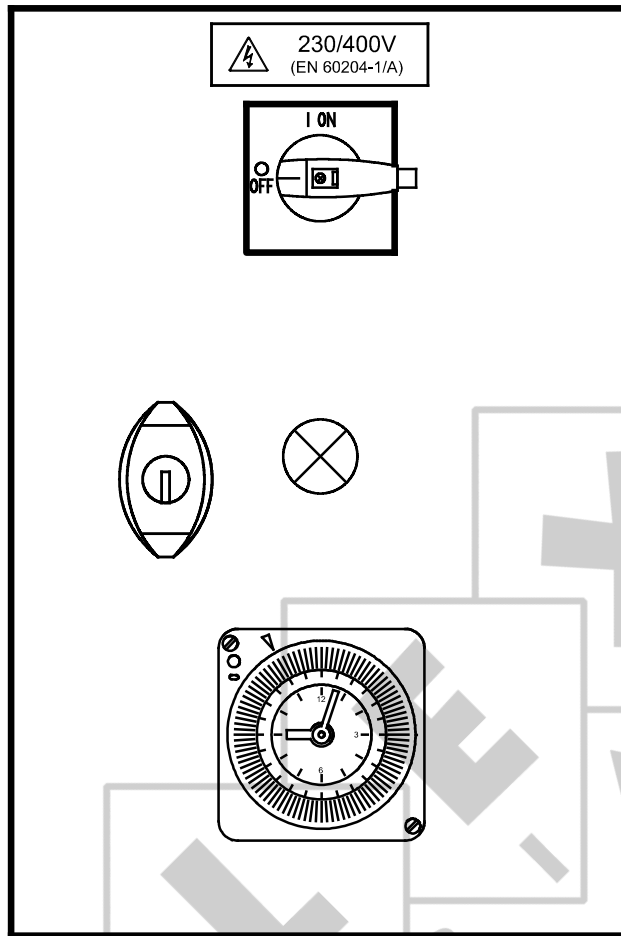
Key	Name	Part Nr.	Qt.
1	ENCLOSURE MOTOR STARTER	15011934	1
2	THERMAL MAGNETIC PROTECTION: See: Where used	-	1
3	MOUNT SOCLE GV2-AF01	15010291	1
4	CONTACTOR 3P+1NO 230VAC	15011926	1
5	CABLE RING NUT M20	15010440	3
6	CABLE RING V-TEC VM20 LGR	15010210	3
7	CABLE RING M16	10111755	1
8	CABLE RING NUT M16	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						
MOTOR STARTER	05001225	05001233	05001241	05001249	05001257	05001265
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 !**

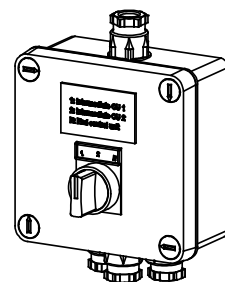
**CONTROL PANEL WITH TIME CLOCK - 00100685**



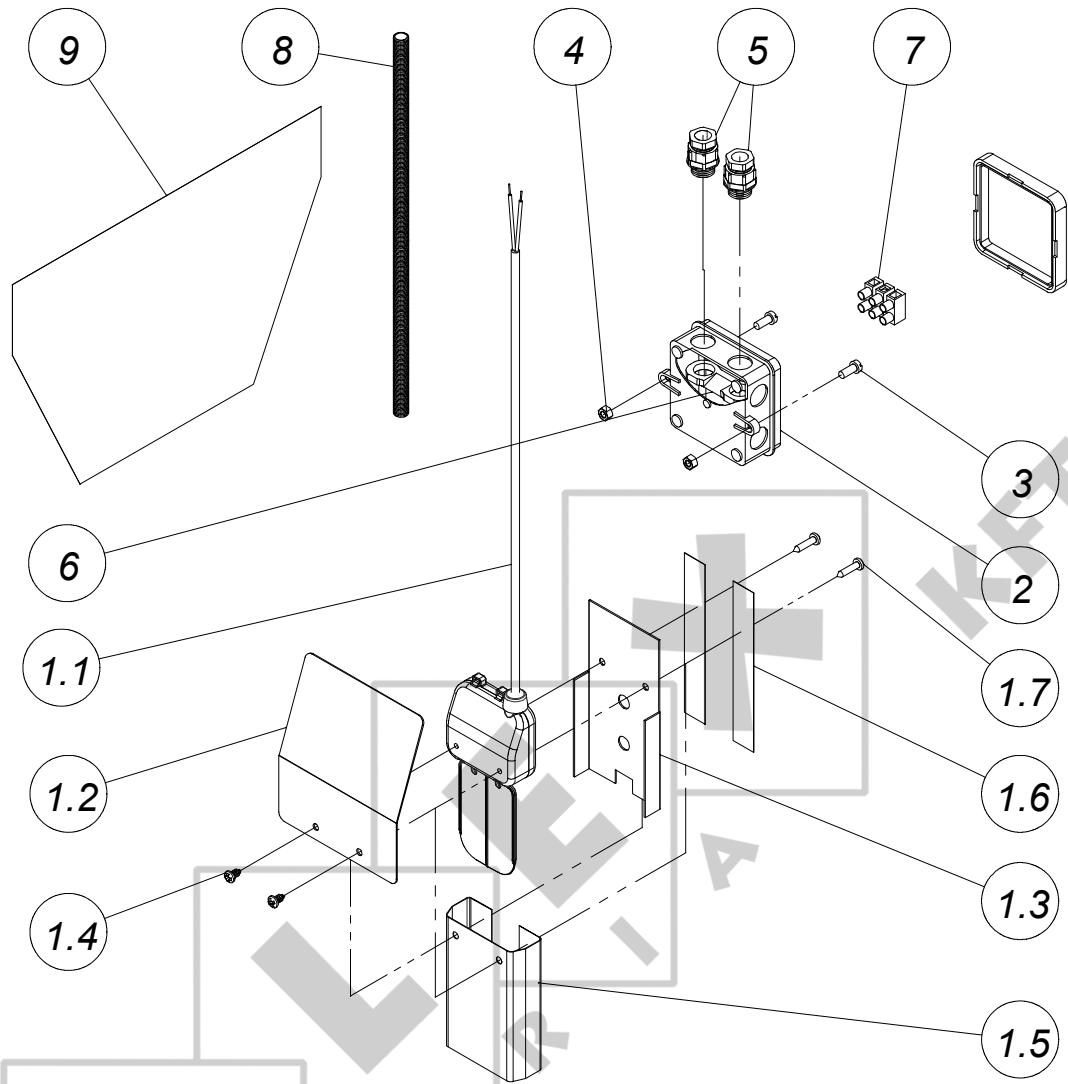
**BOX W/COUNTER - 00102905**



**OPTION : CONTROL PANEL  
INTERMEDIATE CONTROL UNIT  
- 05000922**



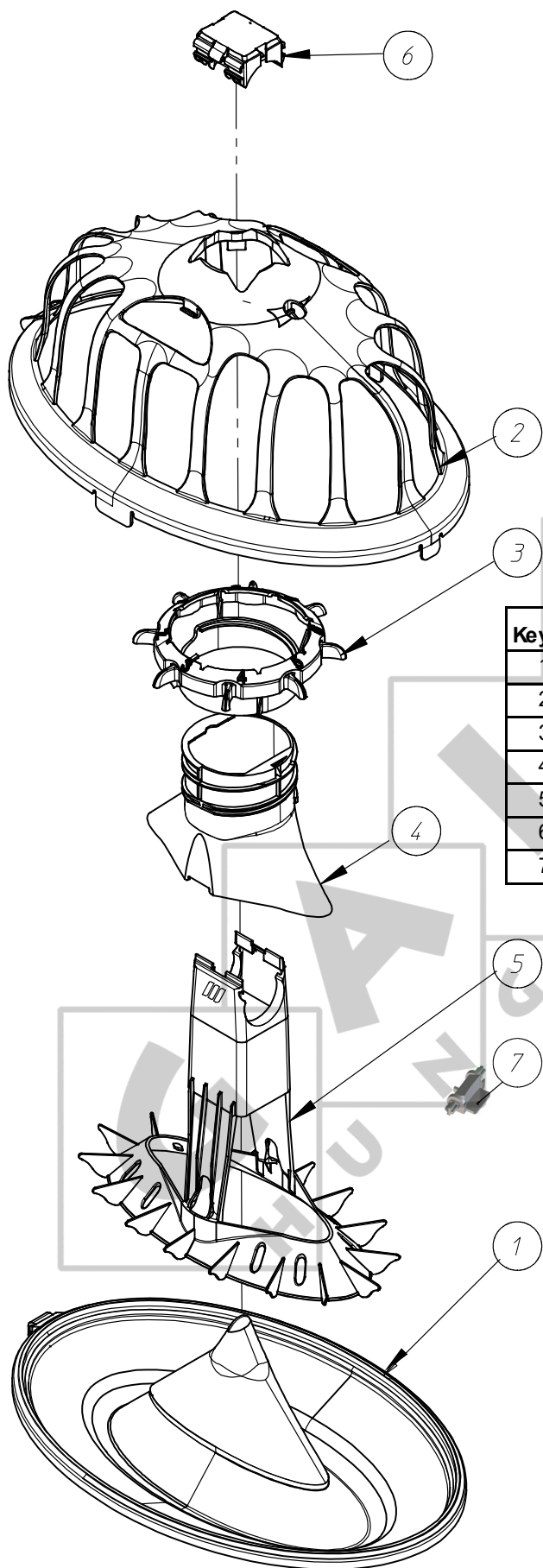
**MINIMUM SWITCH - 00201145**



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



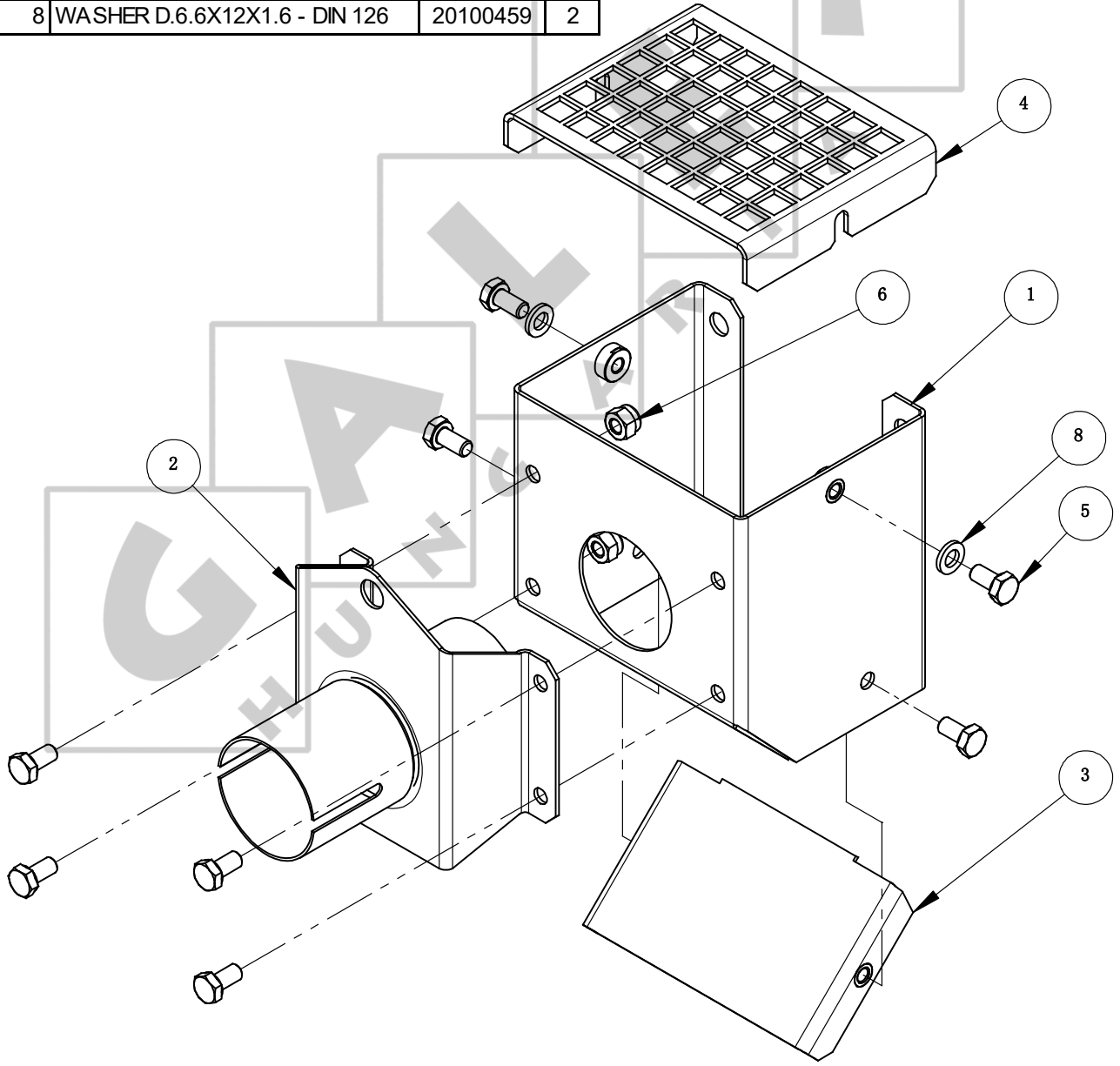
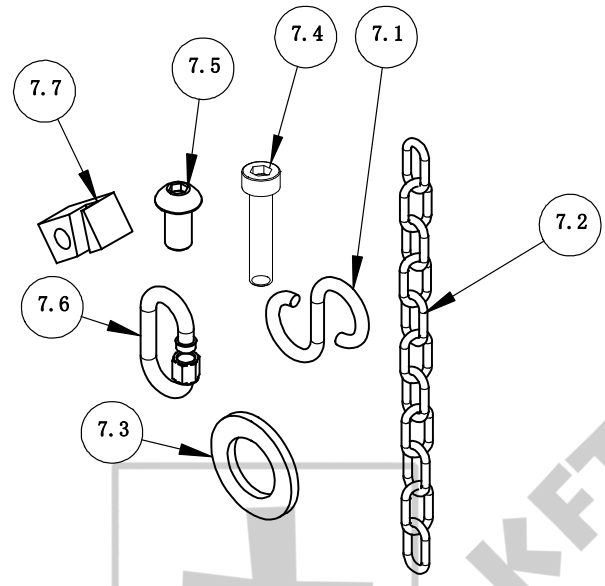
### PARTS FOR BROILER CAGE PAN



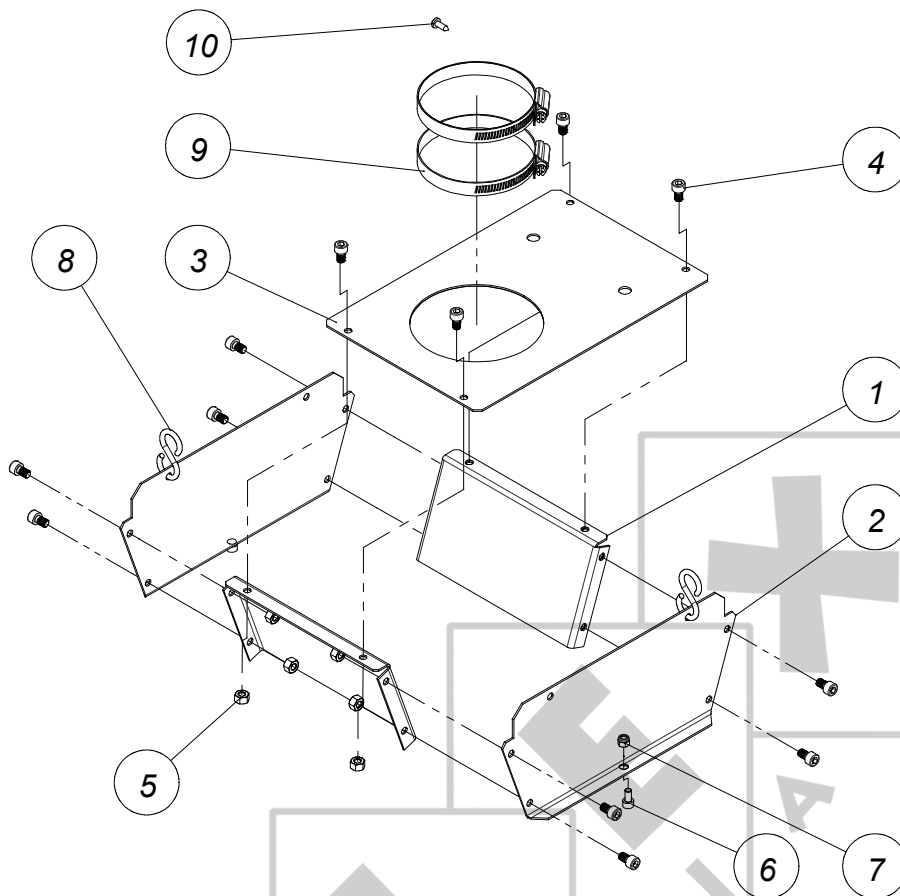
Key	Name	Part Nr.	Qt.
1	FEEDER PAN	00900001	1
2	GRILL	00900019	1
3	SHORT ADJUSTER RING	00900068	1
4	SKIRT	00900035	1
5	HAIKOO SUPPORT CONE F/ BROILER CAGE	00901769	1
6	FLAT TOP SUPPORT	00901793	1
7	HINGE CLICK	00901389	1

**END UNIT - 00901827**

Key	Name	Part Nr.	Qt.
1	OVERFLOW BOX	10204998	1
2	TUBE BRACKET ASS'Y	10205771	1
3	BOTTOM PLATE	10204980	1
4	PROTECTION PLATE	10110237	1
5	BOLT M6X10 - DIN 933-8.8	20100160	8
6	LOCKNUT M6 - DIN 985	20100400	4
7	HARDWARE KIT	10107431	1
7.1	"S" HOOK	05000013	1
7.2	CHAIN Ø2.5 LG=149MM	10107449	1
7.3	WASHER Ø34X20X3 - DIN 126	20100483	1
7.4	SOCKET CAP SCREW M6X35	20102158	1
7.5	FLAT ROUND HEAD SCREW M8X16	20104196	1
7.6	SCREW LINK Ø3.5	10203156	1
7.7	DRIVE BLOCK	10100782	1
8	WASHER D.6.6X12X1.6 - DIN 126	20100459	2

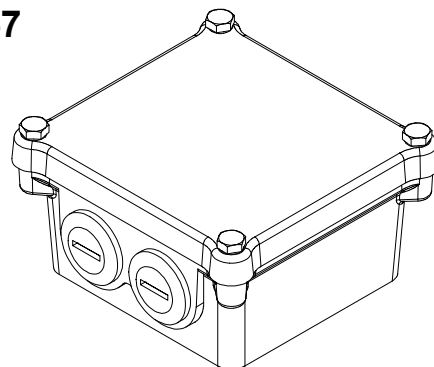


### EXTENSION FEED INTAKE BOOT - 00901470

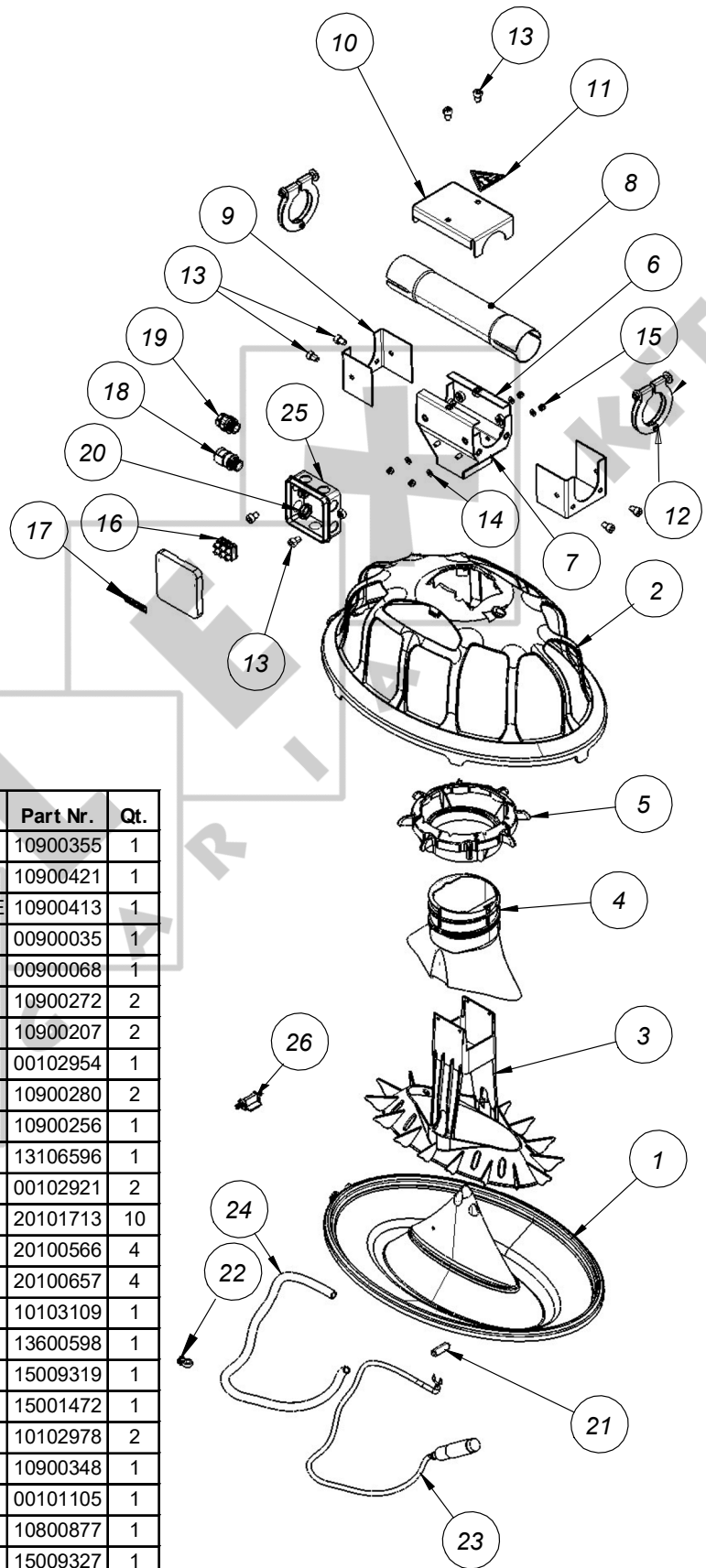


Key	Name	Part Nr.	Qt.
1	SIDE PLATE EXTENSION BOX	10900397	2
2	FRONT&BACK PLATE EXTENSION BOX	10900389	2
3	TOP PLATE EXTENSION BOX	10900405	1
4	NUT M6 - DIN 934	20100210	12
5	SOCKET CAP SCREW M5X10 - DIN 912	20103149	2
6	LOCKNUT M5 - DIN 985	20100392	2
7	"S" HOOK	05000013	2
8	SOCKET CAP SCREW M6X10 - DIN 912	20101713	12
9	HOSE CLAMP Ø90-110	00105726	2
10	PARCKER SCREW 8X1/2"	20100525	1

### FLEXIBLE CONNECTION BOX - 00106757

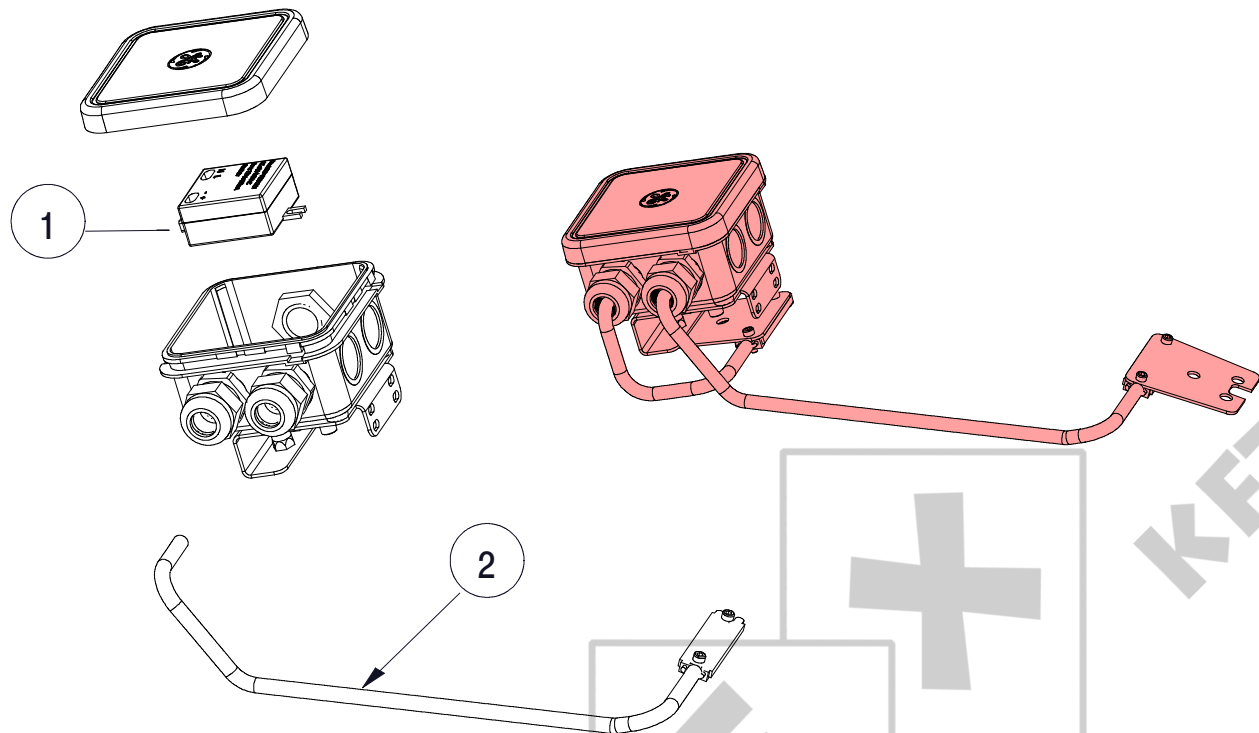


### HAIKOO CONTROL UNIT F/ BROILER CAGE - 00901785



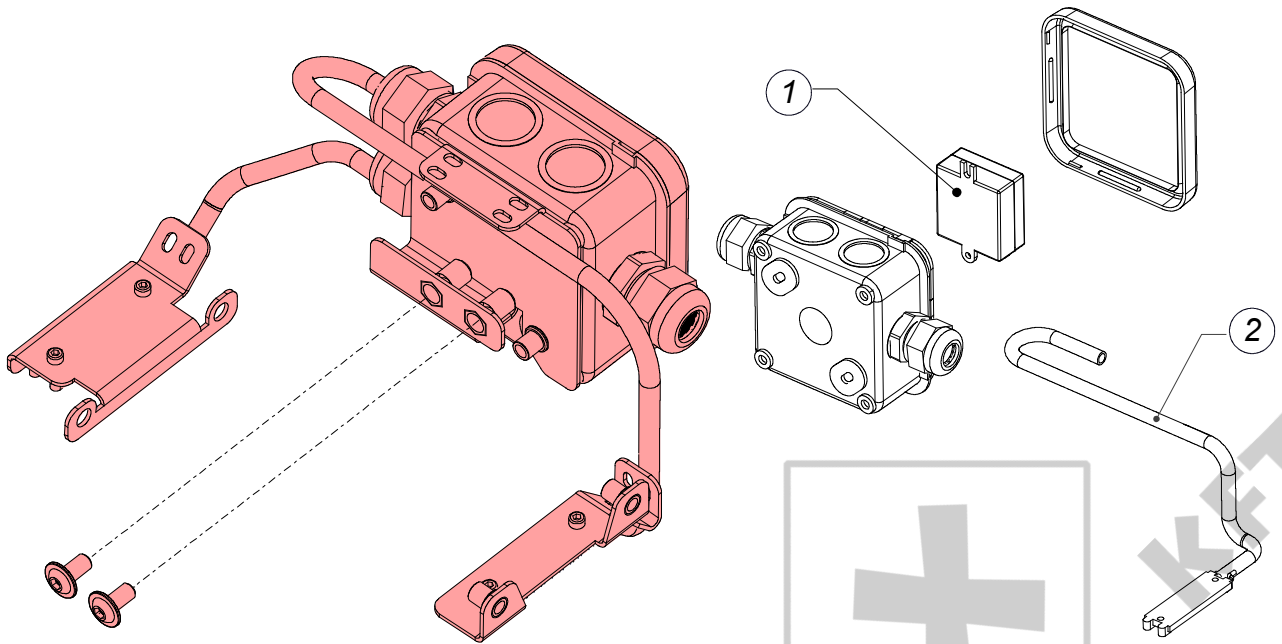
Key	Name	Part Nr.	Qt.
1	FEEDER PAN FOR SENSOR	10900355	1
2	GRILL CONTROL UNIT F/BROILER CAGE	10900421	1
3	SUPPORT CONE CONTROL UNIT F/BROILER CAGE	10900413	1
4	SKIRT	00900035	1
5	SHORT ADJUSTER RING	00900068	1
6	SIDE PLATE INTERM. DROP BOX	10900272	2
7	FRONT PLATE DROP BOX	10900207	2
8	TUBE W/DROP HOLE (2 EXP. ENDS)- L=240MM	00102954	1
9	SIDE PLATE INTERM. DROP BOX	10900280	2
10	TOP CLOSURE ASS'Y F/DROP BOX	10900256	1
11	DECAL - HANDS WARNING	13106596	1
12	TUBE CLAMP ASSEMBLY Ø45 MM	00102921	2
13	SOCKET CAP SCREW M6 X 10 - DIN 912	20101713	10
14	WASHER 4.3x9x0.8	20100566	4
15	LOCKNUT M4-DIN 985	20100657	4
16	CLAMP STROKE 27 20 6E/3	10103109	1
17	ROXELL DECAL - 42 x 10	13600598	1
18	FLEXTUBE CONNECTOR	15009319	1
19	CABLE RING PG 9	15001472	1
20	CABLE RING NUT PG 9 poly. G.V.	10102978	2
21	AXLE FOR SENSOR	10900348	1
22	HINGE JOINT	00101105	1
23	SENSOR CA18CLN12TC1547-3-30SEC 230VAC	10800877	1
24	FLEXTUBE	15009327	1
25	HANDY BOX OBO A8	15000037	1
26	HINGE CLICK	00901389	1

### LED LIGHT KIT FOR CONTROL UNIT HAIKOO - 00906530



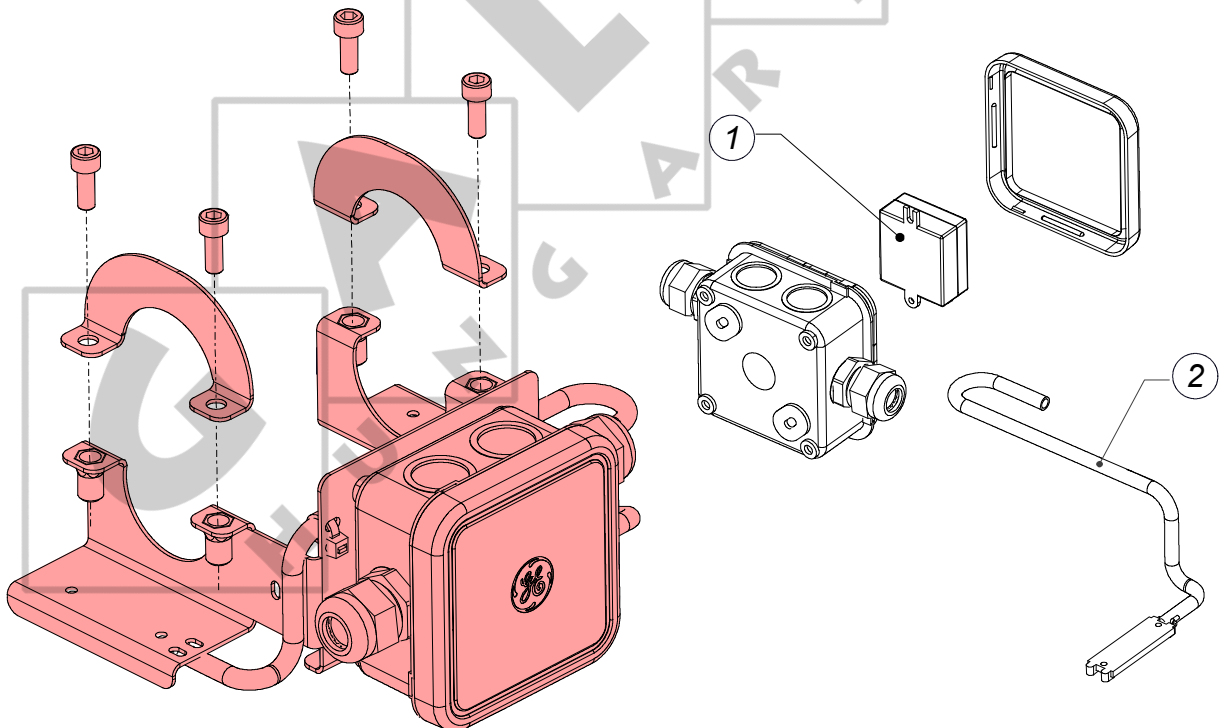
Key	Name	Part Nr.	Qt.
1	POWER SUPPLY 12VDC - 6W	10112245	1
2	LEDBAR - 100LUMEN - LG 450MM	10112237	1

### LED LIGHT KIT FOR CONTROL UNIT - 00108158



Key	Name	Part Nr.	Qt.
1	POWER SUPPLY 12VDC - 6W	10112245	1
2	LEDBAR - 100LUMEN - LG 550MM	10112237	1

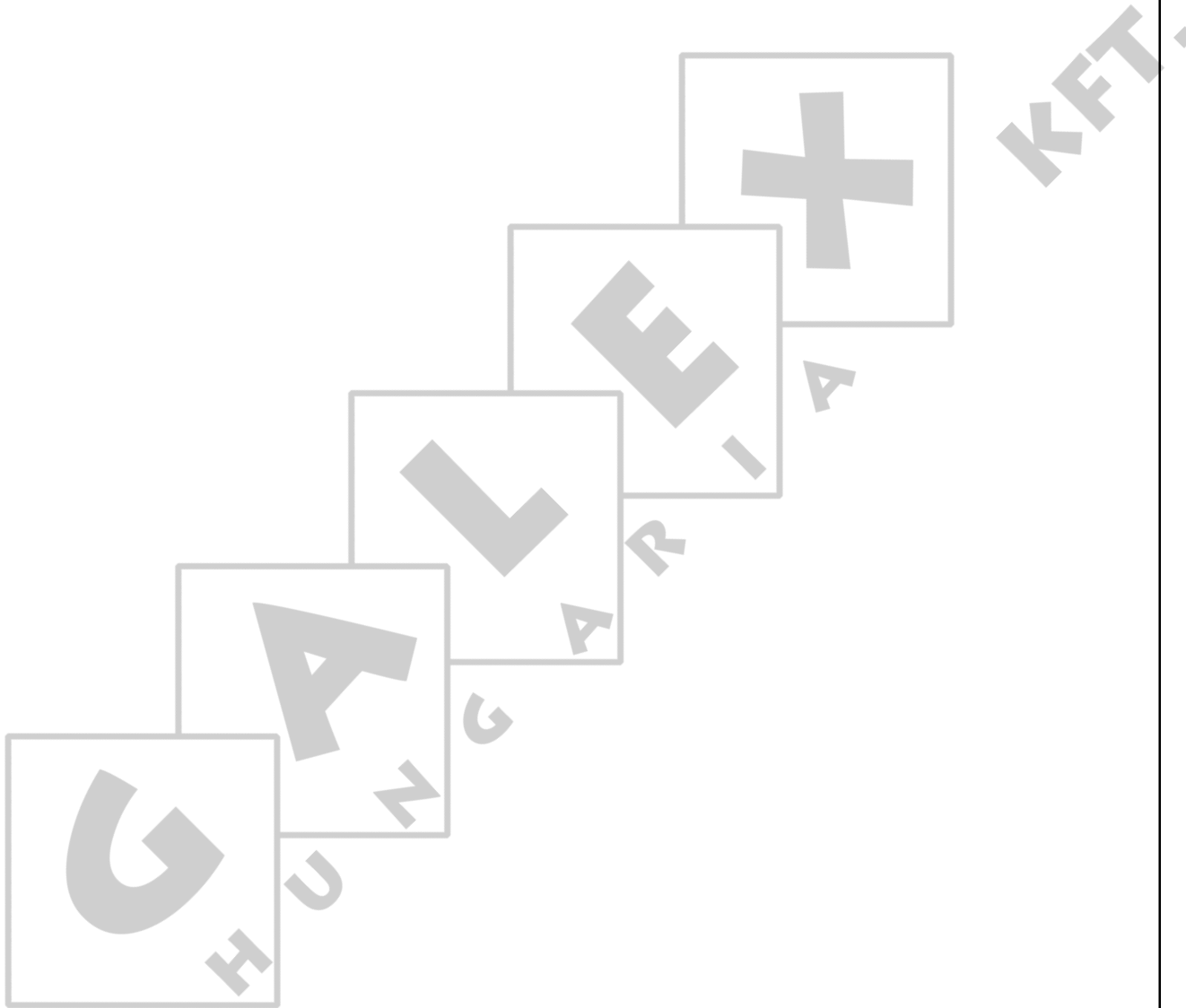
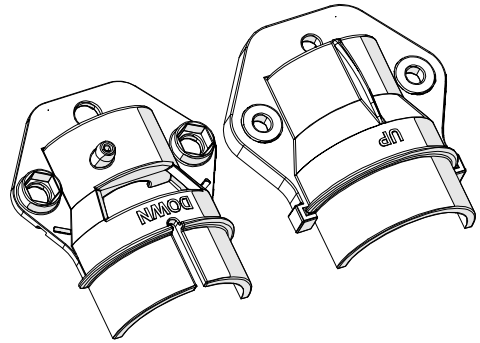
### LED LIGHT KIT F/ INTERM. CONTROL UNIT - 00108166



Key	Name	Part Nr.	Qt.
1	POWER SUPPLY 12VDC - 6W	10112245	1
2	LEDBAR - 100LUMEN - LG 550MM	10112237	1

**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 230VAC	00108952	
DOUBLE FEED INTAKE BOOT	00106518	



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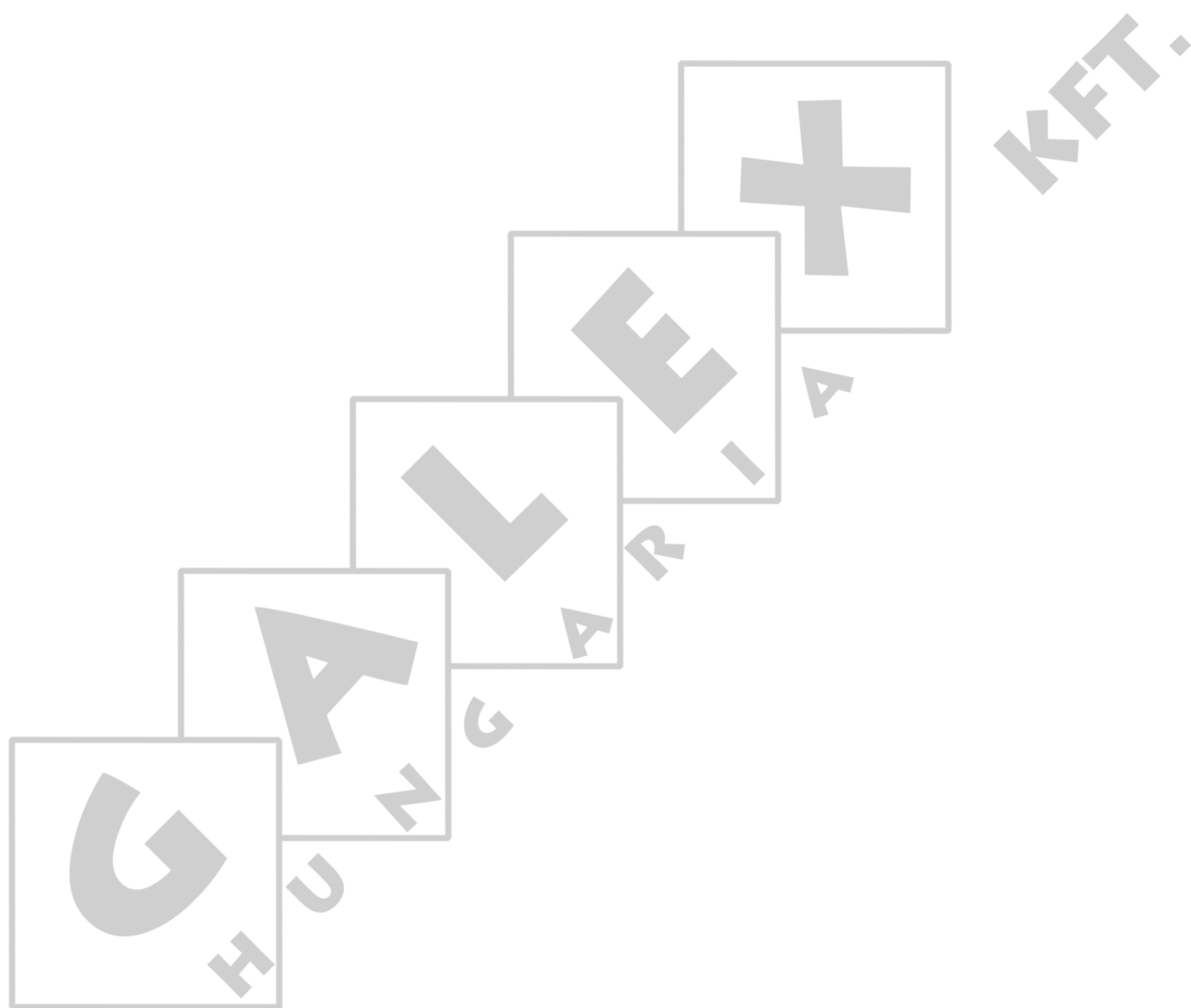
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# PART III

## INSTALLATION INSTRUCTIONS





## GENERAL SAFETY RULES

### LINE SYSTEMS



**DANGER**

### IMPORTANT

Carefull 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 **SE-RIOUS INJURIES** or even **DEATH**.

## TOOLS

1. LOCK GRIP PLIERS



2. HEAVY HAMMER, LIGHT HAMMER



3. MULTIGRIP PLIERS



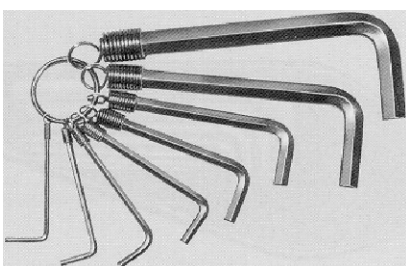
4. DRILLING MACHINE



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



6. SET OF HEX WRENCHES



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



8. CABLE CUTTING PLIERS



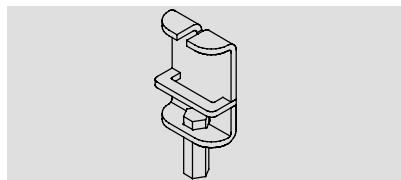
9. SET OF DRILLS (METAL Ø 3-13) & CONCRETE



10. GRINDING MACHINE



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



13. SOCKET SCREW DRIVERS - 19700236



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)



15. HOLE SAW HOLDER - 09700071



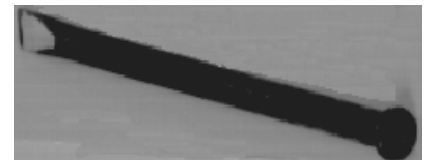
16. OPENING TOOL - 09701814



17. TUBE CUTTER



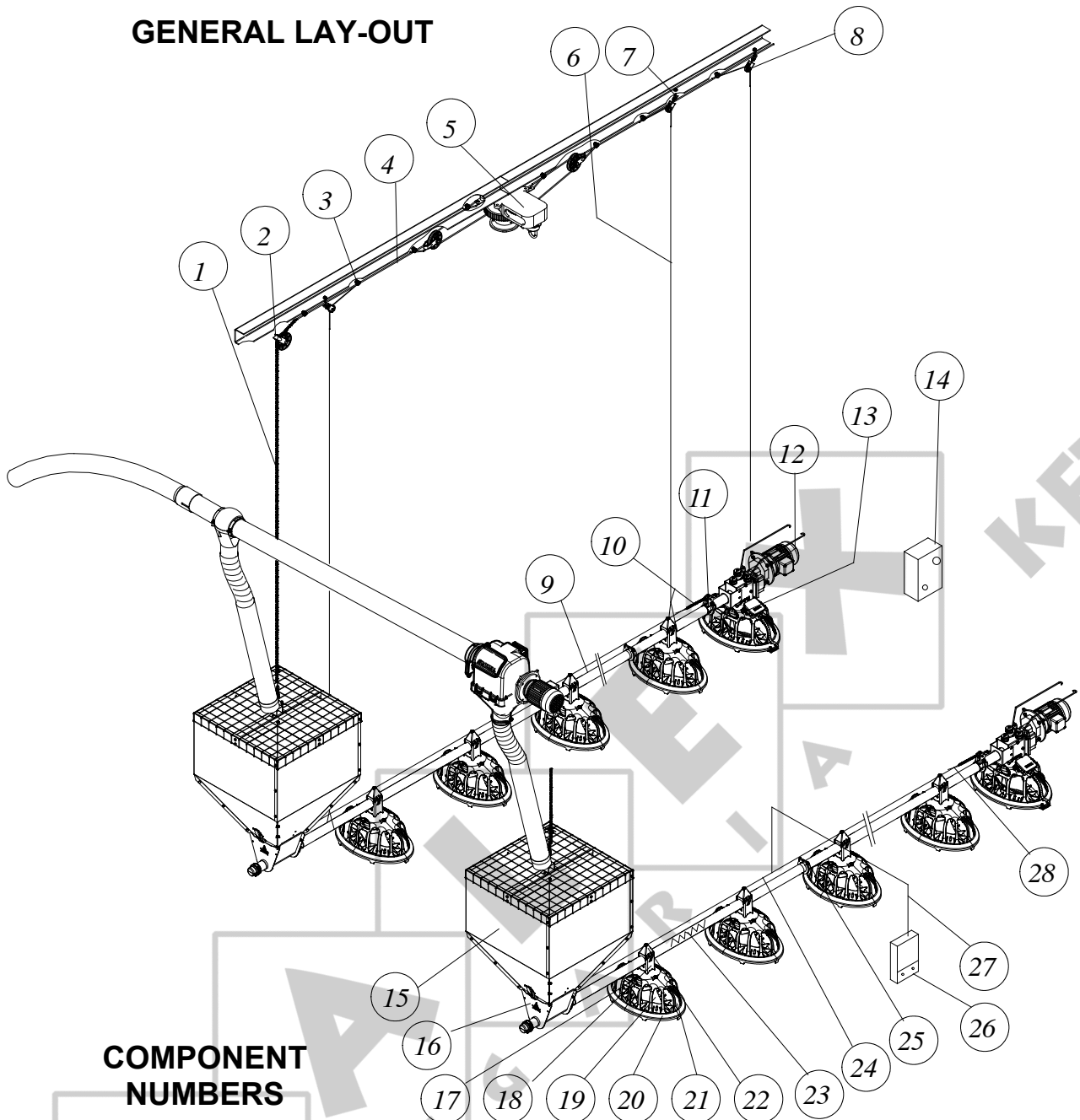
18. LONG CHISEL



20. ELECTRICAL HEATED KNIFE (OPTIONAL)



### GENERAL LAY-OUT



### COMPONENT NUMBERS

Key	Name	Number
1	CHAIN DIAM. 3,5 mm	00100750
2	HEAVY DUTY PULLEY	00100412
3	CABLE CLAMP NO. 5	00100545
4	CABLE DIAM. 5 mm	00100388
5	HAND OPERATED CENTR. WINCH	00102368
6	SUSPENSION CORD	00100610
7	SCREW HOOK 90 mm	05000872
	SCREW HOOK 160 mm	05000237
8	SMALL PULLEY WITH STAINLESS STEEL HOOK	00104349
9	TUBES 2.9 M - 0 HOLES	
10	SPRING	00400077
11	ANCHOR BRACKET	00102681
12	POWER UNIT	SEVERAL
13	CONTROL PAN	SEVERAL
14	MOTOR STARTER	SEVERAL
15	100KG HOPPER	00100602
16	FEED INTAKE BOOT POULTRY	00106500

Key	Name	Number
16	POULTRY INTAKE BOOT WITH SENSOR - 230 V AC	00108952
	POULTRY INTAKE BOOT WITH SENSOR - 24 V DC	00108950
17	SHORT ADJUSTER RING	00900068
18	SUPPORT CONE	00900027
	SUPPORT CONE HB	00905478
19	SKIRT	00900035
20	GRILL	00900019
	12 STRUT GRILL	00901330
21	FEEDER PAN	00900001
	FEEDER PAN HB	00905470
22	TOP SUPPORT	00900050
23	AUGER	00100974
24	CABLE - 1/16" - 1.5MM - 250M	00106839
	CABLE - 1/16" - 1.5MM - 500M	00106831
25	TUBE CLAMP ASSY DIAM. 45 mm	00102921
26	POULTRY PERCH GUARD	00105692
27	CABLE FOR PERCH GUARD - 50M	00106847
	CABLE FOR PERCH GUARD - 100M	00106855
28	DUPLEX CABLE CLAMP ST. ST. - 3MM	00106945

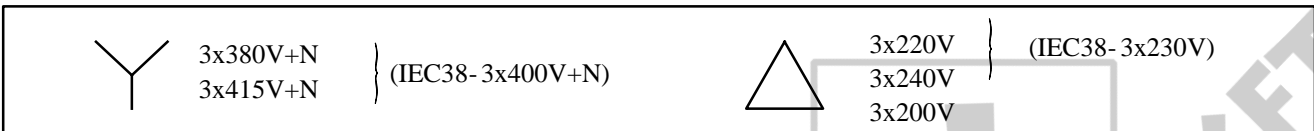
## ELECTRICITY .... WATCH OUT !

### 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**

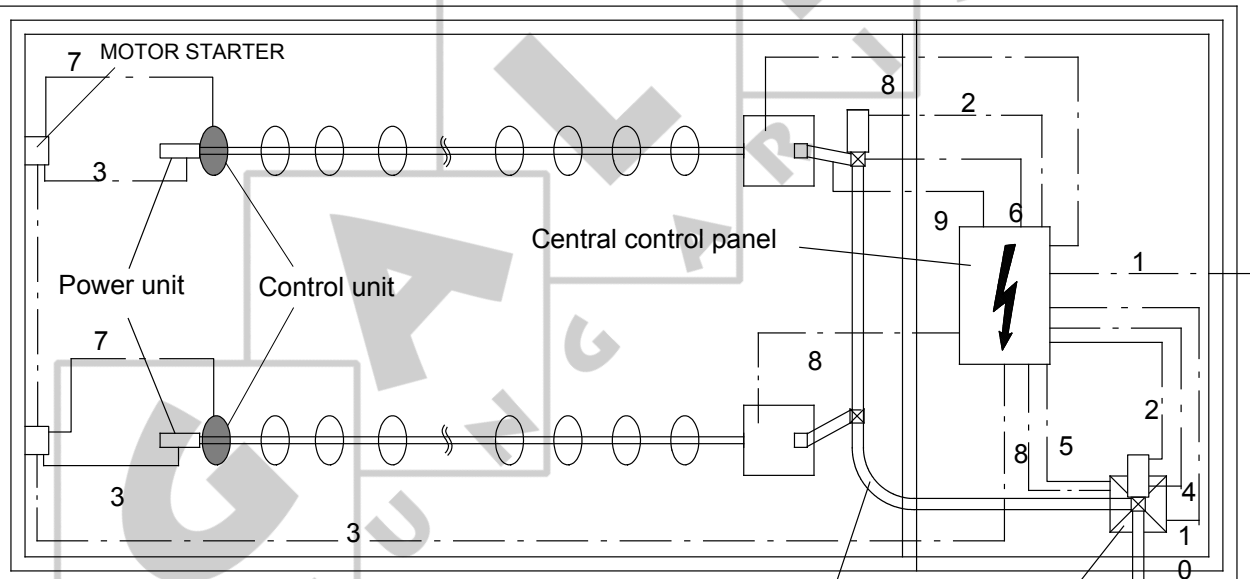


**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-41**

## ELECTRICAL WIRING DIAGRAM

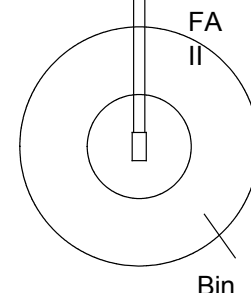
**SEALED PARTS IN CONTROL PANELS MUST UNDER NO CONDITION WHATSOEVER BE UNSEALED !**

**ONLY THE CONNECTION DIAGRAM IS SHOWN IN THE ASSEMBLY GUIDE. WIRING DIAGRAMS ARE ALWAYS SUPPLIED WITH THE CONTROL PANELS.**



{ (3x400V+N IEC 38 ) { (3x230V IEC 38 )  
 { (3x380V+N / 3x415V+N { (3x200V / 3x220V ) / 3x240V).

1. Supply cable(4x2,5+2,5).
2. Cable Flex-Auger power units (3x2,5+2,5).
3. Cable power units (3x2,5+2,5).
4. Cable max. sensor weigher (4x1,5)+ safety switch FA II (2x1,5).
5. Cable impulse switch weigher (2x0,75+0,75).
6. Cable safety switch Flex-Auger I(2x1,5)
7. Cable sensor control unit (2x1,5).
8. Cable min. switch hopper (2x1,5)+ safety switch +
9. Cable max. sensor Flex-Auger (4x1,5).
10. Cable min. sensor weigher (4x1,5).



**FIGURE 1.**

# THE SUSPENSION

The suspension of the system is very important: it must be done carefully and accurately! Closely study the instructions before starting the suspension.

- **IMPORTANT:** If there is a layer of insulation, first install the necessary reinforcements!



- Each suspension point (small pulley) should be able to hold a 100 kg burden.
- Each fixing of the heavy duty pulley should be able to hold a burden of 3 X F.

**DANGER**

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

- On hopper suspension
- On standard pulley
- On power unit suspension

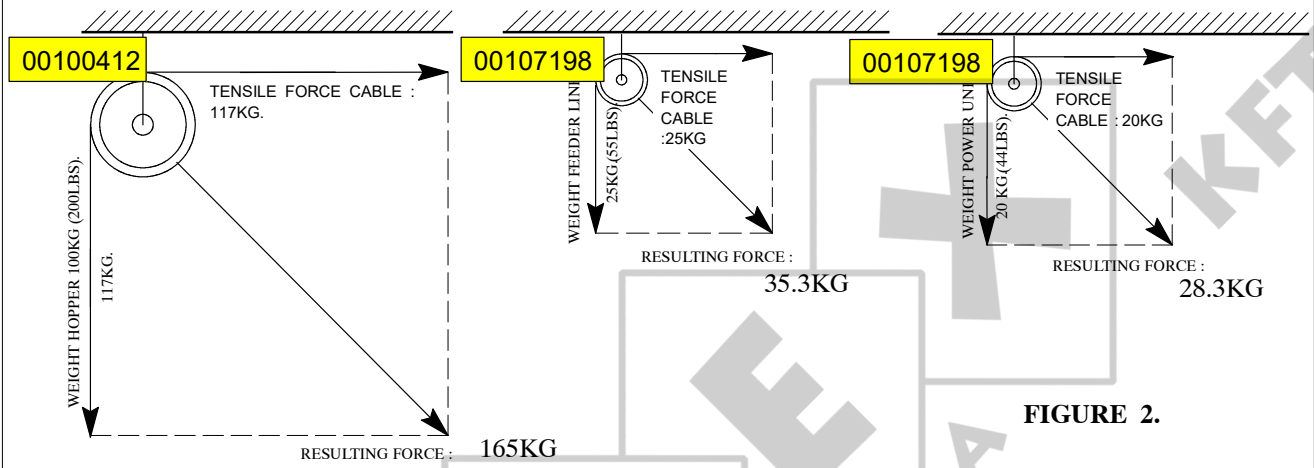


FIGURE 2.

## SUSPENSION COMPONENTS

**In a wooden beam:**

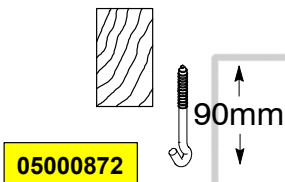


FIGURE 3.

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.

**Wooden beam + insulation:**

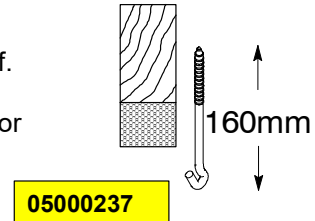


FIGURE 4.

**In a concrete beam:**

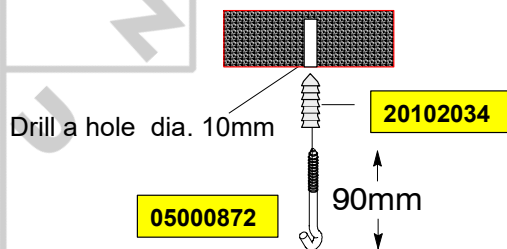


FIGURE 5.

**In a metal girder:**

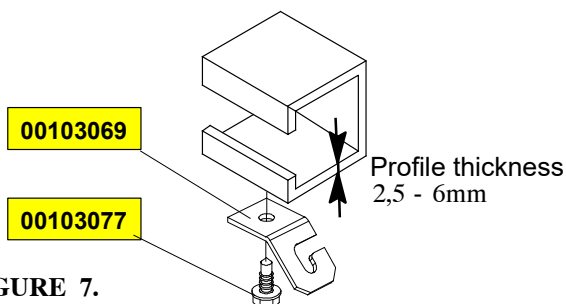


FIGURE 7.

**In metal I girder:**

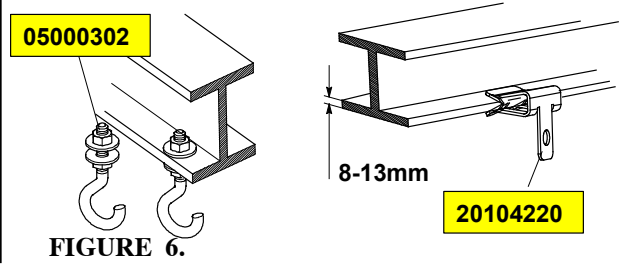


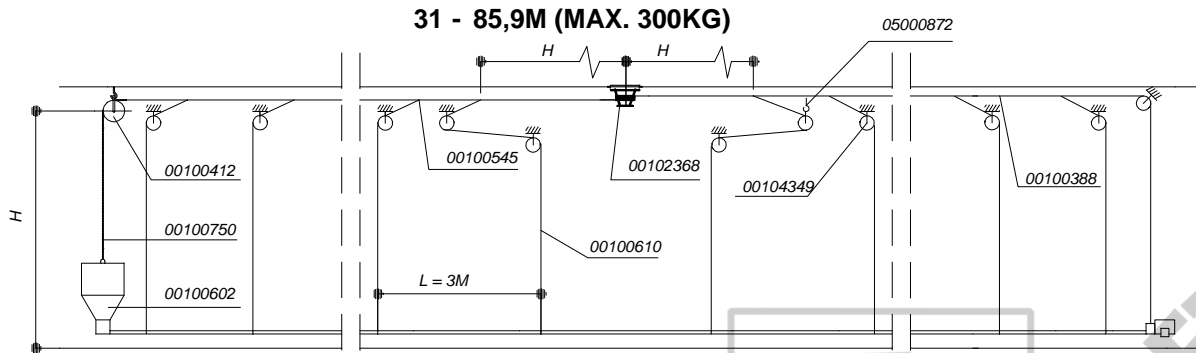
FIGURE 6.

## DRAWINGS OF SUSPENSION SYSTEM WITH CENTRAL WINCH

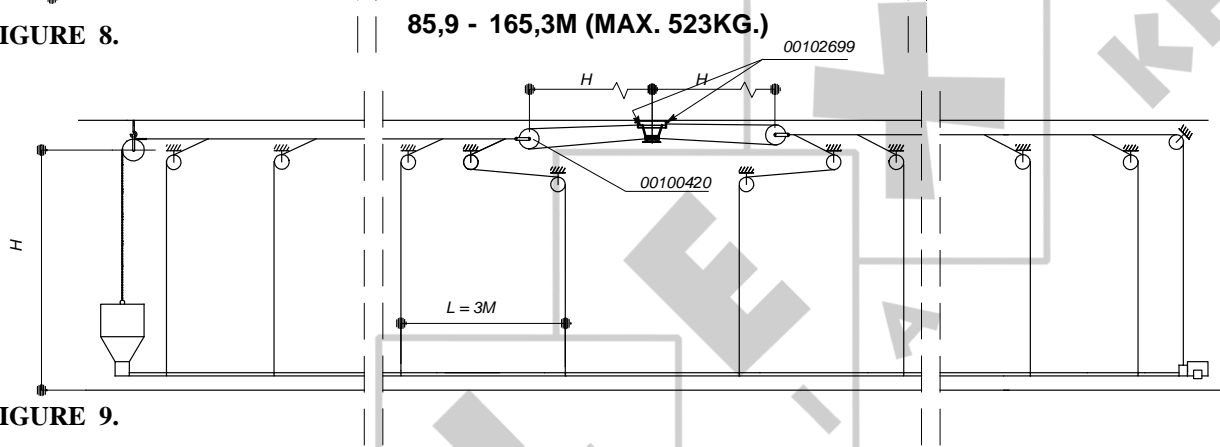


**FOR YOUR SAFETY : NEVER MAKE THE INSTALLATIONS LONGER THAN THE RECOMMENDED LENGTH.**

**DANGER**



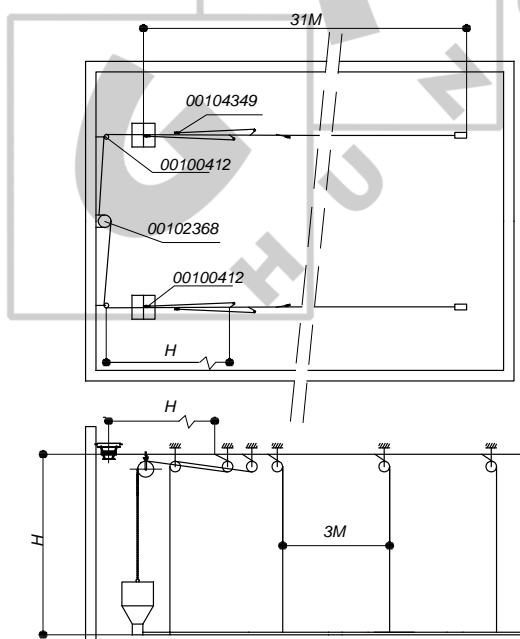
**FIGURE 8.**



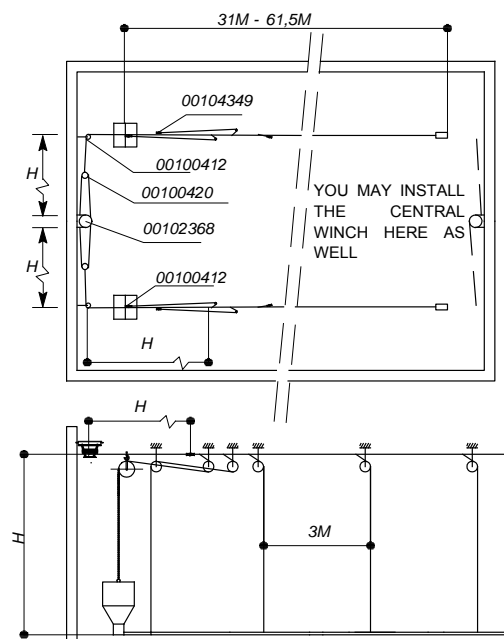
**FIGURE 9.**

00100412	HEAVY DUTY PULLEY	00100750	CHAIN DIAM. 3,5MM
00104349	SMALL PULLEY WITH STAINLESS STEEL HOOK	00600610	SUSPENSION CORD
00102368	HAND OPERATED CENTRAL WINCH	00100420	SINGLE EYE PULLEY
00100388	CABLE DIAM. 5MM	05000982	SCREW HOOK 90MM
00100545	CABLE CLAMP NR. 5	00100602	100KG HOPPER
10102699	CABLE CONNECTION SET		

## TWO SHORT FEEDER LINES WITH ONE CENTRAL WINCH



**FIGURE 10.**



**FIGURE 11.**



## SUSPENSION FOR FEEDER LINE

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

**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.



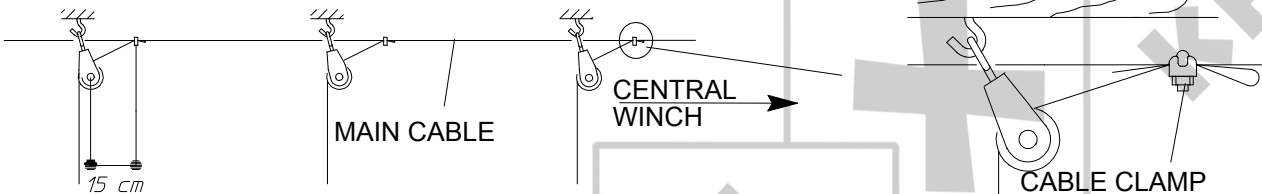
Alternatives : see page 7.

Fix the suspension points (*well aligned !*) every 3m. Hook openings point away from the central winch.

FIGURE 13.

**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 14.

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.**

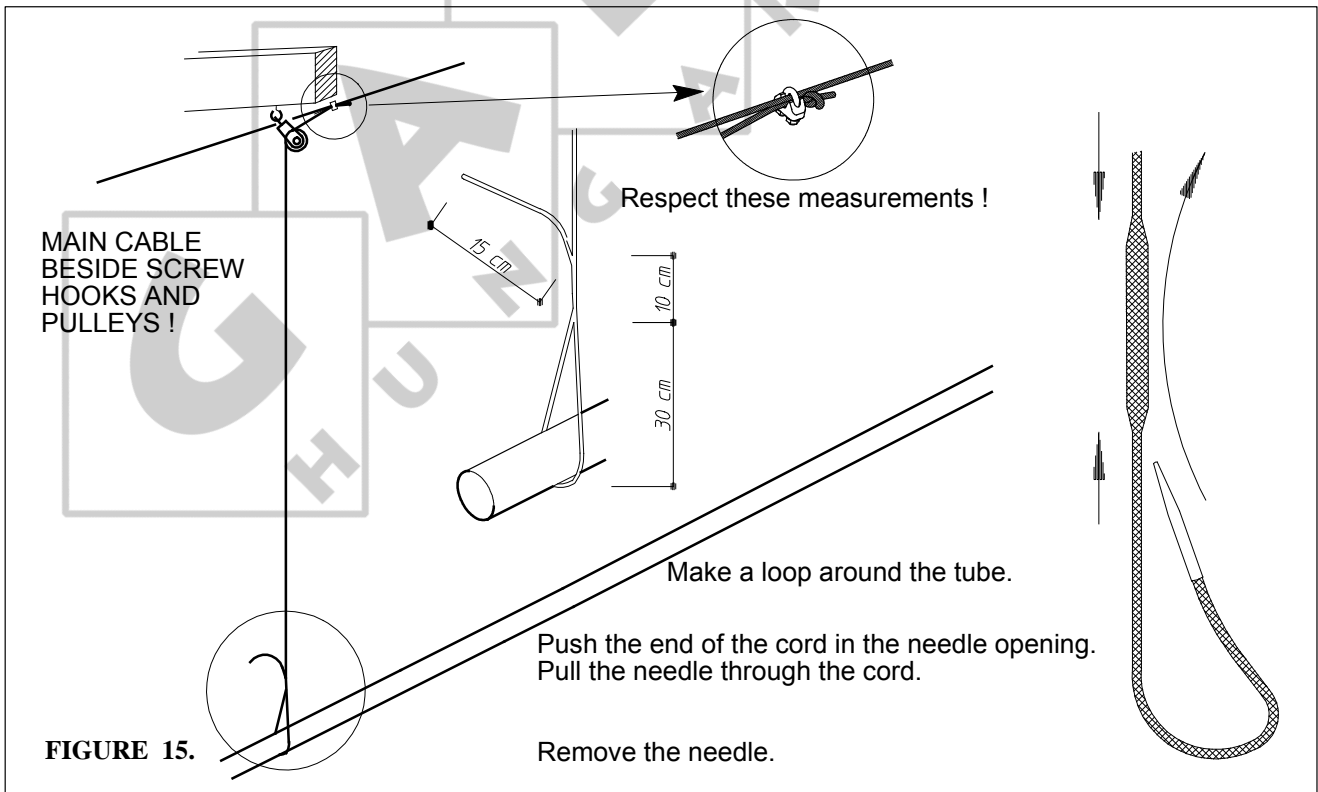


FIGURE 15.

**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 :**

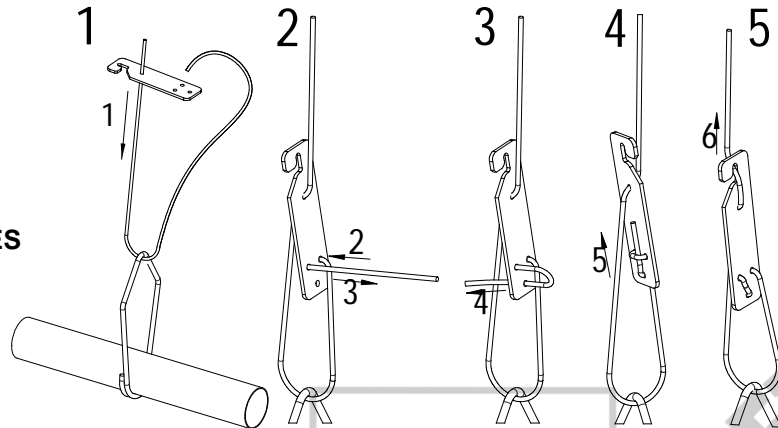
As an option, you can suspend the line with cable 3/32." (00106887/250M - 00106895/500M).

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.

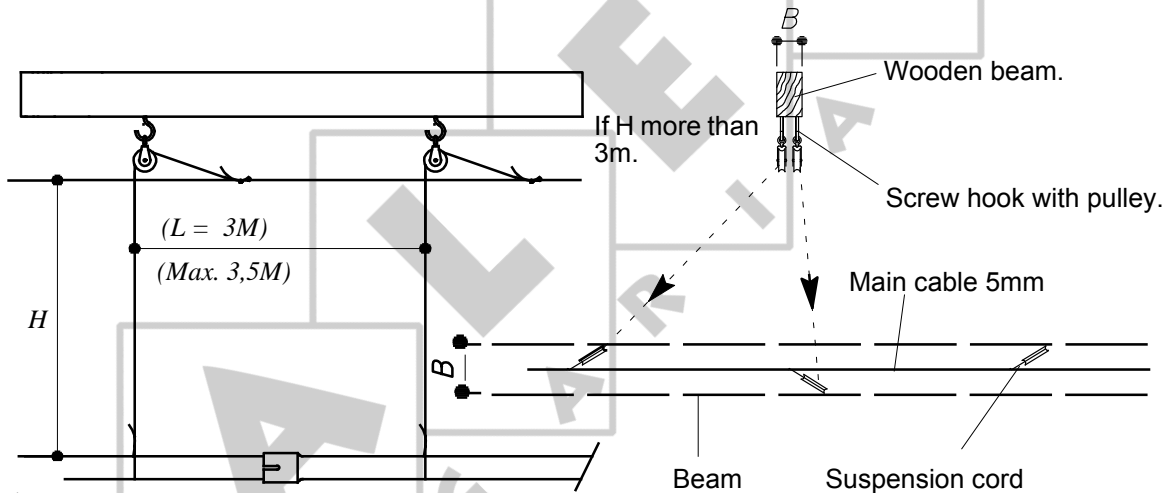
Fix the suspension cable as follows :

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



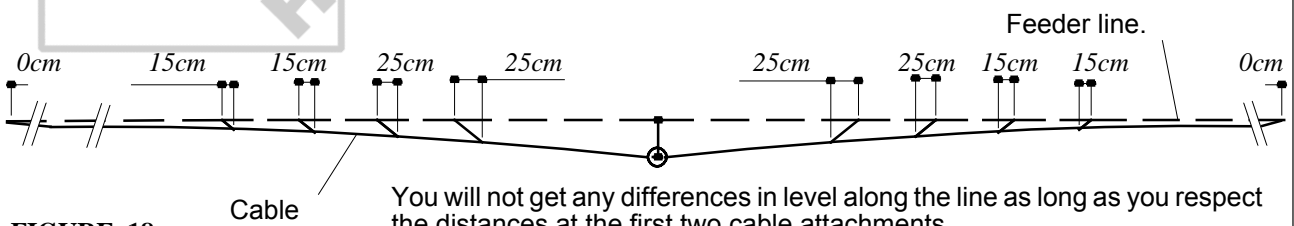
**FIGURE 16.**

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 17.**

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. 17.)



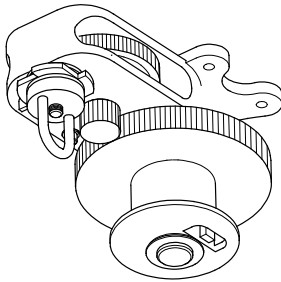
**FIGURE 18.**

## CENTRAL WINCH INSTALLATION



**IMPORTANT : INSTALL WINCH ABOUT IN THE MIDDLE, AT THE FIRST FIXATION IN THE DIRECTION OF THE 100KG HOPPER\*, NOT AT THE END OF A LINE ! MAXIMUM LIFTING POWER : 800KGS.**

**THE TRACTION OF THE WINCH IS 800 KG. INSTALL THE WINCH AT A SOLID SPOT IN THE ROOF CONSTRUCTION. REINFORCE WHEN NECESSARY.**



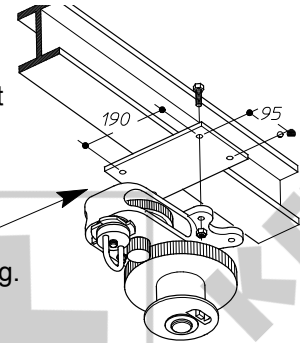
**FIGURE 19.**

 = HAND OPERATED CENTRAL WINCH.

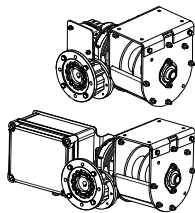
Roxell supplies the hand operated winch without mounting plate and bolts/nuts.

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.



Winching up speed :  
1m/minute.



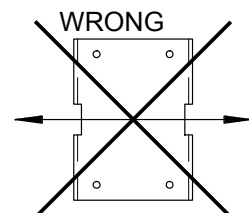
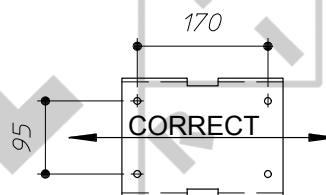
Install the motor after finishing the installation.

**FIGURE 20.**



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

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



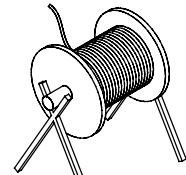
Fix the winch to the plate with bolts and locknuts.

## 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.**

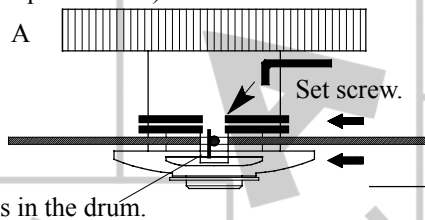
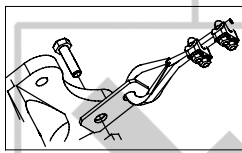


- Start at the end of the circuit.
- Hang the roll of cable in a support to prevent torsion when unrolling the cable.
- Pull the cable through the first pulley.
- Unroll the cable towards the winch until you have the required length.

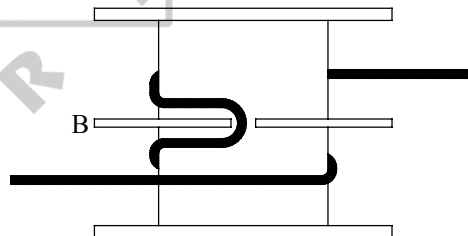


Pull the main cable through the bottom hole of the drum.

- **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).



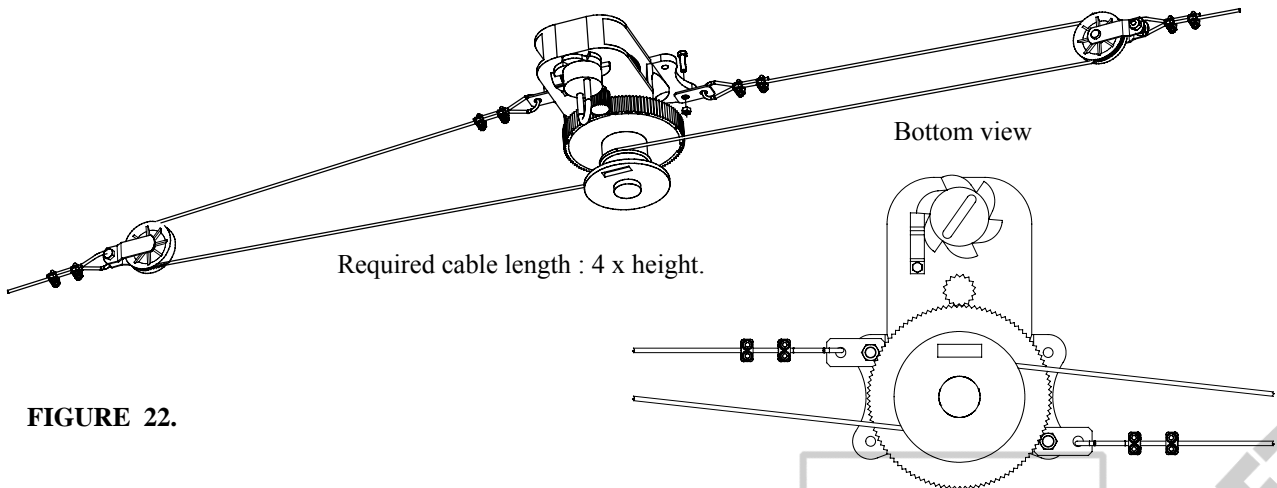
- Guide the main cable through the winch.
- Hook the cable on the drum flange.
- Make **4 full turns** on the drum, guide the cable against the drum flange and make sure that windings touch each other.



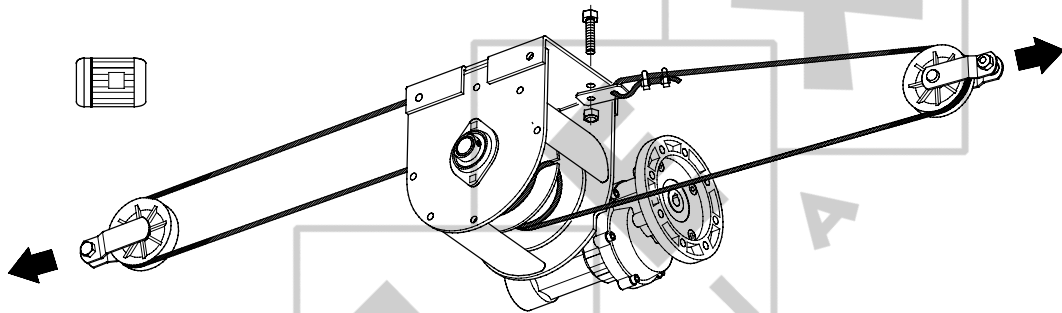
**FIGURE 21.** - Now you can start the complete suspension of the system

**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**



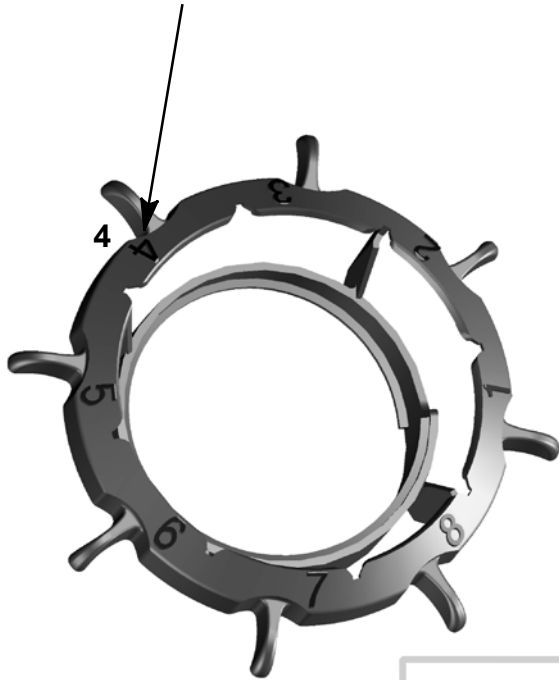
**FIGURE 22.**



**FIGURE 23.**

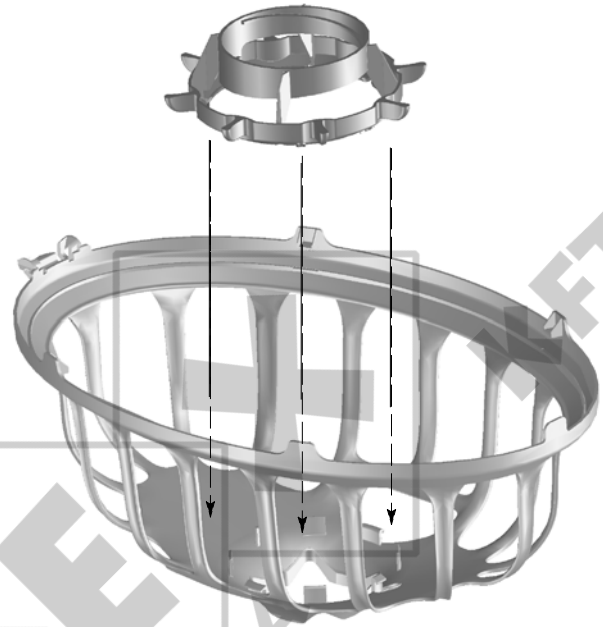
## TO INSTALL THE LINE TO INSTALL THE FEEDER PANS

Choose a position of the feed level ring  
(our example = position 4)



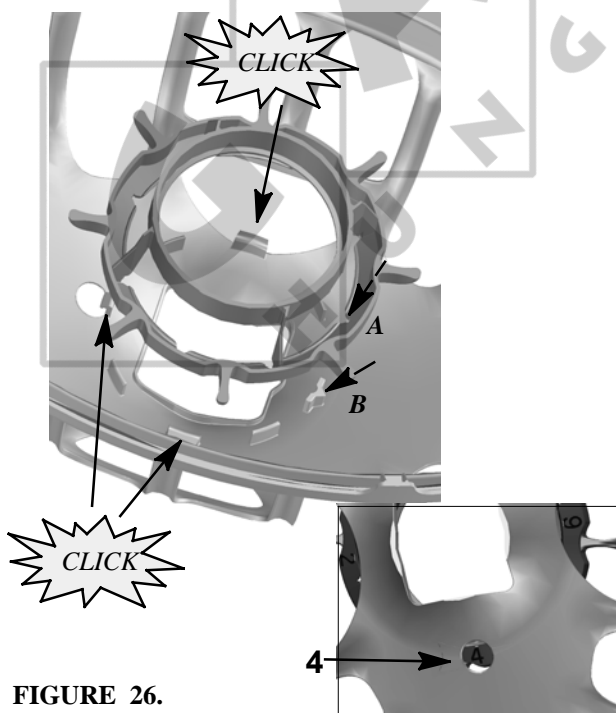
**FIGURE 24.**

Hook the feed level ring in the grill at the chosen position.



**FIGURE 25.**

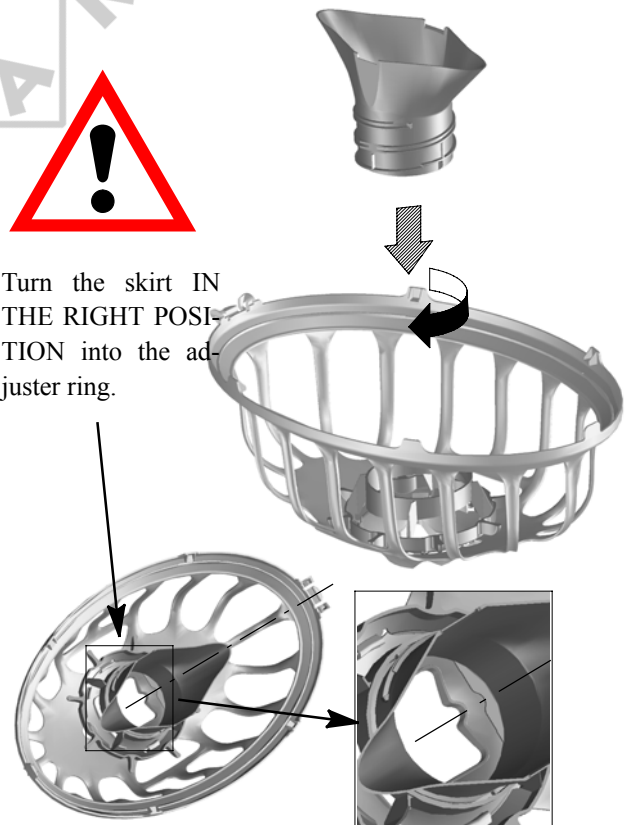
If the cipher on the feed level ring is at the correct position facing the opening in the grill, the notch **A** of the feed level ring will perfectly match the **B** on the grill.



**FIGURE 26.**

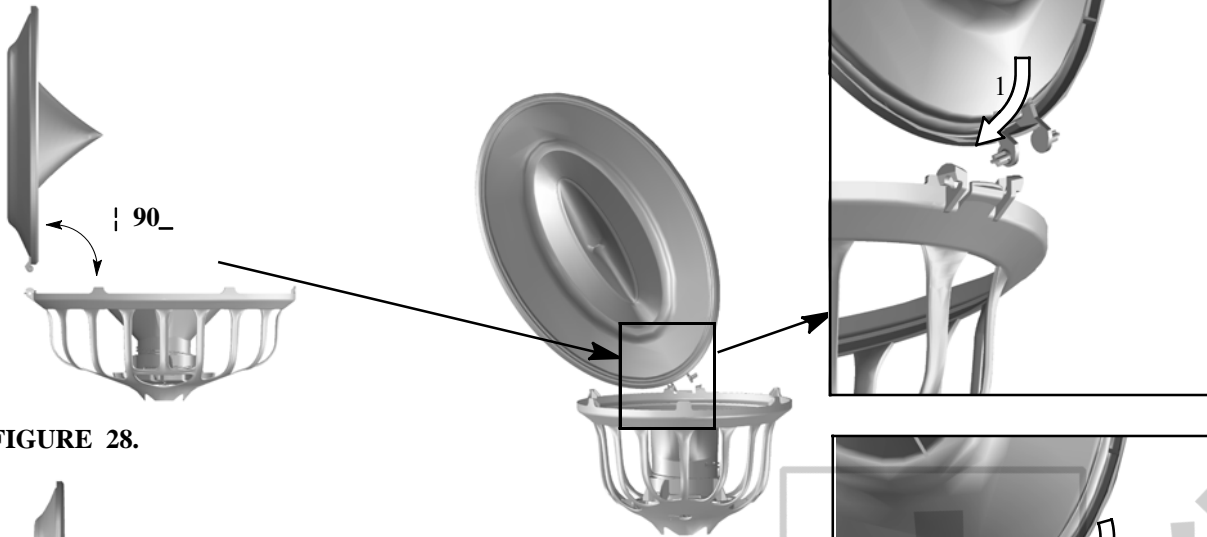


Turn the skirt **IN**  
**THE RIGHT POSI-**  
**TION** into the ad-  
juster ring.

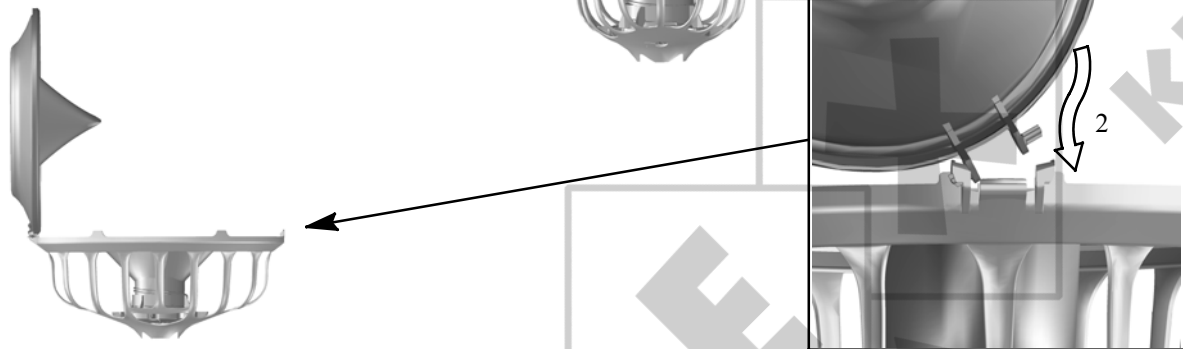


**FIGURE 27.**

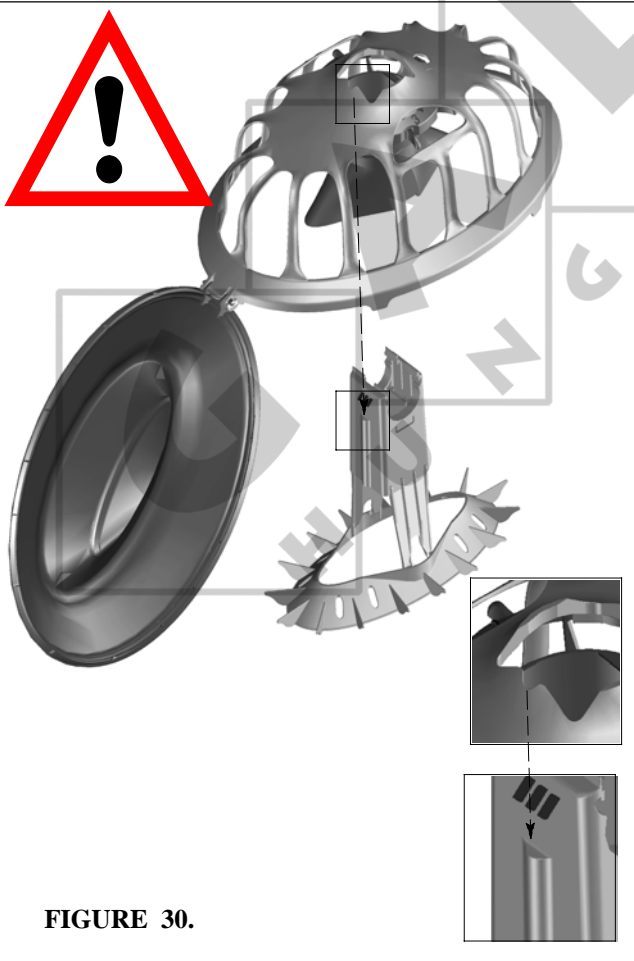
**FIX THE PAN TO THE GRILL**



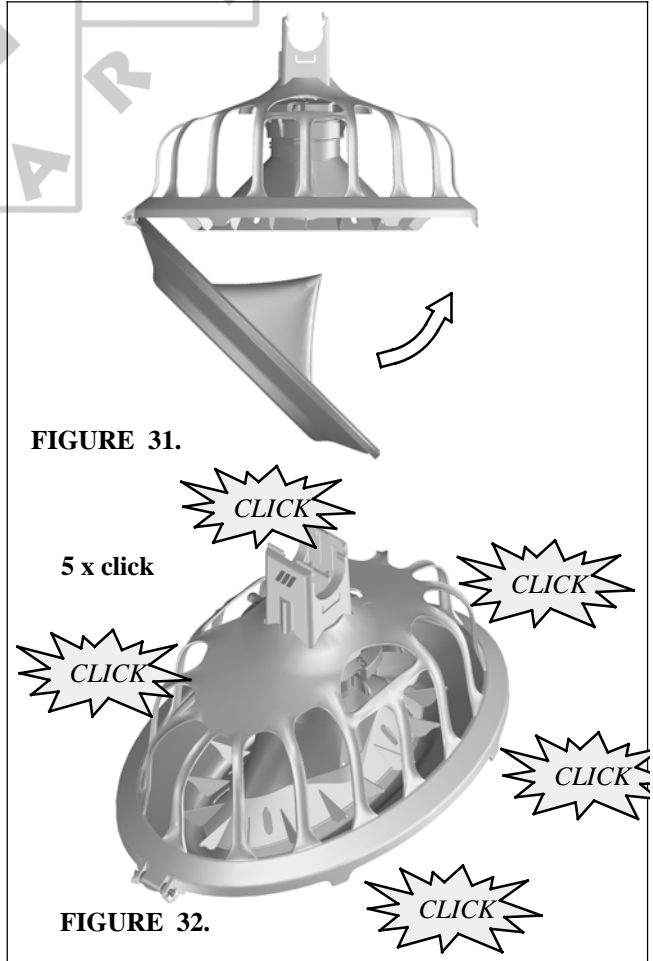
**FIGURE 28.**



**FIGURE 29.**



**FIGURE 30.**



**FIGURE 31.**

**FIGURE 32.**

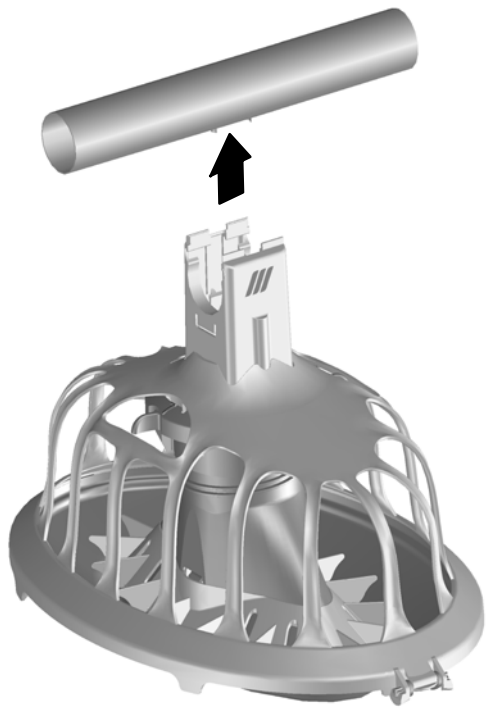


FIGURE 32.

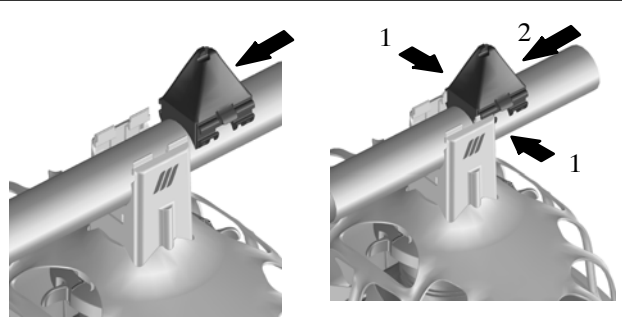


FIGURE 33.

FIGURE 34.

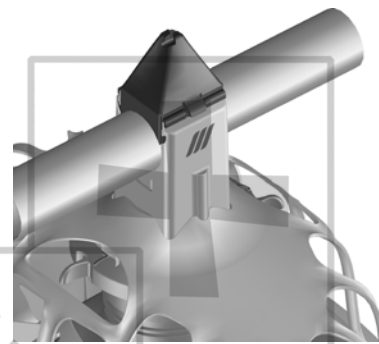


FIGURE 35.



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

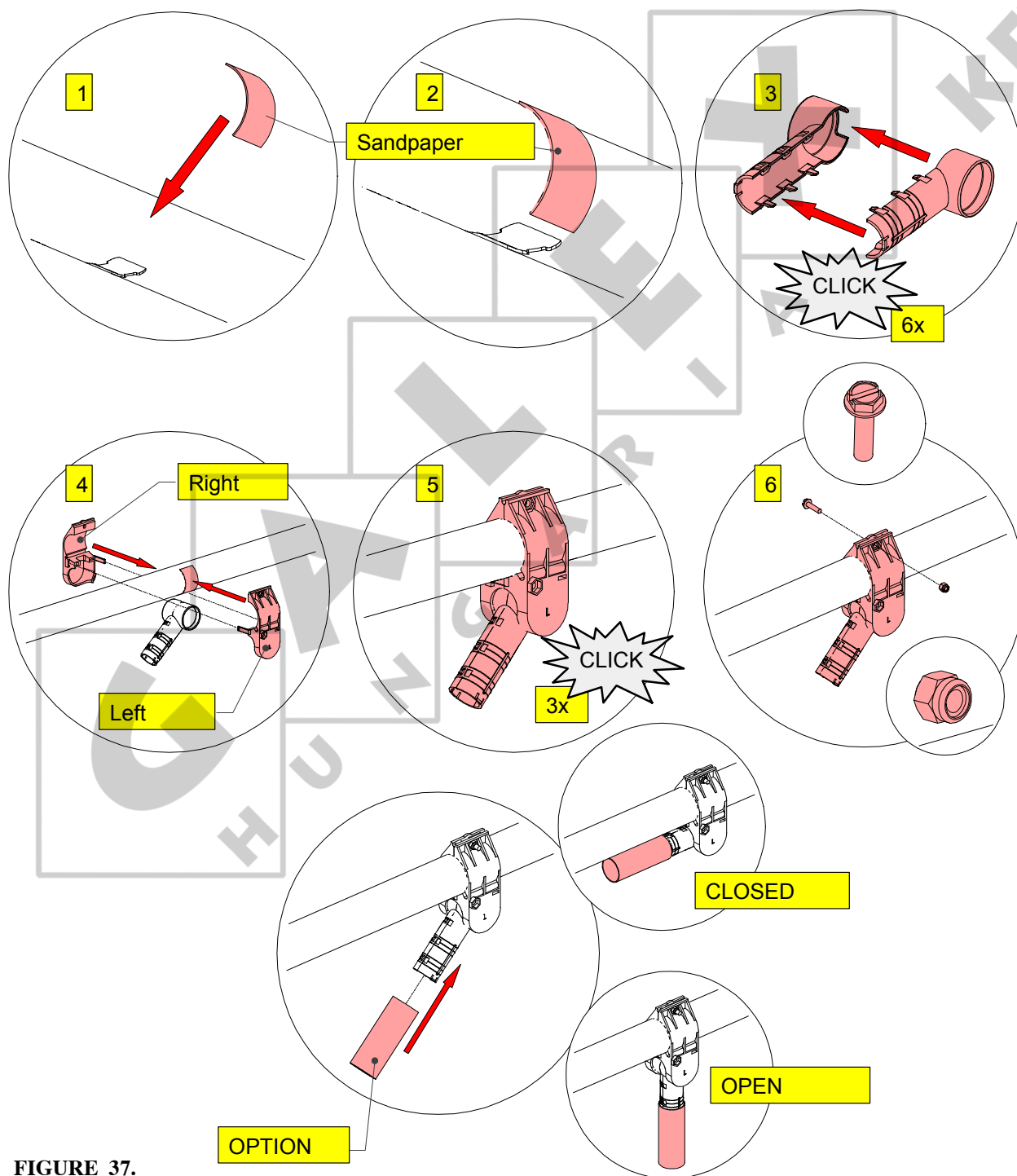
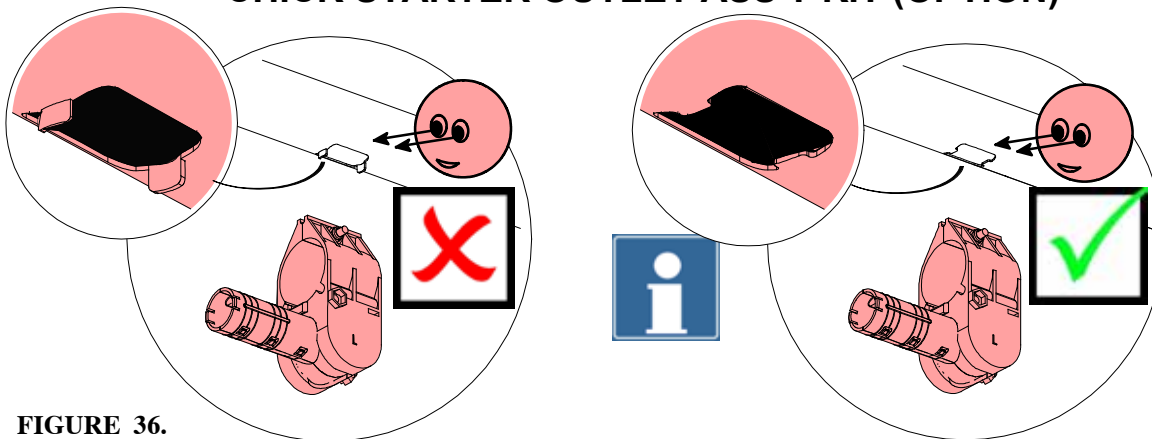


FIGURE 37.

### TO INSTALL THE SHUT OFF SLIDE

#### FOR PARTIAL STARTING - REAR

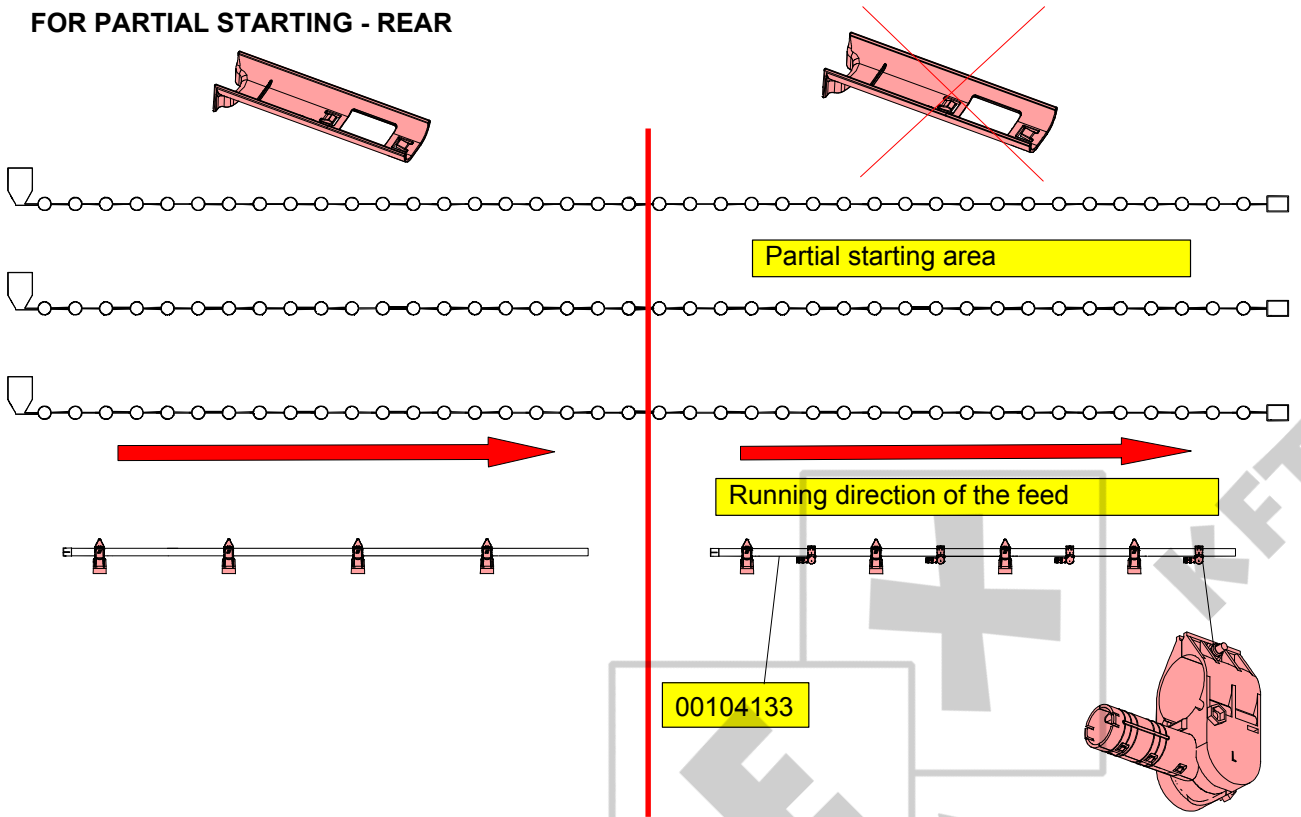


FIGURE 38.

FIGURE 39.

#### FOR PARTIAL STARTING - FRONT

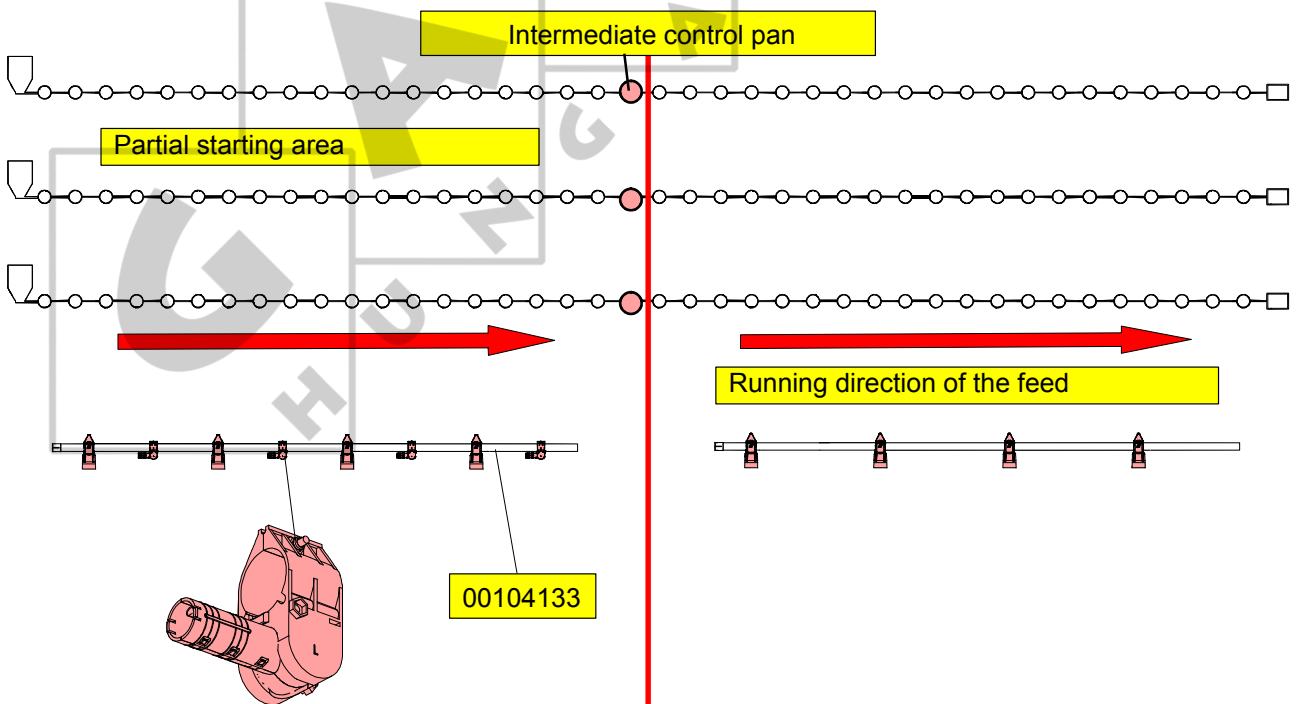
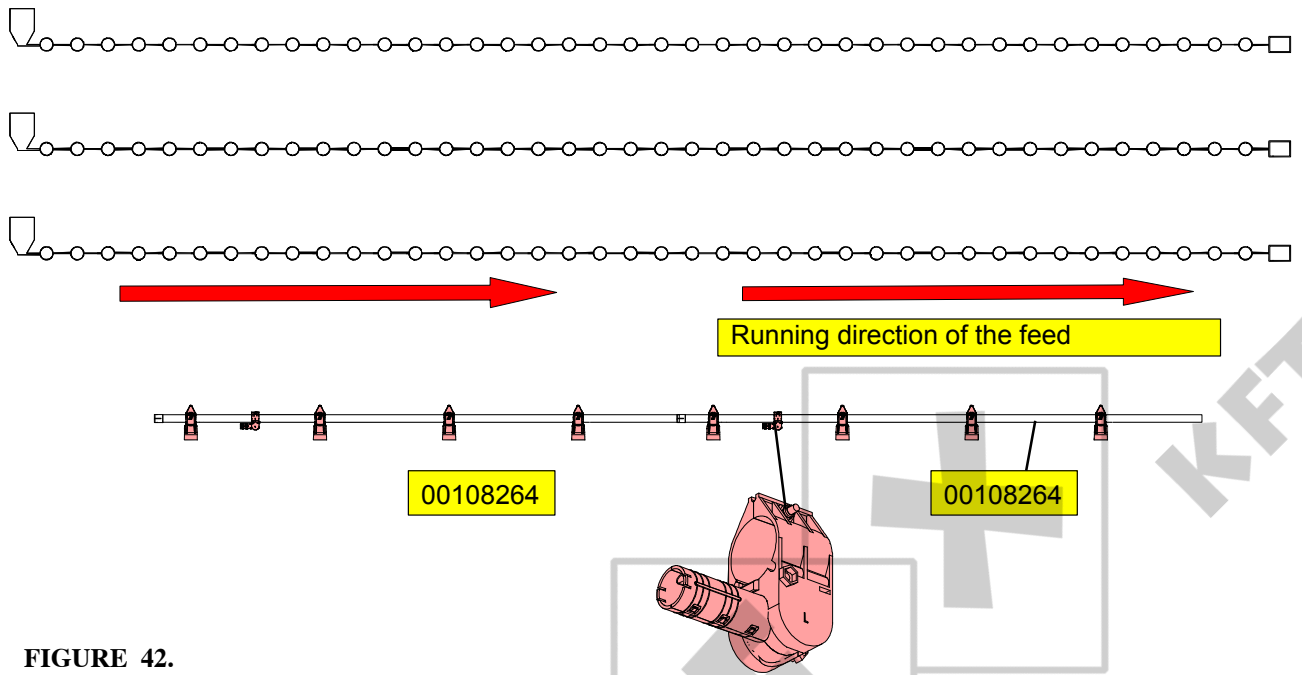


FIGURE 40.

FIGURE 41.

**TOTAL HOUSE BROODING**



**FIGURE 42.**

## TO REMOVE THE PAN

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



FIGURE 43.

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

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

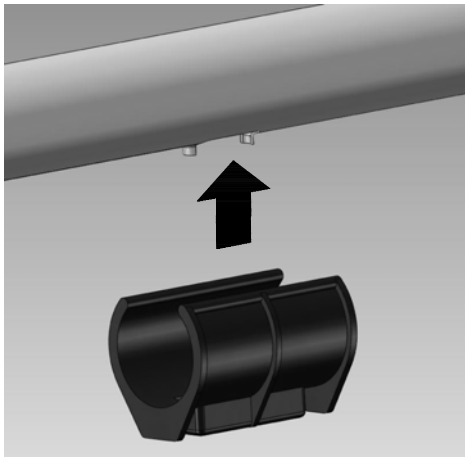


FIGURE 44.

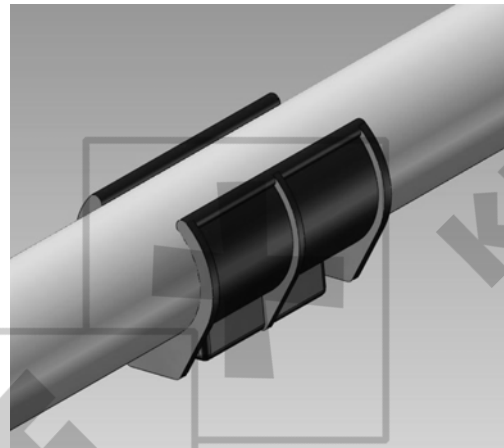


FIGURE 45.

### **OPTION: HINGE CLICK**

1. Cut off the hinge pins of the pan.

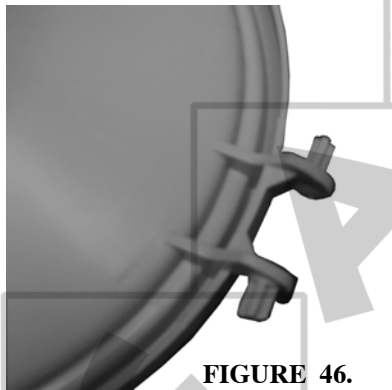


FIGURE 46.



FIGURE 50.

2. Install the hinge click in the grill at the level of the hinge.



FIGURE 47.



FIGURE 48.

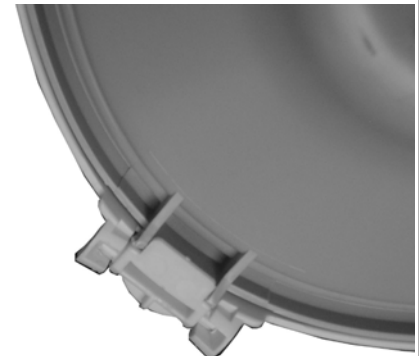
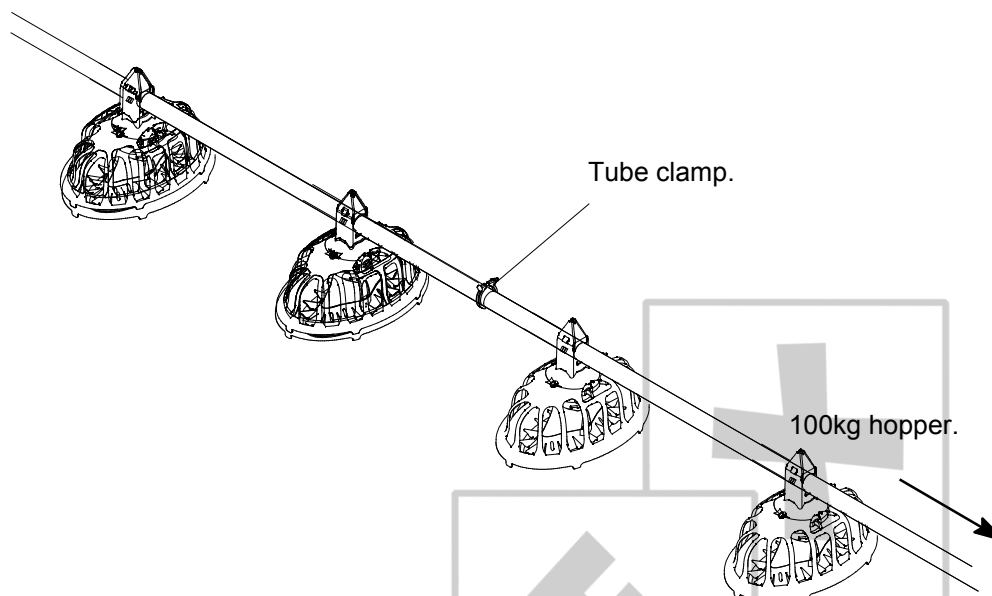


FIGURE 49.

3. The installation of the hinge click is unique. Now you can simply dismantle the pan before cleaning. If you open the pan as described on page I-5 the pan is falling down.

## 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.



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 51.

### INSTALL AN ANCHOR BRACKET :

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

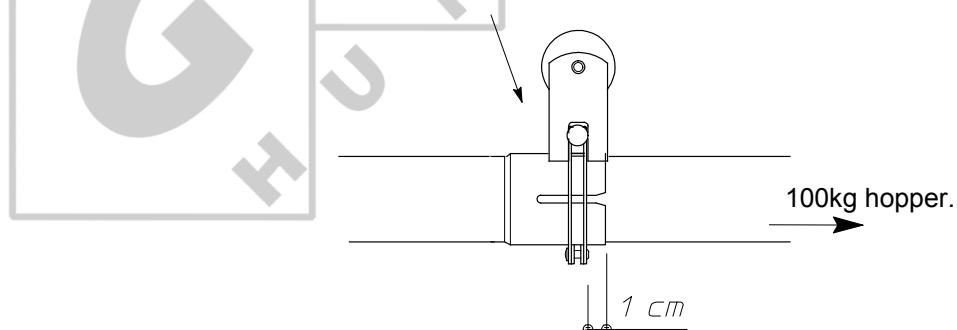


FIGURE 52.

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 PANS !**

### POWER UNIT SUSPENSION

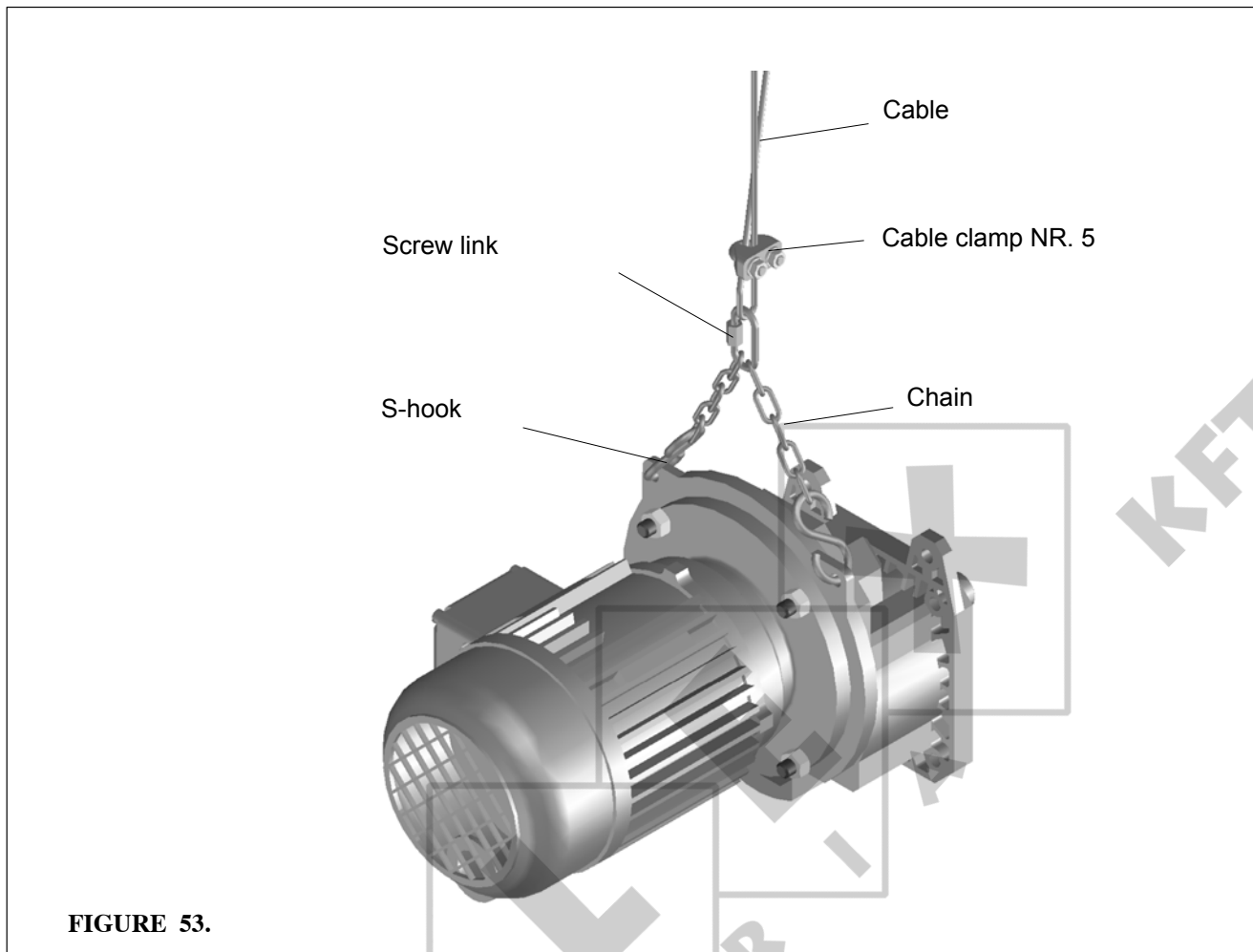


FIGURE 53.

## TO INSTALL AND SUSPEND THE 100KG HOPPER

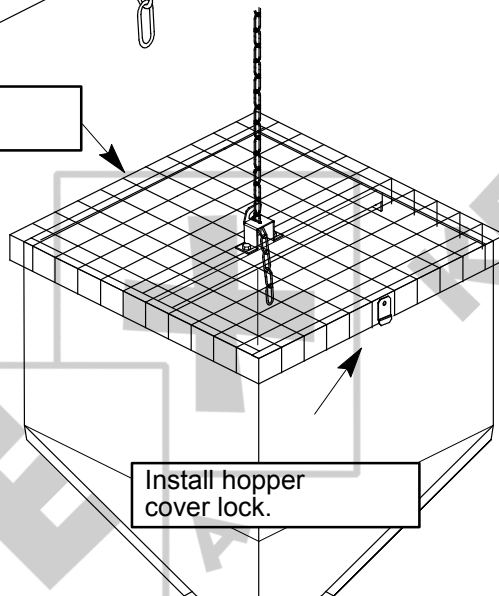
Install the feed intake boot at the opposite end of the line.



Hopper hook.

Chain 3,5mm.

Install hopper cover lock.



Install hopper cover lock.

FIGURE 54.

Roxell supplies the 100Kg hopper unassembled.

Install as shown on page II-14.



**DANGER**

FIGURE 55.

Decal in front

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

FIGURE 56.

### 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.

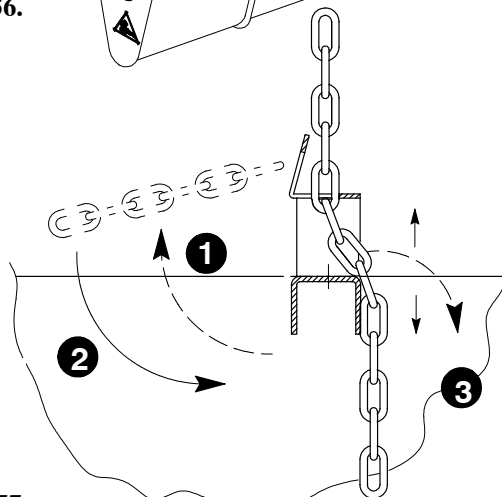
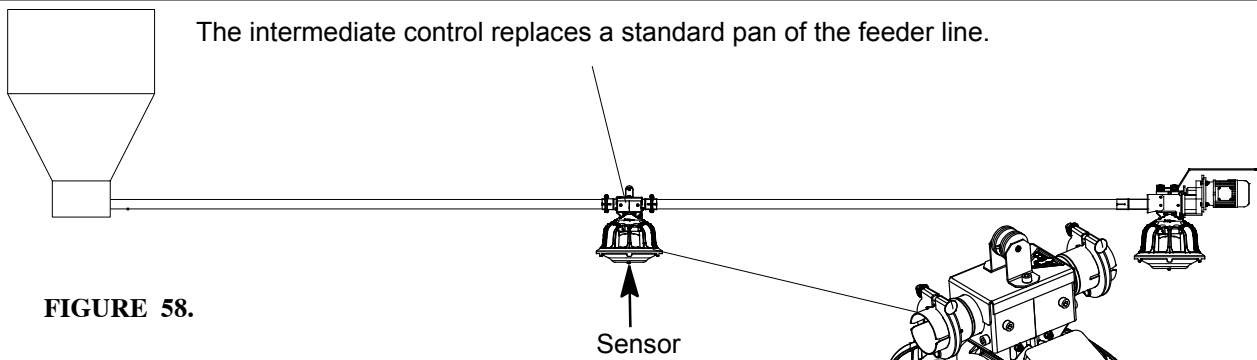


FIGURE 57.

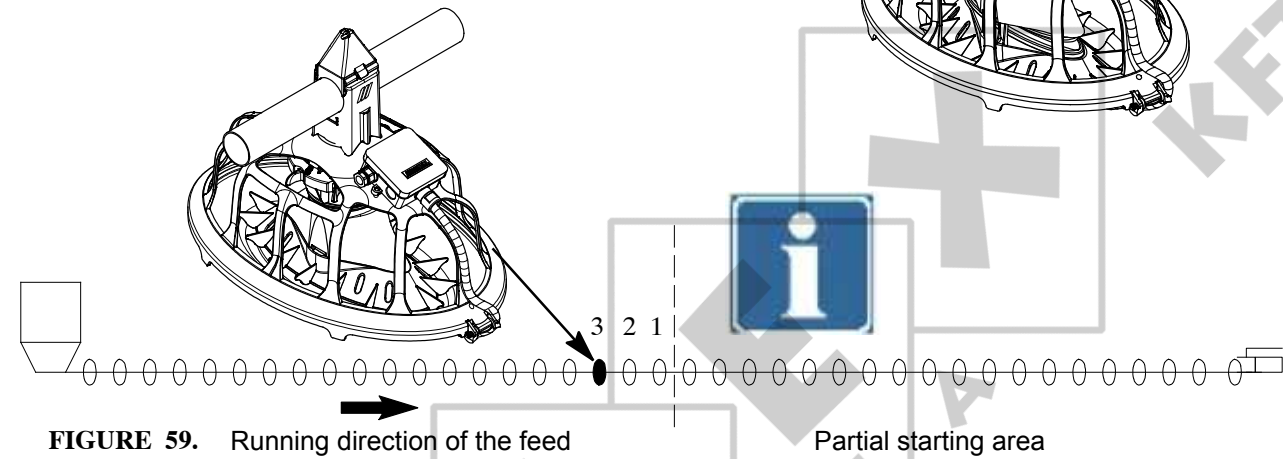
## TO INSTALL THE INTERMEDIATE CONTROL

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



**FIGURE 58.**

### MOVABLE INTERMEDIATE CONTROL UNIT WITH SWITCH FOR PARTIAL STARTING



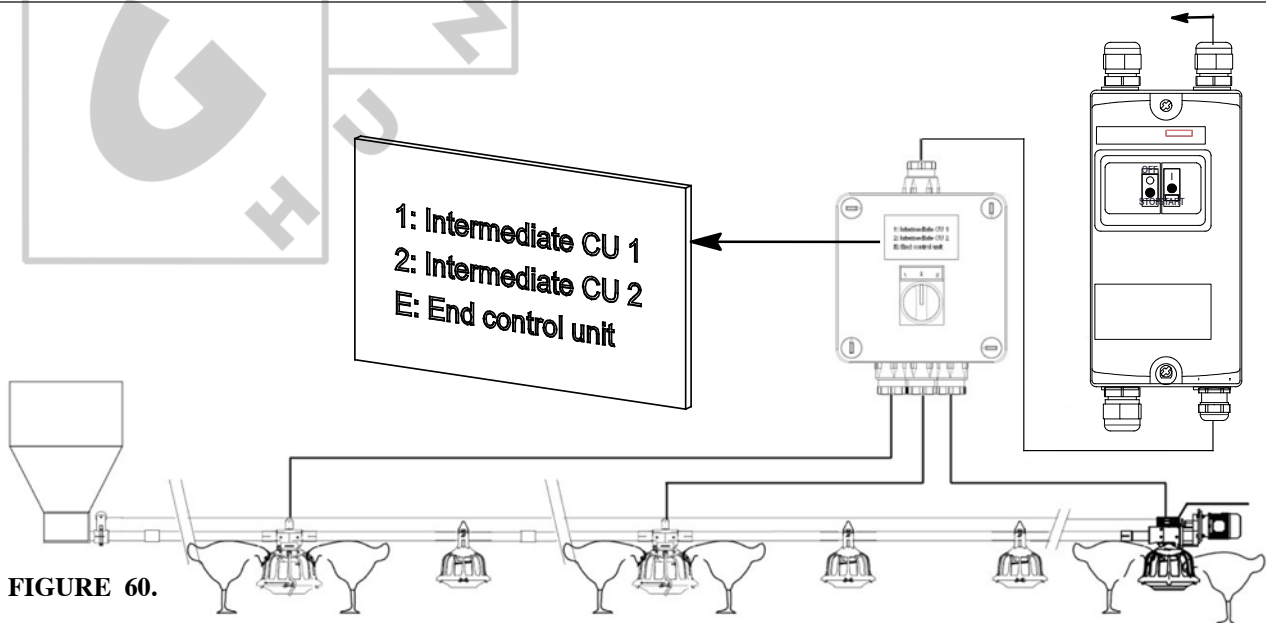
**FIGURE 59.** Running direction of the feed

Partial starting area

## CONTROL PANEL INTERMEDIATE CONTROL UNIT (WITH SENSOR)

For an “easy use”, and/or switching over from a partial area to full use of the house, you can make advantage of a control panel intermediate control unit ( optional).

Use of	Position of the switch
1 intermediate control unit	1 and 2
2 intermediate control units	1 or 2, depending on the brooding area in the house
control unit with sensor (at the end)	E



**FIGURE 60.**



### TO INSTALL THE TUBE WITH HOLE

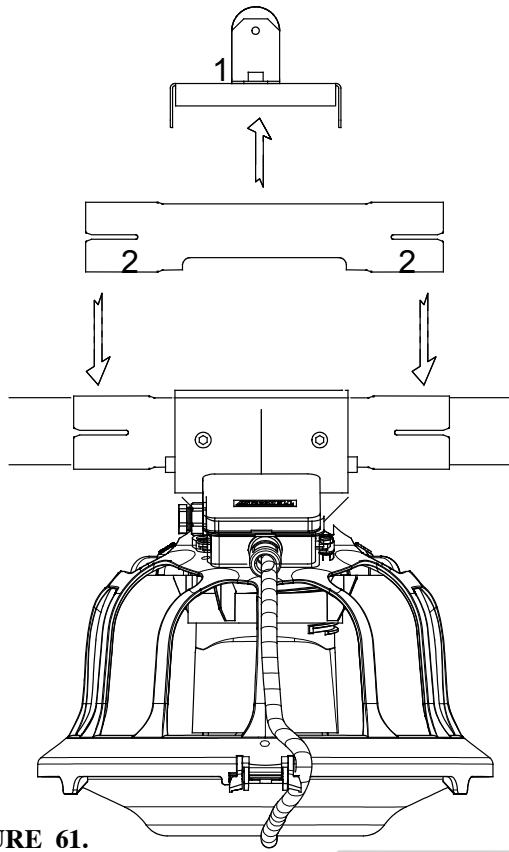


FIGURE 61.

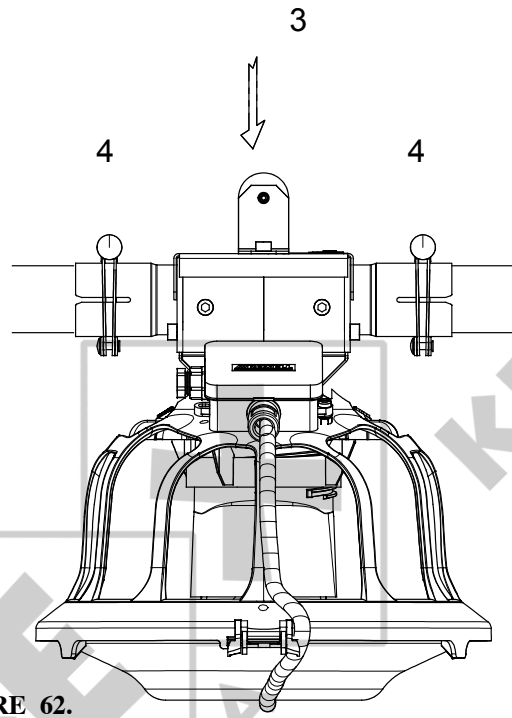


FIGURE 62.

### CONNECTION BOX KIT FOR CONTROL PAN (FOR US ONLY)

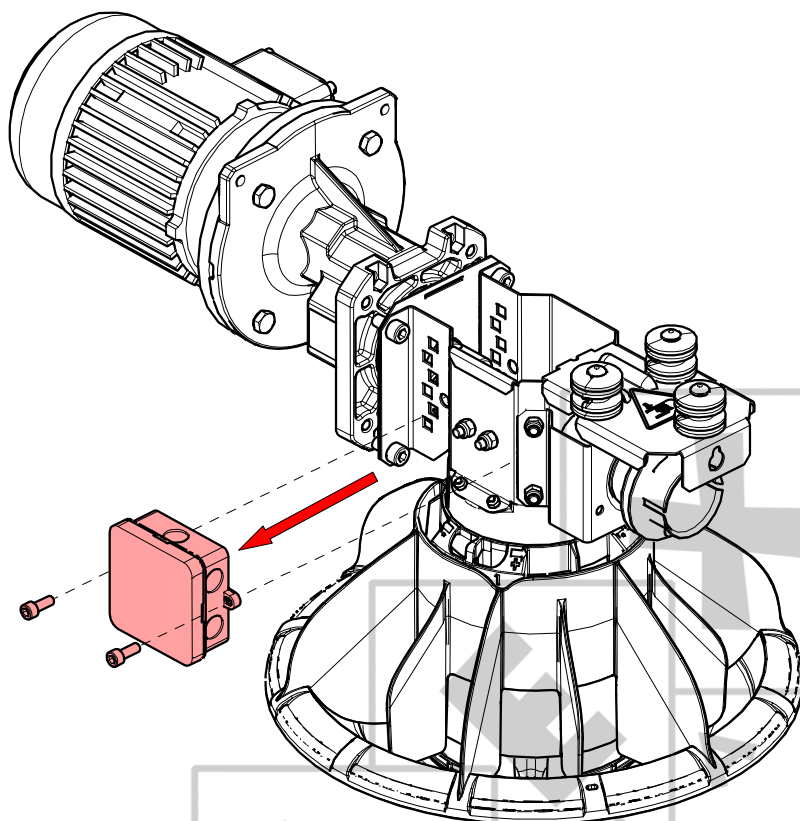


FIGURE 63.

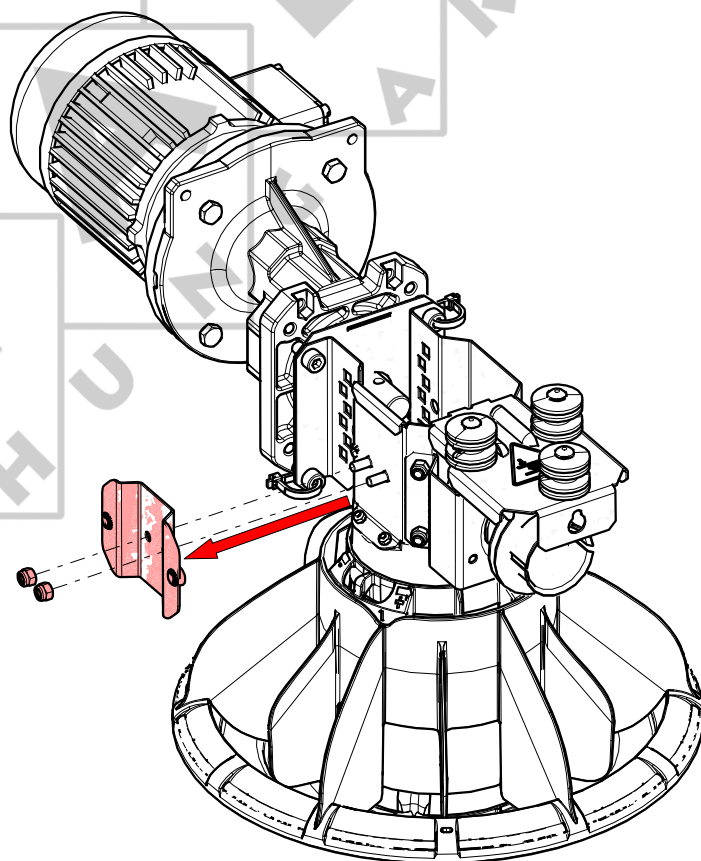


FIGURE 64.

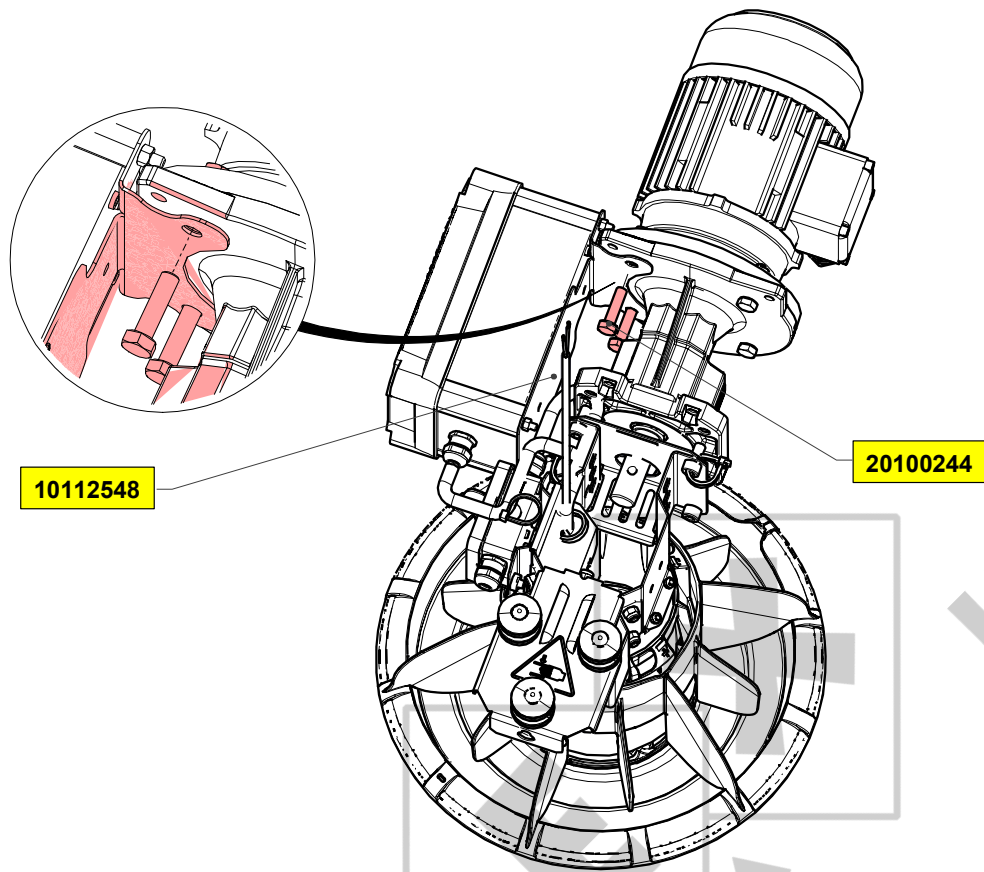


FIGURE 65.

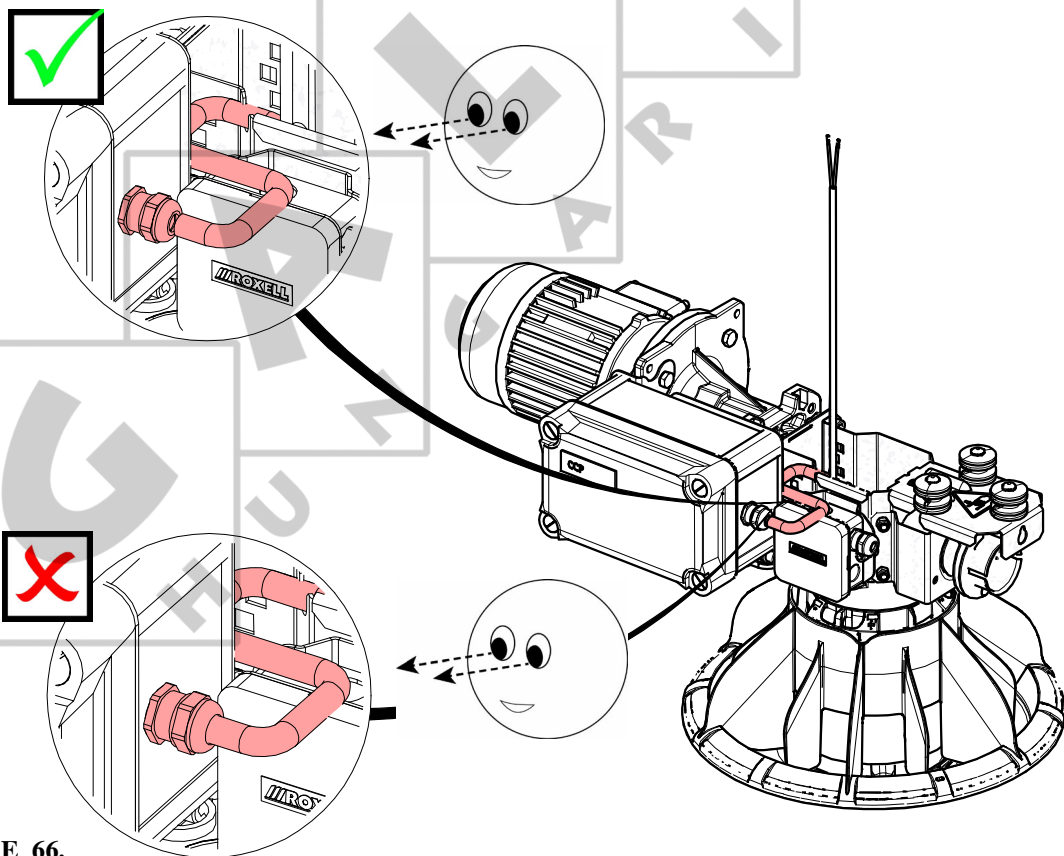
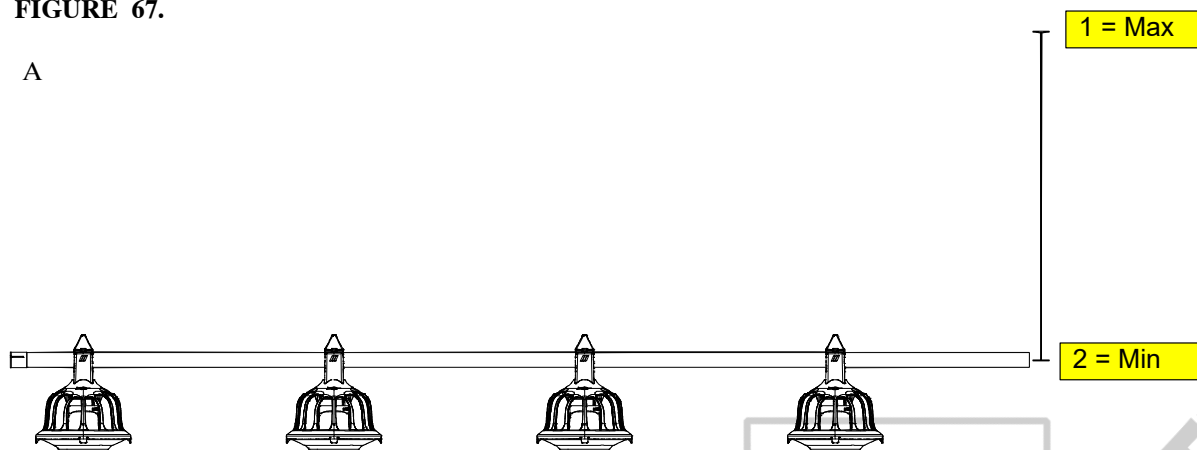


FIGURE 66.

### ADJUSTMENT

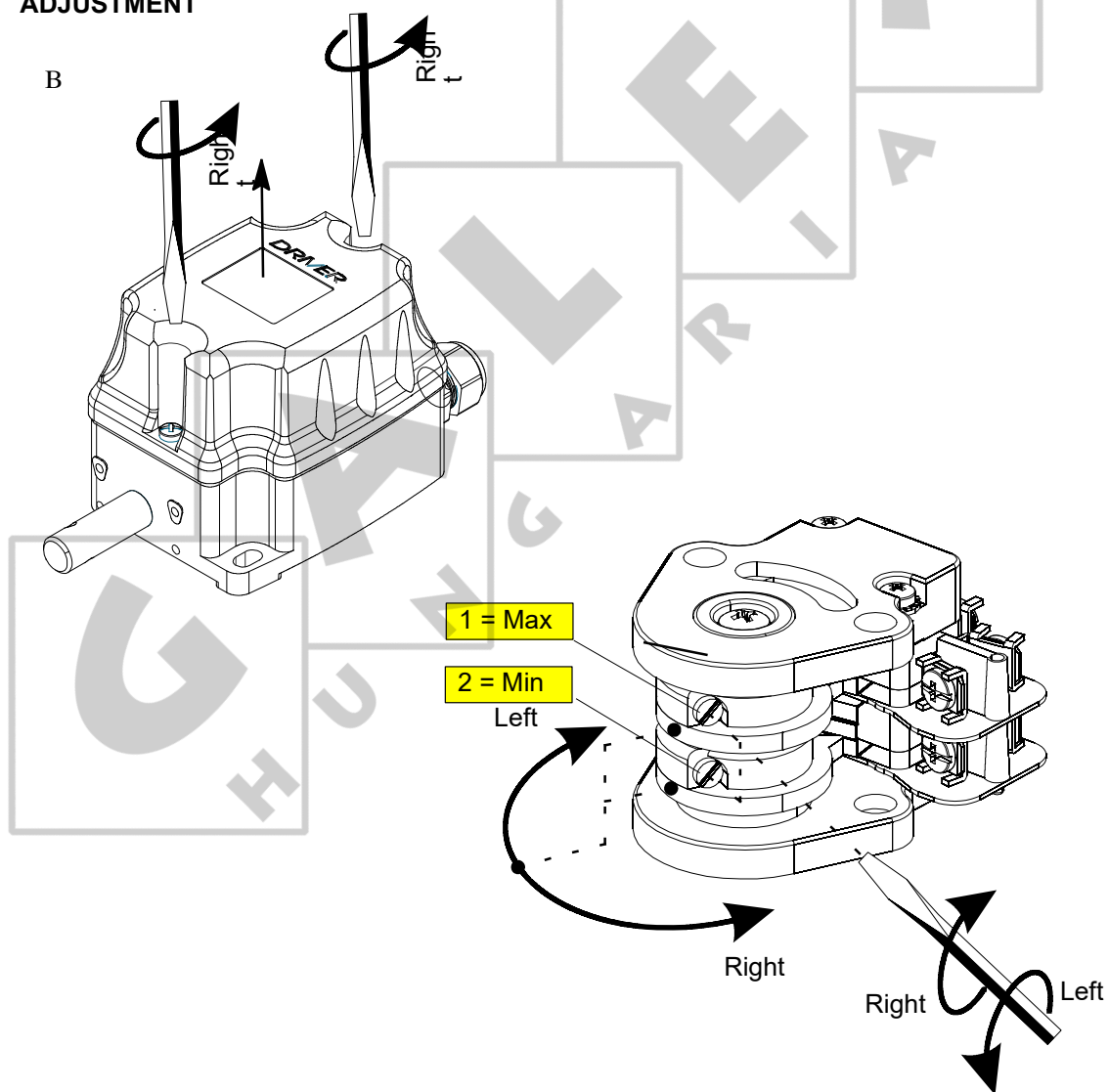
FIGURE 67.

A



### ADJUSTMENT

B



### ADJUSTMENT LIMIT SWITCH

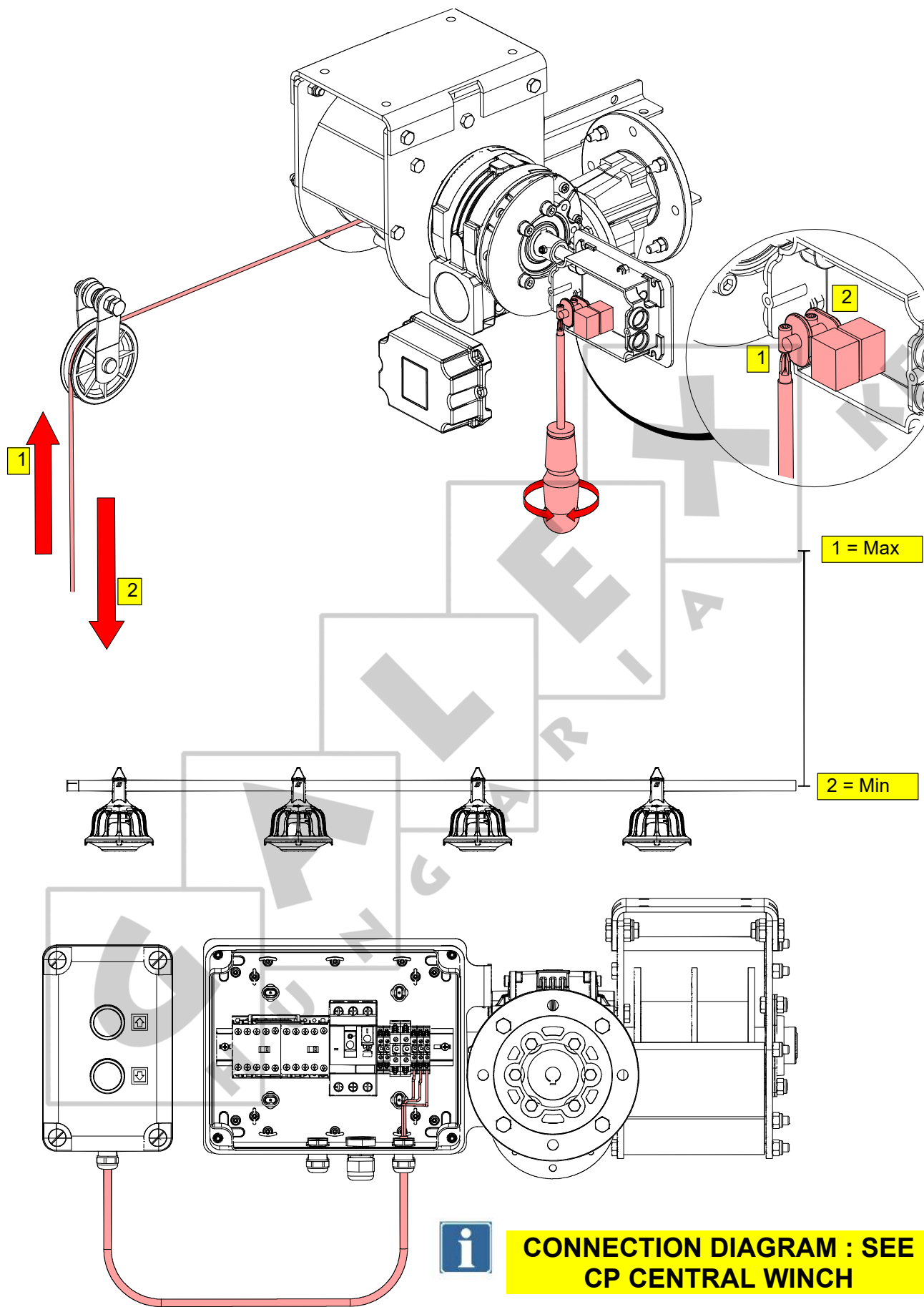


FIGURE 68.

## TO INSTALL THE AUGER



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

**DANGER**

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



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

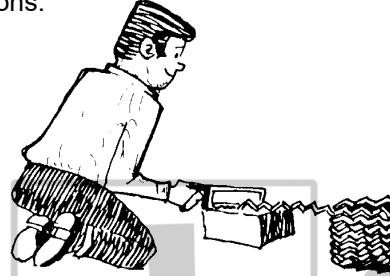
**DANGER**



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

**FIGURE 69.**

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



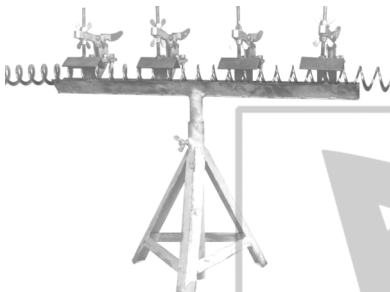
**! KINKS OR DENTS WEAR OUT THE TUBES !**

**FIGURE 70.**

### **AUGER BRAZING**

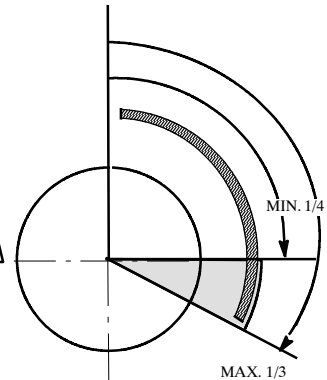
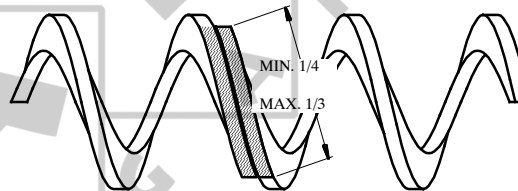
Firmly clamp the auger in an angle or channel iron.

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.**

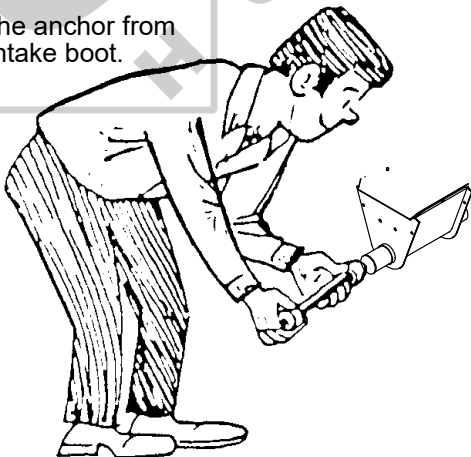
Min.  $\frac{1}{4}$  of the auger circumference, up to  
Max.  $\frac{1}{3}$  of the auger circumference.



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

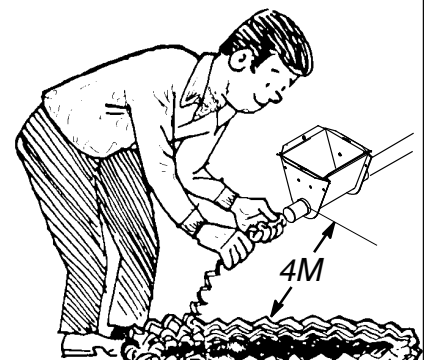
**FIGURE 71.**

Remove the anchor from the feed intake boot.

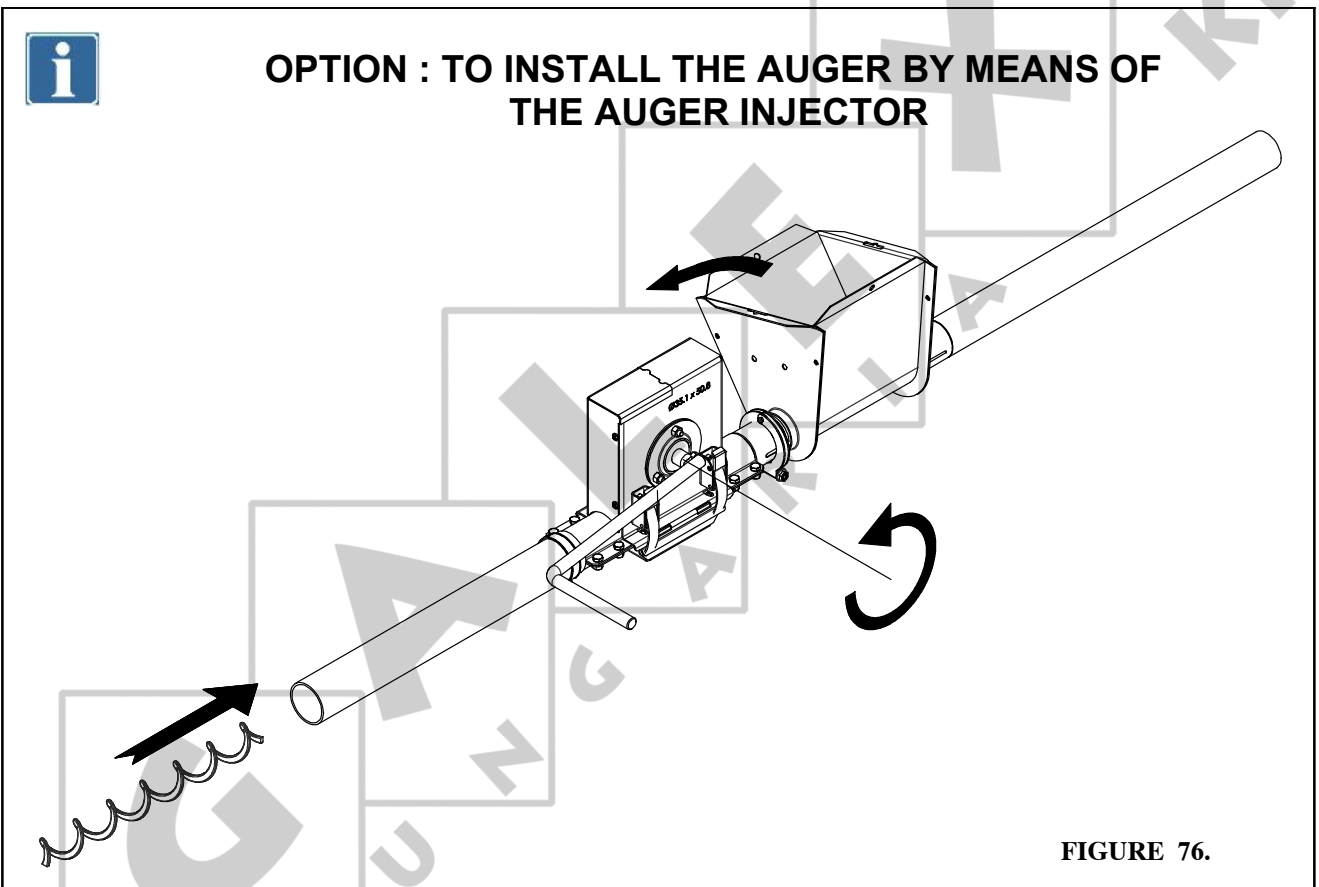
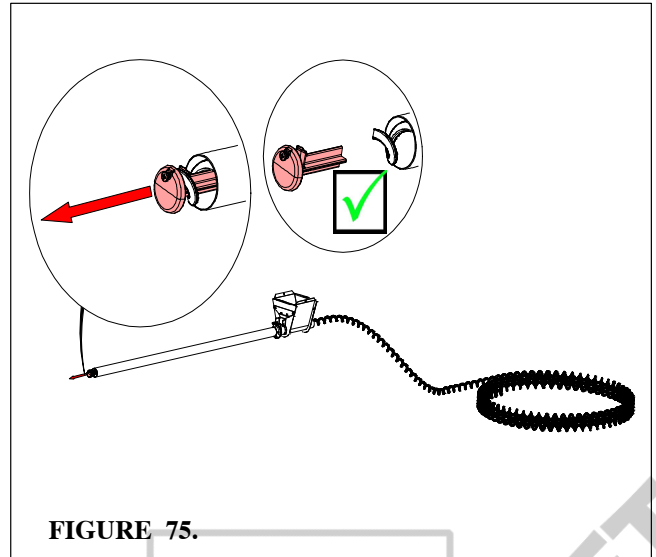
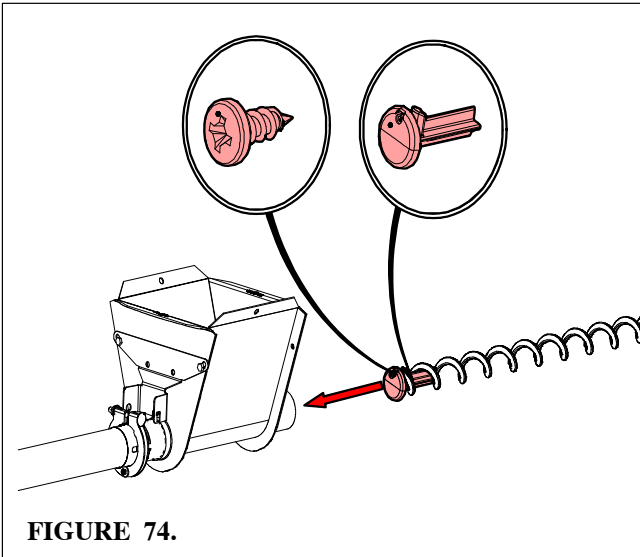


**FIGURE 72.**

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 73.**



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

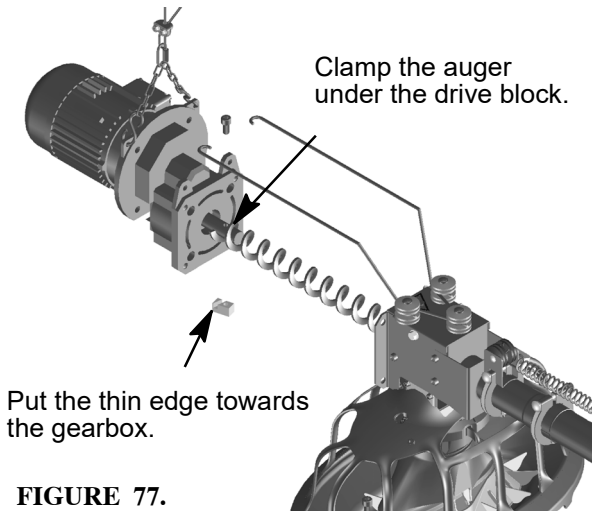


FIGURE 77.

Slide the auger slowly back into the tube.

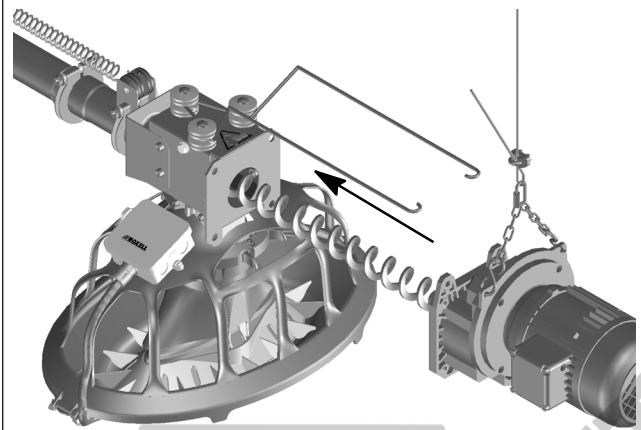


FIGURE 78.

Tighten the 4 bolts with a hex wrench.

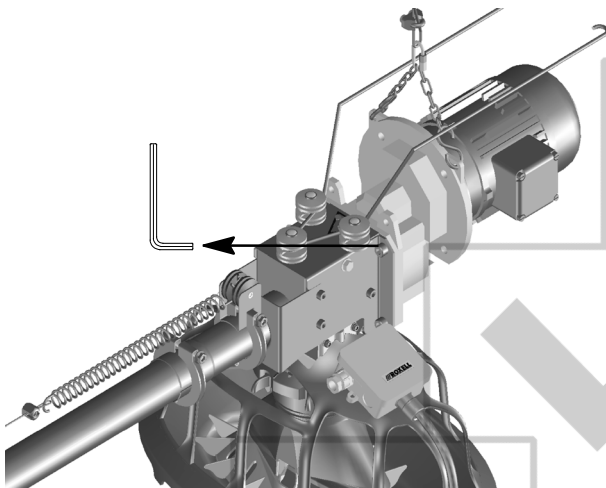


FIGURE 79.

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

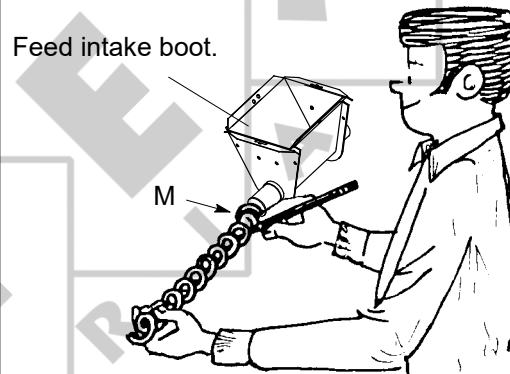


FIGURE 80.

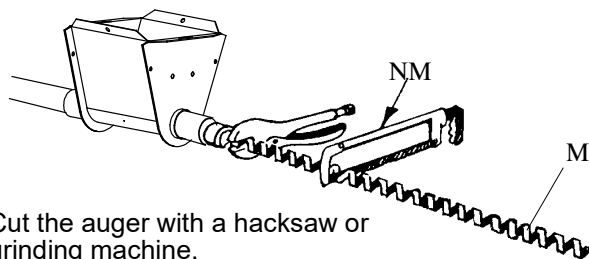


**DANGER**

**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 81.

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.

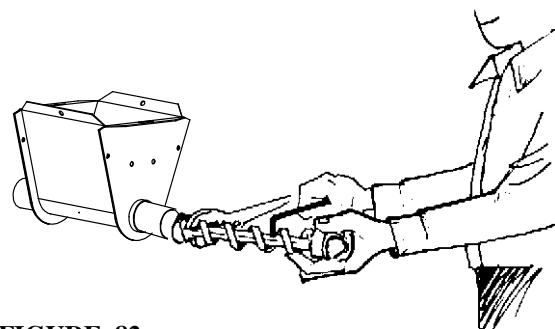


FIGURE 82.



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

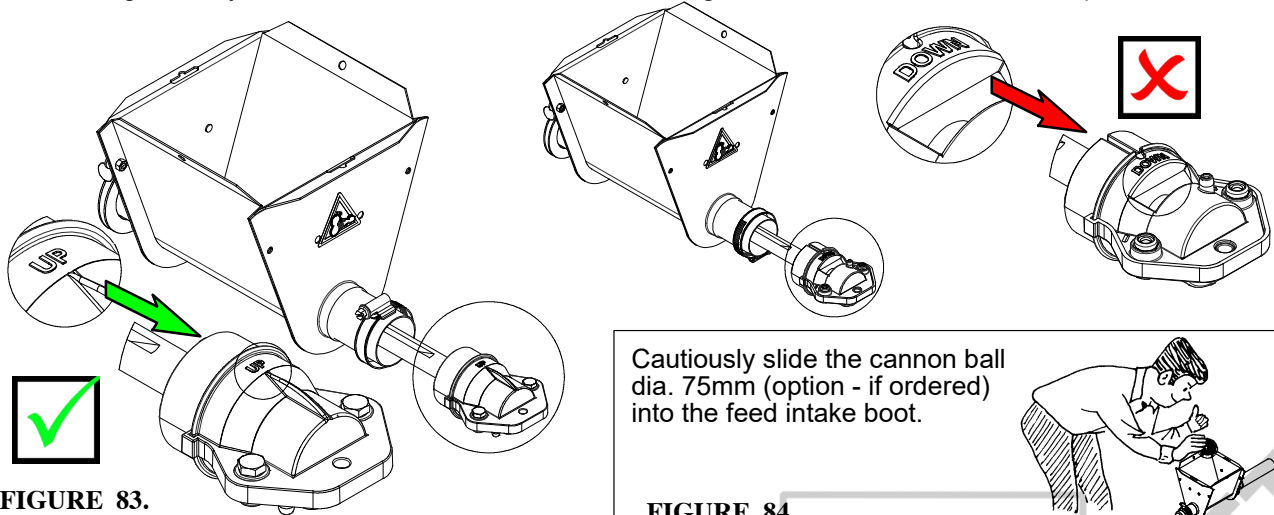


FIGURE 83.

FIGURE 84.

### TO INSTALL THE THUMPER (OPTION)

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

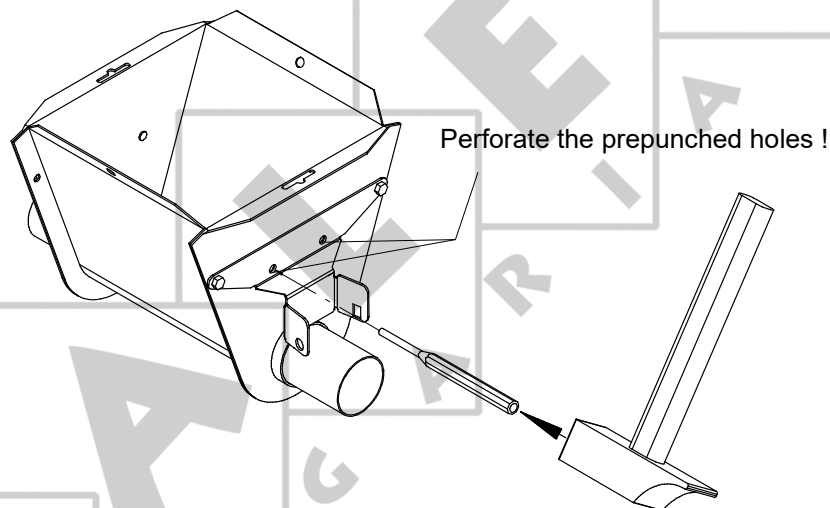


FIGURE 85.

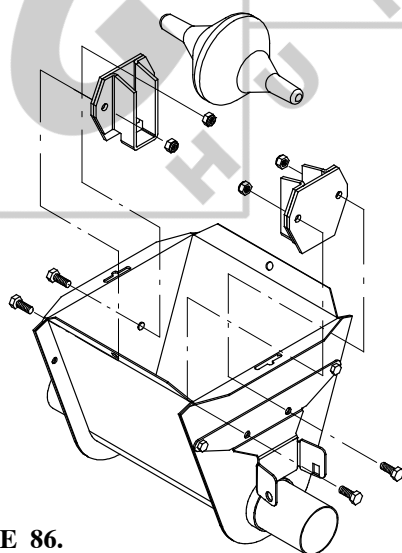


FIGURE 86.

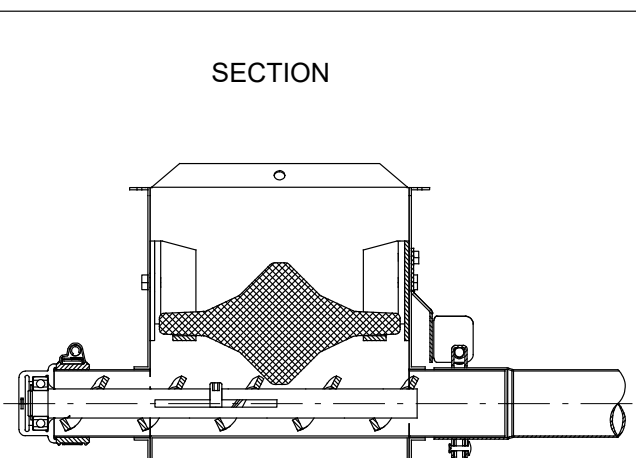
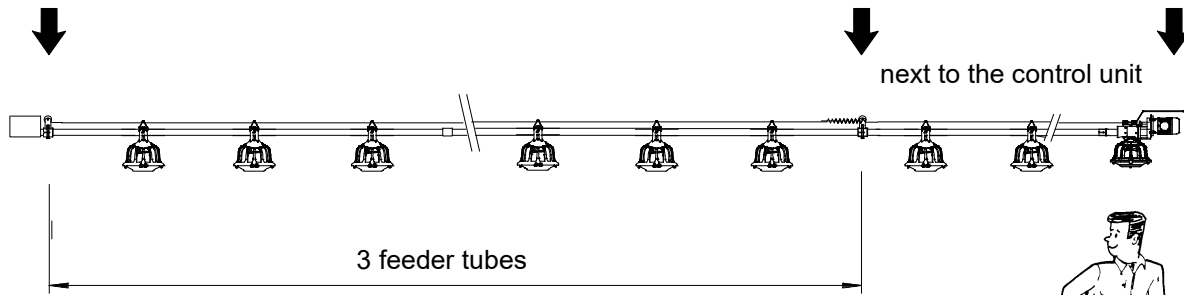


FIGURE 87.

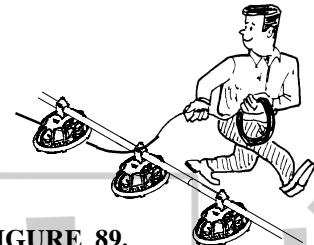
## TO INSTALL THE POULTRY PERCH GUARD

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.

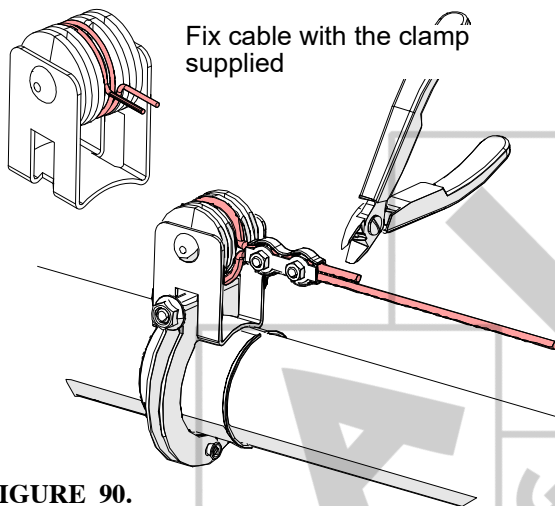


**FIGURE 88.**

**FIGURE 89.**

### START NEXT TO THE HOPPER

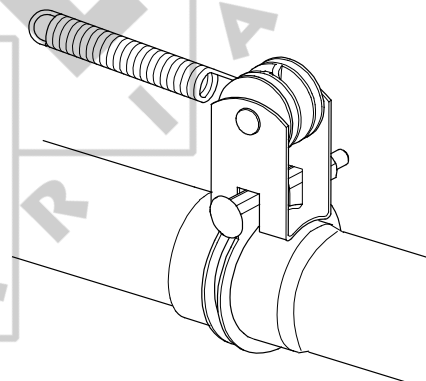
Make a double loop around the central notch of the anchor bracket.



**FIGURE 90.**

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.



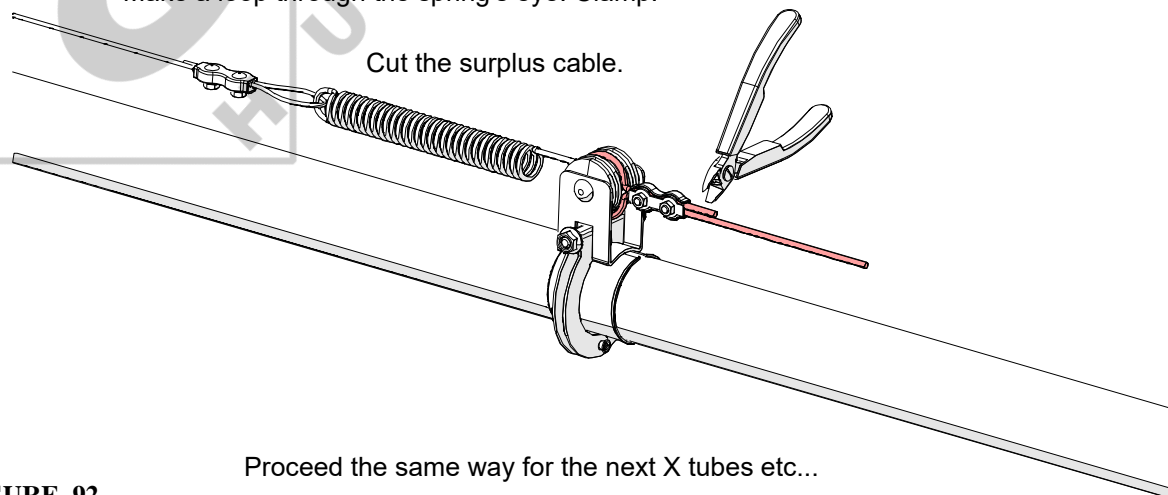
**FIGURE 91.**

### EVERY X FEEDER TUBES (see fig. 88.)

Firmly tighten the cable.

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

Cut the surplus cable.



Proceed the same way for the next X tubes etc...

**FIGURE 92.**

**NEXT TO THE CONTROL UNIT**

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

Fasten the cable the same way as in fig. 92.

Cut the surplus cable at the duplex cable clamp.

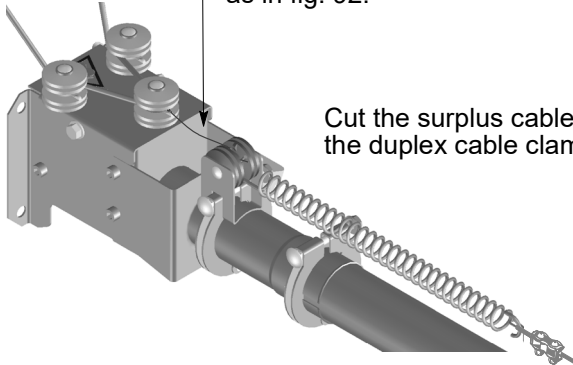


FIGURE 93.

On the INTERMEDIATE CONTROL, put the cable on top of the insulator.

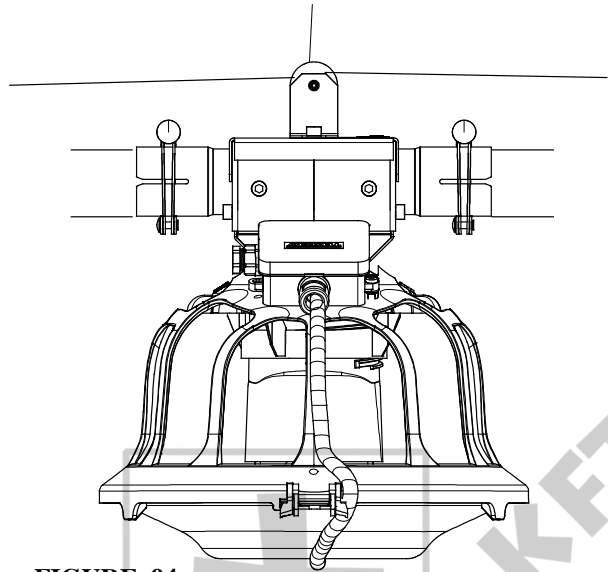


FIGURE 94.

**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.

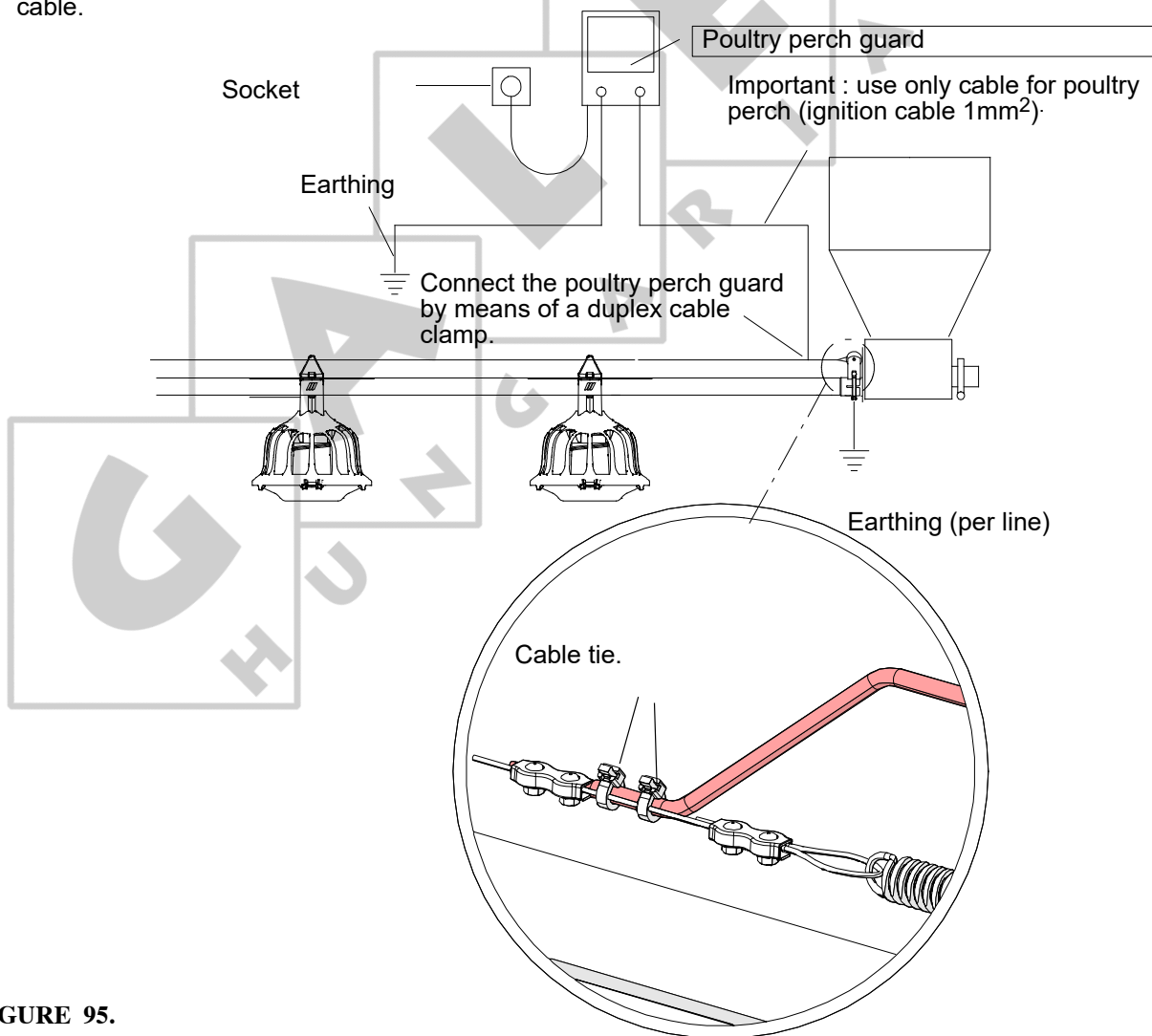


FIGURE 95.

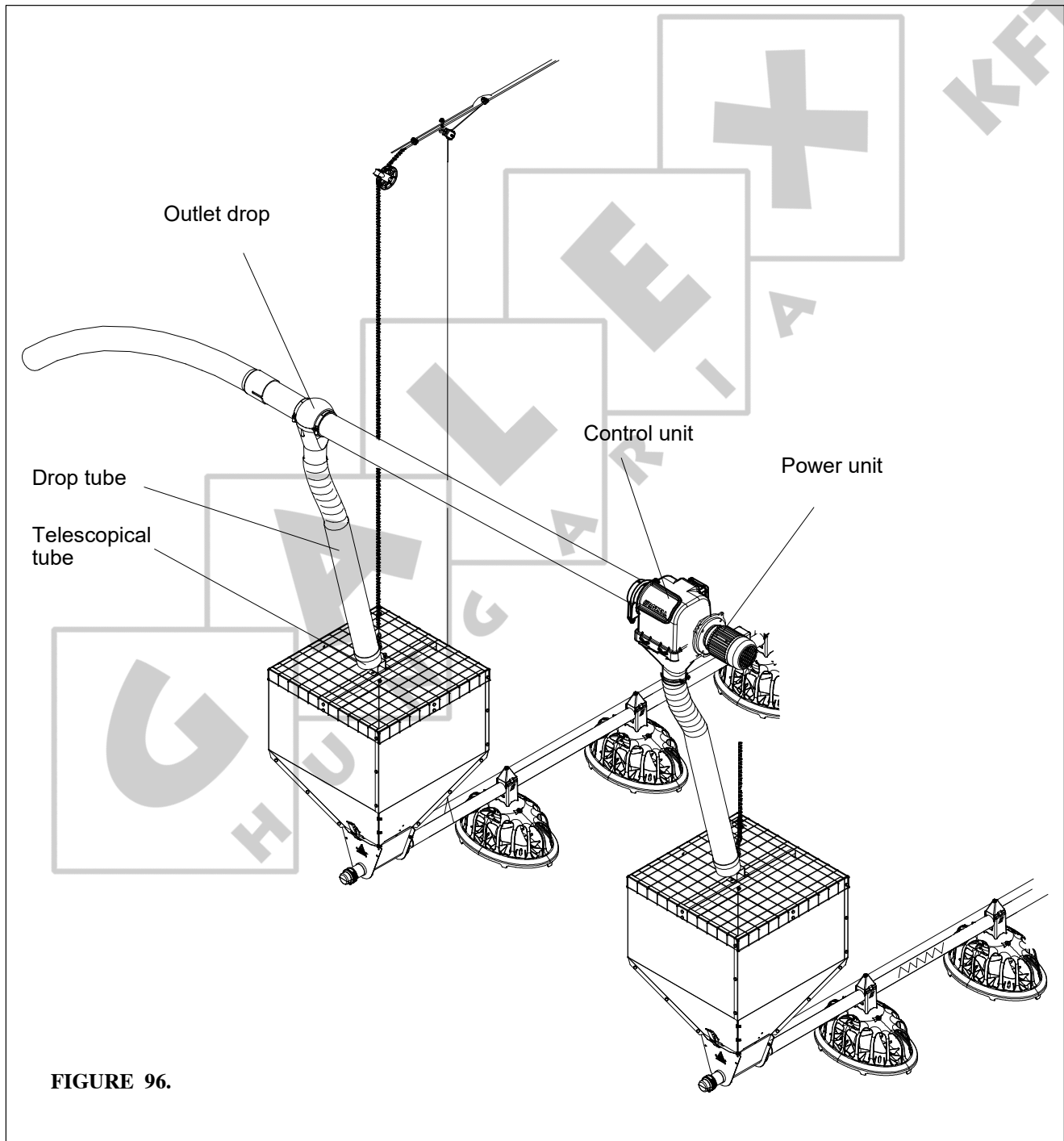
## TO INSTALL THE FLEX AUGER FEED SUPPLY SYSTEM

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

**ATTENTION :**

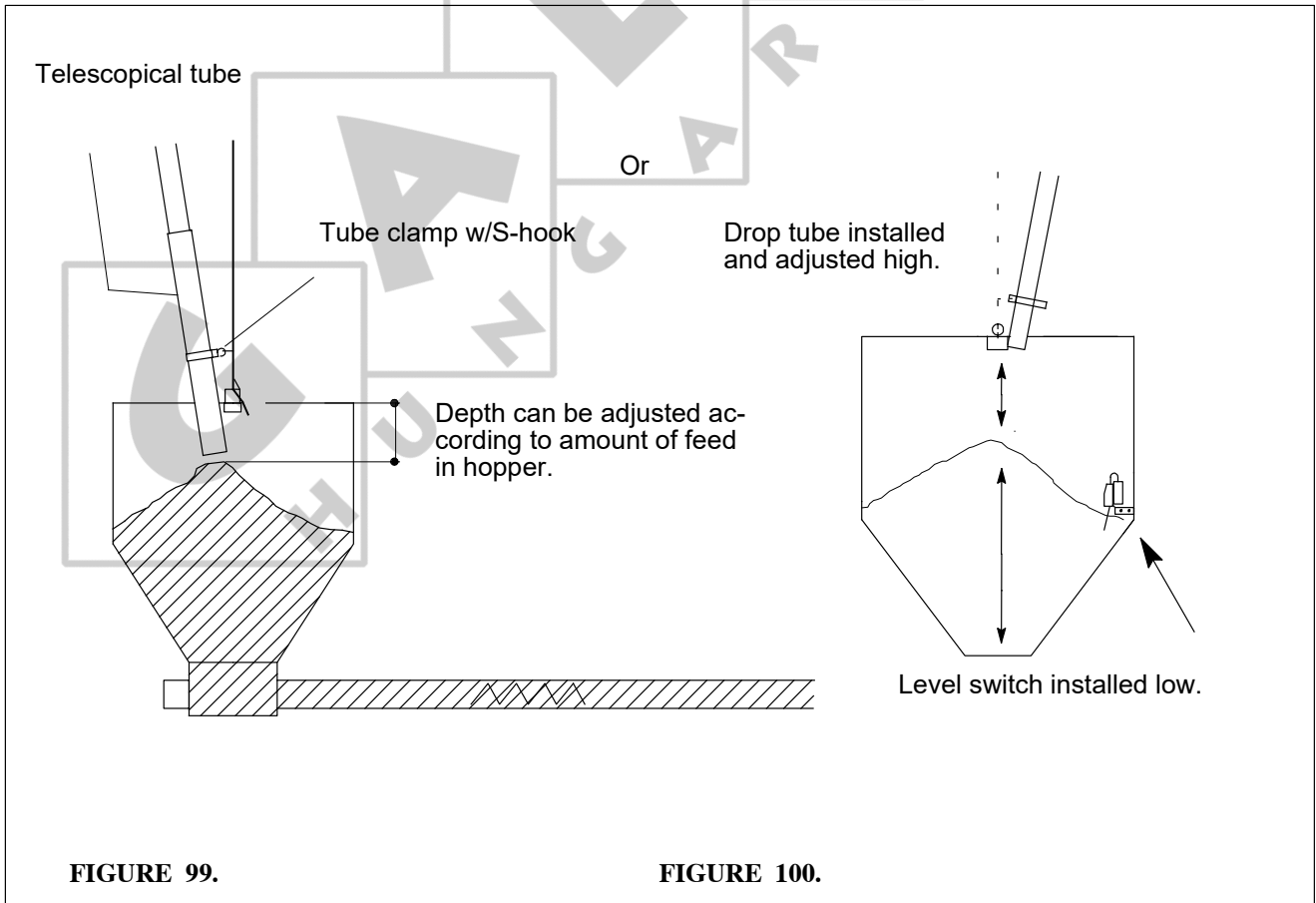
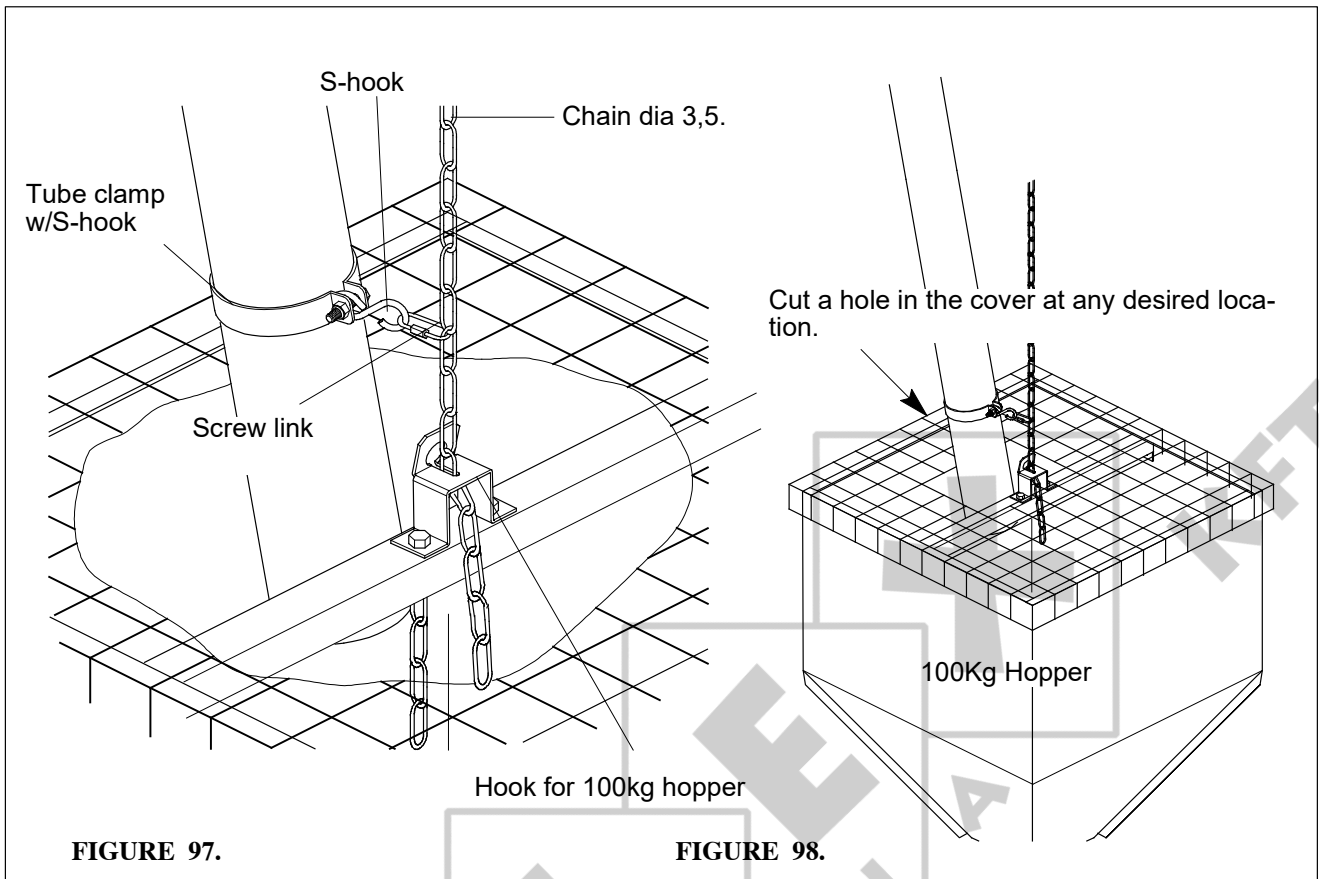
**USE AS LITTLE ELBOWS AS POSSIBLE.**

**MAKE SURE THAT THERE ARE NO TUBE CONNECTIONS AT LOCATIONS WHERE YOU NEED  
OUTLET DROPS !**

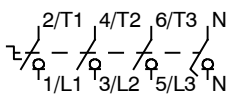
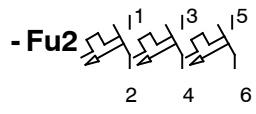
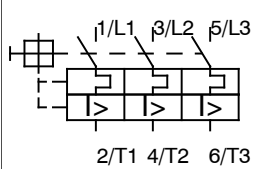
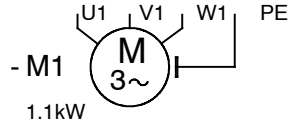
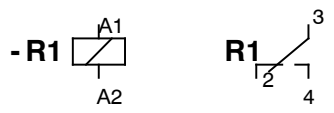

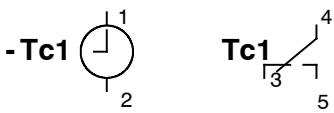
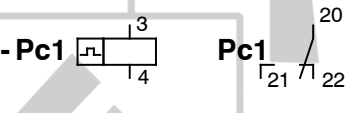
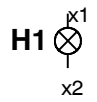
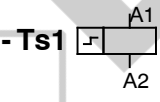
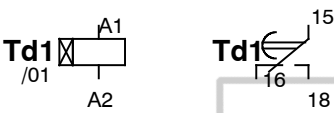
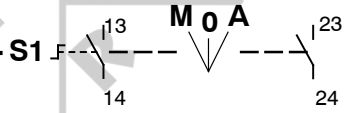
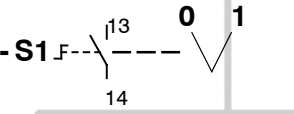
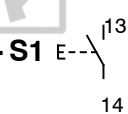
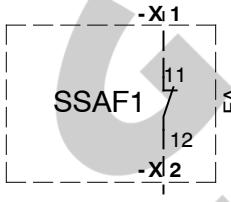
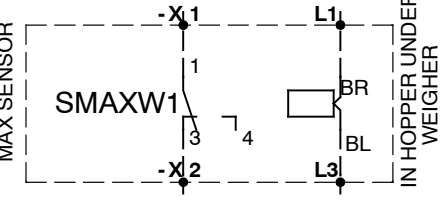
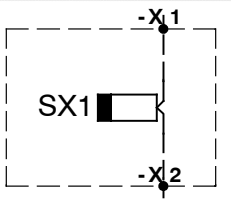
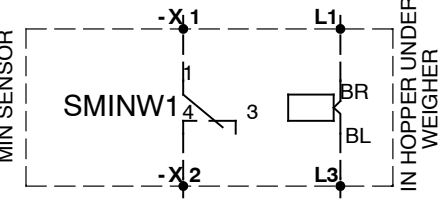


**FIGURE 96.**

### TO INSTALL THE TELESCOPICAL TUBE

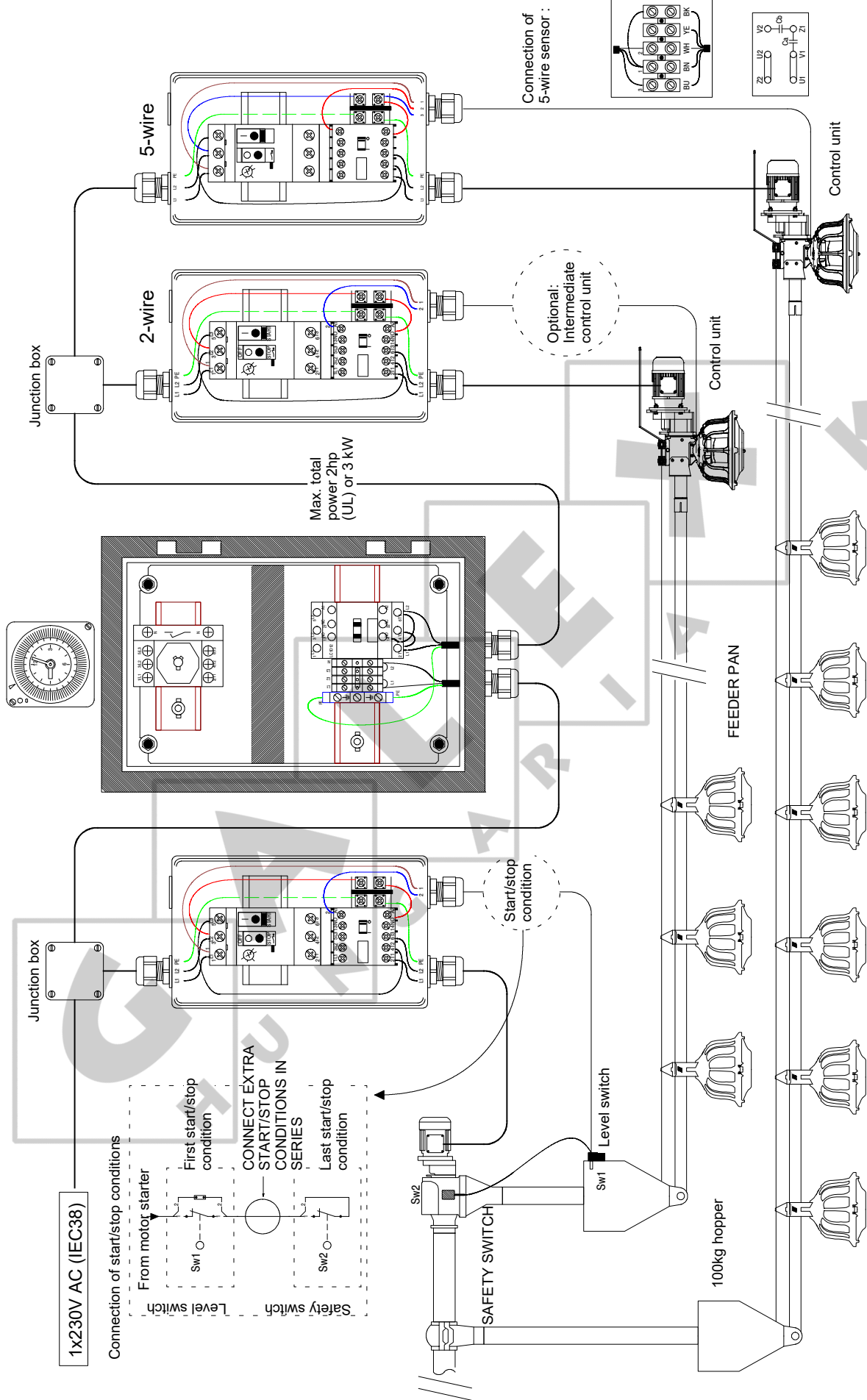


## ELECTRICAL SYMBOLS

 <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 <b>MOTOR</b></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 style="writing-mode: vertical-rl; transform: rotate(180deg);">SAFETY SWITCH</p>  <p><b>SSAF1</b> Safety or level switch for Flex-Augers, Discaflex,...</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">MAX SENSOR</p>  <p><b>SMAXW1</b> Sensor with NC-contact (supply on)</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">CONTROL PAN</p>  <p><b>SX1</b> Control sensor for Kixoo or Booztzer pans</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">MIN SENSOR</p>  <p><b>SMINW1</b> Sensor with NO-contact (supply on)</p>

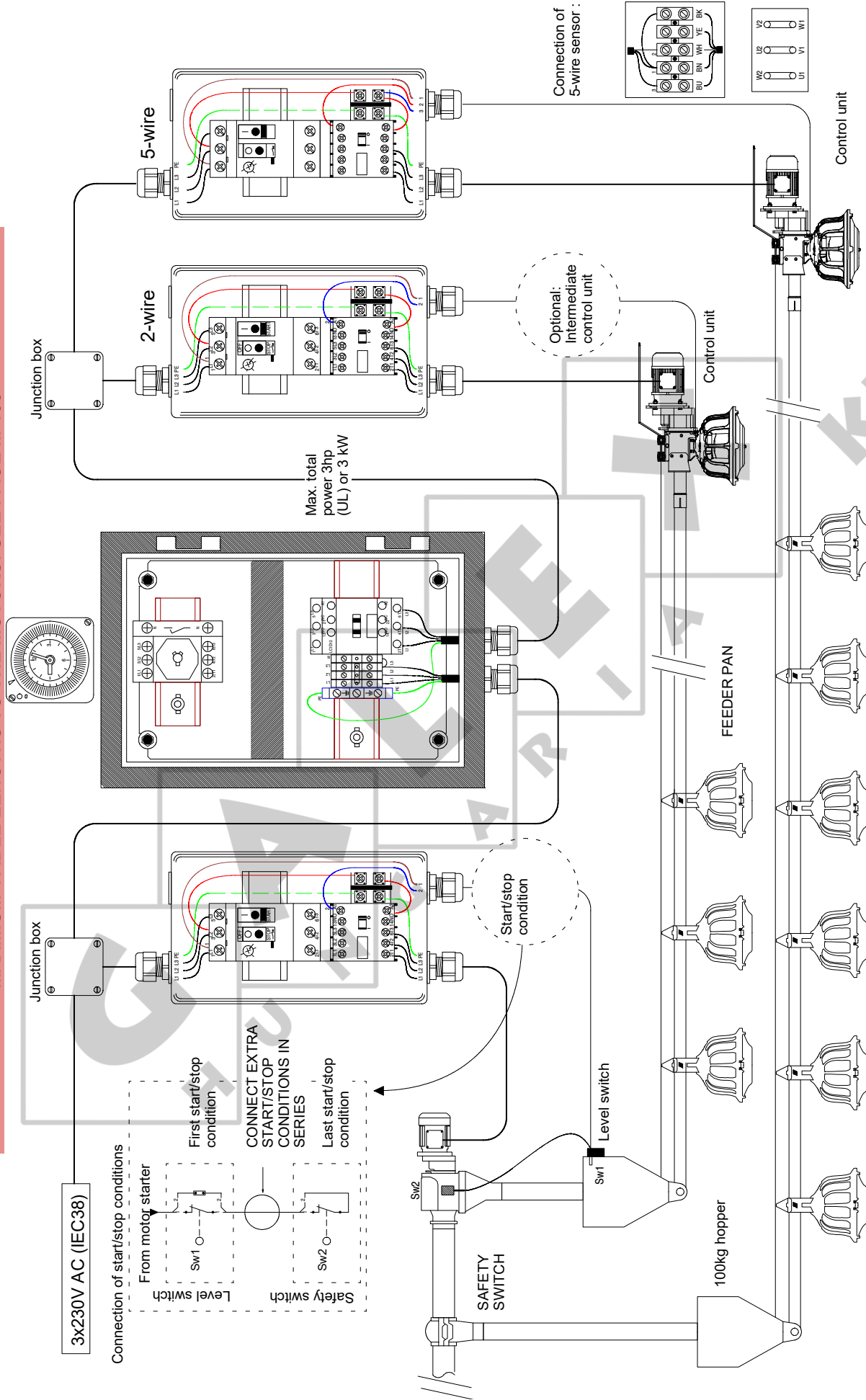
### EXAMPLE: WIRING DIAGRAM FOR 1X230V

**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-138**



**EXAMPLE: WIRING DIAGRAM FOR 3X230V**

**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-138**

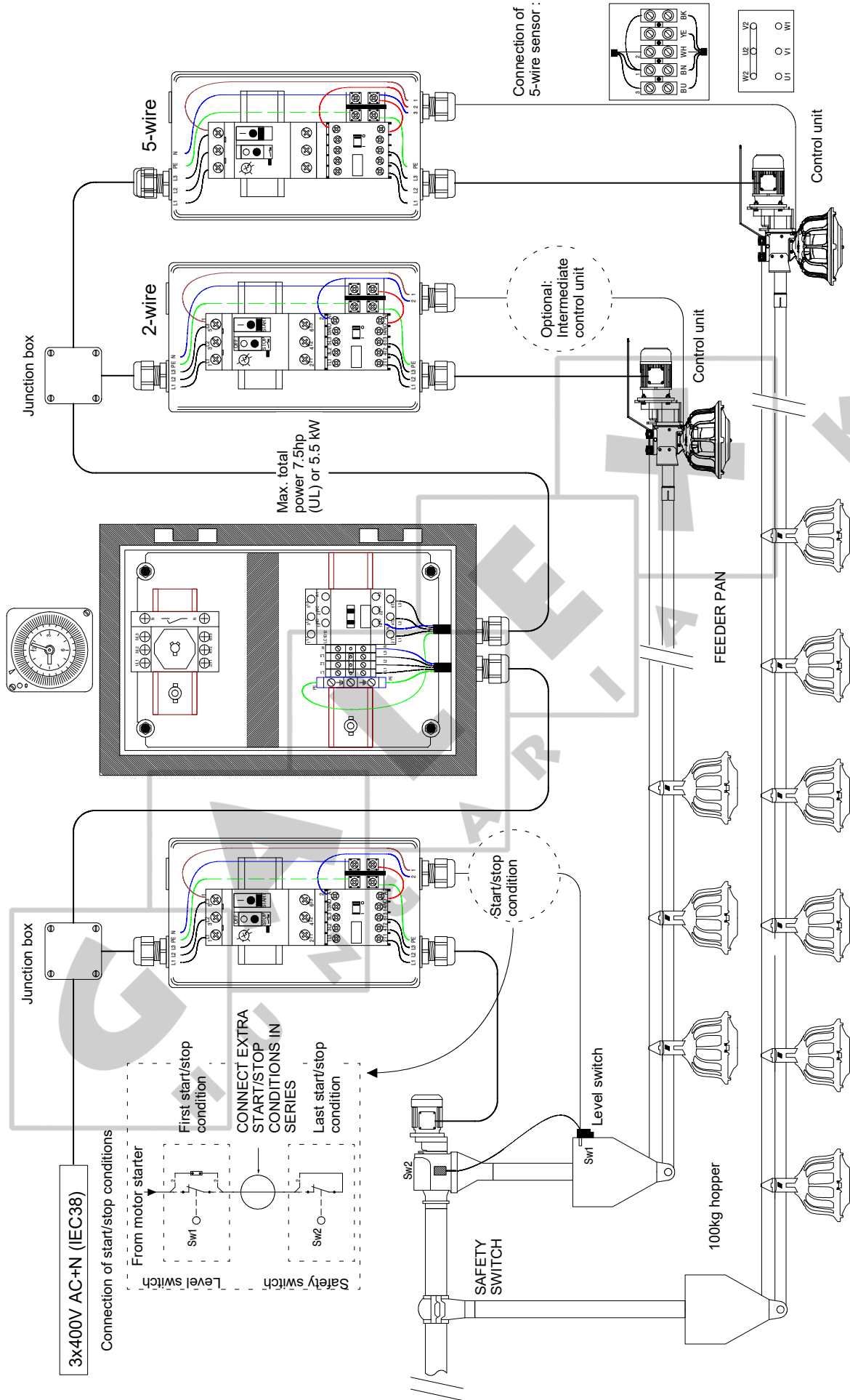


Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.



### EXAMPLE: WIRING DIAGRAM FOR 3X400V

**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-138**



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



## LED LIGHT KIT FOR CONTROL UNIT HAIKOO

CONNECT THE POWER SUPPLY TO 100-240 VAC, 50/60HZ. ; 0,22A/CU.

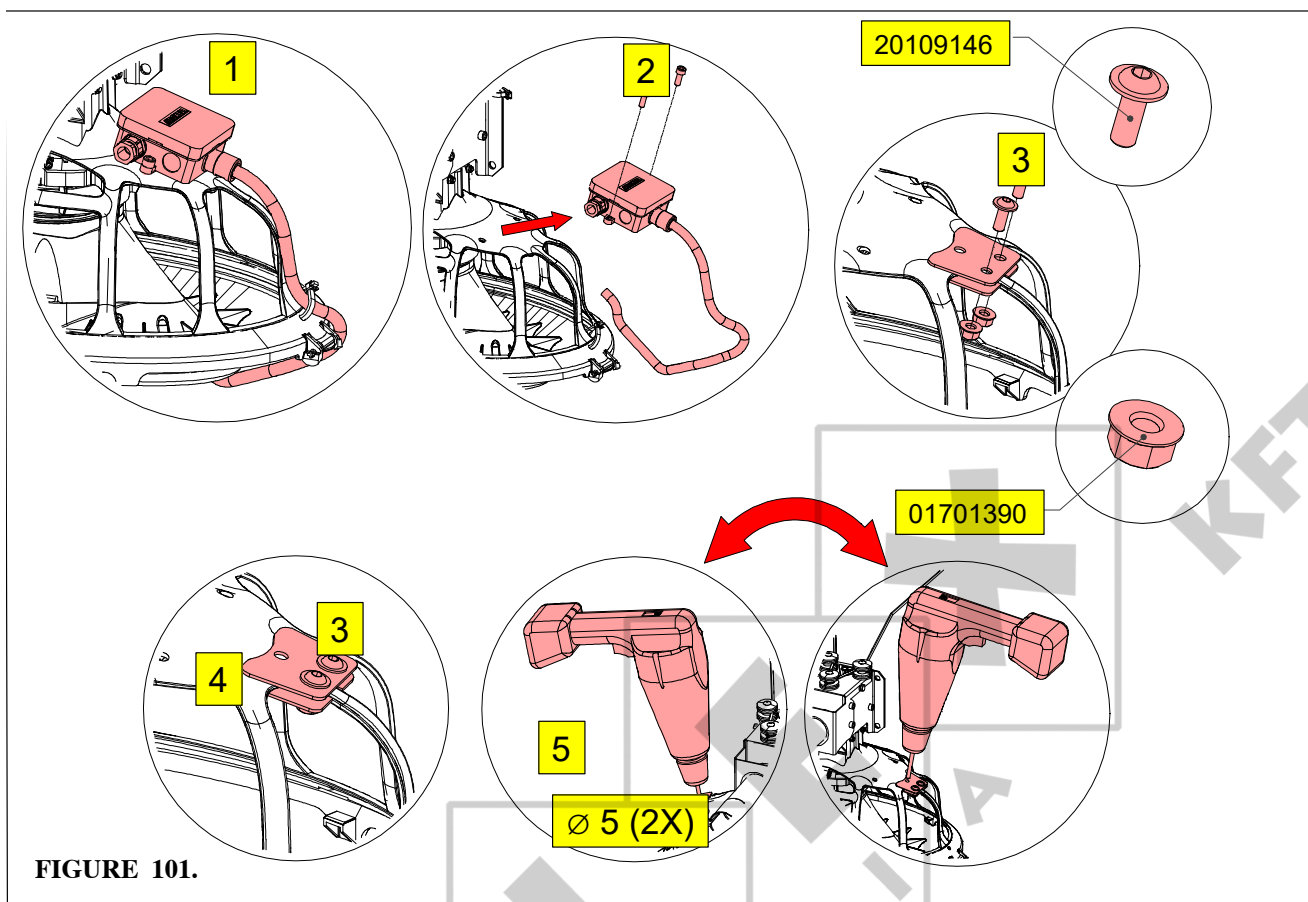


FIGURE 101.

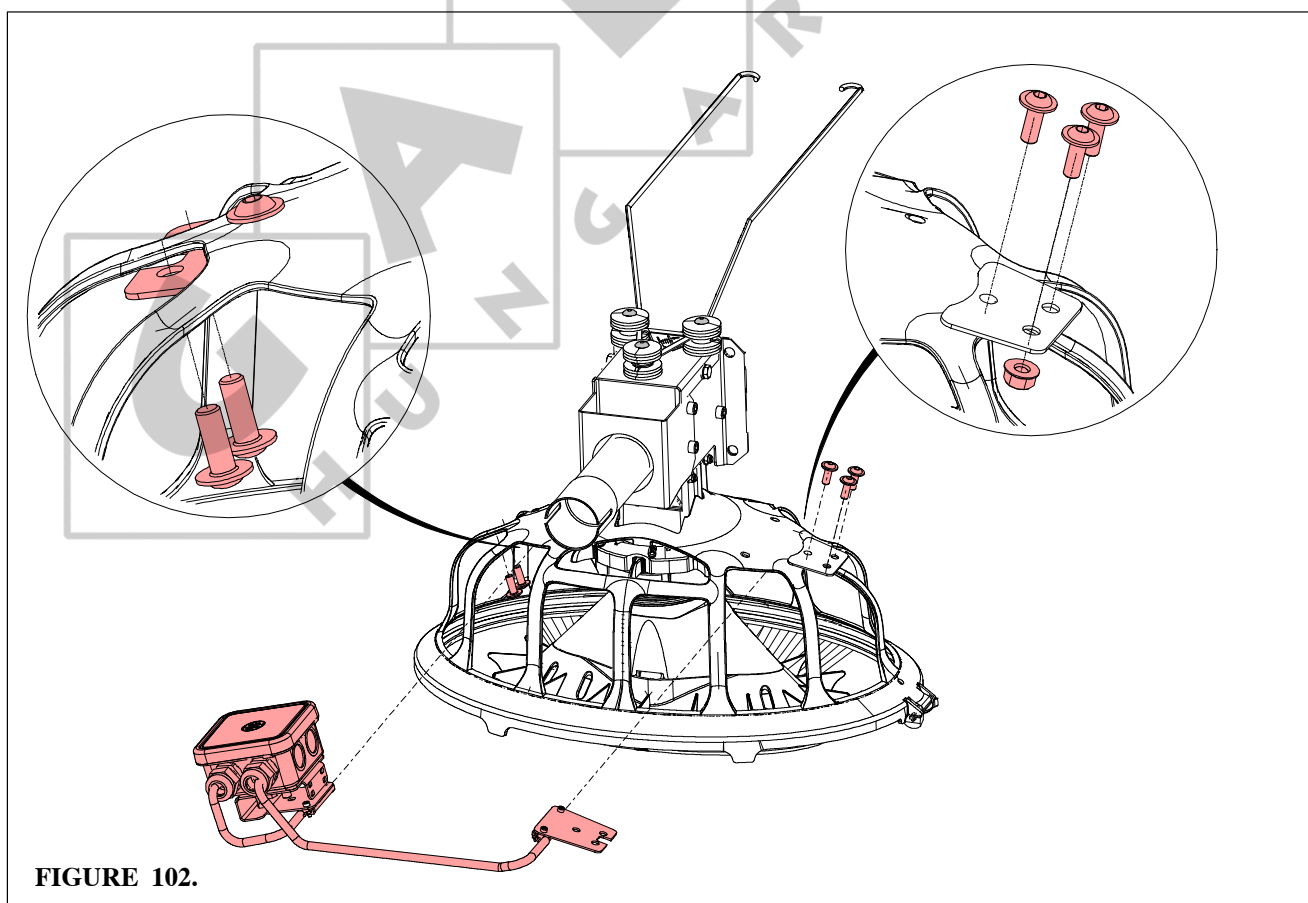


FIGURE 102.

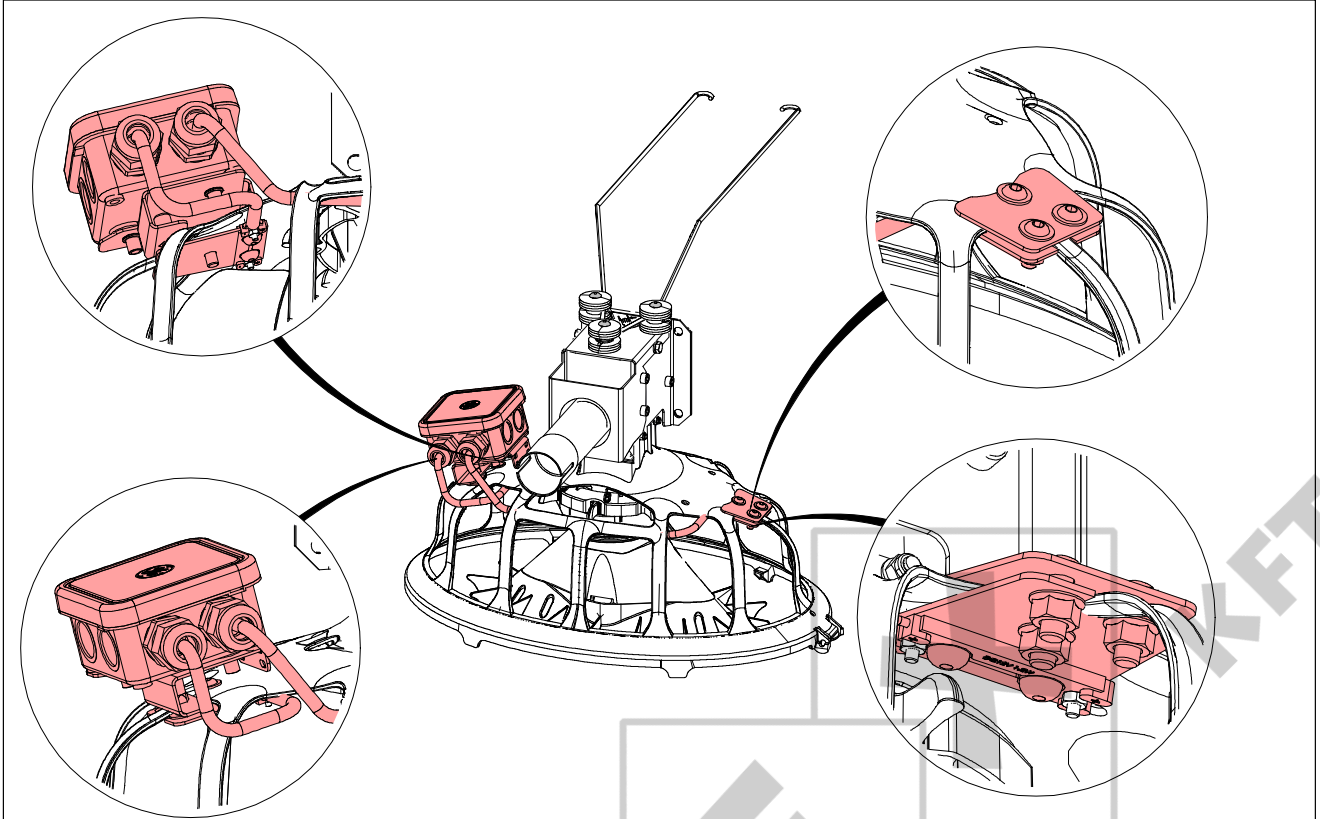


FIGURE 103.

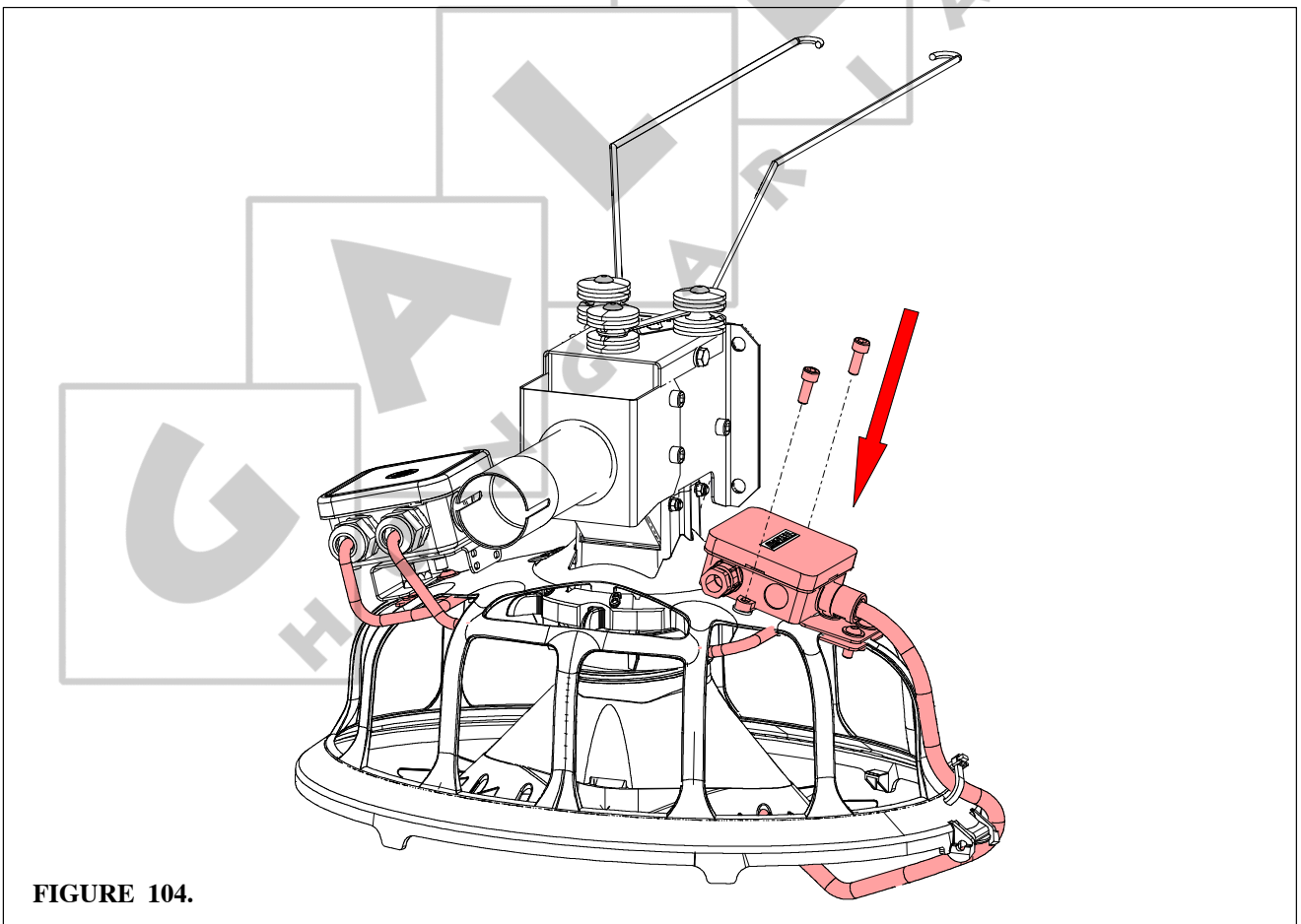


FIGURE 104.

## 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



G  
H

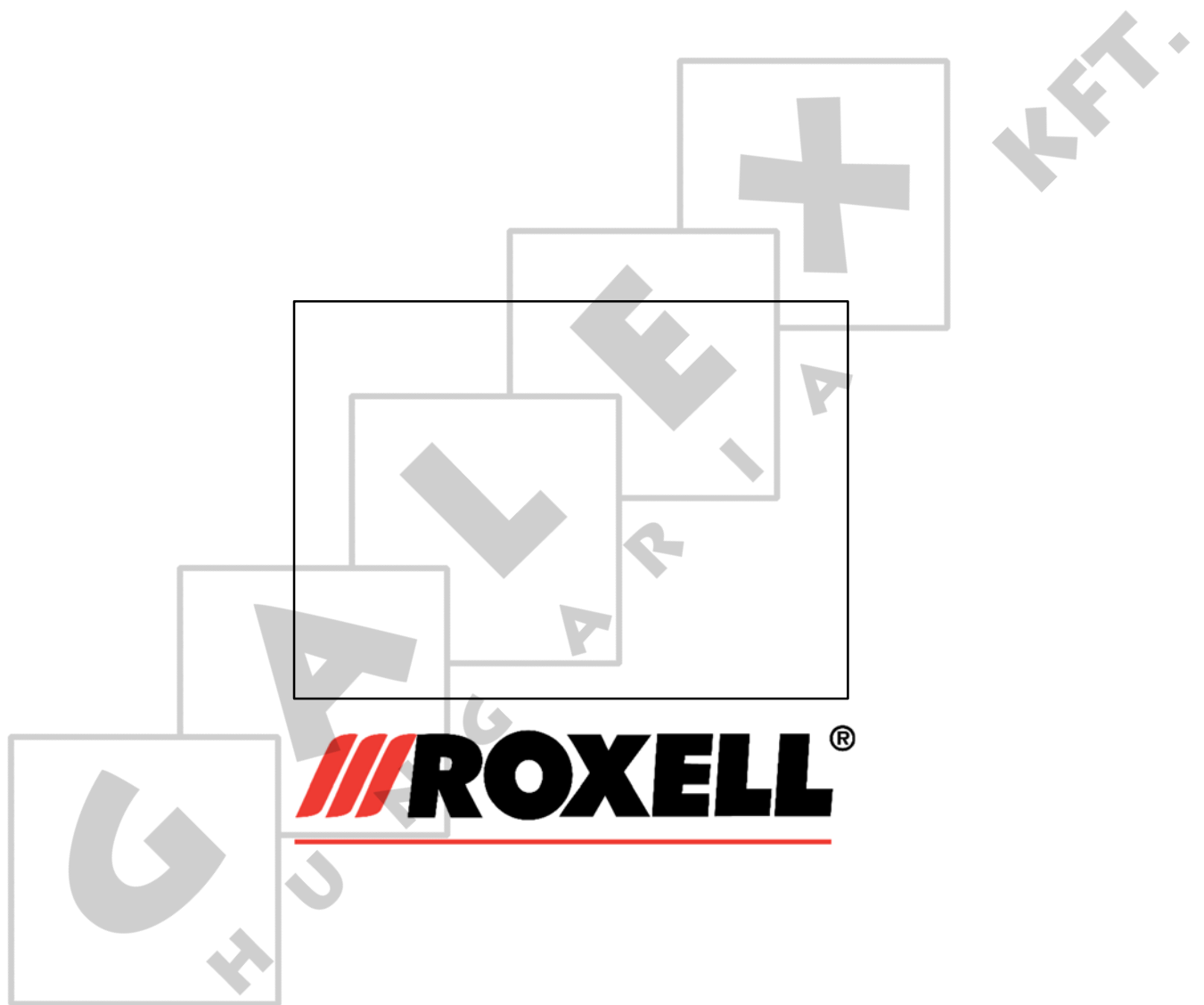
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