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Auger Transport Line

Use and Assembly Guide

ENGLISH

Original use and assembly guide

TABLE OF CONTENTS

GENERAL INFORMATION
DISCLAIMER

PART I : INSTRUCTIONS FOR THE USER

GENERAL SAFETY RULES I-3
GENERAL TECHNICAL INFORMATION I-4
OPERATION GUIDELINES I-5
MAINTENANCE I-5
TROUBLE SHOOTING GUIDE I-6
TECHNICAL SPECIFICATIONS WEIGHERS I-7/8
MAINTENANCE I-8
DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

PART II : COMPONENTS

GENERAL VIEW II-2
COMPONENT NUMBERS II-3
SUSPENSION- AND LINE COMPONENTS II-4
POWER UNIT II-5
MOTOR MOUNT II-6
CONTROL UNIT II-7/10
EXTENSION BOOT II-11/15
BOOT II-16
FEED INTAKE BOOT II-17/18
BOOT ASSEMBLY II-19
DOUBLE INTAKE BOOT II-20/22
TANDEM IN LINE II-23/25
THUMPER ASS'Y II-26
PELLET GUIDES II-26
PELLET GUIDES II-27
PELLET GUIDE DOUBLE II-27
PELLET GUIDES II-27
UPPER BOOT 15_ PE - BLACK II-28
QUADRUPLE BOOT II-28
TRANSFER PLATE ASS'Y - PE - BLACK II-28
OUTLET DROP ASS'Y W/SHUT-OFF II-29/30
SENSOR HOLDER + CONN. KIT II-31
HOPPER LEVEL SWITCH II-32
TELESCOPICAL DROP TUBE II-32
DROP TUBE LEVEL SWITCH W/DELAY II-33
DROP TUBE LEVEL SWITCH II-33
MOTOR STARTER II-34
LAY-OUT WEIGHER 6.5 TON - PRODUCT NUMBERS II-35
AUTOMATIC WEIGHER II-35/36
LAY-OUT WEIGHER EBW70 ..... II-37

PRODUCT NUMBERS II-37
TABLE TOP II-37
HARDWARE KIT FOR TABLE EBW70 ..... II-37
TABLE LEG II-37
TABLE LEG BRACE II-37
ELECTRONIC BATCHWEIGHER EBW-70L II-38
ELECTRONIC BATCHWEIGHER EBW-70 + LCC II-39
EXCENTRIC DROP ASS'Y MOD. CU II-40
AUTOMATIC OUTLET DIA 75 - ST.ST. II-41
AUTOMATIC OUTLET DIA 89 - ST.ST. II-42
SPARES SET BEARING CAP HOLDER II-43

PART III : INSTALLATION INSTRUCTIONS

GENERAL SAFETY RULES III-1
GENERAL VIEW III-2
COMPONENT NUMBERS III-3
TOOLS III-3
GUIDELINES FOR DESIGNING THE AUGER TRANSPORT LINE III-4
BIN LOCATION III-4
ELBOW DIAGRAM III-5/6
GRAPH WITH MAXIMUM LENGTHS - MODEL 55 ..... III-7
GRAPH WITH MAXIMUM LENGTHS - MODEL 75 ..... III-8
GRAPH WITH MAXIMUM LENGTHS - MODEL 90 ..... III-9
GRAPH WITH MAXIMUM LENGTHS - MODEL 125 ..... III-10
TO INSTALL THE WEIGHER (IF USED) : SEE PAGE III-39 UP TO III-46 ..... III-11
TRANSPORT LINE LOCATION III-11
DISTANCE BETWEEN SUSPENSION POINTS III-11
TO INSTALL THE SUSPENSION POINTS III-12
CONTROL UNIT ASSEMBLY AND INSTALLATION III-13
EXTENSION BOOT ASSEMBLY AND INSTALLATION III-14
TO MAKE THE DROP HOLES IN THE TUBES III-15
TO INSTALL THE TUBES III-16/17
TO INSTALL THE OUTLETS III-18/19
POSITION OF THE CONTROL UNIT DROP TUBE III-20
TO INSTALL THE THUMPER - MODEL 55MM / 75MM / 90MM III-20
TO INSTALL THE BOOT ASSEMBLY III-21
QUADRUPLE BOOT ASSEMBLY III-22
TO CONNECT THE AUGER TRANSPORT LINE TO THE BIN III-23/24
TO INSTALL THE AUGER III-25
TO CONNECT THE AUGER III-26
FLOW REGULATION MODEL 75 & 90 ..... III-27
TO INSTALL THE THUMPER - FLOW REGULATION - MODEL 125 ..... III-28/29
TO INSTALL THE DROP TUBES III-30
TO ADJUST THE TELESCOPICAL TUBE III-30
TO INSTALL THE TANDEM IN LINE (MODEL 75/90/125) III-31
REDUCING THE CAPACITY III-31
AUGER STRETCHING (STRAIGHT THROUGH TANDEM) III-32

TO INSTALL THE HOPPER LEVEL SWITCH III-32
TO INSTALL THE DROP TUBE LEVEL SWITCH III-33
TO INSTALL THE SENSOR ON A FLAT SURFACE III-34
TO INSTALL THE SENSOR ON A DROP TUBE III-34
TO INSTALL THE DROP TUBE LEVEL SWITCH IN A LINE WITH EXTENSION BOOT ... III-35
TIME DELAY III-35
ELECTRICITY .... WATCH OUT ! III-36
ELECTRICAL SYMBOLS III-37
WIRING DIAGRAMS III-38/40
LAY-OUT WEIGHER 6.5 TON III-41
PRODUCT NUMBERS III-41
DIMENSIONS - INSTALLATION III-41/46
CONNECTION IMPULSE SWITCH MECHANICAL WEIGHER III-47/48
AUTOMATIC WEIGHER III-49/52
TO ADJUST THE WEIGHER III-52
LAY-OUT EBW70 ..... III-53
PRODUCT NUMBERS III-53
DIMENSIONS EBW70 ..... III-53
INSTALLATION EBW 70 ..... III-54
ELECTRICAL INSTALLATION III-54
TRANSPORT SECURITY III-55
MANUAL DISCHARGE VALVE III-56
REMOVAL OF THE LIFTING MAGNET III-56
DISASSEMBLY WEIGHING BAR (IN CASE OF FAILURE) III-56
MOTOR PROTECTION III-57
MAXIMUM CABLE LENGTHS TO THE MOTORS III-58

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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 donein 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!

DANGER	**DANGER** indicates a direct imminent danger that can result in a serious or even fatal accident if the safety measures are not respected.
WARNING	**WARNING** indicates a possible imminent danger that can result in a serious accident or damage to the product if the safety measures are not respected.
CAUTION	**CAUTION** indicates possible, dangerous situations that can result in minor physical injury or material damage if the safety measures are not respected.
	This symbol refers to supporting information.
allowed not allowed	

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. Your 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.**

PART I

INSTRUCTIONS FOR THE USER

GENERAL SAFETY RULES

Auger Transport Line : 5920.../2921.../5922...

Transportsysteem voor droogvoeder van dieren

Transport system of dry feed for animals

DANGER

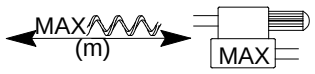
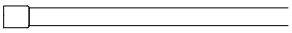
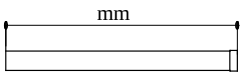
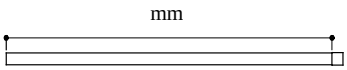
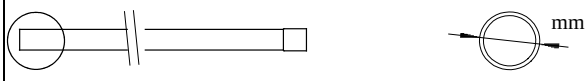
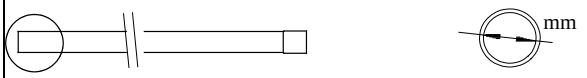
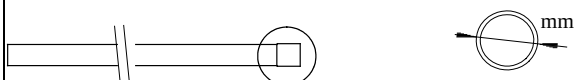
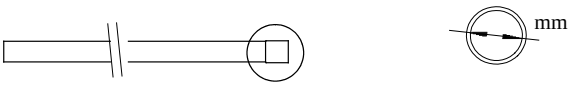
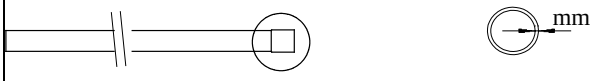
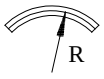
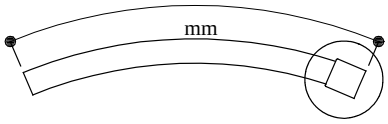
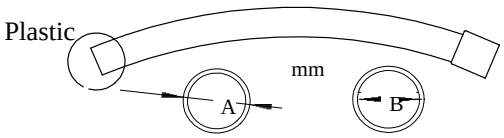
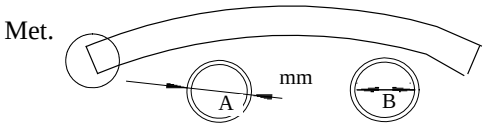
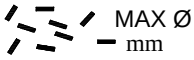
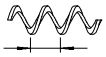
IMPORTANT

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. Take care that neither strangers nor children can **open the bin boot.**
5. **Never** allow **unauthorized persons** to **enter the house** in your absence.
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** 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 SERIOUS INJURIES or even DEATH.

GENERAL TECHNICAL INFORMATION

TRANSPORT SYSTEM	Model 55mm	Model 75mm	Model 90mm	Model 125
* kW 3phase – 50Hz	0.37	0.37/0.75	0.75/1.1	1.10
* kW 1phase – 50 Hz	0.37	0.34/0.75	0.75/1.1	1.30
	See page III-7	See page III-8	See page III-9	See III-15
RPM – 50Hz	350	175/350	350/450	290
KG/H (50Hz)	520	600/1300	2400/3100	5400
Kg/m	0,70	1,90	2,50	4,8
	PLASTIC		MET./PLASTIC	PLASTIC/MET-AL
	3050	3075	3090	3100
	3000			3000
	56	75	89	127
	51	68,6	82,2	117
	61,3	81,7	96,1	137,3
	56,3	75,3	89,3	127,3
	2,5	3,2	3,4 (PLASTIC.) 1,5 (MET.)	5 (NOV.) 2 (MET.)
	R = 1533	R = 1533	R=1568,5	R=1587,5
	1593	1308	1357	1485(58.46)
	A = 56 B = 51	A = 75 B = 68,6	A = 89 B = 82,2	A = 127 B = 117
	Not available	A = 81,7 B = 75,3	A = 96,1 B = 89,3	A =137,3 B = 127,3
	6	8	9	9
mm	D = 38,60 d = 22,60	60,45 36,57	68,33 44,45	94,60 65,60
Pitch mm 	31,4	41,4	50,8	66

OPERATION GUIDELINES

1. The auger easily conveys meal, crumbs and soft pellets.
2. With an extension boot and an extra power unit you can make turns of 90_ or double the length.
3. Never let the auger transport line run without feed.
4. Open the slide valve completely when the system runs with mash. Adjust feed flow with the slide valve when pellets are conveyed. Always use a thumper when feeding meal, and always use pellet guides when feeding pellets.
5. INSTALL THE LEVEL SWITCH LOW INSIDE THE LAST FEEDING TROUGH OR HOPPER.
   See that there are enough animals in the last pen : they empty the trough completely, so that fresh feed will be supplied at all times.
6. The restrictor on the boot anchor adjusts the amount of feed flowing into the auger. See page III- 27.
   Start any new system with the restrictor in minimum position.
   Let the system run a while before you adjust the feed flow.
   You obtain minimum feed flow by moving the restrictor as far as possible away from the anchor.
   In an auger transport line system with **EXTENSION BOOT**, the second part must convey more feed than the first part.

   Adjust the restrictor if necessary.
7. If the auger transport line starts from a tandem system : empty one bin after another. **Never** feed from both bins at the same time. When one of the bins is empty, remove the thumper (if used).
8. **Maximum running time per day** : **4 hours** (system without elbows) / **2 hours** (system with elbows). For layer feed and any feed other than commercial feed or poultry and pigs, the maximum running times are considerably shorter !

ATTENTION : Contac your supplier for professional advice when using following feeds:
CCM (Corn Cob Mix).
Feed mixed with CCM.
Soya.
Soya lumps.
Wet feed.
Without explicite authorization, all our warranties will expire and no claims will be accepted.
Also contact your supplier if you want to use strongly grating feeds like hen feed etc...

MAINTENANCE

- Check screws and bolts in the system after the first month and after each batch. Tighten if necessary.
- Keep tubes level. Adjust if necessary. Sagged tubes cause wear.
- Remove all feed from the auger transport line when the system will be out of use for a longer period.

DANGER

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

ACTIONS IN GREY BACKGROUND MUST BE DONE BY A TECHNICALLY TRAINED PERSON.

	6-monthly	Each Batch
- Check auger transport line suspension		X
- Check operation of safety switch	X	
- Clean the motor	X	
- Check electrical wiring		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	POSSIBLE CAUSE	CORRECTIVE ACTION
1. ATL does not run.	No supply voltage.	Check fuses and/or reset circuit breakers. Check cut-off-switches and current lead to the house. Repair if necessary.
	Defective level switch.	Check correct installation of the level switch. Find cause of possible feed bridging in control unit. Check level switch and replace if necessary.
	Defective safety switch in control unit.	Check operation of safety switch. Replace if necessary.
	Defective motor.	Replace motor.
2. Motor overloads after running for a short while.	Wrong motor.	Check motor power. Replace motor if necessary.
	Voltage too low (motor runs too slowly and overheats).	Check current supply to motor. Use wires with correct diameter for the connection.
	Foreign object in auger. Motor runs, then stalls.	ATTENTION ! Disconnect the auger **carefully** and pull it out of the tubes. Remove the object. Clean auger and tubes. Check fat content, percentage of moisture etc... of the feed.
	Motor runs in reverse (runs, then stalls : no feed is conveyed).	Disconnect power. Change wires. Motor shaft on the back of the motor must turn clockwise. Check the auger for damages.
	Motor overheats.	Replace motor.
NOTE : **NEVER** SET THERMAL-MAGNETIC PROTECTION HIGHER THAN THE VALUE MENTIONED ON THE MOTOR LABEL !		
3. Motor runs, but auger does not turn.	Broken bolt or worn-out set screw in drive shaft.	Replace bolt or set screw.
4. Auger wears holes in straight tubes.	Auger kinked or poorly brazed.	See instructions;
5. Elbows wear out.	Auger too short or too long.	Adjust auger length. (see instructions). Install an extension boot if necessary.
6. Auger runs erratically.	Boot bearing jammed or worn out.	Replace bearing.
	Auger too long.	Shorten auger. Close all outlets. Remove bearing and anchor. Disconnect auger. Let system run for a short while. Cut auger at rear end of boot. Reinstall.
	Poor suspension of the tubes or too many elbows.	Provide more suspension points. Adjust height. Decrease number of elbows.
	Kinked and/or poorly brazed auger scrapes along the tubes.	See auger brazing;
7. ATL short cycles continually.	- Level switch not installed on the right spot in 100kg hopper. - Sensor in tube.	- Adjust level switch position (see instructions.). - Use a sensor VC11 or VC12 if necessary (see instructions).
8. Feed bridging in extension boot.	Not enough feed drop from last outlet before the extension boot.	Provide 100 % feed drop.
	Time set too short on relay.	Check.
9. Second part (past the extension boot) does not start.	Defective level switch on first part.	Check operation of level switch. Replace if necessary.

TECHNICAL SPECIFICATIONS WEIGHERS

TECHNICAL SPECIFICATIONS OF THE MECHANICAL BATCH WEIGHER 6.5 TONS

Capacity	6.5 tons/hour (depending on the kind of feed)
Precision	± 1%
Number of compartments	2 x 26 liters (2x10 kg)
Weight of the weigher	30kg

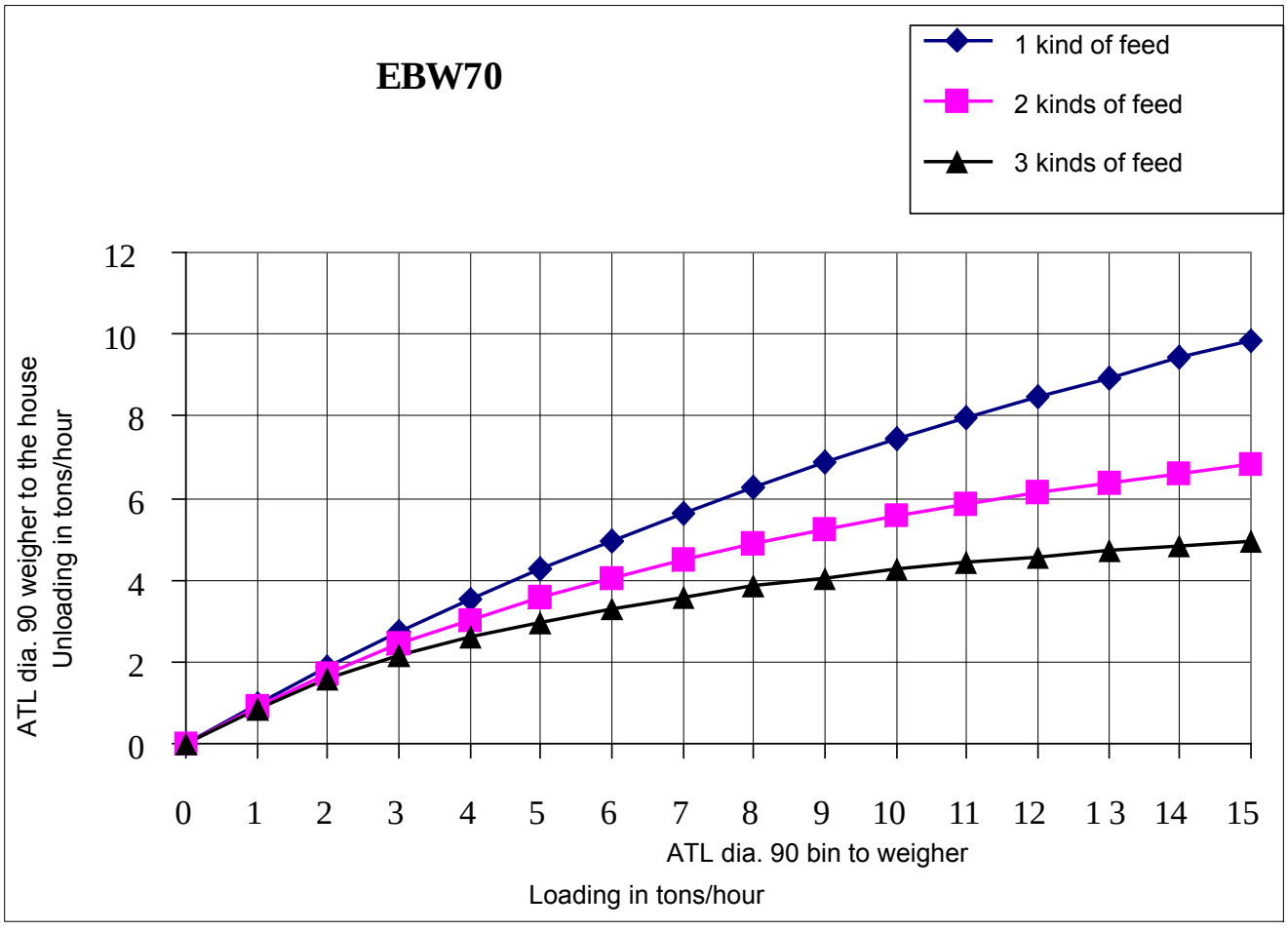
TECHNICAL SPECIFICATIONS OF THE MECHANICAL BATCH WEIGHER 13 TONS

Capacity	13 tons/hour (depending on the kind of feed)
Precision	± 1%
Number of compartments	2 x 65 liters (2x25 kg)
Weight weigher	52kg

TECHNICAL SPECIFICATIONS OF THE ELECTRONIC BATCH WEIGHER EBW70

The EBW70 is an electronic batch weigher, especially developed for a correct feed weighing. A feed computer controls the weighing unit.

Operation of the feeding process : see manual of the feed computer



Weighing unit	
Tension of the valve unlatching	24Vdc
Maximum capacity of the valve unlatching	1,5A
Maximum batch size	35 kg / 70 liters
Minimum batch size	6kg
Number of weighing bars	2
Housing	
Material	galvanized steel plate
Dimensions (length x width x height)	see page III-43
Weight of the weighing bin	13 kg.
Weight of the table	12 kg
Ambient climate	
Operating temperature range	-20°C up to +60°C
Relative humidity	<95%, uncondensed
Outlet opposite to inlet	

MAINTENANCE

SWITCH OFF THE CURRENT BEFORE YOU START ANY MAINTENANCE JOB!

We recommend that you let the installer check every six months the proper functioning of the complete installation (of which this system is a part).

Regularly remove dust from the weigher (every 3 months or more frequently, according to the type of feed used), but DO NOT USE WATER to clean it.

5629994960

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:
EFG, 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:

Chain Transport Circuit /Auger Transport Circuit /Auger Transport Line
Nr: 5637…/ 5625…/ 5629…
Transportsysteem voor droogvoeder van dieren.
Transport system of dry feed for animals.

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 13857:2008; EN 349:1993 + A1:2008; EN ISO 12100:2010; EN 60204-1:2006; EN 61439-1:2011; EN 61439-2:2011

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 informatieverschaffing laat de intellectueel-eigendomsrechten van de fabrikant van de niet voltooide machine onverlet**.**

(NL)

Relating to this declaration, is conform
- The following directives 2006/42/EC (Machinery Directive); 2014/30/EU (Electromagnetic Compatibility).
- The harmonised European standards: EN ISO 13857:2008; EN 349:1993 + A1:2008; EN ISO 12100:2010; EN 60204-1:2006; EN 61439-1:2011; EN 61439-2:2011

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, 01/01/2017

……
Dhr. Gino Van Landuyt
Managing Director

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

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 EFG-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 EFG.

_____
(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 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.

SPECIMEN

PART II

COMPONENTS

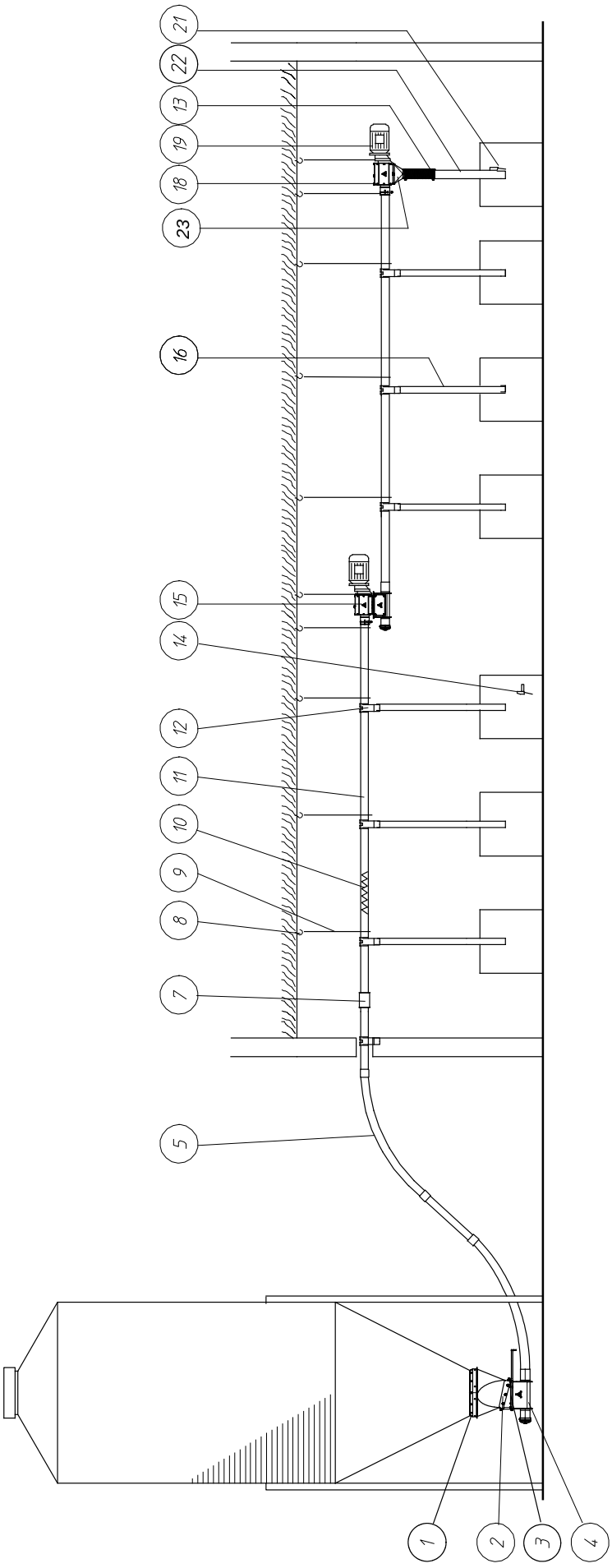
1. ENVIRONMENTALLY - FRIENDLY DESIGN

Roxell complies with the Commission Regulation (EU) No. 4/2014 of 6 January 2014, amending Regulation (EC) No 640/2009 implementing Directive 2005/32/EC (the European standard IEC 60034) of the European Parliament and of the Council with regard to eco design requirements for electric motors.

2. COMMUNICATION

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

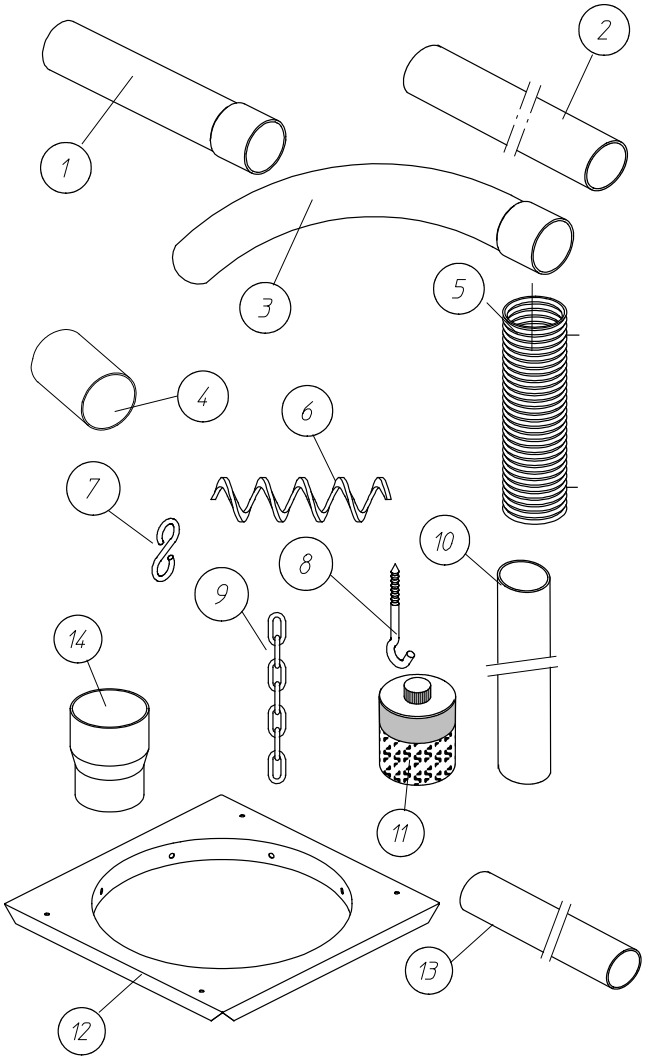
GENERAL VIEW



COMPONENT NUMBERS

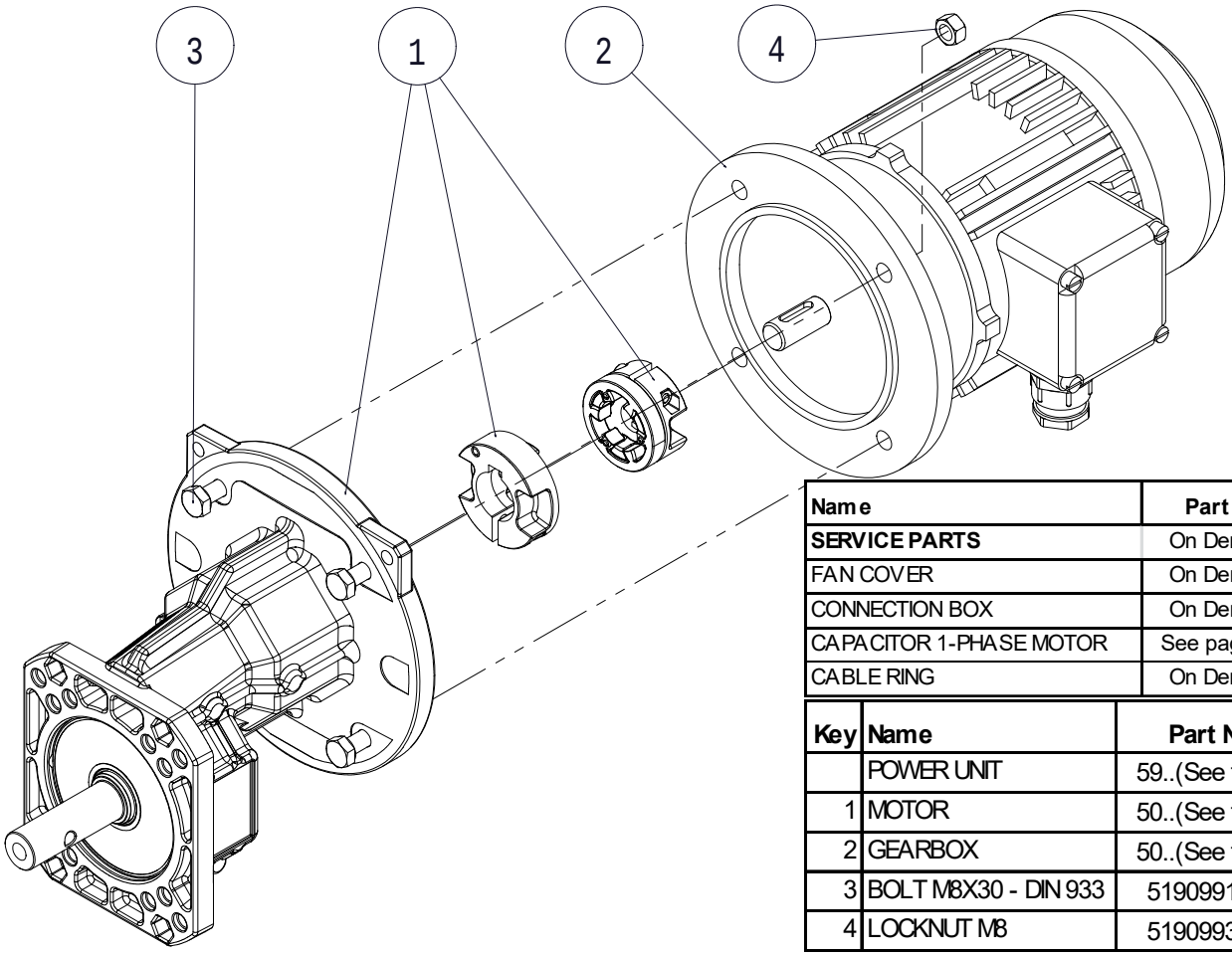
Key	Description	Number				Page
		Model 55	**Model 75**	**Model 90**	**Model 125**	
1	UNIVERSAL COLLAR	5620992200	5620992200	5620992200	5620992200	II-4
2	UPPER BOOT 15 DEGREES	5629993880	5629993880	5629993880	5629993880	II-25
3	TRANSFER PLATE ASSEMBLY	5629996020	5629996020	5629996020	5629996020	II-25
4	BOOT ASSEMBLY	5624990150	5620993110	5621992430	5626999450	II-12/14
	DOUBLE BOOT ASSEMBLY	5624990230	5620993290	5621992510	-	II-15/17
5	PVC ELBOW 45°	5624999650	5620991390	5621991440	5626999380	
	HARDENED STEEL ELBOW 45°	-	-	5921993220	5926999910	
7	TUBE CONNECTOR	5624999810	5620992040	5621992940	-	
	TUBE CONNECTOR	-	-	5921990580	5926992710	
8	SCREW HOOK L = 90	5949997610	5949997610	5949997610	5949997610	II-4
9	SUSPENSION CHAIN	5949999100	5949999100	5949999100	5949999100	
10	AUGER	5922994600	5920990760	5921993980	5926999740	
11	PVC TUBE - 3 M	5624999730	5620991460	5621991520	5626992120	
	METAL TUBE - 3 M	-	-	5921990910	5926991990	
12	OUTLET W SHUT-OFF (BLUE)	SEE PAGE				II-22
13	FLEXIBLE TUBE ASSSEMBLY DIA. 70	-	-	5920995220	5920995220	II-4
15	EXTENSION BOOT	5624999570	5620991210	5621991600	5626999790	II-9/11
16	PLASTIC DROP TUBE DIA 70MM X 1,5 LG = 2,5 M	5949999430	5949999430	5949999430	-	II-4
18	CONTROL UNIT	5624999320	5620991130	5621991110	5626999610	II-6/8
19	POWER UNIT	SEE PAGE				II-5
21	DROP TUBE LEVEL SWITCH	5629993390	5629993390	5629993390	5629993390	II-29
	DROP TUBE LEVEL SWITCH (W/DELAY)	5629993460	5629993460	5629993460	5629993460	II-29
22	PLASTIC DROP TUBE DIA 85MMLG = 2,5 M	5920995140	5920995140	5920995140	5920995140	II-4
23	METAL DROP DIA 105	5926995110	5926995110	5926995110	5926995110	II-4

SUSPENSION- AND LINE COMPONENTS



Key	Name	Part Nr.
1	PVC TUBE DIA.56 - 3 m	5624999730
	PVC TUBE DIA.75 - 3 m	5620991460
	PVC TUBE DIA.90 - 3 m	5621991520
	PVC TUBE LG=3M - ø127MM	5626992120
2	METAL TUBE LG=3M - ø89MM	5921990910
	METAL TUBE LG=3M - ø127MM	5926991990
	METAL TUBE ø60 LG=3000MM	5926997500
	METAL TUBE LG=3M - ø127MM	5926991990
3	PVC ELBOW 45°-ø56 mm	5624999650
	PVC ELBOW 45°-ø75 mm	5620991390
	PVC ELBOW 45°-ø90 mm	5621991440
	HARDENED STEEL ELBOW 45°-Ø 90MM	5921993220
	HARDENED STEEL ELBOW 45°-Ø 125MM	5926999910
	PVC ELBOW 45°-ø125 mm	5626999380
4	PVC TUBE CONNECTOR ø56 mm	5624999810
	PVC TUBE CONNECTOR ø75 mm	5620992040
	PVC TUBE CONNECTOR ø90 mm	5621992940
	TUBE CONNECTOR	5921990580
	TUBE CONNECTOR KIT	5926992710
5	FLEXIBLE TUBE ASS'Y ø85 MM	5920995220
	FLEXIBLE TUBE ASS'Y ø70 MM	5949999360
	FLEXIBLE TUBE ASSEMBLY ø110 MM	5926990320
6	AUGER - ATL 55	5922994600
	AUGER - ATL 75	5920990760
	AUGER - ATL 90	5921993980
	AUGER - ATL 125	5926999740
7	"S" HOOK	5949999020
8	SCREW HOOK 90 MM	5949997610
9	SUSPENSION CHAIN	5949999100
10	PLASTIC DROP TUBE DIA. 70MM - 2.5 m	5949999430
	PLASTIC DROP TUBE - D. 85 MM - 2.5 m	5920995140
	PLASTIC DROP TUBE 5.0M -DIA. 110M	5926990240
11	PVC GLUE 1/4L	5920992910
12	UNIVERSAL COLLAR	5920919900
13	TUBE ø32 x 1.2 - 2.9M	5920929550
	TUBE 3.05M WITHOUT HOLES	5990911580
	METAL TUBE ø60 LG=3000MM	5926997500
14	DROP TUBE REDUCER ø80.5-ø70	5920902720

POWER UNIT



Name	Part Nr.
SERVICE PARTS	On Demand
FAN COVER	On Demand
CONNECTION BOX	On Demand
CAPACITOR 1-PHASE MOTOR	See page II-6
CABLE RING	On Demand

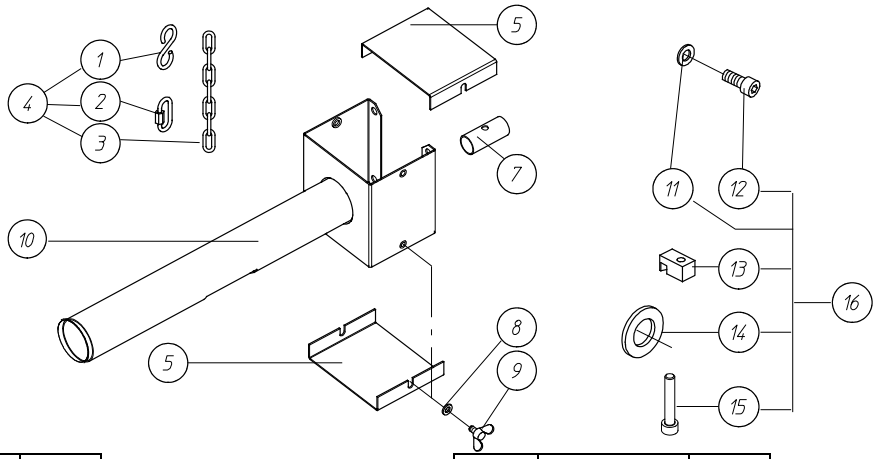
Key	Name	Part Nr.
	POWER UNIT	59..(See table)
1	MOTOR	50..(See table)
2	GEARBOX	50..(See table)
3	BOLT M8X30 - DIN 933	5190991330
4	LOCKNUT M8	5190993070

System	FA-55	FA-75	FA-75/90	FA-90	FA-125
Gearbox With Key	5090953300	5020940650	5020954940		5026918120
Gearbox With F-Coupling steel				5021925220	5026905250
Gearbox With F-Coupling alu	5090007100	5020987190	5020987170	5021930370	5026918610
Type Elastic Coupling Motor	Coupling G5.14 5021930390	Coupling G5.14 5021930790	Coupling G5.14 5021930390	Coupling G5.19 5021928860	Coupling G5.19 5021928860
Type Elastic Coupling Gearbox	Coupling G5.24 5021930610	Coupling G5.24 5021930610	Coupling G5.24 5021930610	Coupling G5.24 5021930610	Coupling G5.24 5021930610
Type Elastic Coupling Set (CS 71-80-90)	CS71 5021930790	CS71 5021930790	CS71 5021930790	CS80 5021930850	CS80 5021930850
Motor Shaft	Ø14	Ø14	Ø14	Ø19	Ø19
Ratio	3.867	7.875	3.867	2.944	4.75
Output speed	350	175	350	450	290
Construction size	71	71	71	80	80
Motor speed 50Hz(RPM)	1500	1500	1500	1500	1500
Motor speed 60Hz(RPM)	1800	1800	1800	1800	1800
Feed capacity kg	520	600	1.300/2.400	3.100	5.400
Max. Run Time	2 Hours/day	2 Hours/day	2 Hours/day	2 Hours/day	2 Hours/day
3x230/400V 50Hz IE1	5990969810	5920931510	5920932090	5921916230	5926997740
Motor IE1	5090953710 (0,37kw)	5090953710 (0,37kw)	5020955760 (0,74kw)	5021922740 (1,1kw)	5021922740 (1,1kw)
3x230/400V 50Hz Conform IE				5921916310	5926997820
Motor Conform IE				5021931010 (1,1kw IE)	5021931010 (1,1kw IE)
3x200/346V 50Hz	5990960990	5920931690	5920932070	5921916490	5926998900
Motor	5090933760 (0,37kw)	5090933760 (0,37kw)	5020950470 (0,75kw)	5009131360 (1,1kw)	5009131360 (1,1kw)
1x230V 50Hz	5990960970	5920931670	5920932150	5921916470	5926998980
Motor	5090955450 (0,37kw)	5090955450 (0,37kw)	5020955500 (0,75kw)	5021922400 (1,3kw)	5021922400 (1,3kw)
3x220-230/380-400V 60Hz	5990960050	5920931750	5920932230	5921916550	5926998070
Motor	5088091380 (0,45kw)	5088091380 (0,45kw)	5020951050 (0,9kw)	5088059290 (1,3kw)	5088059290 (1,32kw)
3x200/346V 60Hz	5990960130	5920931830	5920932310	5921916630	5926998150
Motor	5020941230 (0,45kw)	5020941230 (0,45kw)	5020955500 (0,75kw)	5021922580 (1,3kw)	5021922580 (1,32kw)
3x254/440V 60Hz	5990960210	5920931870	5920932490	5921916710	5926998230
Motor	5088029670 (0,45kw)	5088029670 (0,45kw)	5020951390 (0,9kw)	5021922660 (1,3kw)	5021922660 (1,32kw)
1x220V 60Hz	5990960390	5920932910	5920932470	5921916890	5926998310
Motor	5090090760 (0,55kw)	5090090760 (0,55kw)	5020975070 (0,9kw)	5021923080 (1,3kw)	5021923080 (1,32kw)

CAPACITOR

Name	Part Nr.
Capacitor 1 phase motor	
RUN CAPACITOR 10 µF	5987912290
RUN CAPACITOR 12.5 µF	5987912270
RUN CAPACITOR 18 µF	5987912350
RUN CAPACITOR 20 µF	5987912430
RUN CAPACITOR 25 µF	5987912510
RUN CAPACITOR 30 µF	5987912690
RUN CAPACITOR 45 µF	5987912670
RUN CAPACITOR 50 µF	5987912750
START CAPACITOR 12.5 µF	5987912830
START CAPACITOR 14 µF	5987913910
START CAPACITOR 16 µF	5987913090
START CAPACITOR 20 µF	5987913070
START CAPACITOR 25 µF	5987913150
START CAPACITOR 36-43 µF	5987913310
START CAPACITOR 56-63 µF	5987913490
START CAPACITOR 108-130 µF	5987913470

MOTOR MOUNT - 5939902650



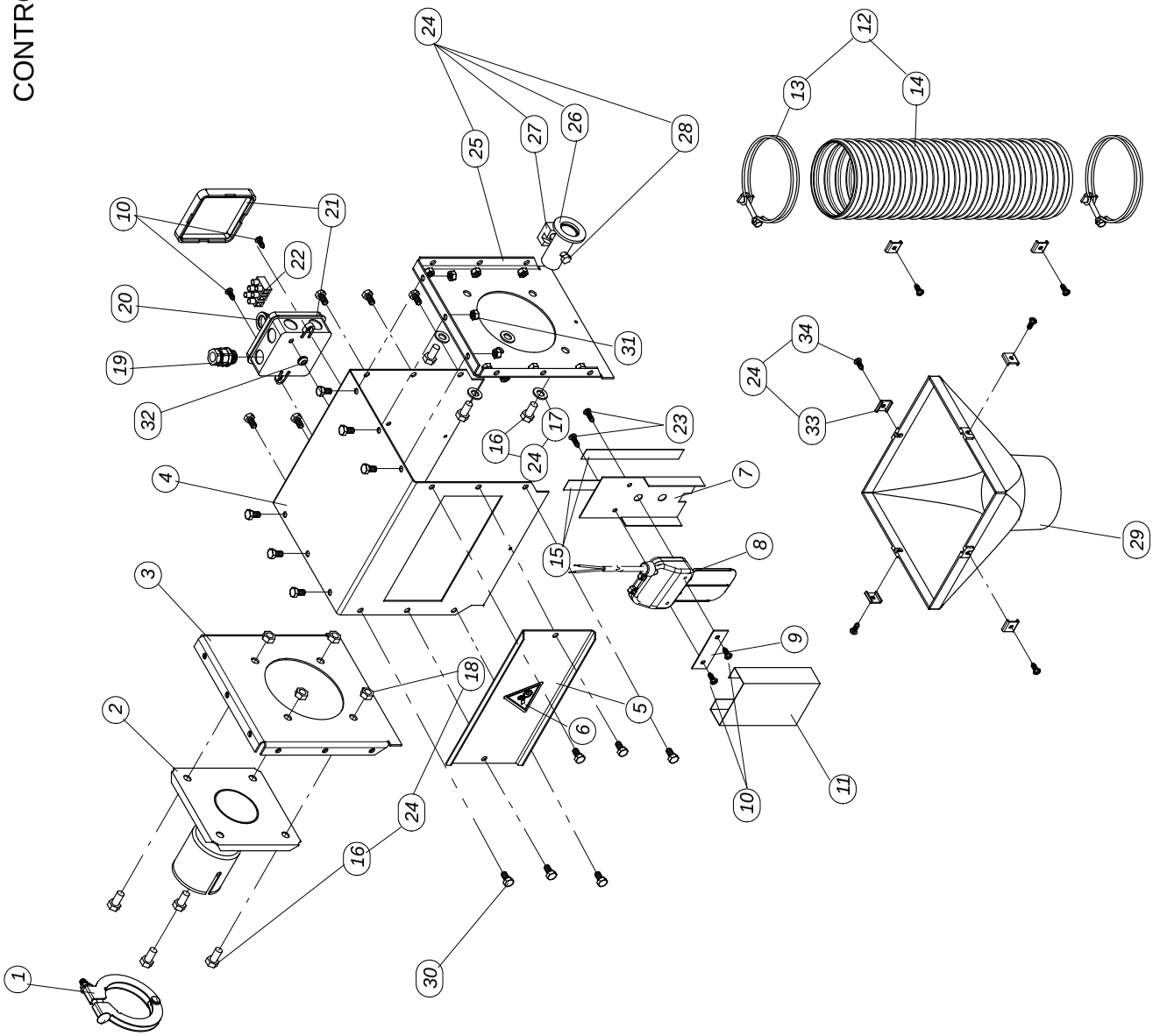
Key	Part Nr.	Qt.
1	5949999020	2
2	5091920450	1
3	5090918830	1
4	5093995930	1
5	5022923630	2
7	5024993230	1
8	5190993480	4
9	5190996120	4

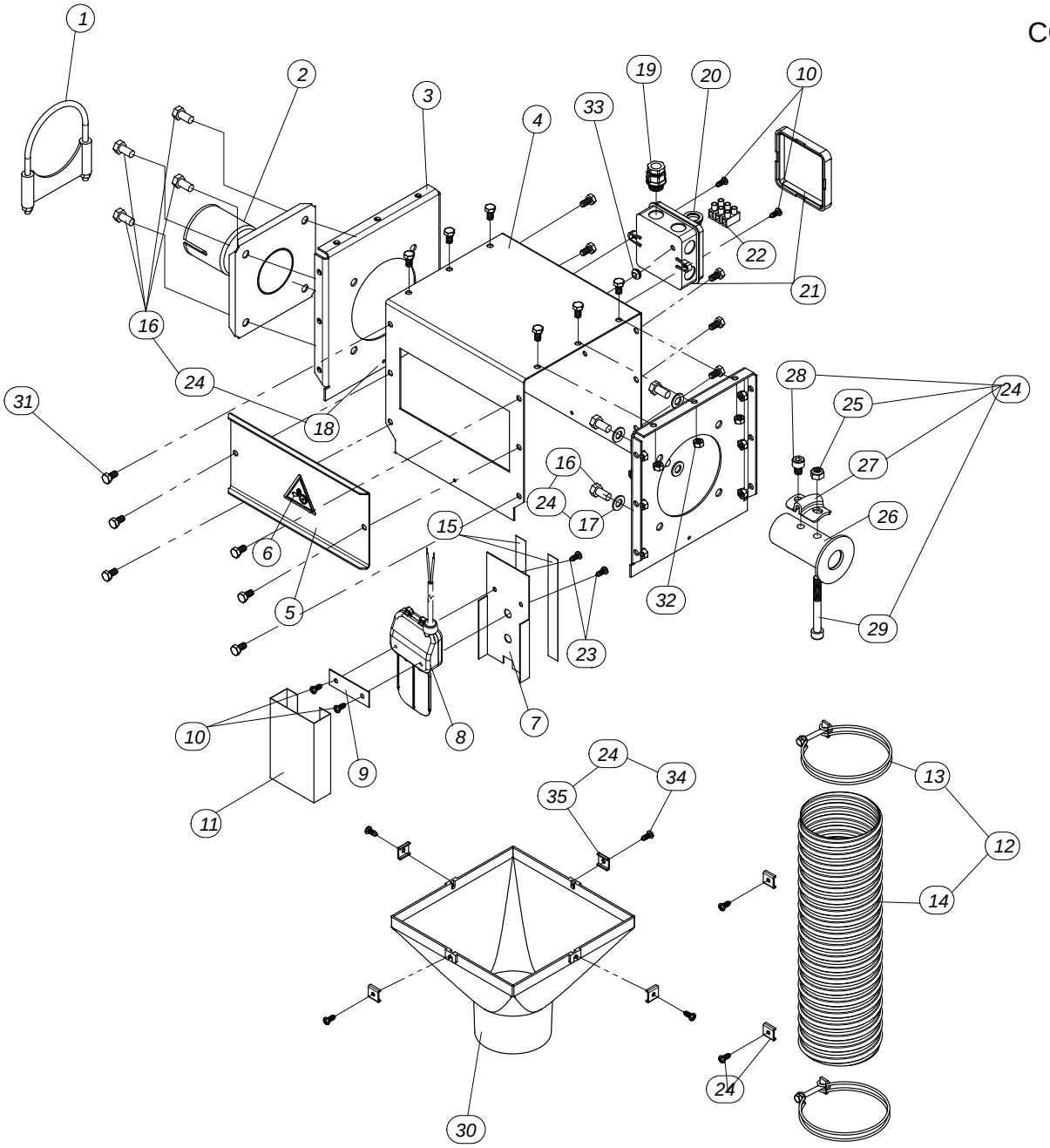
Key	Part Nr.	Qt.
10	5039994890	1
11	5190993560	4
12	5190929800	4
13	5090996710	1
14	5190927310	1
15	5190910470	1
16	5024902630	1

CONTROL UNIT MODEL 55 - 5624999320

CONTROL UNIT MODEL 55 MM 5624999320

1 : 5029999100
2 : 5024906360
3 : 5029992330(2x)
4 : 5029992400
5 : 5029992580
6 : 5029992660
7 : 5091920960
8 : 5020976630
9 : 5020941480
10: 5190994140(4x)
11: 5091920040
12: 5920995220
13: 5020922350(2x)
14: 5020922420
15: 5297996150
16: 5190991170(8x)
17: 5190993560(4x)
18: 5191999170(4x)
19: 5049903610
20: 5090918670
21: 5049999260
22: 5090920980
23: 5190912200(2x)
24: 5024997950
25: 5024993230
26: 5190927310
27: 5090996710
28: 5190910470
29: 5029992740
30: 5190990590(18x)
31: 5190991090(18x)
32: 5049949660
33: 5020925320(6x)
34: 5190994140(6x)





CONTROL UNIT MODEL 75 MM 5620991130

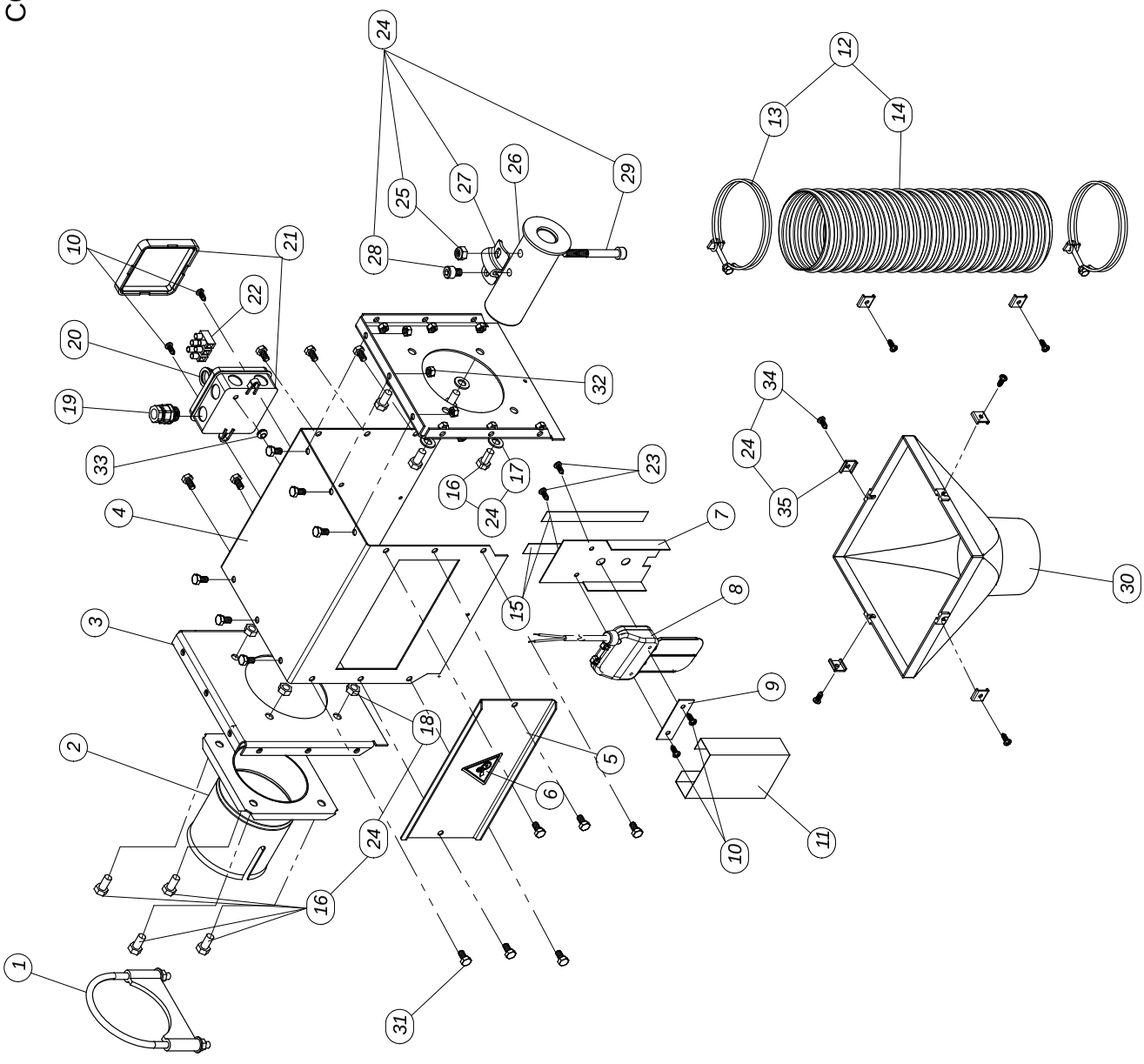
1 : 5928999540
2 : 5020966900
3 : 5029992330(2x)
4 : 5029992400
5 : 5029992580
6 : 5029992660
7 : 5091920960
8 : 5020976630
9 : 5020941480
10: 5190994140(4x)
11: 5091920040
12: 5920995220
13: 5020922350(2x)
14: 5020922420
15: 5297996150
16: 5190991170(8x)
17: 5190993560(4x)
18: 5191999170(4x)
19: 5049903610
20: 5090918670
21: 5049999260
22: 5090920980
23: 5190912200(2x)
24: 5020955010
25: 5190993070
26: 5020941990
27: 5020934640
28: 5190916670
29: 5190916750
30: 5029992740
31: 5190990590(18x)
32: 5190991090(18x)
33: 5049949660
34: 5190994140(6x)
35: 5020925320(6x)

CONTROL UNIT MODEL 75 - 5620991130

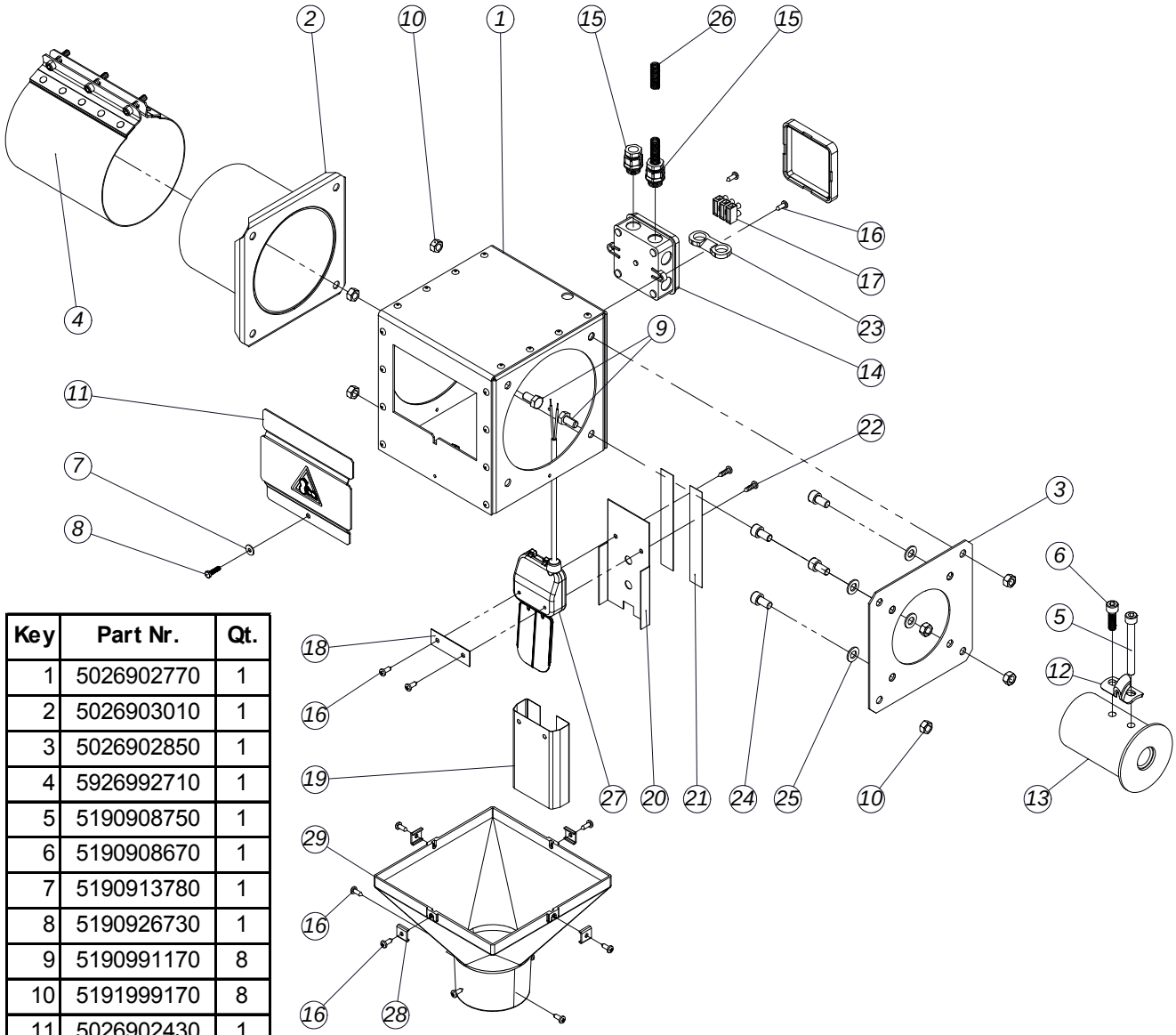
CONTROL UNIT MODEL 90 - 5621991110

CONTROL UNIT MODEL 90 MM 5621991110

1 : 5921999180
2 : 5021992970
3 : 5029992330(2x)
4 : 5029992400
5 : 5029992580
6 : 5029992660
7 : 5091920960
8 : 5020976630
9 : 5020941480
10: 5190994140(4x)
11: 5091920040
12: 5920995220
13: 5020922350(2x)
14: 5020922420
15: 5297996150
16: 5190991170(8x)
17: 5190993560(4x)
18: 5191999170(4x)
19: 5049902610
20: 5090918670
21: 5049999260
22: 5090920980
23: 5190912200(2x)
24: 5021916560
25: 5190993070
26: 5021904500
27: 5020934640
28: 5190916670
29: 5190908750
30: 5029992740
31: 5190990590(18x)
32: 5190991090(18x)
33: 5049949660
34: 5190994140(6x)
35: 5020925320(6x)



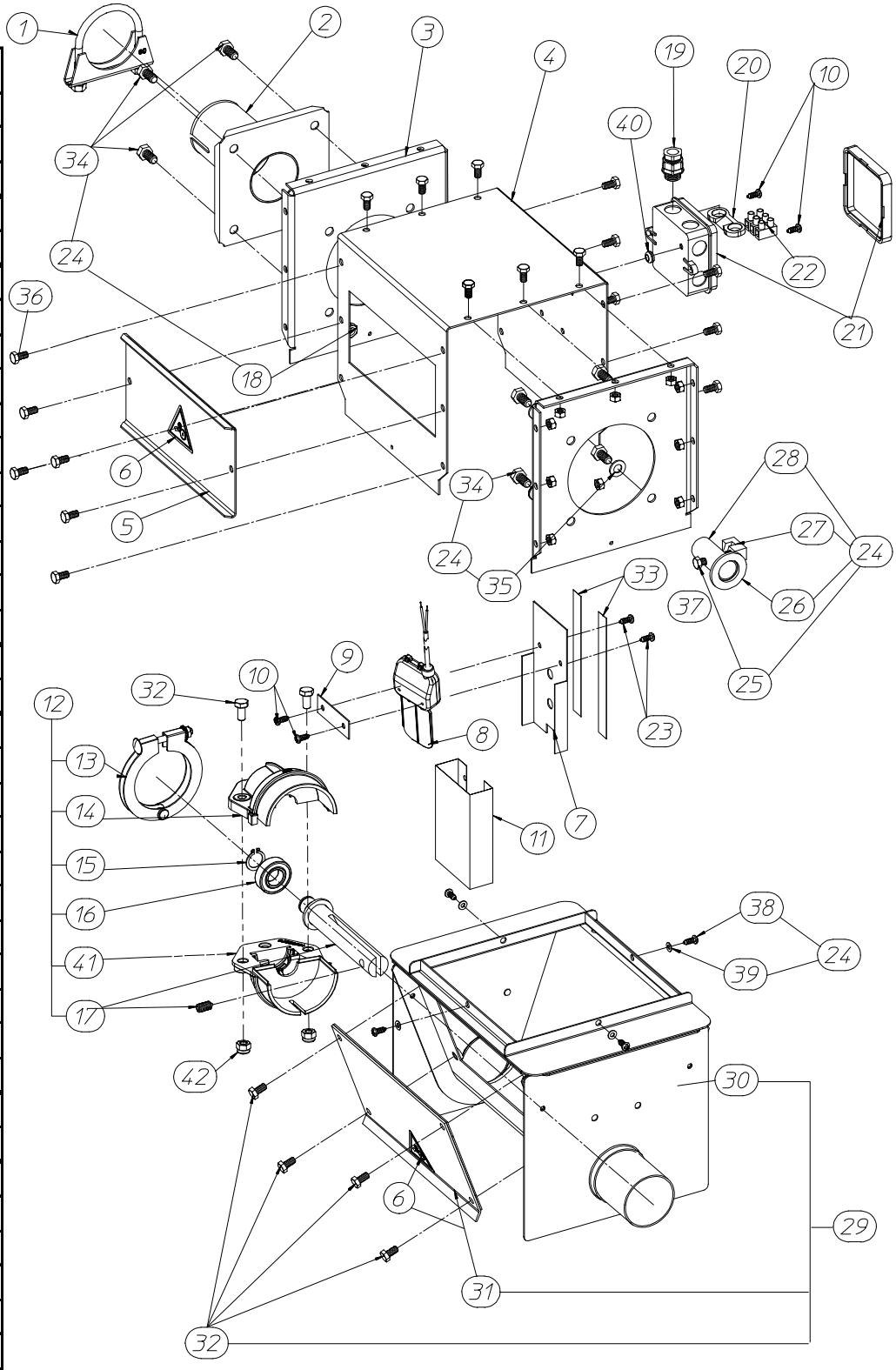
CONTROL UNIT MODEL 125 – 5626999610



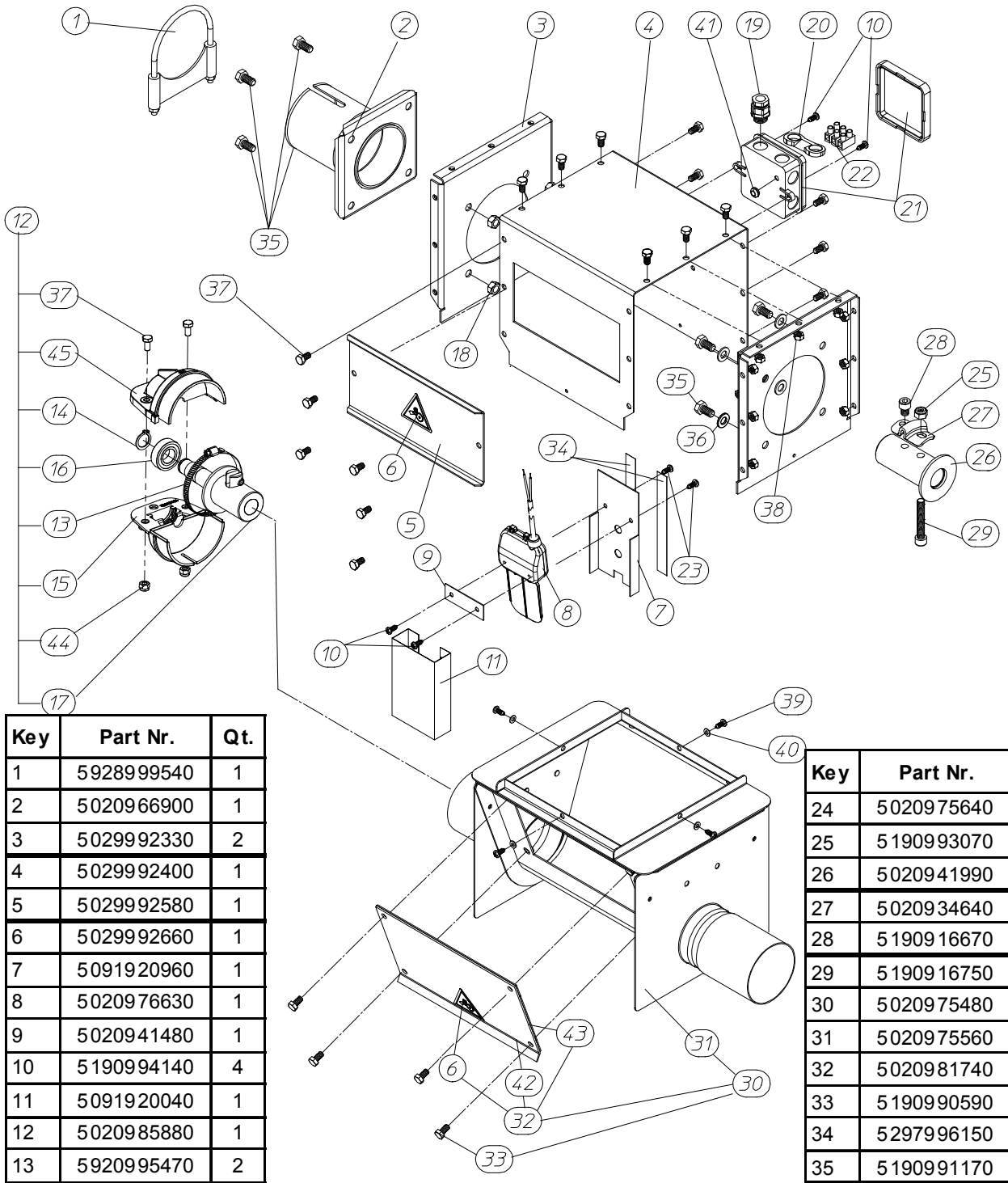
Key	Part Nr.	Qt.
1	5026902770	1
2	5026903010	1
3	5026902850	1
4	5926992710	1
5	5190908750	1
6	5190908670	1
7	5190913780	1
8	5190926730	1
9	5190991170	8
10	5191999170	8
11	5026902430	1
12	5020934640	1
13	5026992380	1
14	5049999260	1
15	5049903610	2
16	5190994140	12
17	5090920980	1
18	5020941480	1
19	5091920040	1
20	5091920960	1
21	5297996150	2
22	5190912200	2
23	5049090080	1
24	5190927800	4
25	5190993560	4
26	5020932580	1
27	5020976630	1
28	5020925320	4
29	5029909180	1

EXTENSION BOOT MODEL 55 – 5624990310

Key	Part Nr.	Qt.
1	5029999100	1
2	5024906360	1
3	5029992330	2
4	5029992400	1
5	5029992580	1
6	5029992660	1
7	5091920960	1
8	5020976630	1
9	5020941480	1
10	5190994140	4
11	5091920040	1
12	5024912960	4
13	5025905500	2
14	5090003140	1
15	5024903540	2
16	5021909550	1
17	5024997110	1
18	5191999170	4
19	5049902610	1
20	5090918670	1
21	5049999260	1
22	5090920980	1
23	5190912200	2
24	5024908590	1
25	5190910470	1
26	5190927310	1
27	5090996710	1
28	5024993230	1
29	5024908750	1
30	5024908340	1
31	5020981740	1
32	5190990590	4
33	5297996150	1
34	5190991170	8
35	5190993560	4
36	5190990560	18
37	5190991090	18
38	5190994140	4
39	5190993560	4
40	5049949660	1
41	5090003220	1
42	5190993990	2



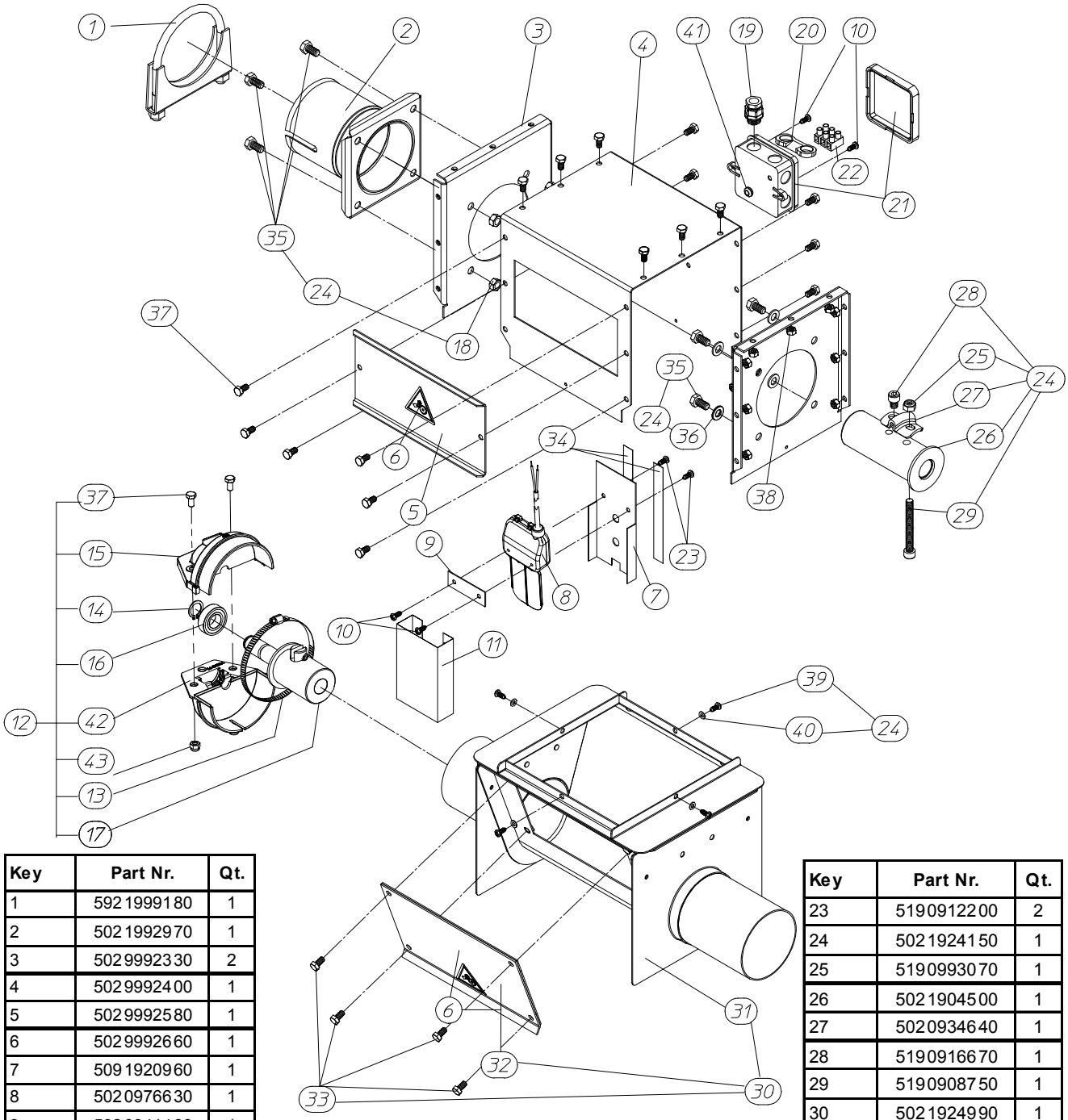
EXTENSION BOOT MODEL 75 - 5620993440



Key	Part Nr.	Qt.
1	5928999540	1
2	5020966900	1
3	5029992330	2
4	5029992400	1
5	5029992580	1
6	5029992660	1
7	5091920960	1
8	5020976630	1
9	5020941480	1
10	5190994140	4
11	5091920040	1
12	5020985880	1
13	5920995470	2
14	5190902220	1
15	5020985210	2
16	5021909550	1
17	5020986380	1
18	5191999170	4
19	5049903610	1
20	5090918670	1
21	5049999260	1
22	5090920980	1
23	5190912200	2

Key	Part Nr.	Qt.
24	5020975640	1
25	5190993070	1
26	5020941990	1
27	5020934640	1
28	5190916670	1
29	5190916750	1
30	5020975480	1
31	5020975560	1
32	5020981740	1
33	5190990590	4
34	5297996150	1
35	5190991170	8
36	5190993560	4
37	5190990590	20
38	5190991090	18
39	5190994140	4
40	5190993560	4
41	5049949660	1
42	5020913850	1
43	5297999790	1
44	5020913850	1
45	5297999790	1

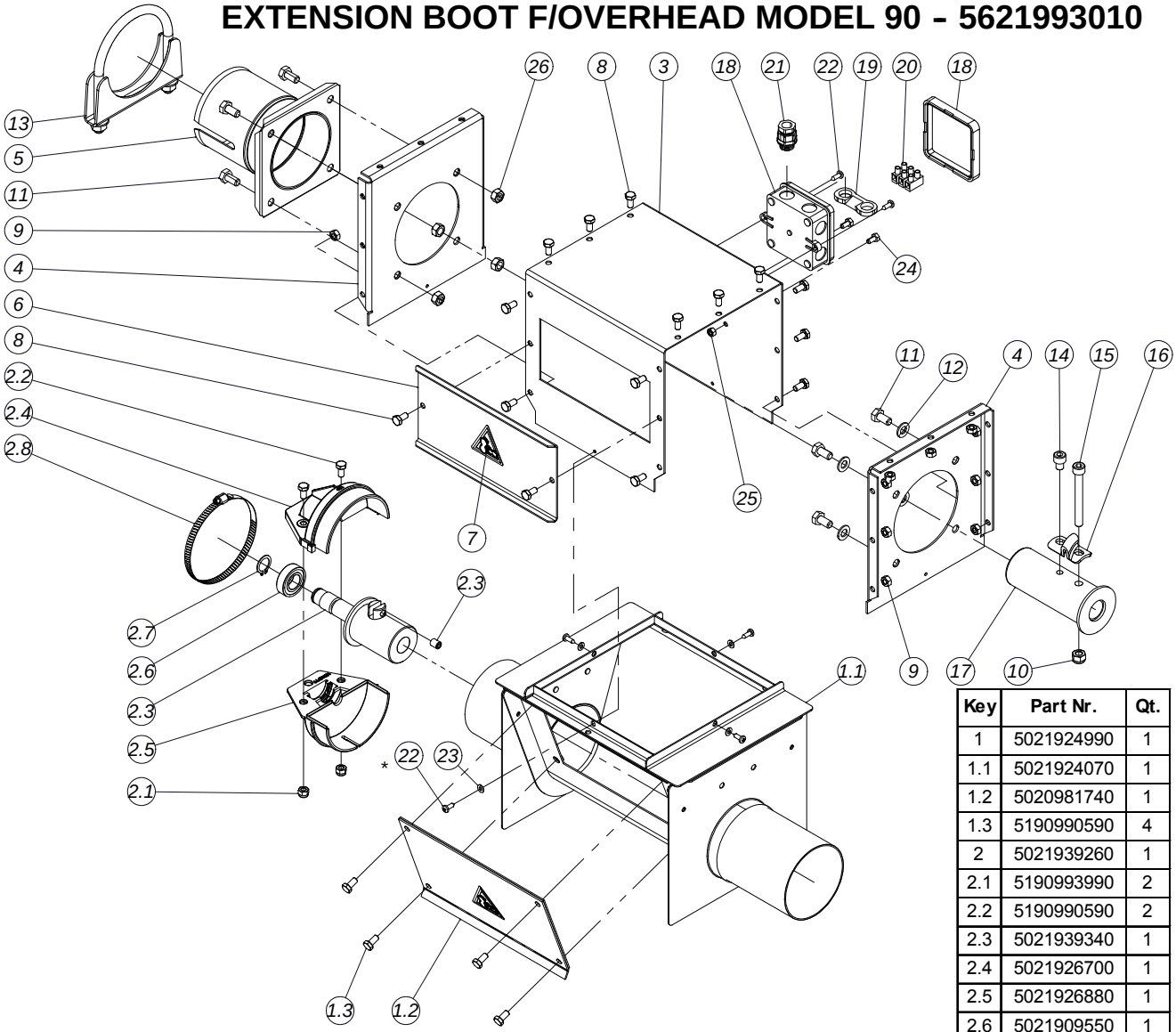
EXTENSION BOOT MODEL 90 – 5621992770



Key	Part Nr.	Qt.
1	5921999180	1
2	5021992970	1
3	5029992330	2
4	5029992400	1
5	5029992580	1
6	5029992660	1
7	5091920960	1
8	5020976630	1
9	5020941480	1
10	5190994140	4
11	5091920040	1
12	5021939260	1
13	5921991490	1
14	5190902220	1
15	5021926700	2
16	5021909550	1
17	5021939340	1
18	5191999170	4
19	5049903610	1
20	5090918670	1
21	5049999260	1
22	5090920980	1

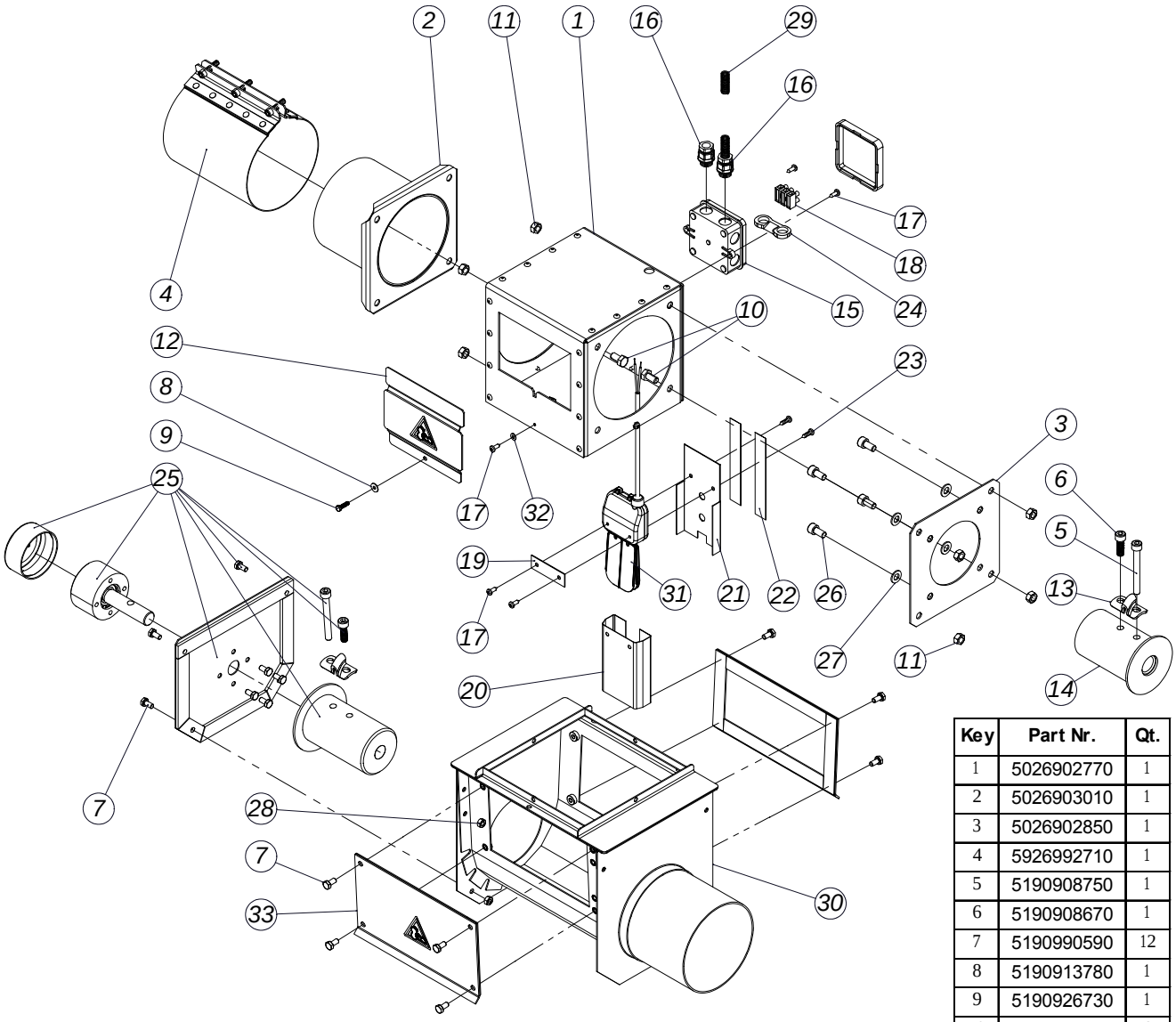
Key	Part Nr.	Qt.
23	5190912200	2
24	5021924150	1
25	5190993070	1
26	5021904500	1
27	5020934640	1
28	5190916670	1
29	5190908750	1
30	5021924990	1
31	5021924070	1
32	5020981740	1
33	5190990590	4
34	5297996150	1
35	5190991170	8
36	5190993560	4
37	5190990590	18
38	5190991090	18
39	5190994140	4
40	5190993560	4
41	5049949660	1
42	5021926880	1
43	5190993990	1

EXTENSION BOOT F/OVERHEAD MODEL 90 – 5621993010



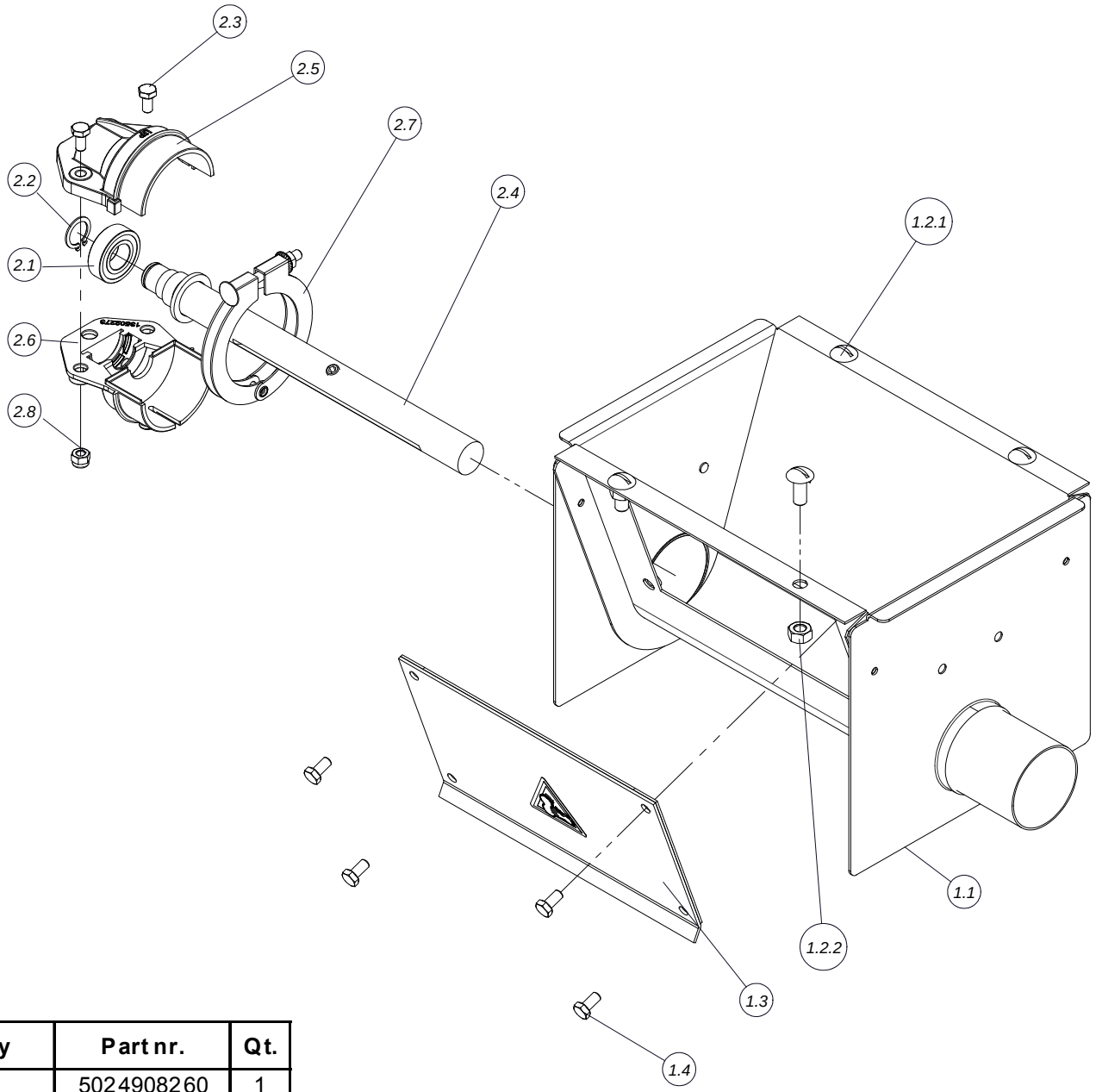
Key	Part Nr.	Qt.
1	5021924990	1
1.1	5021924070	1
1.2	5020981740	1
1.3	5190990590	4
2	5021939260	1
2.1	5190993990	2
2.2	5190990590	2
2.3	5021939340	1
2.4	5021926700	1
2.5	5021926880	1
2.6	5021909550	1
2.7	5190902220	1
2.8	5921991490	1
3	5029992400	1
4	5029992330	2
5	5021992970	1
6	5029992580	1
7	5020954850	1
8	5190990590	18
9	5190991090	18
10	5190993070	1
11	5190991170	8
12	5190993560	4
13	5921999180	1
14	5190916670	1
15	5190908750	1
16	5020934640	1
17	5021904500	1
18	5049999260	1
19	5049090080	1
20	5090920980	1
21	5049903610	1
22	5190994140	6
23	5190994550	4
24	5190990000	2
25	5190990410	2
26	5191999170	4

EXTENSION BOOT MODEL 125 – 5626999790



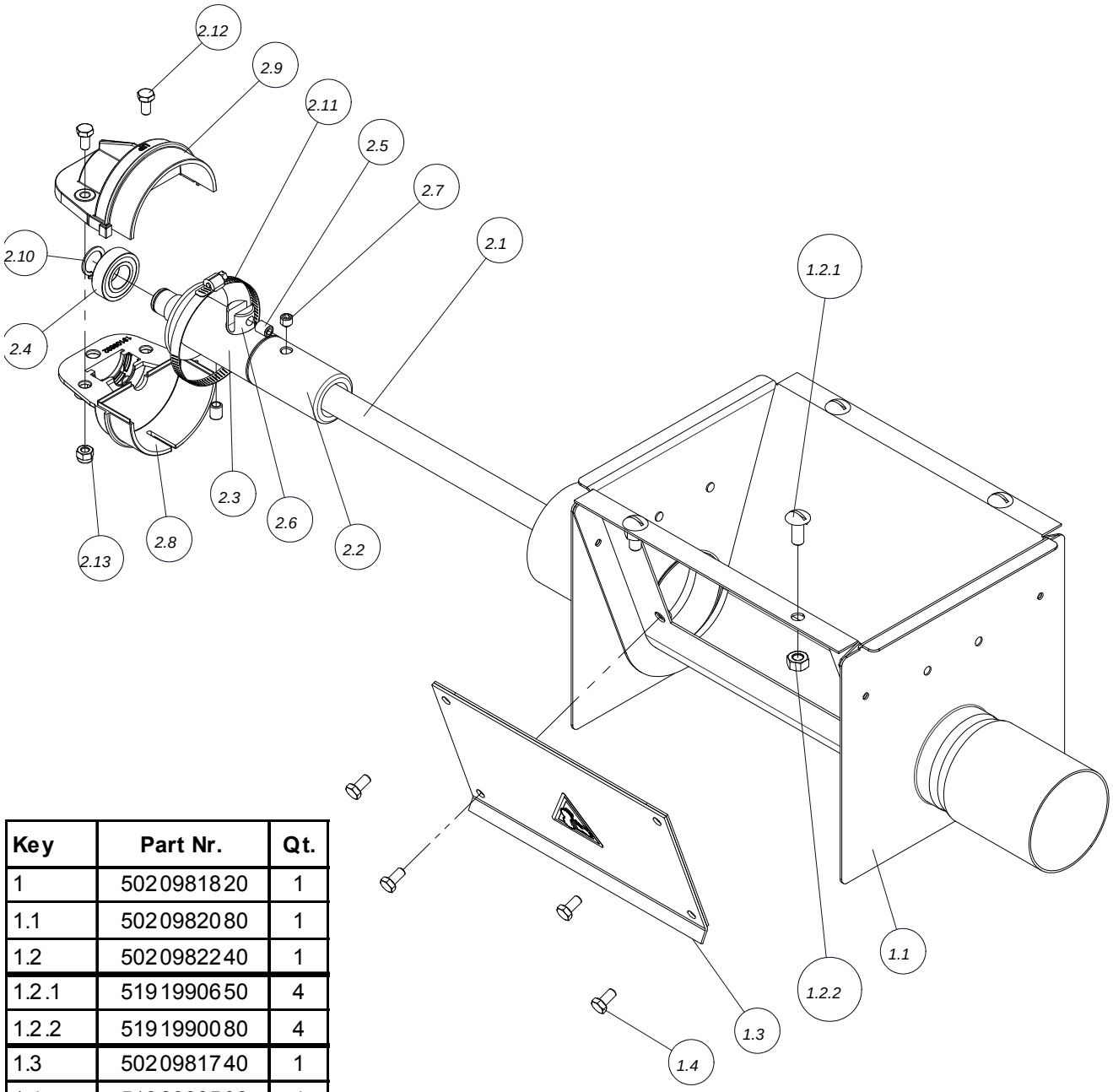
Key	Part Nr.	Qt.
1	5026902770	1
2	5026903010	1
3	5026902850	1
4	5926992710	1
5	5190908750	1
6	5190908670	1
7	5190990590	12
8	5190913780	1
9	5190926730	1
10	5190991170	8
11	5191999170	8
12	5026902430	1
13	5020934640	1
14	5026992380	1
15	5049999260	1
16	5049903610	2
17	5190994140	8
18	5090920980	1
19	5020941480	1
20	5091920040	1
21	5091920960	1
22	5297996150	2
23	5190912200	2
24	5049090080	1
25	5026909050	1
26	5190927800	4
27	5190993560	4
28	5190991090	4
29	5020932580	1
30	5026903190	1
31	5020976630	1
32	5190994550	4
33	5020981740	2

BOOT MODEL 55 – 5624990150



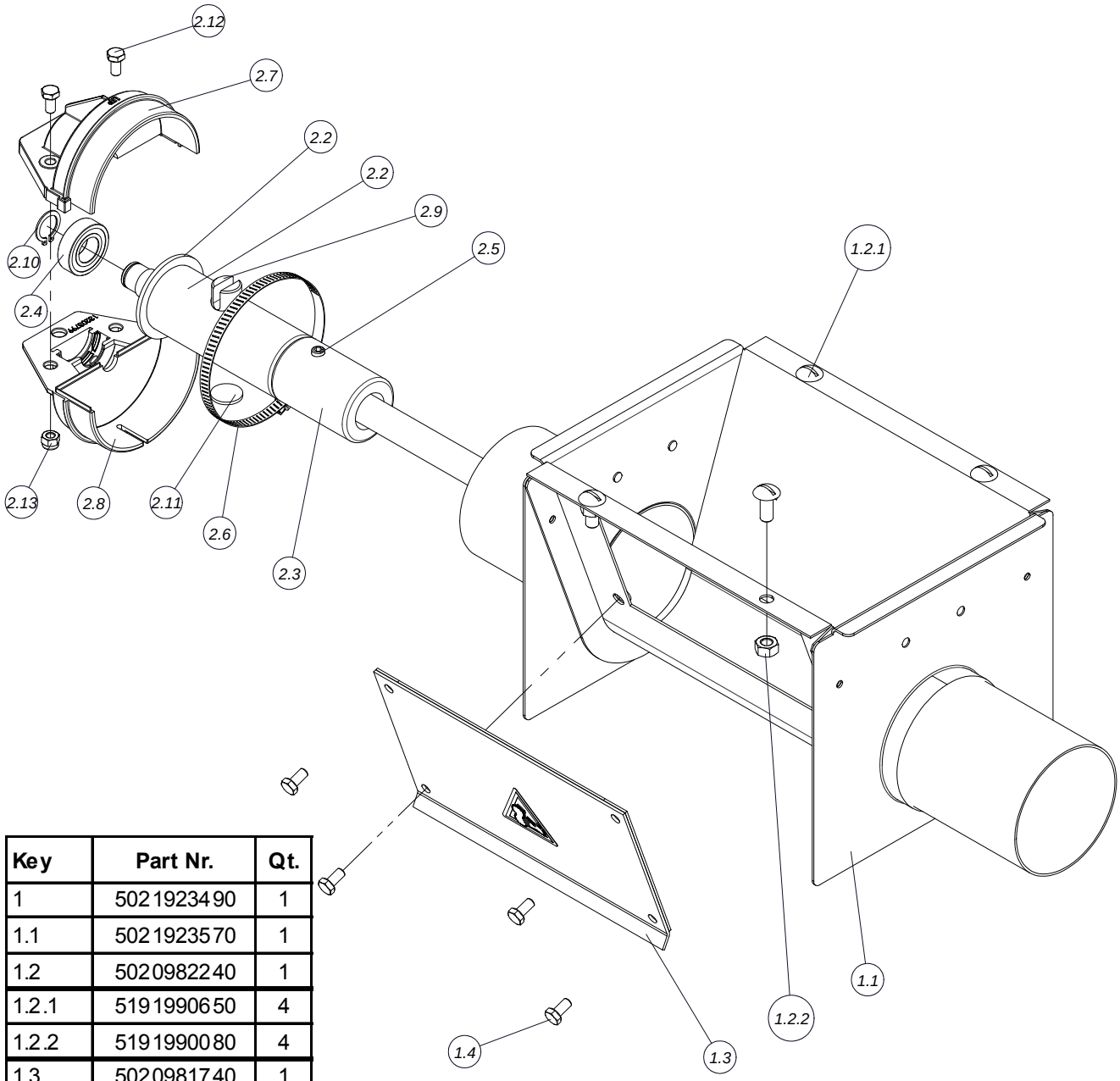
Key	Part nr.	Qt.
1	5024908260	1
1.1	5024908180	1
1.2	5020982240	1
1.2.1	5191990650	4
1.2.2	5191990080	4
1.3	5020981740	1
1.4	5190990590	4
2	5024911880	1
2.1	5021909550	1
2.2	5190902220	1
2.3	5190990590	2
2.4	5024912200	1
2.5	5024911540	1
2.6	5024911620	1
2.7	5025905500	1
2.8	5190993990	2

FEED INTAKE BOOT MODEL 75 – 5620993110



Key	Part Nr.	Qt.
1	5020981820	1
1.1	5020982080	1
1.2	5020982240	1
1.2.1	5191990650	4
1.2.2	5191990080	4
1.3	5020981740	1
1.4	5190990590	4
2	5020985700	1
2.1	5020986200	1
2.2	5020947270	1
2.3	5020947420	1
2.4	5021909550	1
2.5	5190993230	2
2.6	5020993710	1
2.7	5190905860	1
2.8	5020985210	1
2.9	5020985130	1
2.10	5190902220	1
2.11	5920995470	1
2.12	5190990590	2
2.13	5190993990	2

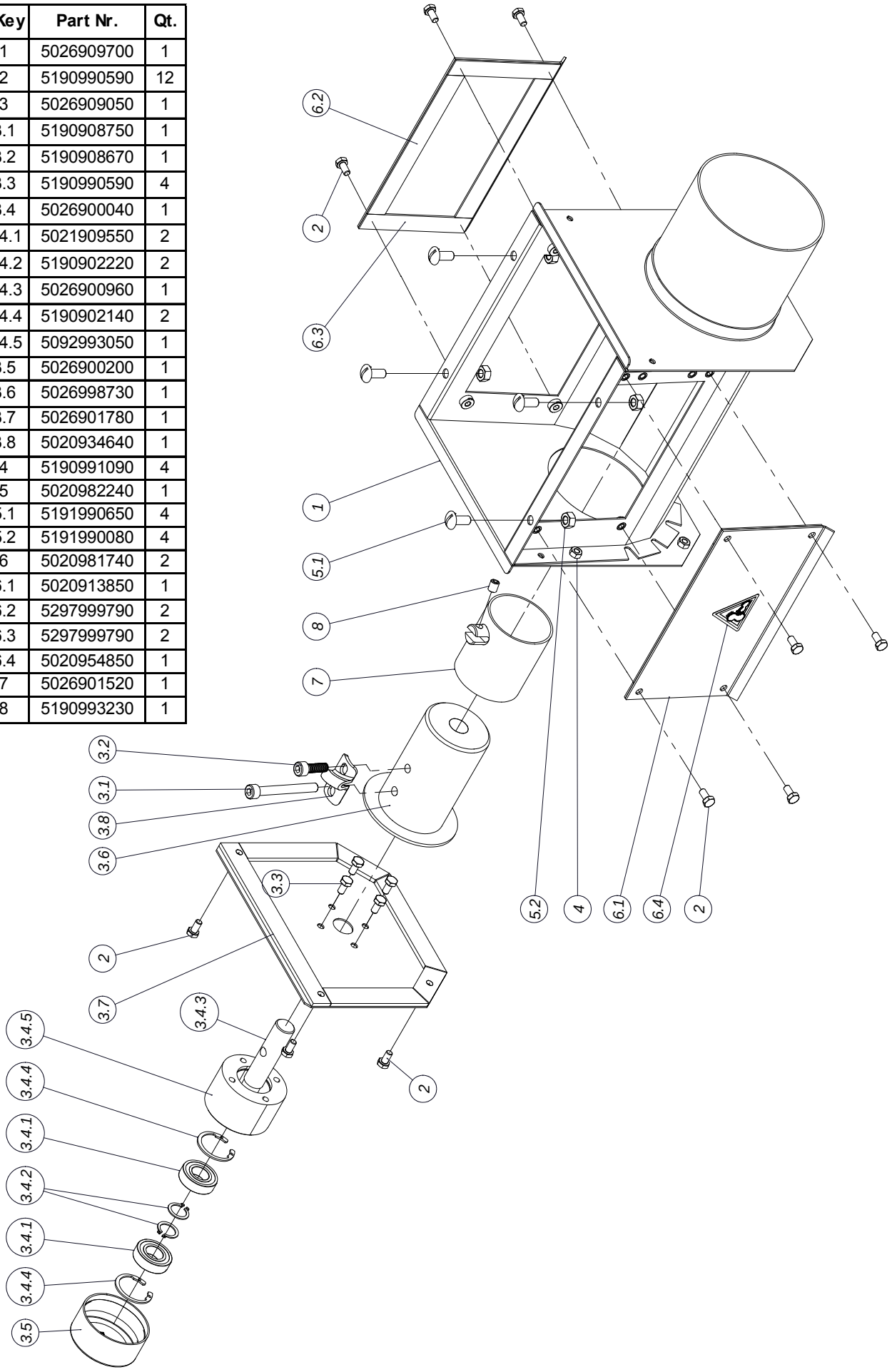
FEED INTAKE BOOT MODEL 90 - 5621992430



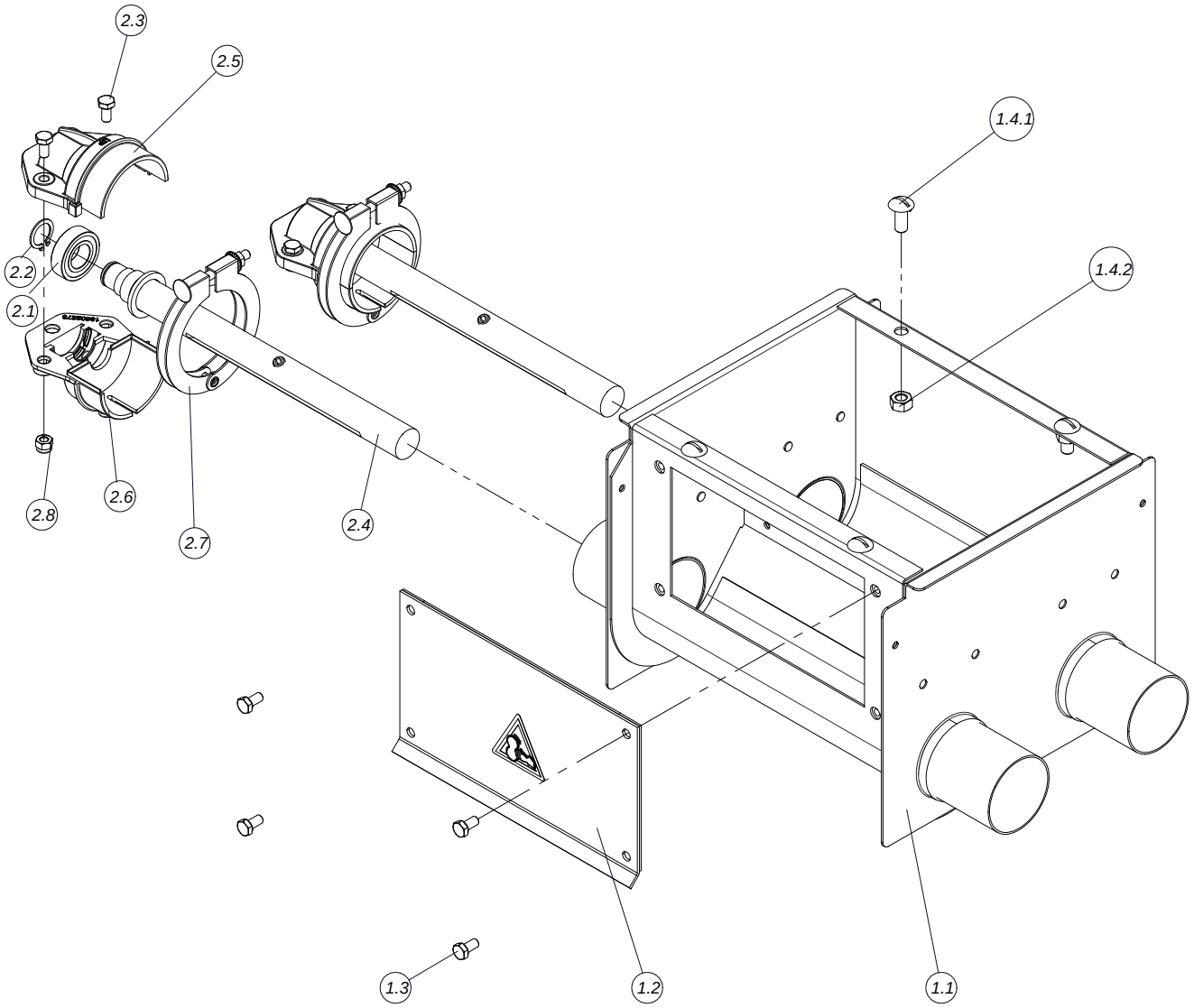
Key	Part Nr.	Qt.
1	5021923490	1
1.1	5021923570	1
1.2	5020982240	1
1.2.1	5191990650	4
1.2.2	5191990080	4
1.3	5020981740	1
1.4	5190990590	4
2	5021939000	1
2.1	5020986200	1
2.2	5021906580	1
2.3	5021906330	1
2.4	5021909550	1
2.5	5190993230	3
2.6	5921991490	1
2.7	5021926700	1
2.8	5021926880	1
2.9	5020993710	1
2.10	5190902220	1
2.11	5021990230	2
2.12	5190990590	2
2.13	5190993990	2

BOOT ASSEMBLY MODEL 125 – 5626999450

Key	Part Nr.	Qt.
1	5026909700	1
2	5190990590	12
3	5026909050	1
3.1	5190908750	1
3.2	5190908670	1
3.3	5190990590	4
3.4	5026900040	1
3.4.1	5021909550	2
3.4.2	5190902220	2
3.4.3	5026900960	1
3.4.4	5190902140	2
3.4.5	5092993050	1
3.5	5026900200	1
3.6	5026998730	1
3.7	5026901780	1
3.8	5020934640	1
4	5190991090	4
5	5020982240	1
5.1	5191990650	4
5.2	5191990080	4
6	5020981740	2
6.1	5020913850	1
6.2	5297999790	2
6.3	5297999790	2
6.4	5020954850	1
7	5026901520	1
8	5190993230	1

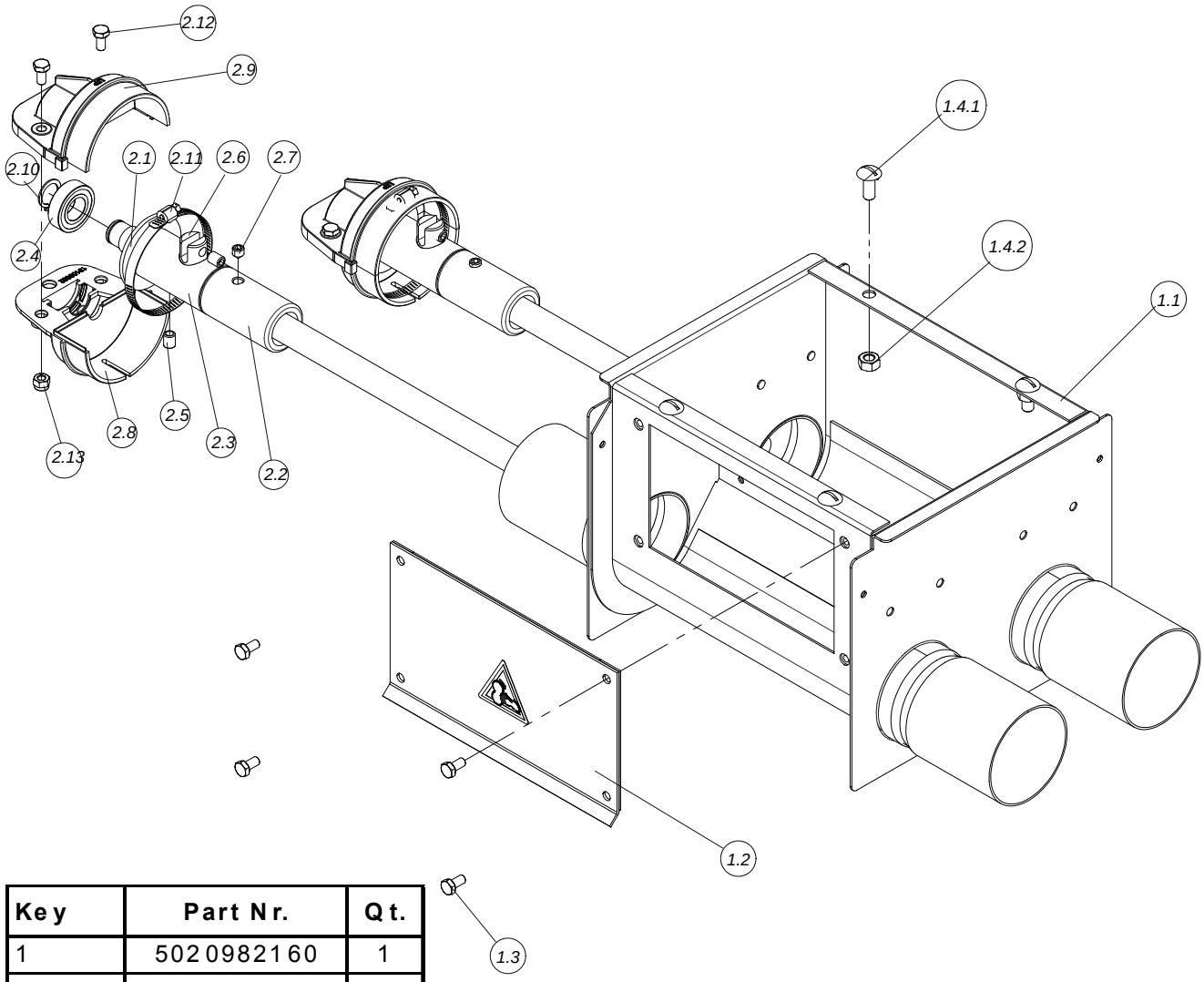


DOUBLE INTAKE BOOT MODEL 55 – 5624990230



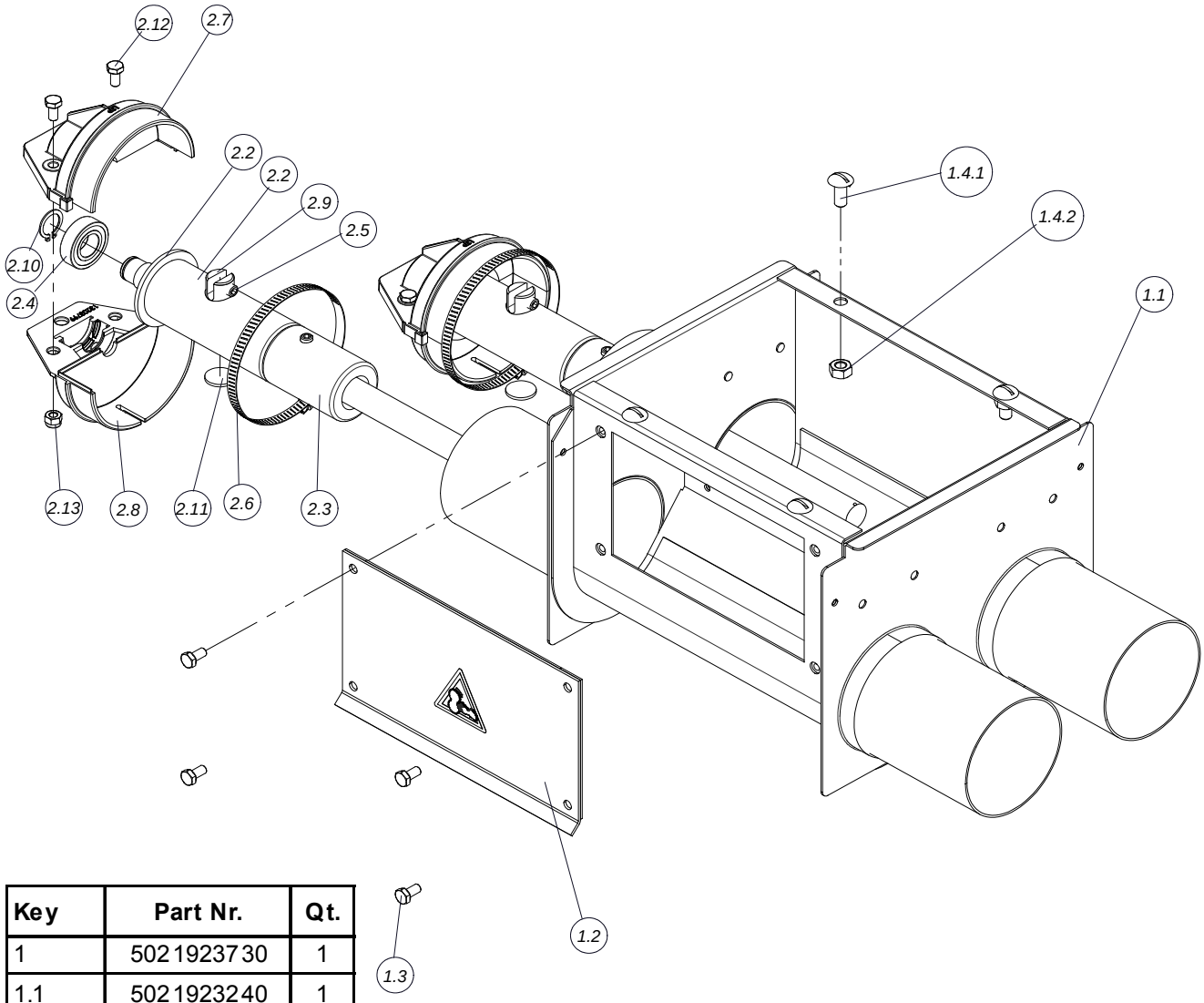
Key	Part Nr.	Qt.
1	5024908410	1
1.1	5024908920	1
1.2	5020981740	1
1.3	5190990590	4
1.4	5020982240	1
1.4.1	5191990650	4
1.4.2	5191990080	4
2	5024911880	2
2.1	5021909550	1
2.2	5190902220	1
2.3	5190990590	2
2.4	5024912200	1
2.5	5024911540	1
2.6	5024911620	1
2.7	5025905500	1
2.8	5190993990	2

DOUBLE INTAKE BOOT MODEL 75 – 5620993290



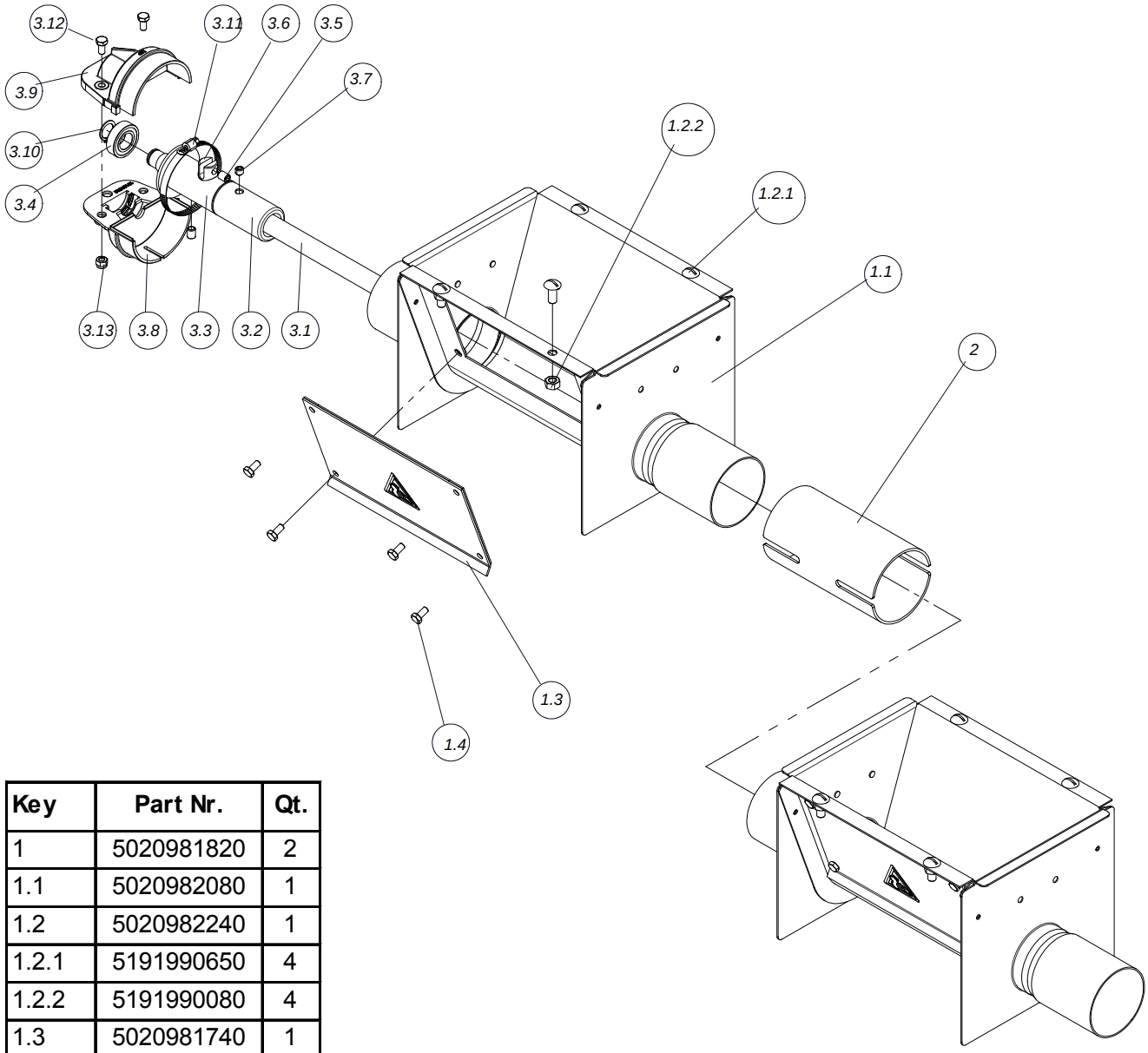
Key	Part Nr.	Qt.
1	5020982160	1
1.1	5020975990	1
1.2	5020981740	1
1.3	5190990590	4
1.4	5020982240	1
1.4.1	5191990650	4
1.4.2	5191990080	4
2	5020985700	2
2.1	5020986200	1
2.2	5020947270	1
2.3	5020947420	1
2.4	5021909550	1
2.5	5190993230	2
2.6	5020993710	1
2.7	5190905860	1
2.8	5020985210	1
2.9	5020985130	1
2.10	5190902220	1
2.11	5920995470	1
2.12	5190990590	2
2.13	5190993990	2

DOUBLE INTAKE BOOT MODEL 90 – 5621992510



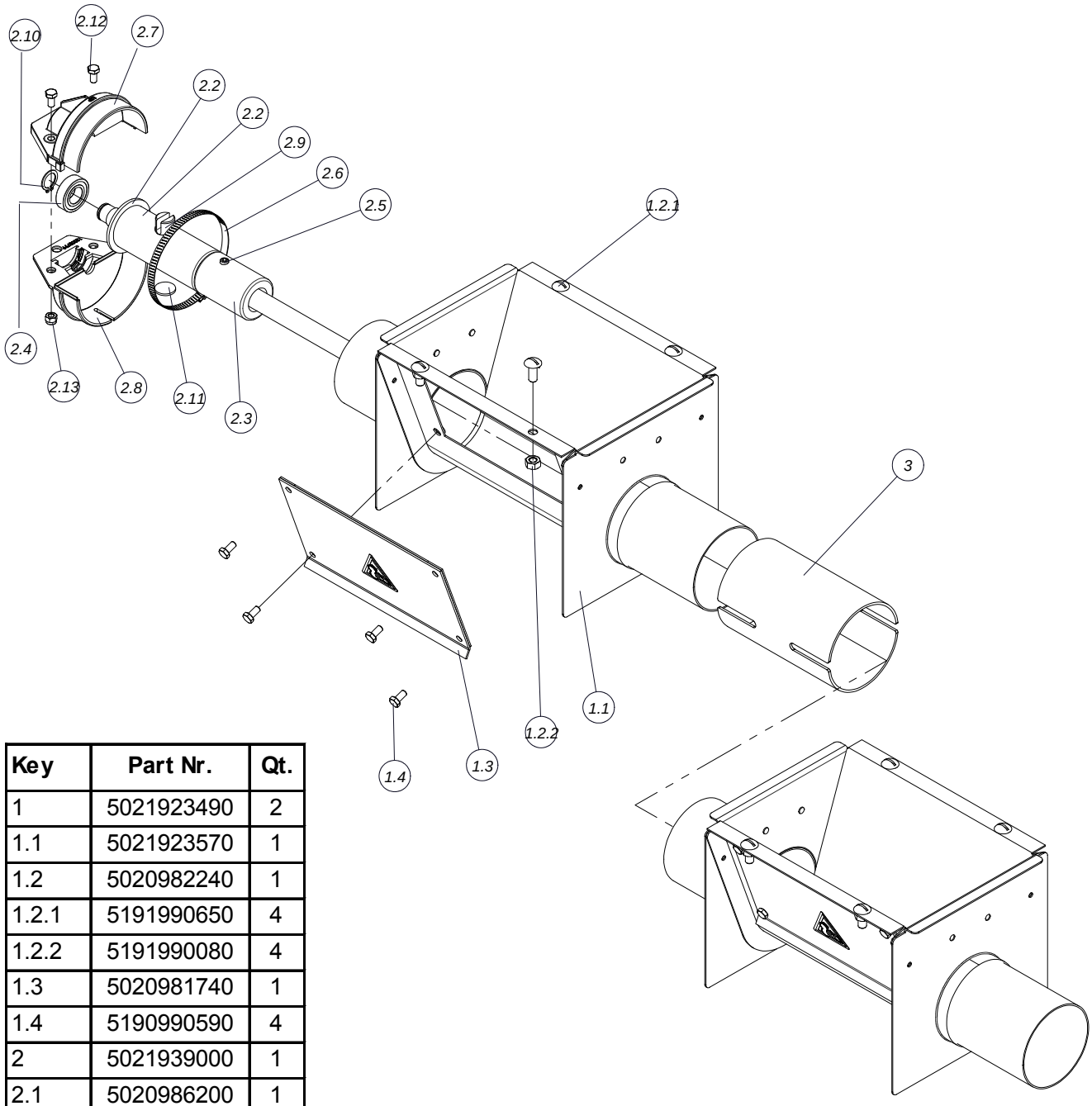
Key	Part Nr.	Qt.
1	5021923730	1
1.1	5021923240	1
1.2	5020981740	1
1.3	5190990590	4
1.4	5020982240	1
1.4.1	5191990650	4
1.4.2	5191990080	4
2	5021939000	2
2.1	5020986200	1
2.2	5021906580	1
2.3	5021906330	1
2.4	5021909550	1
2.5	5190993230	3
2.6	5921991490	1
2.7	5021926700	1
2.8	5021926880	1
2.9	5020993710	1
2.10	5190902220	1
2.11	5021990230	2
2.12	5190990590	2
2.13	5190993990	2

TANDEM IN LINE MODEL 75 - 5620993370



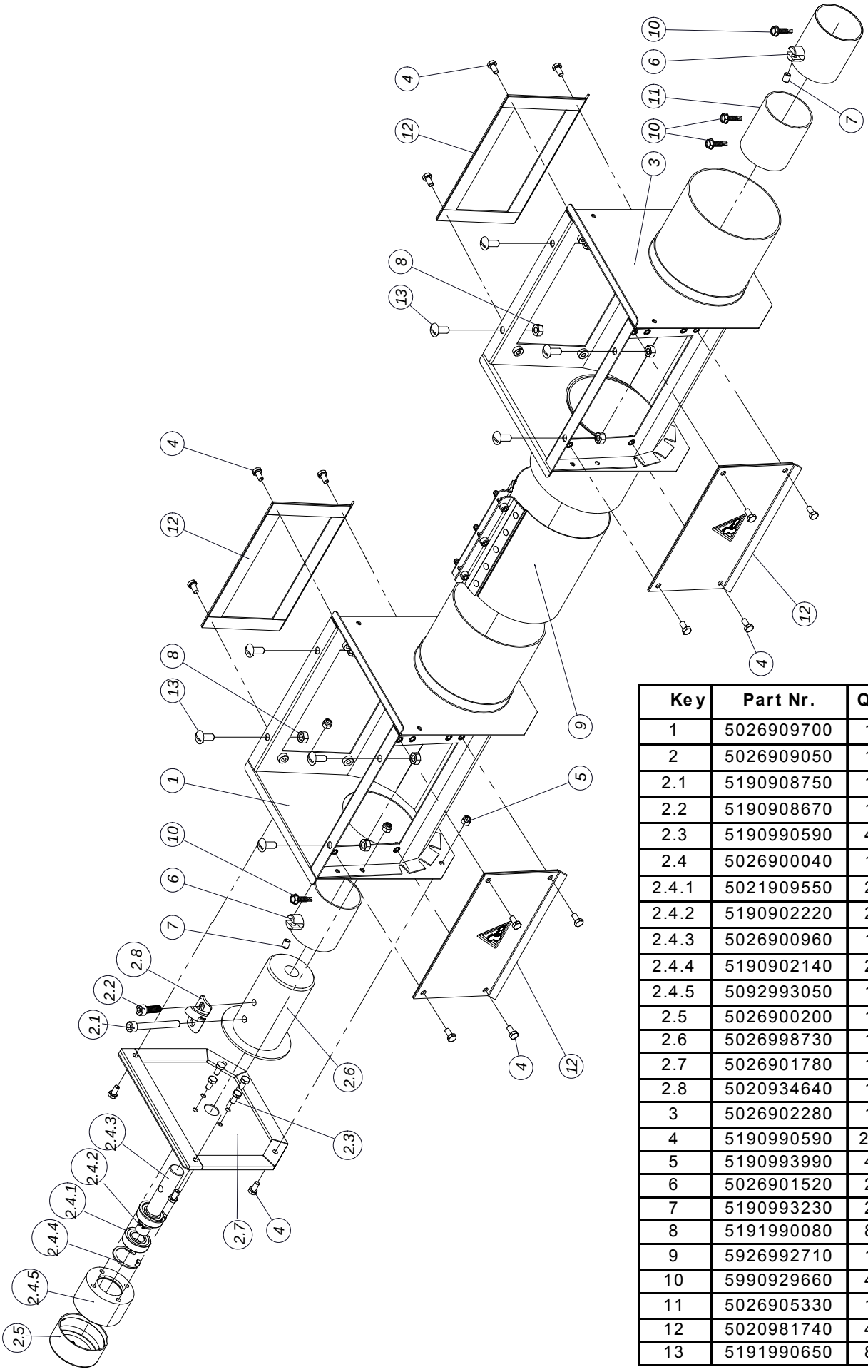
Key	Part Nr.	Qt.
1	5020981820	2
1.1	5020982080	1
1.2	5020982240	1
1.2.1	5191990650	4
1.2.2	5191990080	4
1.3	5020981740	1
1.4	5190990590	4
2	5920994720	1
3	5020985700	1
3.1	5020986200	1
3.2	5020947270	1
3.3	5020947420	1
3.4	5021909550	1
3.5	5190993230	2
3.6	5020993710	1
3.7	5190905860	1
3.8	5020985210	1
3.9	5020985130	1
3.10	5190902220	1
3.11	5920995470	1
3.12	5190990590	2
3.13	5190993990	2

TANDEM IN LINE MODEL 90 - 5621992690



Key	Part Nr.	Qt.
1	5021923490	2
1.1	5021923570	1
1.2	5020982240	1
1.2.1	5191990650	4
1.2.2	5191990080	4
1.3	5020981740	1
1.4	5190990590	4
2	5021939000	1
2.1	5020986200	1
2.2	5021906580	1
2.3	5021906330	1
2.4	5021909550	1
2.5	5190993230	3
2.6	5921991490	1
2.7	5021926700	1
2.8	5021926880	1
2.9	5020993710	1
2.10	5190902220	1
2.11	5021990230	2
2.12	5190990590	2
2.13	5190993990	2
3	5921992720	1

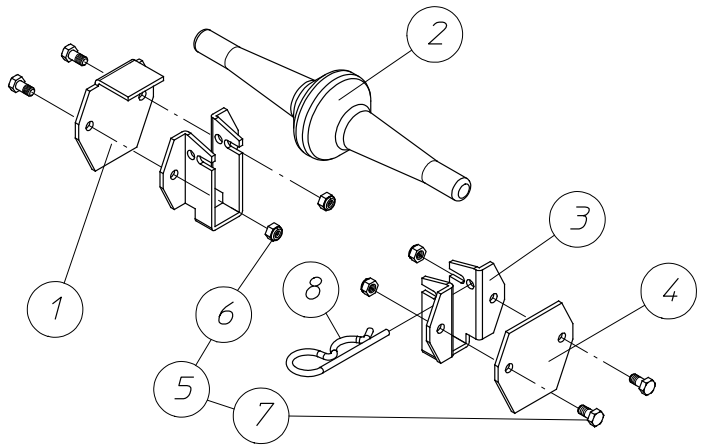
TANDEM IN LINE MODEL125 – 5626990370



Key	Part Nr.	Qt.
1	5026909700	1
2	5026909050	1
2.1	5190908750	1
2.2	5190908670	1
2.3	5190990590	4
2.4	5026900040	1
2.4.1	5021909550	2
2.4.2	5190902220	2
2.4.3	5026900960	1
2.4.4	5190902140	2
2.4.5	5092993050	1
2.5	5026900200	1
2.6	5026998730	1
2.7	5026901780	1
2.8	5020934640	1
3	5026902280	1
4	5190990590	20
5	5190993990	4
6	5026901520	2
7	5190993230	2
8	5191990080	8
9	5926992710	1
10	5990929660	4
11	5026905330	1
12	5020981740	4
13	5191990650	8

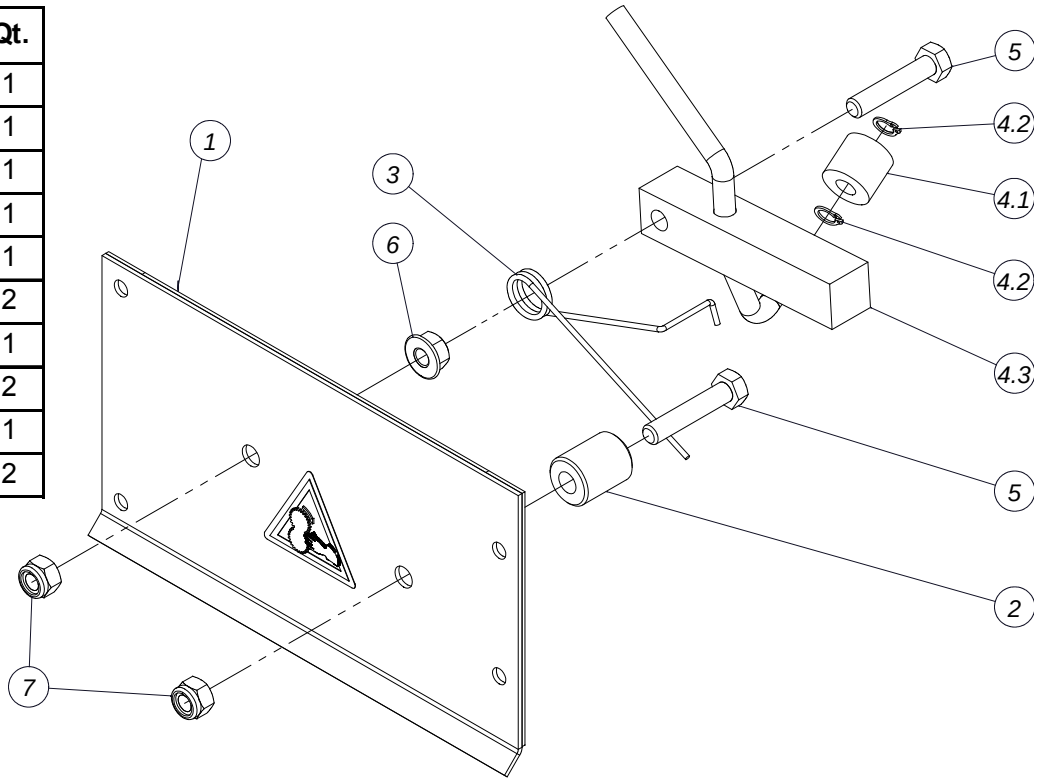
THUMPER ASS'Y – 5929999960

Key	Part Nr.	Qt.
1	5020968890	1
2	5020968550	1
3	5020968630	2
4	5020968710	1
5	5020979030	1
6	5190993990	4
7	5190990590	4
8	5190928220	1



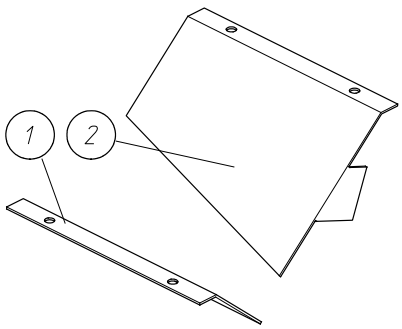
THUMPER ASS'Y 125- 5626999530

Key	Part Nr.	Qt.
1	5026905660	1
2	5020992230	1
3	5020913100	1
4	5026901030	1
4.1	5020992640	1
4.2	5190904960	2
4.3	5026900790	1
5	5190991400	2
6	5190909330	1
7	5190993070	2



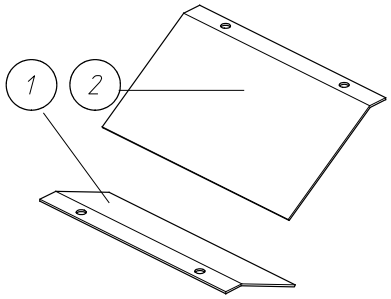
PELLET GUIDES MODEL 75 mm-MODEL 55 – 5920903140

Key	Part Nr.	Qt.
1	5020913690	1
2	5020936050	1



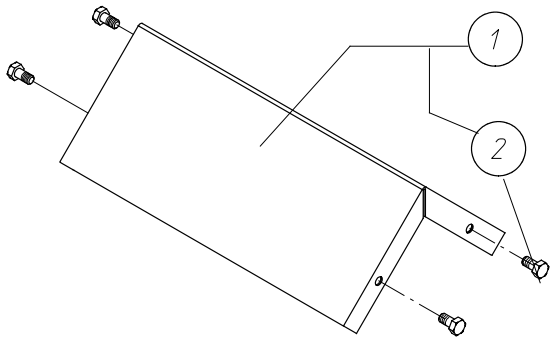
PELLET GUIDES MODEL 90 - 5921997430

Key	Part Nr.	Qt.
1	5021995690	1
2	5021995770	1



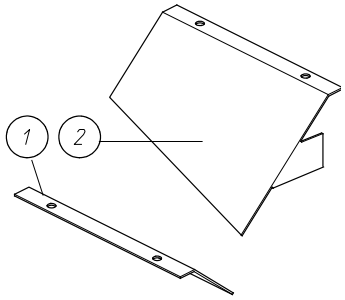
PELLET GUIDE DOUBLE - 5920918090

Key	Part Nr.	Qt.
1	5920918090	1
*2	5190990590	4
*	INCLUDED IN NR. 1	

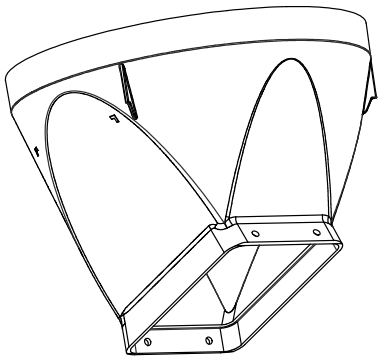


PELLET GUIDES MODEL 125 - 5926994530

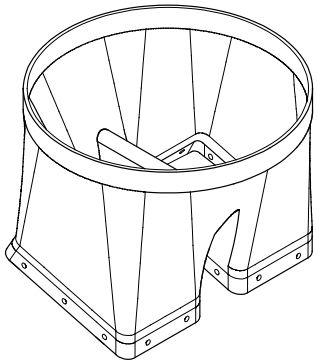
Key	Part Nr.	Qt.
1	5026999720	1
2	5020913690	1



UPPER BOOT 15_ PE - BLACK - 5629993880

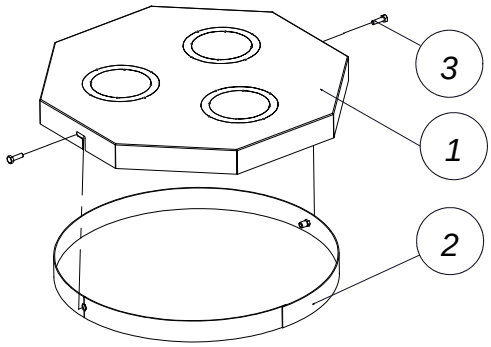


QUADRUPLE BOOT - 5920917340

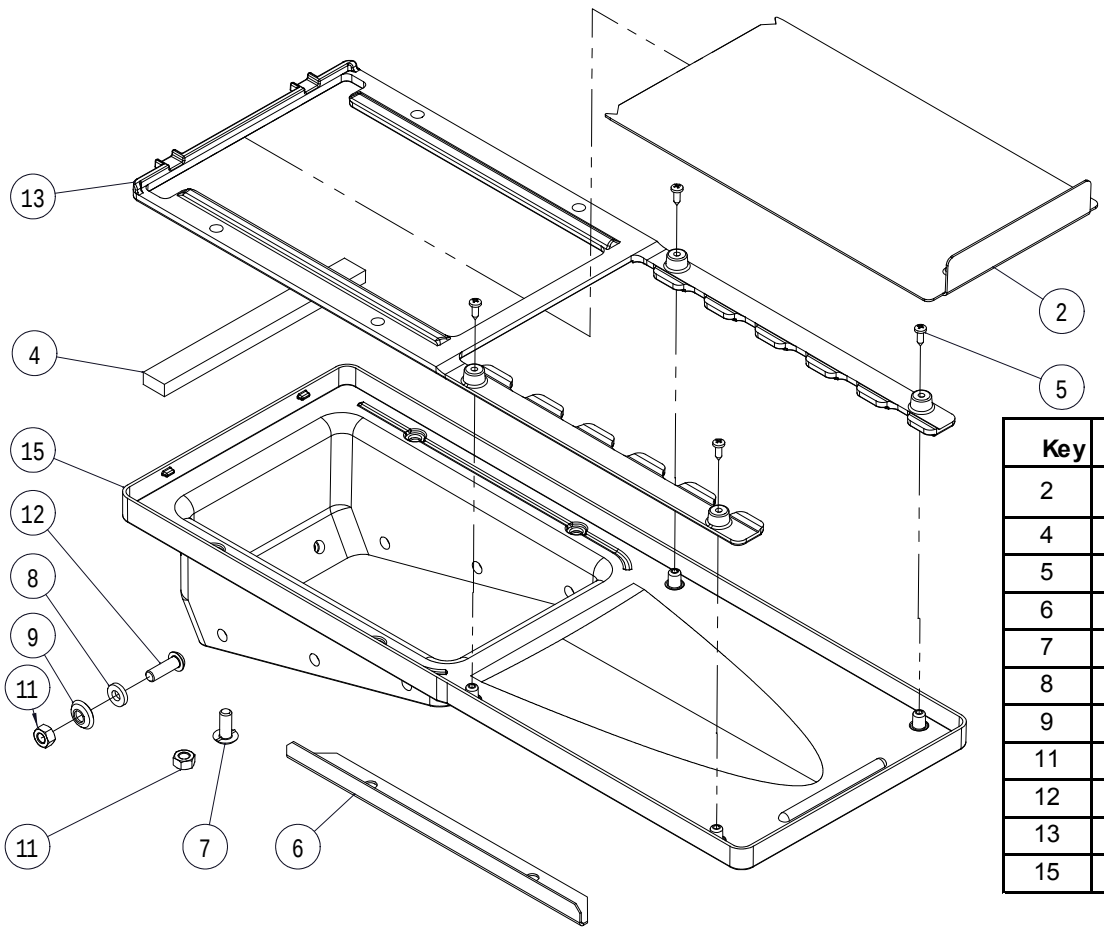


COVER ASS'Y FOR UPPER BOOT - 5929900840

Key	Part Nr.	Qt.
1	5026929010	1
2	5026929190	1
3	5190990750	2



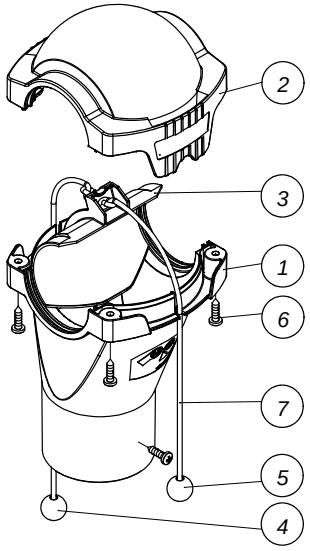
TRANSFER PLATE ASS'Y - PE - BLACK - 5629996020



Key	Part Nr.	Qt.
2	5029994720	1
4	5297999530	1
5	5191991560	4
6	5029994800	2
7	5191990650	8
8	5191999330	10
9	5191999250	10
11	5190986700	18
12	5190986970	10
13	5029994640	1
15	5029995060	1

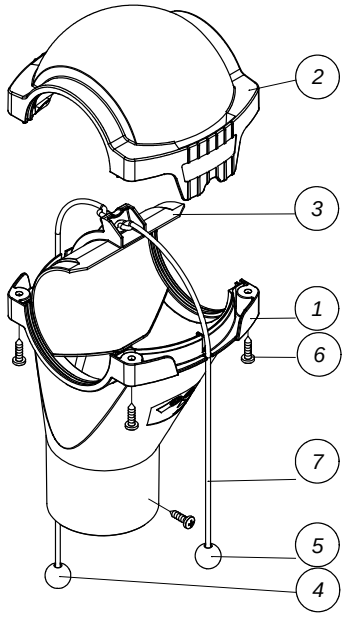
OUTLET DROP ASS'Y W/SHUT-OFF MODEL 55

Key	Part Nr.	Qt.
1	5624990800	1
2	5624990720	1
3	5924902160	1
*4	5021902440	1
*5	5021902520	1
*6	5190912200	6
7	5020928050	1
*	5929992840	1



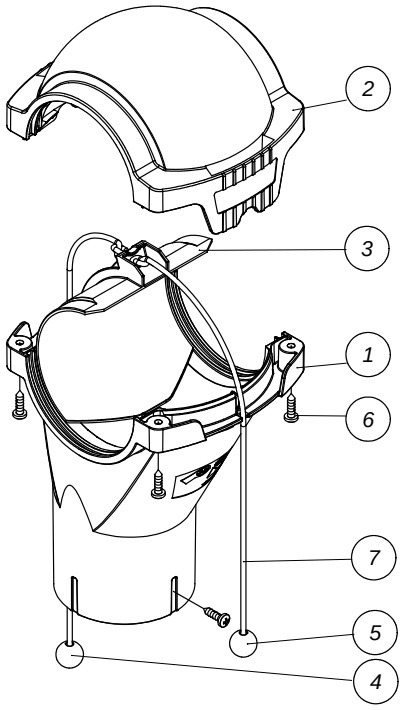
OUTLET DROP ASS'Y W/SHUT-OFF MODEL 75

Key	Part Nr.	Qt.
1	5620993520	1
2	5620993600	1
3	5920922600	1
*4	5021902440	1
*5	5021902520	1
*6	5190912200	6
*7	5020928050	1
*	5929992840	1



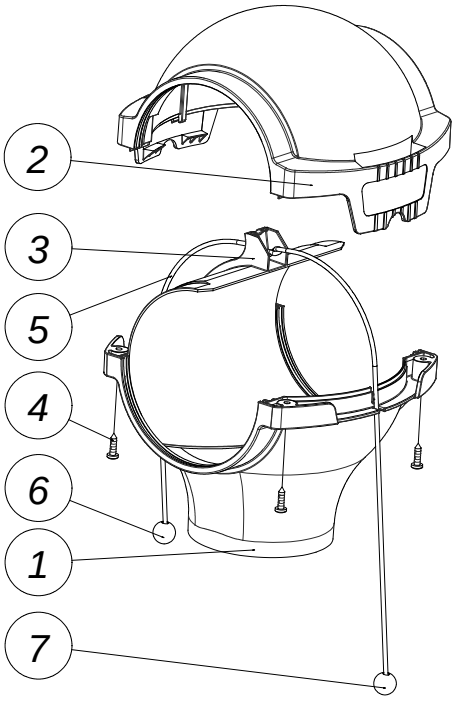
OUTLET DROP ASS'Y W/SHUT-OFF MODEL 90

Key	Part Nr.	Qt.
1	5621993930	1
2	5621992850	1
3	5921915000	1
*4	5021902440	1
*5	5021902520	1
*6	5190912200	6
*7	5020928050	1
*	5929992840	1



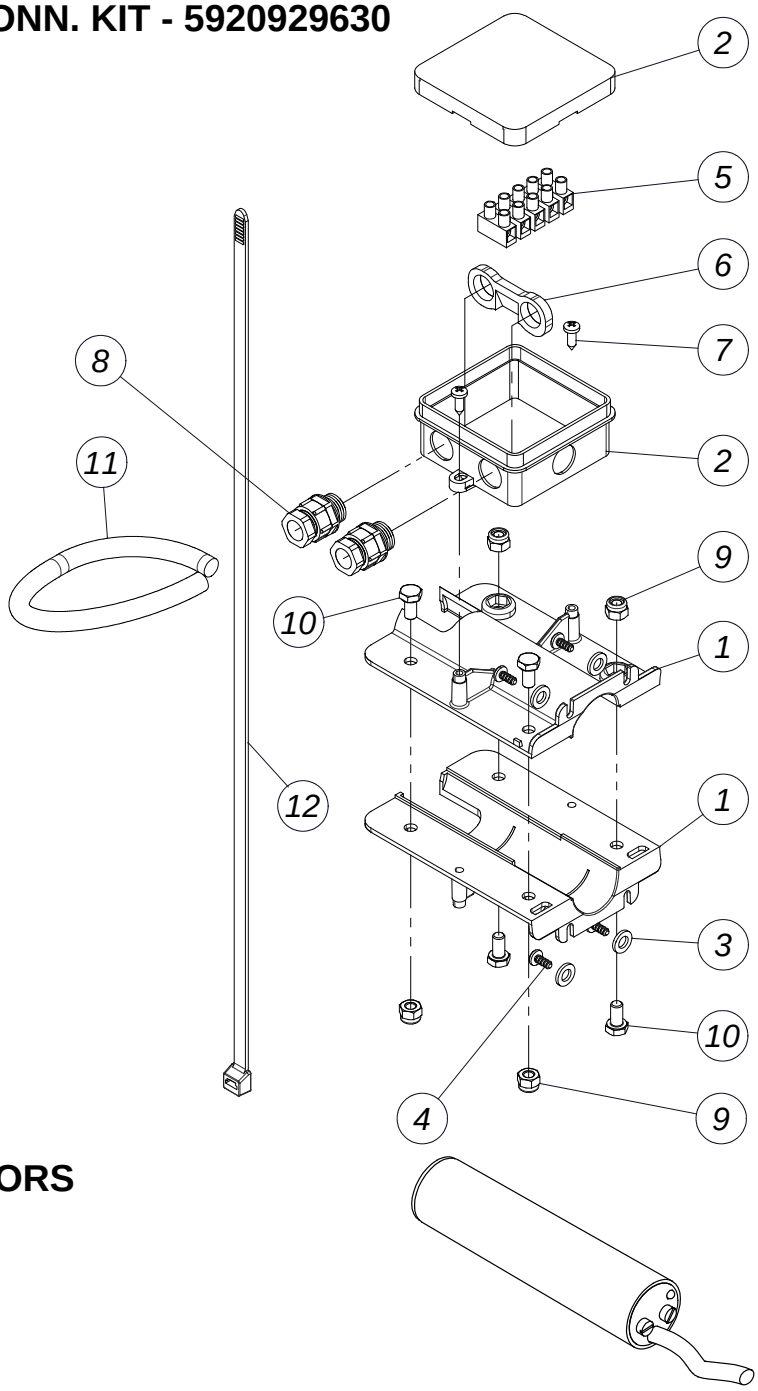
OUTLET DROP ASS'Y W/SHUT-OFF MODEL 125

Key	Part Nr.	Qt.
1	5626992200	1
2	5626992280	1
3	5926909010	1
*4	5190912200	4
*5	5020928050	1
*6	5021902440	1
*7	5021902520	1
*	5929992840	1



SENSOR HOLDER + CONN. KIT - 5920929630

Key	Part Nr.	Qt.
1	5029993320	2
2	5049999260	1
3	5190993480	4
4	5190927480	4
5	5022929750	1
6	5049090080	1
7	5190994140	2
8	5049903610	2
9	5190908590	4
10	5190927720	4
11	5020980340	1
12	5020942980	2

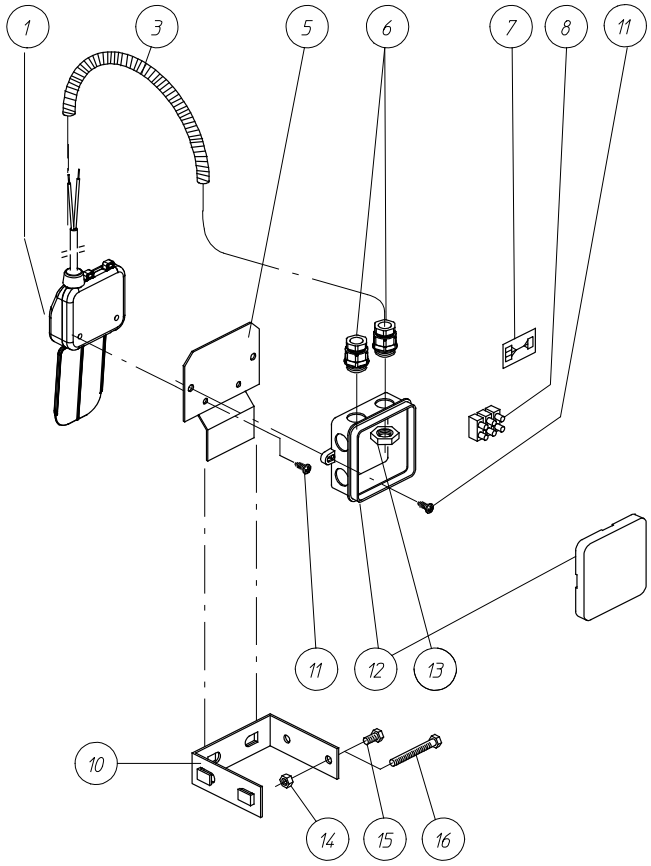


SENSORS

5920934270 : SENSOR VC12

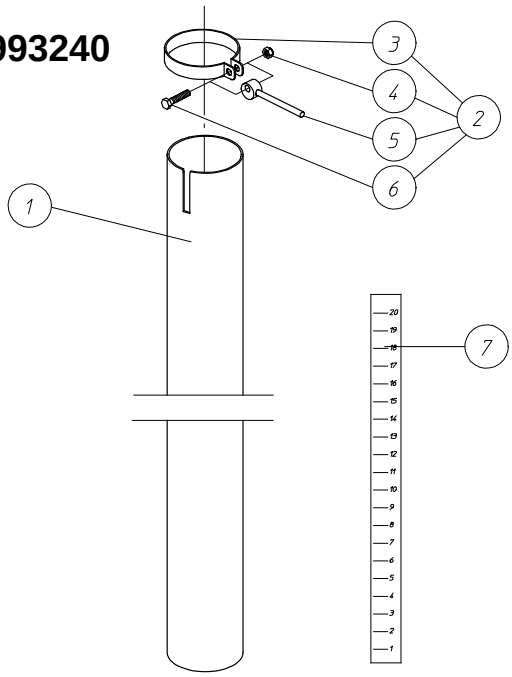
HOPPER LEVEL SWITCH - 5629993210

Key	Part Nr.	Qt.
1	5020934990	1
3	5020932580	1
5	5020933900	1
6	5049903610	2
7	5020934230	1
8	5090920980	1
10	5020933080	1
11	5190994140	4
12	5049999260	1
13	5090918670	2
14	5190991090	2
15	5190990590	2
16	5191991720	2

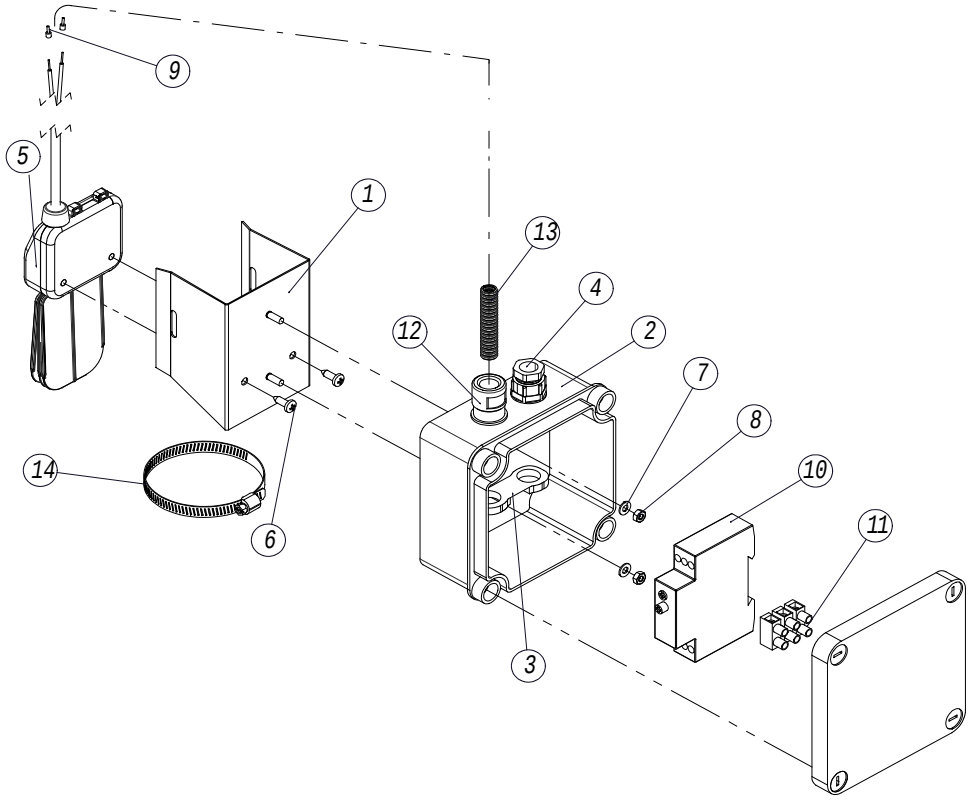


TELESCOPICAL DROP TUBE - 5920993240

Key	Part Nr.	Qt.
1	5020999180	1
2	5020925490	1
3	5090964520	1
4	5190993990	1
5	5020968220	1
6	5190990830	1
7	5020930680	1

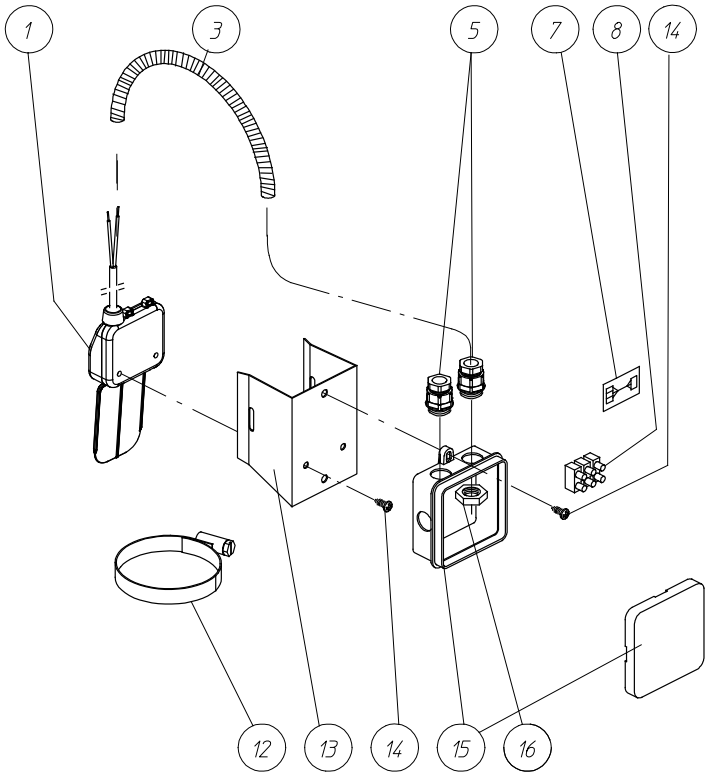


DROP TUBE LEVEL SWITCH W/DELAY - 5629993460



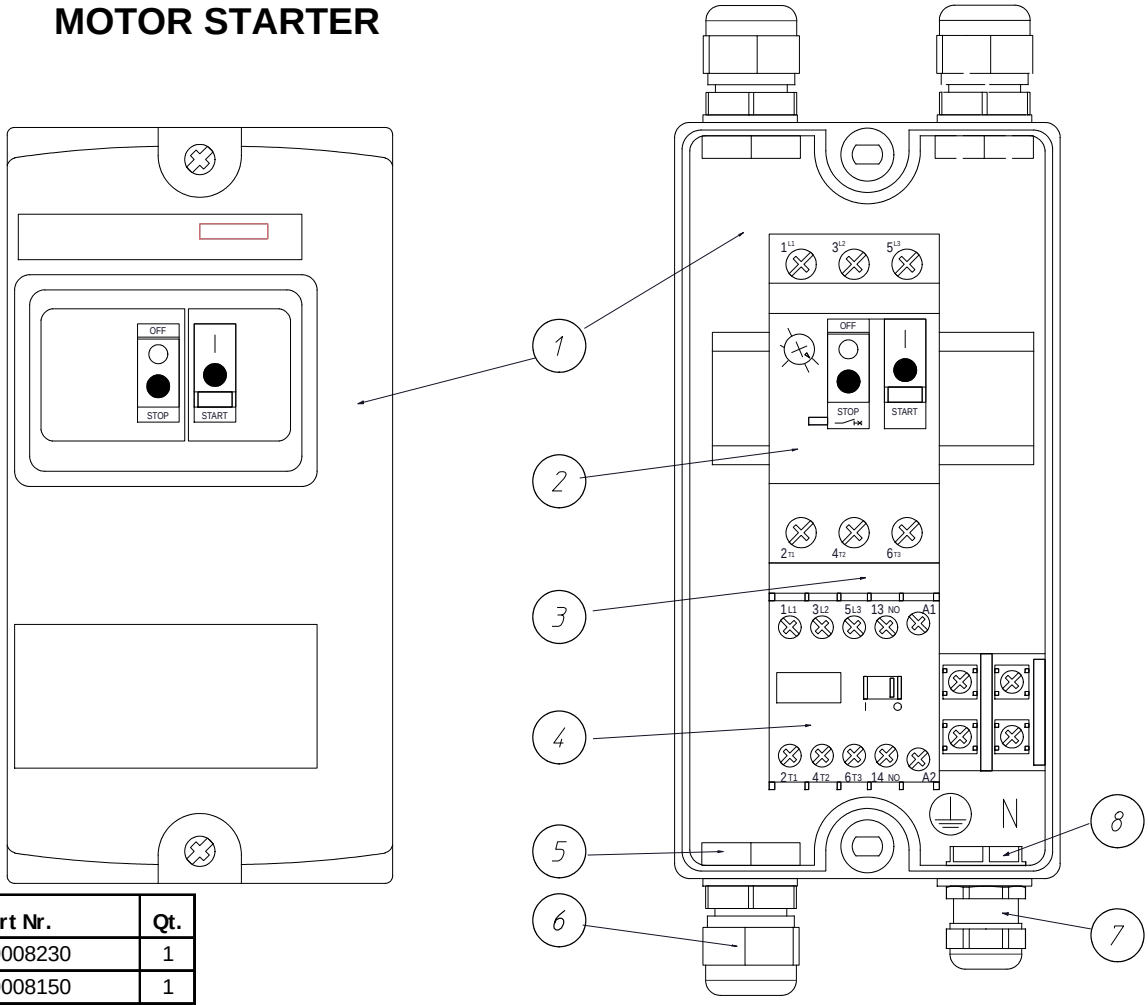
Key	Part Nr.	Qt.
1	5020986530	1
2	5038047280	1
3	5049090080	1
4	5049903610	1
5	5020976220	1
6	5190994140	2
7	5190994550	2
8	5190995700	2
9	5049901220	2
10	5020986450	1
11	5090920980	1
12	5049982080	1
13	5049094450	1
14	5920995470	1

DROP TUBE LEVEL SWITCH - 5629993390



Key	Part Nr.	Qt.
1	5020934990	1
3	5020932580	1
5	5049903610	2
7	5020934230	1
8	5090920980	1
12	5920995470	1
13	5020932660	1
14	5190994140	4
15	5049999260	1
16	5090918670	2

MOTOR STARTER



Key	Part Nr.	Qt.
1	5049008230	1
2	5049008150	1
3	5049091800	1
4	*See : where used	1
5	5049093390	3
6	5049091090	3
7	5090006440	1
8	5090006520	1
*THERMAL MAGNETIC PROTECTION :		

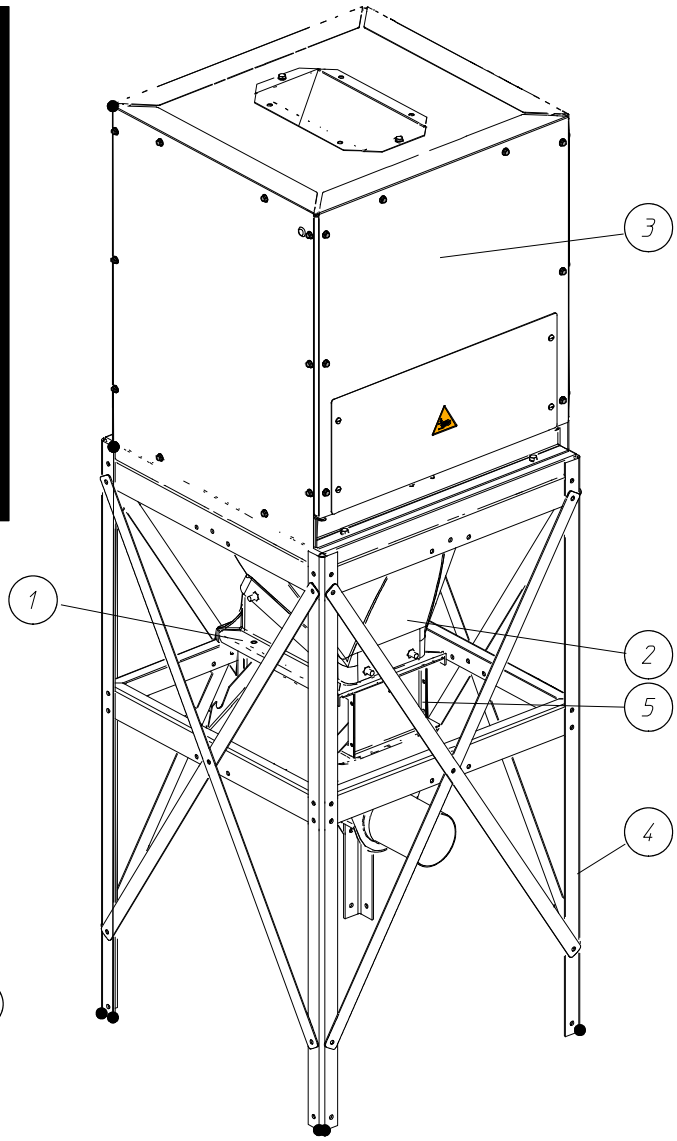
MOTOR STARTER USED FOR :				
MOTOR RATING		SUPPLY VOLTAGE		
50Hz	60Hz	3- PH. 230V	3- PH. 400V	1- PH. 230V
0.37KW	0.44KW	5949901300	5949901220	5949901380
0.55KW	0.66KW	5949901380	5949901300	5949901380
0.74KW	0.90KW	5949901380	5949901300	5949901460
1.10KW	1.32KW	5949901460	5949901380	5949901540

	THERMAL-MAGNETIC MOTOR PROTECTION : WHERE USED					
MOTOR STARTER	5949901140	5949901220	5949901300	5949901380	5949901460	5949901540
THERM. MAGNETIC PROTECT.	5025997500	5028991500	5025997760	5028991680	5049936880	5049952960
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

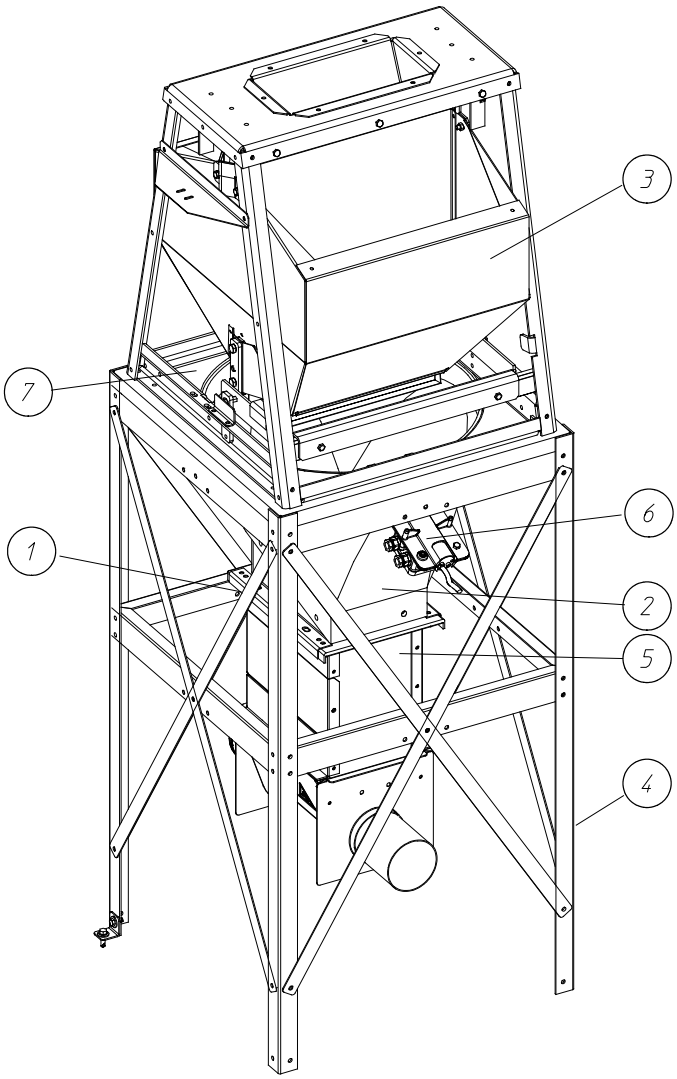
(FOR 1 MOTOR CONTROL)

LAY-OUT WEIGHER 6.5 TON - 5638999330- PRODUCT NUMBERS

KEY	PART NR.
1	5696999990
2	5629993880
3	5638999330
4	5991995310
5	5696999070

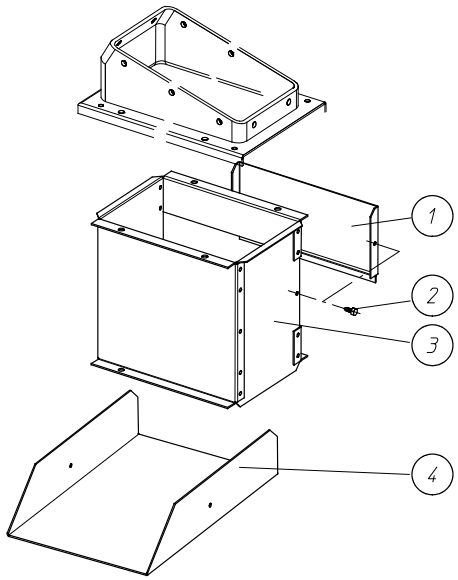


AUTOMATIC WEIGHER - 13 TON - 5695999910



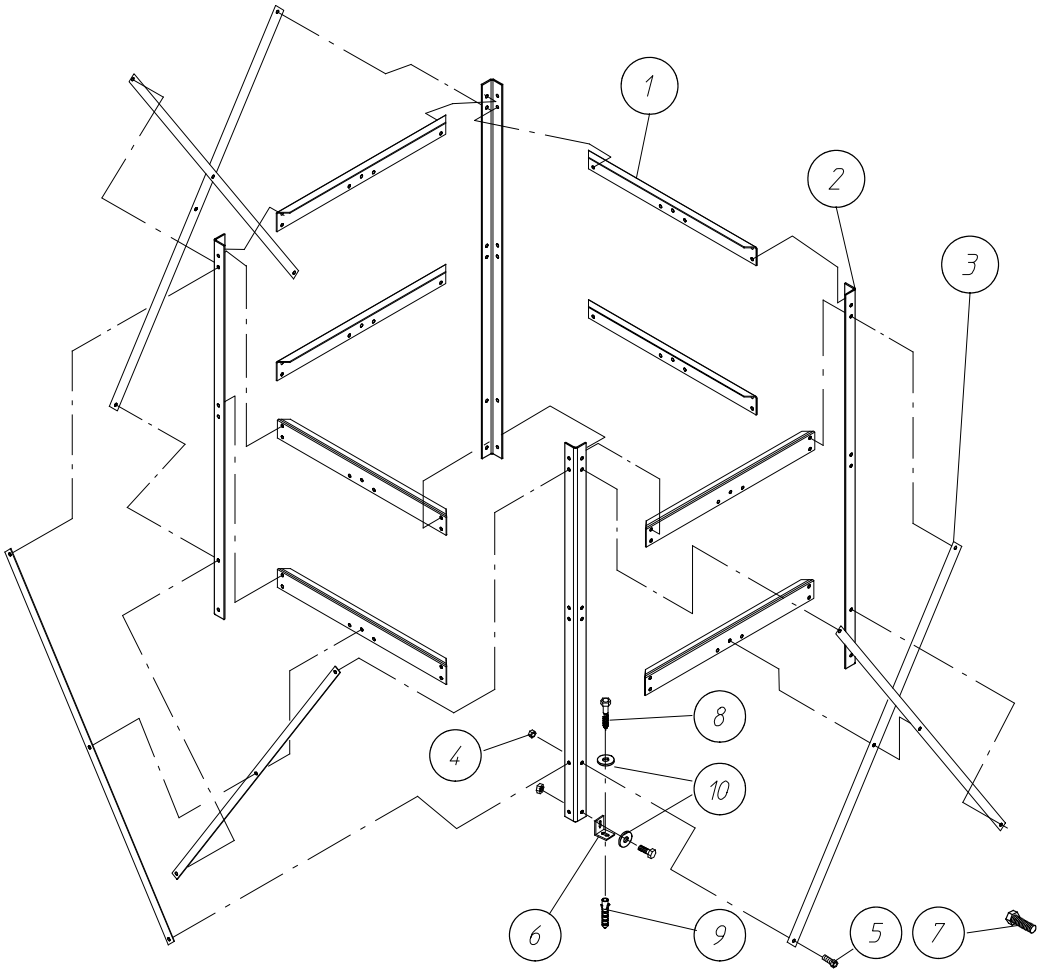
KEY	PART NR.
1	5696999990
2	5629992630
3	5695999910
4	5991995310
5	5696999070
6	5920929630
7	5920919900

TRANSITION ASS'Y FOR INTAKE BOOT - 5696999070



Key	Part Nr.	Qt.
1	5091922280	1
2	5190905950	2
3	5096902880	1
4	5091922430	1

WEIGHER STAND - 5991995310

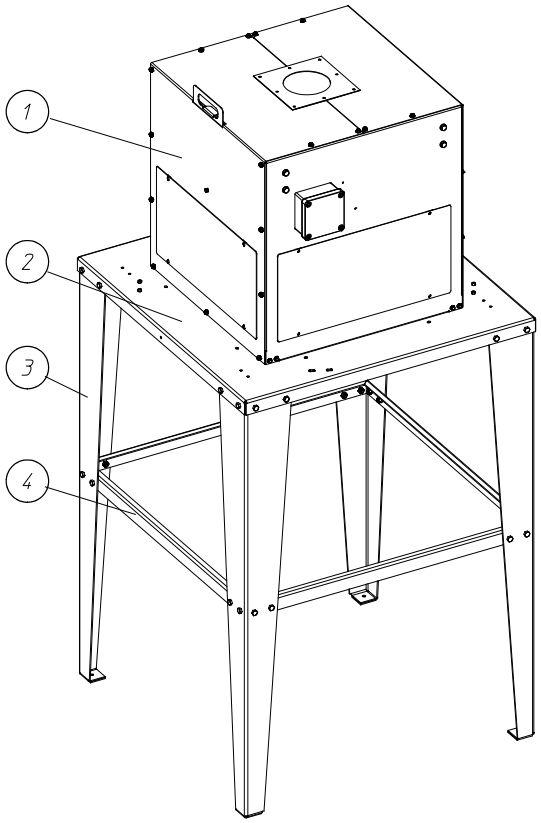


Key	Part Nr.	Qt.
1	5091901800	8
2	5091902980	4
3	5091939950	6
4*	5190991096	51
5*	5190990590	37
6*	5096906500	4

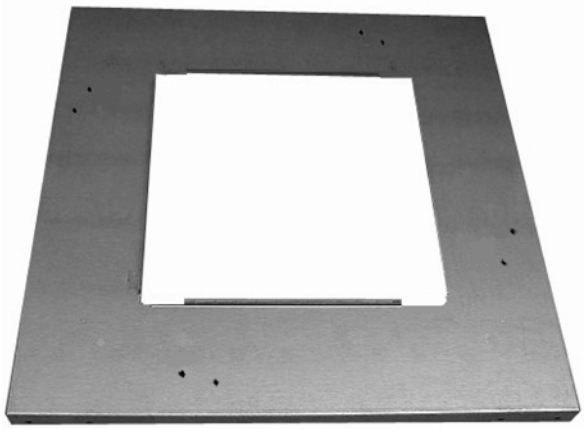
Key	Part Nr.	Qt.
7*	5190990670	14
8*	5190919150	4
9*	5190919230	4
10*	5190996450	8
*	5091930690	1

LAY-OUT WEIGHER EBW70 - PRODUCT NUMBERS

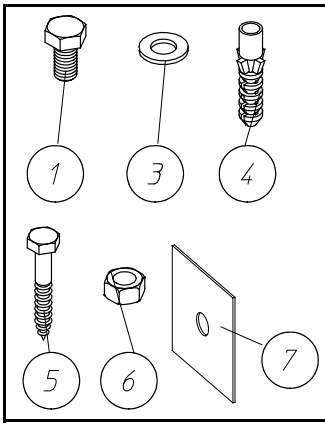
KEY	PART NR.	PAGE
1	5938925690	II-38
2	5938935670	II-37
3	5938935750	II-37
4	5938935830	II-37
*	5938935340	II-37
*	Bolts-Nuts	Not shown



5938935670 - TABLE TOP

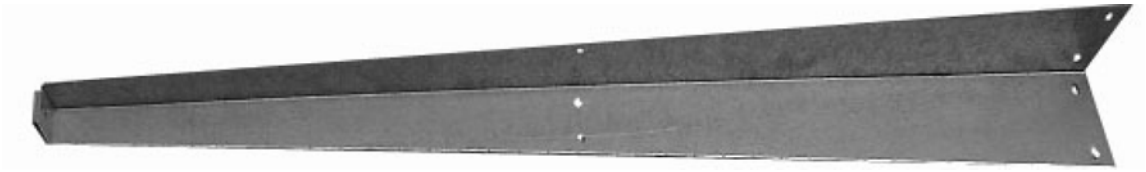


5938935340 - HARDWARE KIT FOR TABLE EBW70



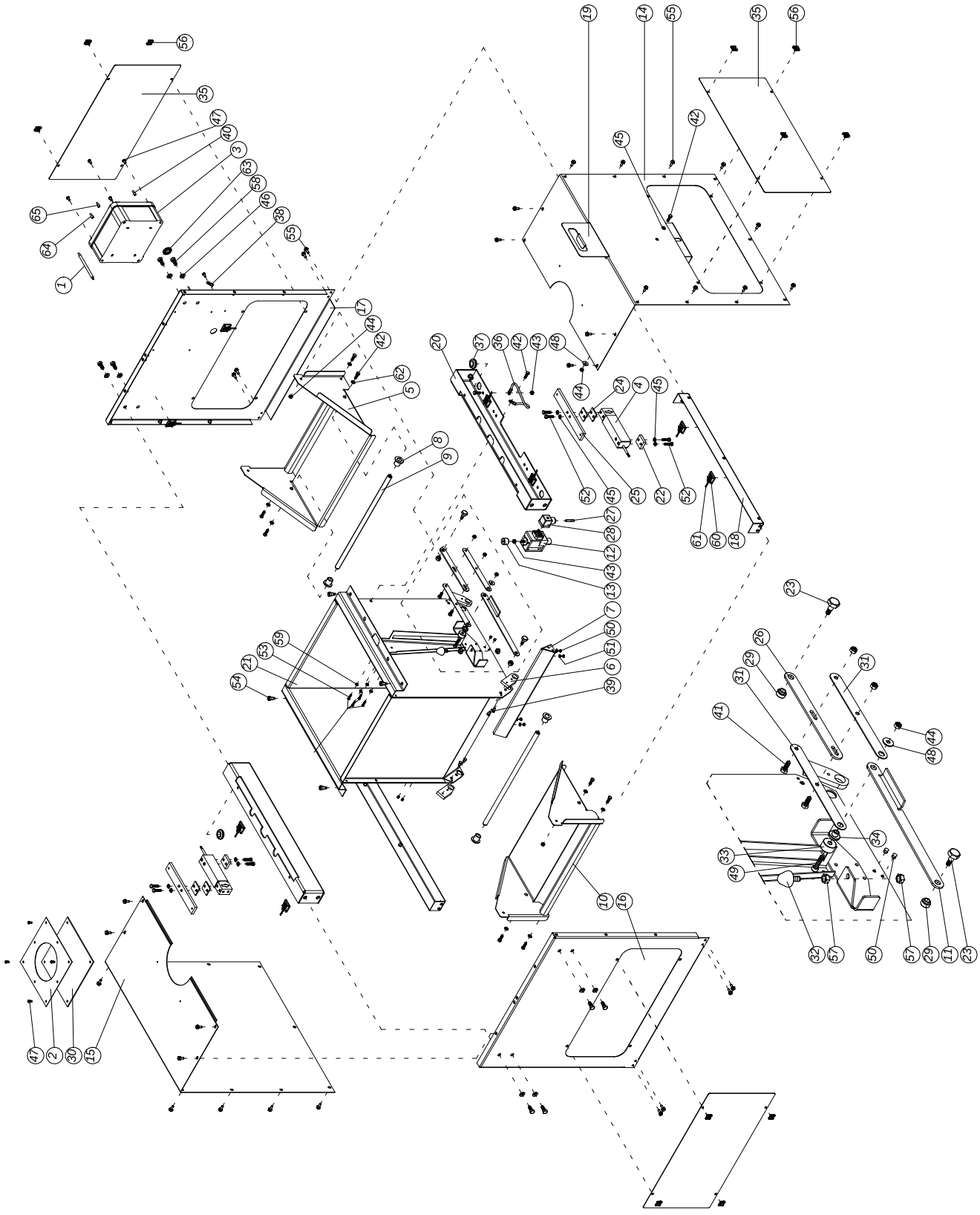
Key	Part Nr.	Qt.
1	5190991170	32
3	5190993560	4
4	5190936980	4
5	5190979610	4
6	5191999170	32
7	5038926250	2
	5038926170	2

5938935750 - TABLE LEG



5938935830 - TABLE LEG BRACE

ELECTRONIC BATCHWEIGHER EBW-70L - 5938925690

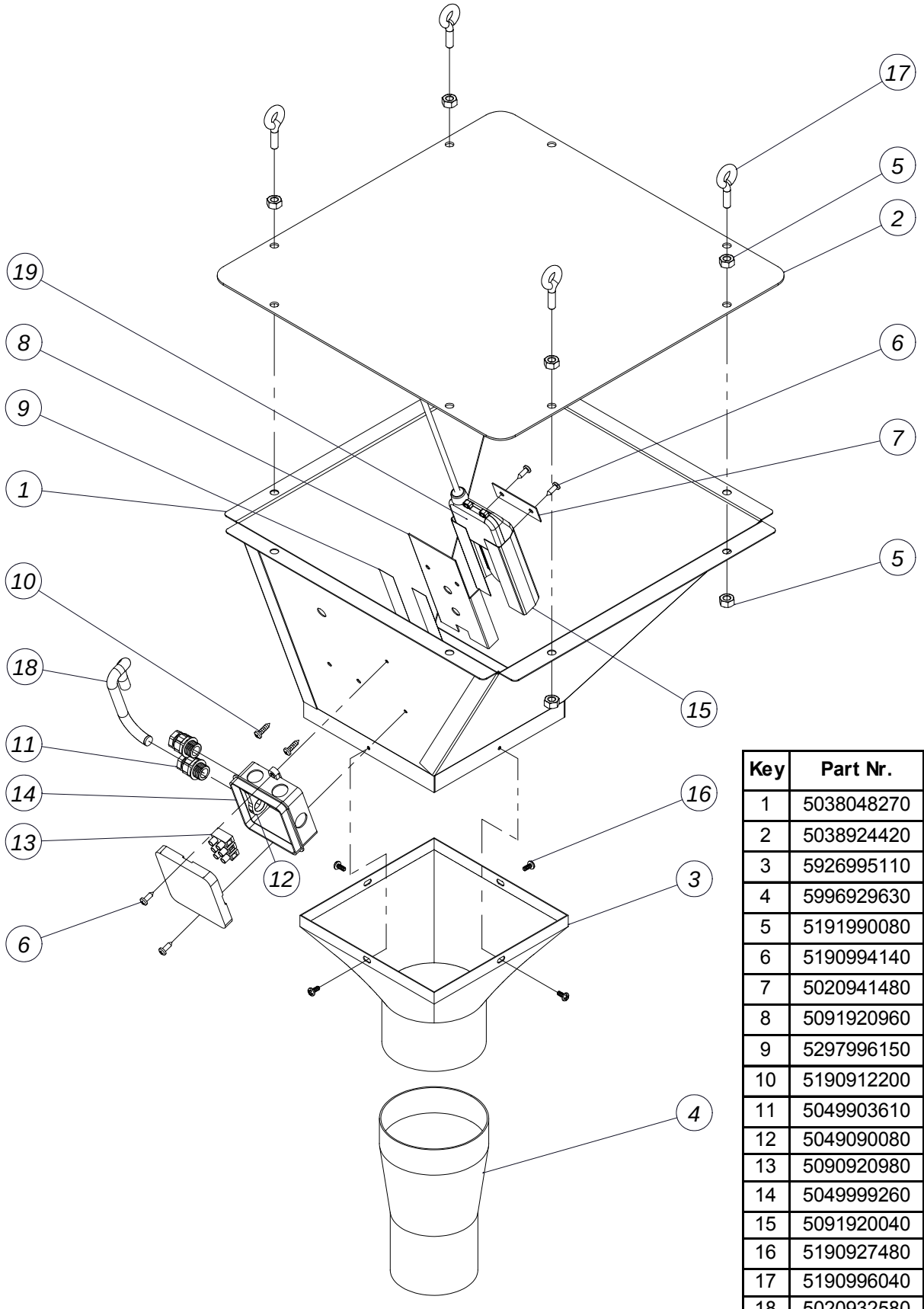


ELECTRONIC BATCHWEIGHER EBW-70 + LCC - 5938925690

Key	Part Nr.	Qt.
1	5298992740	1
2	5025994200	1
3	5038041810	1
4	5038910230	2
5	5038929890	2
6	5038920210	4
7	5038920390	1
8	5038920460	4
9	5038920700	2
10	5038920880	2
11	5038921040	1
12	5038921200	1
13	5038921380	1
14	5038921450	1
15	5038921530	1
16	5038921610	1
17	5038045450	1
18	5038921870	2
19	5038922950	1
20	5038922030	2
21	5038922110	1
22	5038922600	2
23	5038922780	2
24	5038922860	4
25	5038923940	2
26	5038923100	1
27	5038923280	1
28	5038923430	1
29	5038924500	2
30	5038930290	1
31	5038931770	2
32	5038932930	1
33	5038932010	1

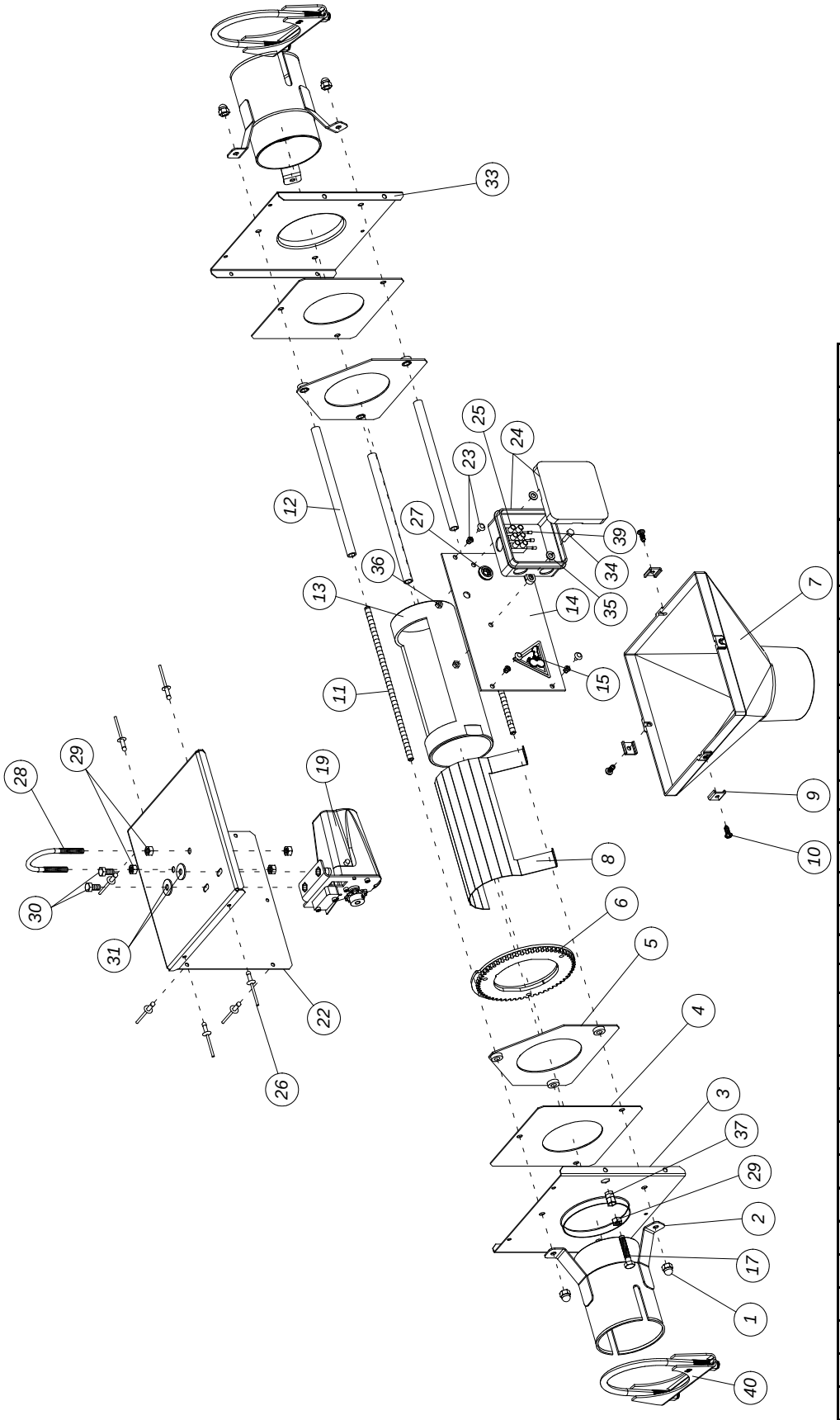
Key	Part Nr.	Qt.
34	5038932190	1
35	5038932270	3
36	5049917650	1
37	5049950220	2
38	5049966080	1
39	5190990000	8
40	5049945950	1
41	5190990670	2
42	5190990750	11
43	5190991090	3
44	5190993990	6
45	5190993480	17
46	5190993560	8
47	5190994140	9
48	5190996450	2
49	5190997860	1
50	5190909740	4
51	5190912040	4
52	5190918730	8
53	5190932590	4
54	5190975160	4
55	5190977220	34
56	5190980190	12
57	5191999170	2
58	5191990490	8
59	5169996820	4
60	5289011210	8
61	5990900940	8
62	5090929540	8
63	5049985620	1
64	5049901220	9
65	5090920220	1

EXCENTRIC DROP ASS'Y MOD. CU - 5638999090



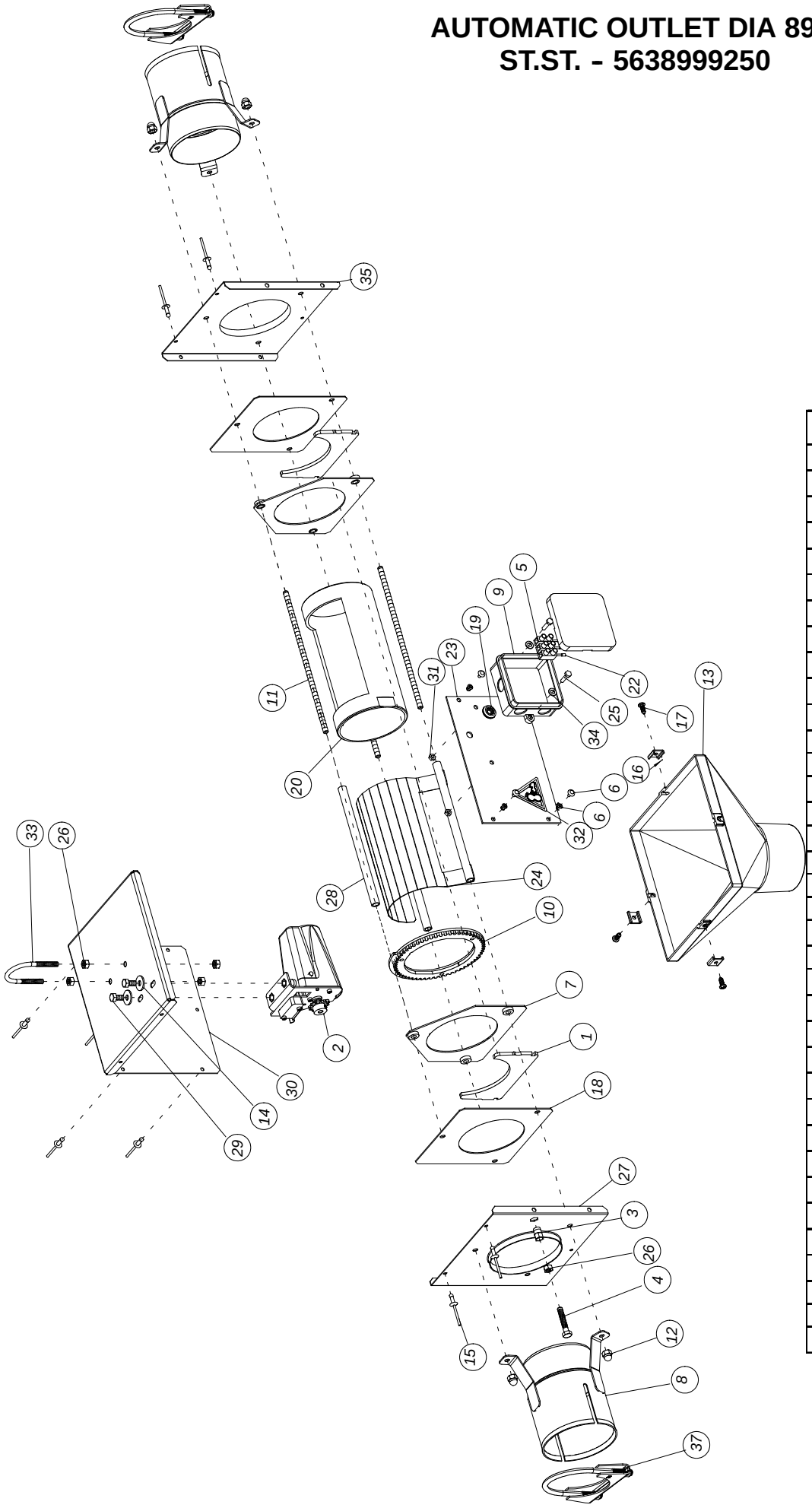
Key	Part Nr.	Qt.
1	5038048270	1
2	5038924420	1
3	5926995110	1
4	5996929630	1
5	5191990080	8
6	5190994140	4
7	5020941480	1
8	5091920960	1
9	5297996150	2
10	5190912200	2
11	5049903610	2
12	5049090080	1
13	5090920980	1
14	5049999260	1
15	5091920040	1
16	5190927480	4
17	5190996040	4
18	5020932580	1
19	5020976630	1

AUTOMATIC OUTLET DIA 75 - ST.ST. - 5638999170



Key	Part Nr.	Qt.
1	5190989770	6
2	5038919810	2
3	5038906110	1
4	5038949680	2
5	5038949760	2
6	5038940920	1
7	5029909180	1
8	5038940000	1
9	5020925320	3
10	5190994140	3
11	5038901650	3
12	5038933750	3
13	5038949840	1
14	5038933260	1
15	5020954850	1
17	5190973670	1
19	5038940750	1
22	5038933180	1
23	5038940180	4
24	5038995980	1
25	5090920980	1
26	5190989360	8
27	5038936310	1
28	5190931840	1
29	5190911460	5
30	5190927720	2
31	5190932180	2
21	5038904050	1
33	5038931020	1
34	5190915270	2
35	5190912040	2
36	5190915350	2
37	5190980930	1
39	5049901220	3
40	5928999540	2

AUTOMATIC OUTLET DIA 89 - ST.ST. - 5638999250



Key	Part Nr.	Qt.
1	5038941910	2
2	5038940750	1
3	5190980930	1
4	5190973670	1
5	5090920980	1
6	5038940180	4
7	5038933340	2
8	5038919320	2
9	5038995980	1
10	5038933830	1
11	5038901650	3
12	5190989770	6
13	5029909180	1
14	5190932180	2
15	5190989360	8
16	5020925320	3
17	5190994140	3
18	5038938460	2
19	5038936310	1
20	5038933410	1
22	5049901220	3
23	5038933260	1
24	5038933000	1
25	5190915270	2
26	5190911460	5
27	5038906290	1
28	5038933750	3
29	5190927720	2
30	5038933180	1
31	5190915350	2
21	5020954850	1
33	5190931840	1
34	5190912040	2
35	5038931510	1
36	5038904050	1
37	5921999180	2

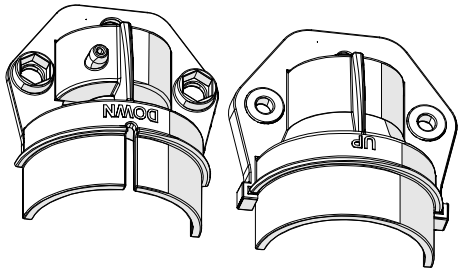
SPARES SET BEARING CAP HOLDER

SPARES SET BEARING CAP HOLDER Ø56 **5924902570**

Ø56

Used in :

Extension boot Model 55	**5624990310**
Boot Model 55	**5624990150**
Double intake boot Model 55	**5624990230**

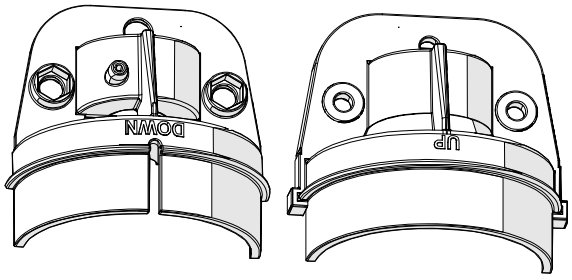


SPARES SET BEARING CAP HOLDER Ø75 **5920931430**

Ø75

Used in :

Extension boot Model 75	**5620993440**
Feed intake boot Model 75	**5620993110**
Double intake boot Model 75	**5620993290**
Tandem in line Model 75	**5620993370**

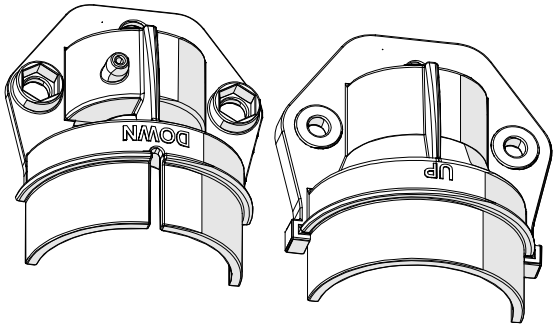


SPARES SET BEARING CAP HOLDER Ø90 **5921916150**

Ø90

Used in :

Extension boot Model 90	**5621992770**
Extension boot f/overhead Model 90	**5621993010**
Feed intake boot Model 90	**5621992430**
Double intake boot Model 90	**5621992510**
Tandem in line Model 90	**5626999450**



PART III

INSTALLATION INSTRUCTIONS

GENERAL SAFETY RULES

IMPORTANT

DANGER

Carefully read the following instructions before you INSTALL the system

1. Be **CAREFUL** when handling the **ROLLS OF AUGER**.

- When you release the **BINDING WIRE,** it is possible that the auger **UNROLLS**. This can cause injuries.
- **ALWAYS** use **SAFETY GLOVES** when you slide the auger into the tube.
- **ALWAYS** see that the auger **CANNOT SPRING BACK** (by using clamps) when you put it under tension or couple it .

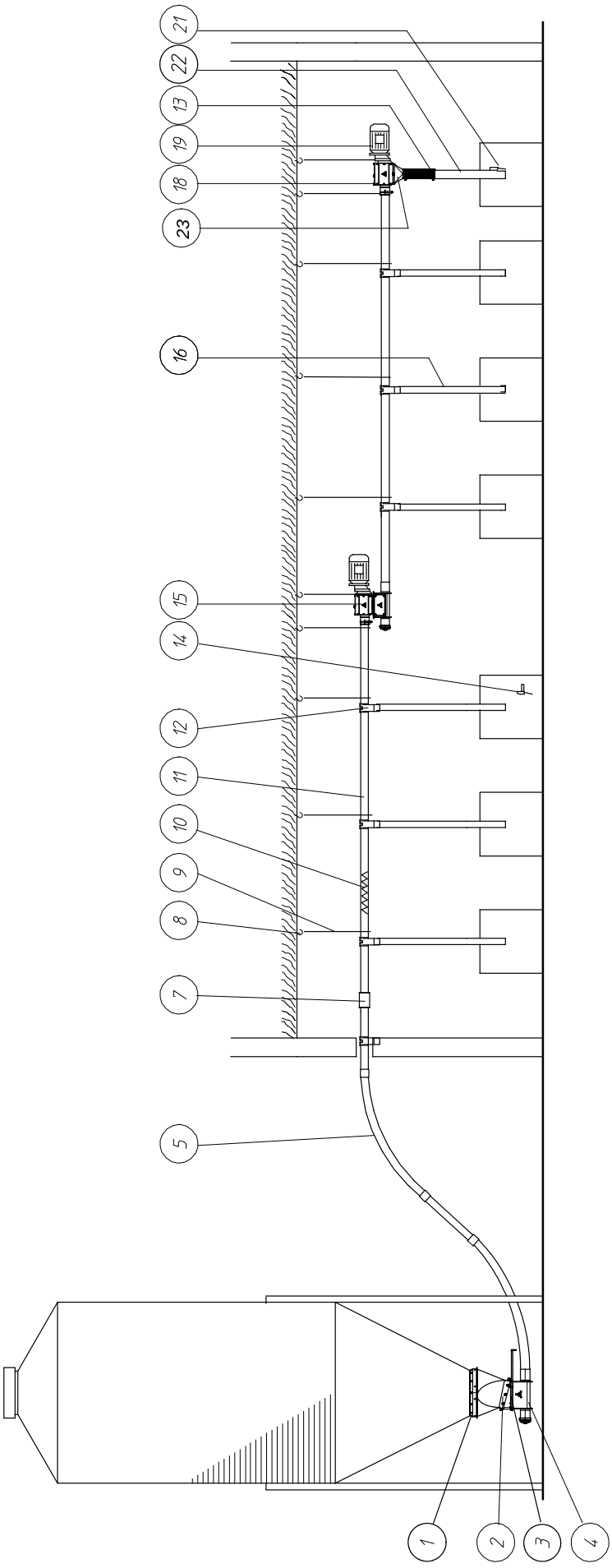
2. Check all **ELBOW** and **TUBE CONNECTIONS** and all **TUBE CLAMPS** on control unit, boot and bearings for **PROPER CLAMPING.** Tighten all tube clamps with a **TORQUE** of min. : 10Nm.

3. Take care to provide **SOLID SUSPENSION POINTS**. Each suspension point should be able to hold **MIN. 50kg** .

4. At the **FIRST START UP,** make sure that, if the auger **HITCHES** or **BLOCKS**, you can **IMMEDIATELY SWITCH OFF** the system with the main switch on the control panel.

This **SYMBOL** will be used to draw your attention to matters that are of **GREAT IMPORTANCE** for your **SAFETY**.
It means : **WARNING** - follow the safety instructions : disconnect the current - re- read the safety rules.
In short : **BE ALERT**. **IGNORING** these instructions can cause **SERIOUS INJURIES** or even **DEATH**.

GENERAL VIEW



COMPONENT NUMBERS

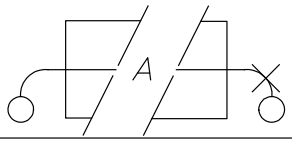
Key	Description	Number				Page
		Model 55	**Model 75**	**Model 90**	**Model 125**	
1	UNIVERSAL COLLAR	5620992200	5620992200	5620992200	5620992200	II-4
2	UPPER BOOT 15 DEGREES	5629993880	5629993880	5629993880	5629993880	II-22
3	TRANSFER PLATE ASSEMBLY	5629996020	5629996020	5629996020	5629996020	II-22
4	BOOT ASSEMBLY	5624990150	5620993110	5621992430	5626999450	II-12/14
	DOUBLE BOOT ASSEMBLY	5624990230	5620993290	5621992510	-	II-15/17
5	PVC ELBOW 45°	5624999650	5620991390	5621991440	5626999380	
	HARDENED STEEL ELBOW 45°	-	-	5921993220	5926999910	
7	TUBE CONNECTOR	5624999810	5620992040	5621992940	-	
	TUBE CONNECTOR	-	-	5921990580	5926992710	
8	SCREW HOOK L = 90	5949997610	5949997610	5949997610	5949997610	II-4
9	SUSPENSION CHAIN	5949999100	5949999100	5949999100	5949999100	
10	AUGER	5922994600	5920990760	5921993980	5926999740	
11	PVC TUBE - 3 M	5624999730	5620991460	5621991520	5626992120	
	METAL TUBE - 3 M	-	-	5921990910	5926991990	
12	OUTLET W SHUT-OFF (BLUE)	SEE PAGE				II-43
13	FLEXIBLE TUBE ASSSEMBLY DIA. 70	-	-	5920995220	5920995220	II-4
15	EXTENSION BOOT	5624999570	5620991210	5621991600	5626999790	II-9/11
16	PLASTIC DROP TUBE DIA 70MM X 1,5 LG = 2,5 M	5949999430	5949999430	5949999430	-	II-4
18	CONTROL UNIT	5624999320	5620991130	5621991110	5626999610	II-6/8
19	POWER UNIT	SEE PAGE				II-10
21	DROP TUBE LEVEL SWITCH	5629993390	5629993390	5629993390	5629993390	II-27
	DROP TUBE LEVEL SWITCH (W/DELAY)	5629993460	5629993460	5629993460	5629993460	II-27
22	PLASTIC DROP TUBE DIA 85MMLG = 2,5 M	5920995140	5920995140	5920995140	5920995140	II-4
23	METAL DROP DIA 105	5926995110	5926995110	5926995110	5926995110	II-4

TOOLS

1. LOCK GRIP PLIERS
2. HEAVY HAMMER, LIGHT HAMMER
3. METAL SAW
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∅ 3-13) & CONCRETE
10. GRINDING MACHINE
11. SET OF SOCKET WRENCHES W/RATCHET & EXTENSION
12. DRIVER FOR SCREW HOOKS DIA. 6MM :
13. TUBE CUTTER
14. HOLE SAW DIA 32 - (SENSOR)
    - Ø40 - (MODEL 55mm),
    - Ø130MM (Holes in wall)
15. HOLE SAW HOLDER -

GUIDELINES FOR DESIGNING THE AUGER TRANSPORT LINE

1. If possible, install the feed bin in line with the feeding troughs.



Avoid using left hand elbows : the feed does not protect such elbows against wear.

FIGURE 1.

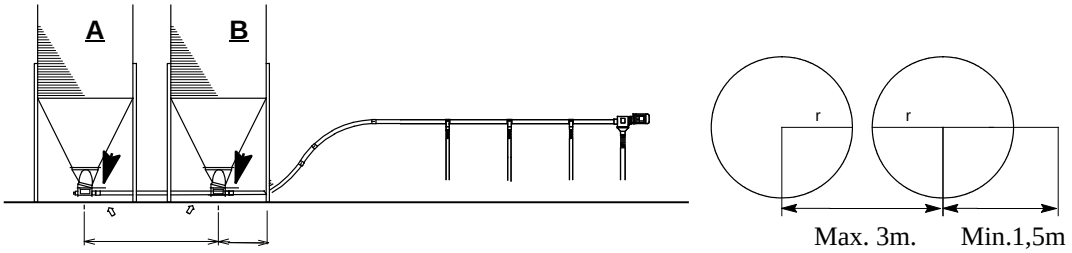


FIGURE 2.

2. Provide adequate size electrical wiring to carry power to the motors. See page III-38

   Preferably use 3-phase motors :

   - they are more trouble-free
   - they are more economical

3. DO NOT install outlets on or right before an elbow. Always put the outlet behind the elbow. If not possible, make sure that part of the feed bypasses. This will make your system run smoother.

4. The use of an extension boot : see graphs page III-5 up to III-8

   In certain cases you can do without an extra elbow in the system. Install the extension boot under 90_ on the auger transport line (see page III-14 FIG. 24.) For certain applications you can turn the extension boot 180_

   Install the extension boot such that no outlets are needed until behind the first elbow.

   The longest part of the line (the one with the most outlets) must follow the extension boot. So you install the extension boot just before the middle of the total length of the line.

   Always install the extension boot before the elbow if any. So you avoid wearing out of the elbow.

5. The TANDEM SYSTEM is the straight-line connection between two feed bins. It allows to supply two different kinds of feed or to double your storage capacity using only one auger transport line .

   Consider the following before you install a tandem system :

   - Tandem and auger transport line augers run in the same centerline.
   - **NEVER INSTALL AN ELBOW BETWEEN 2 BINS.**
   - Make one flat concrete foundation for both bins. For dimensions ask the bin manufacturer.
   - Install the feed bins at the minimum distance.
   - To avoid wear of the second boot, the auger transport line must come at least 1,5 m horizontally past the second boot. See drawing.

BIN LOCATION

Check diagrams on pages III-5 - 9 to determine the most suitable location for your bin. Important are :

- height of horizontal tubes
- position of the first outlet

Note : when you install the 30_ boot, the capacity of the auger transport line is reduced with a percentage up to 20 % according to the feed used.

By using a double intake boot you can start with a auger transport line at either side.

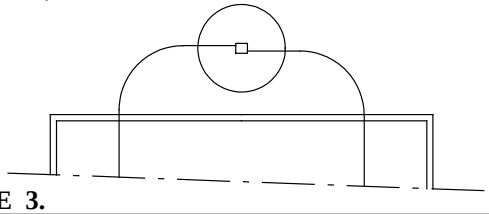


FIGURE 3.

If possible, install the bin in line with the auger transport line. You need 2 elbows 45_ for a standard system.

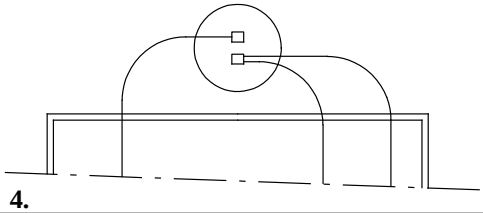


FIGURE 4.

ELBOW DIAGRAM ATL MODEL 55-75-90

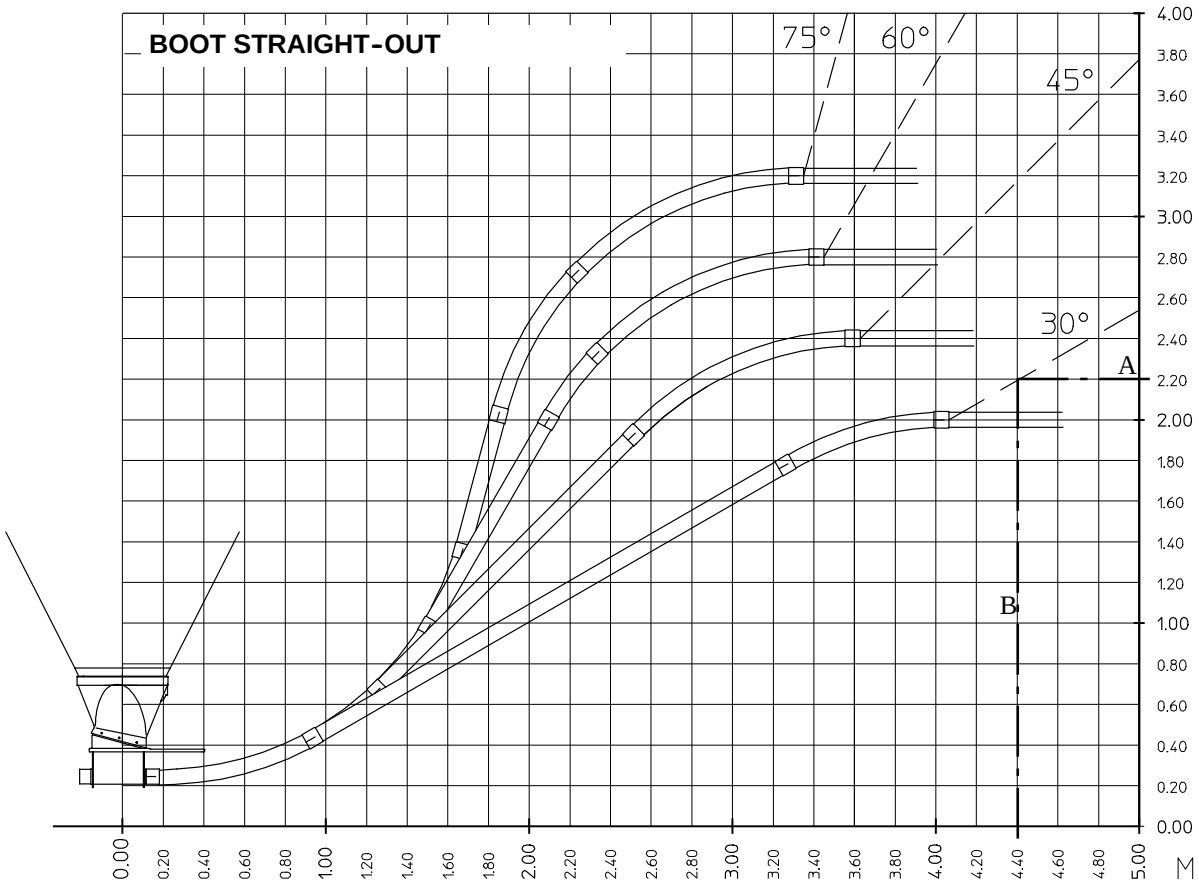


FIGURE 5.

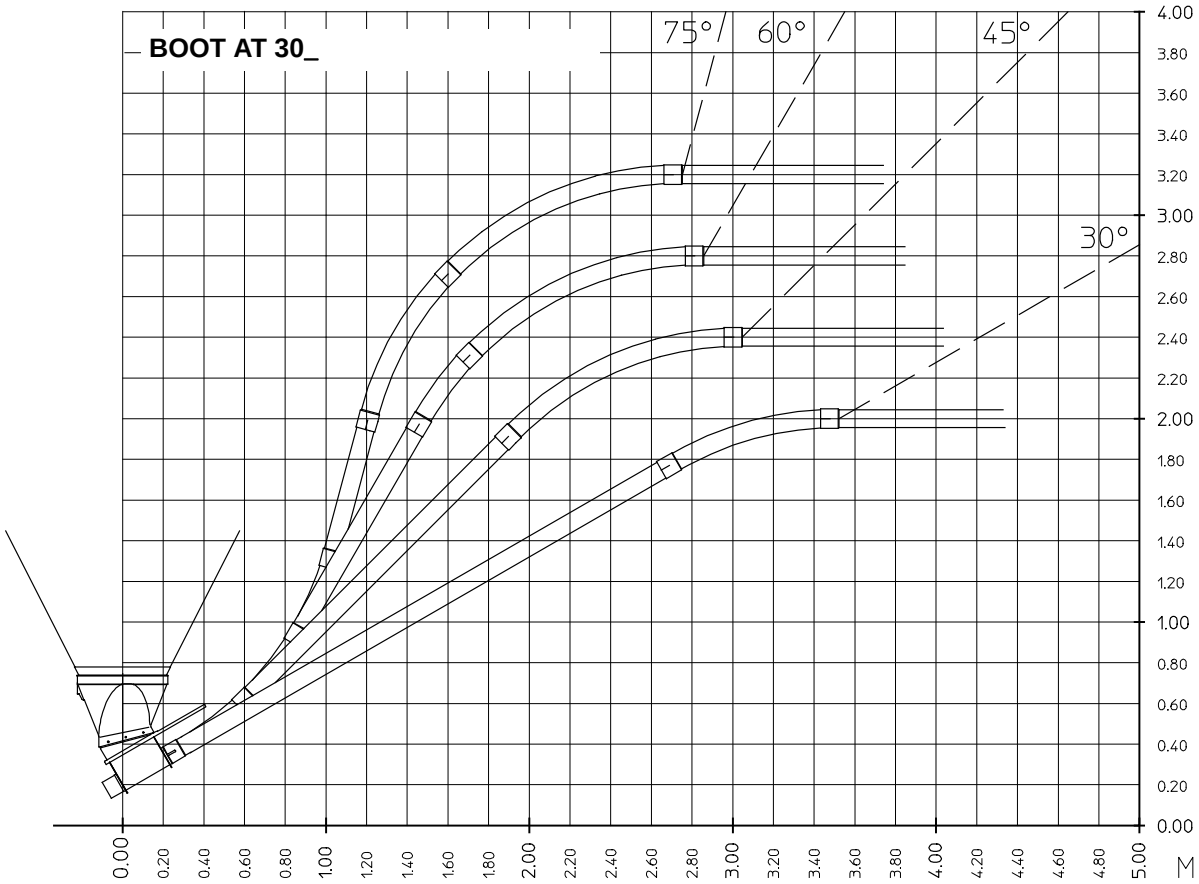


FIGURE 6.

ELBOW DIAGRAM ATL MODEL 125

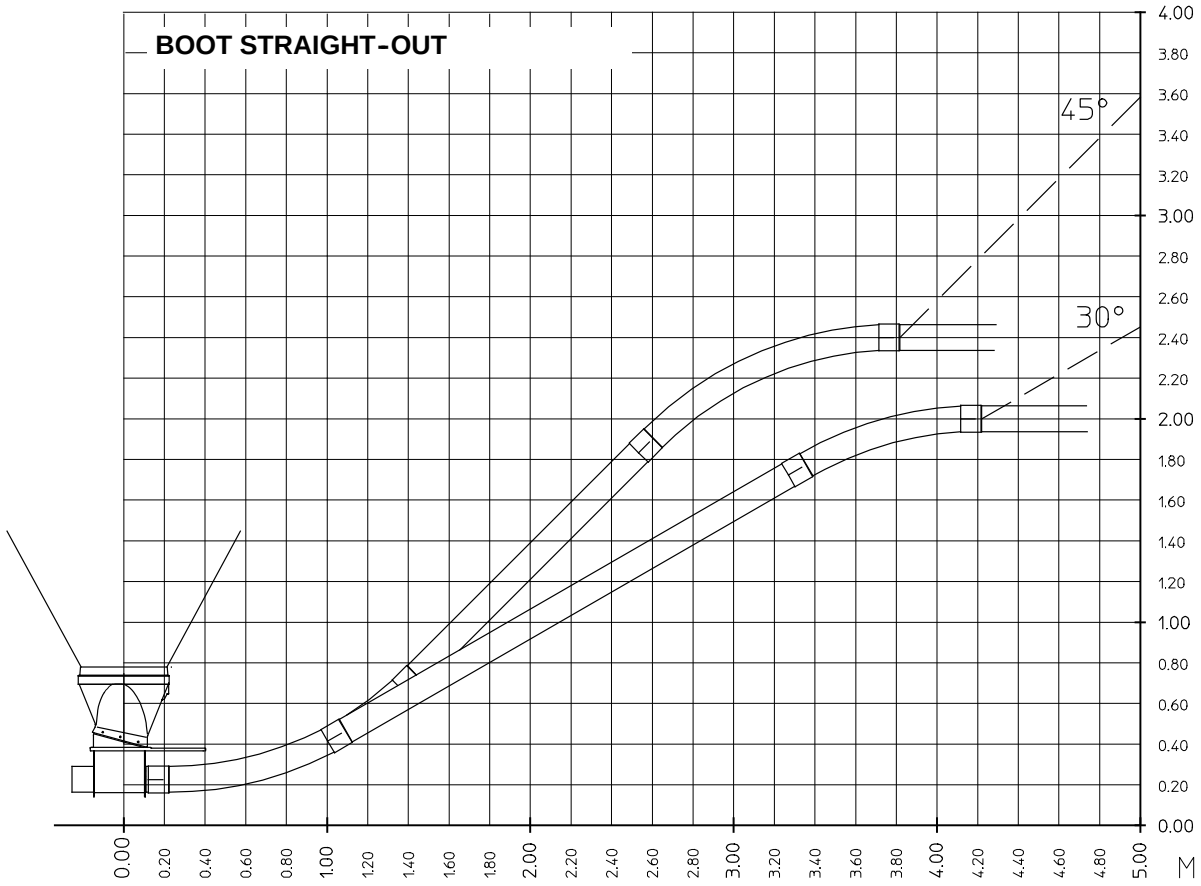


FIGURE 7.

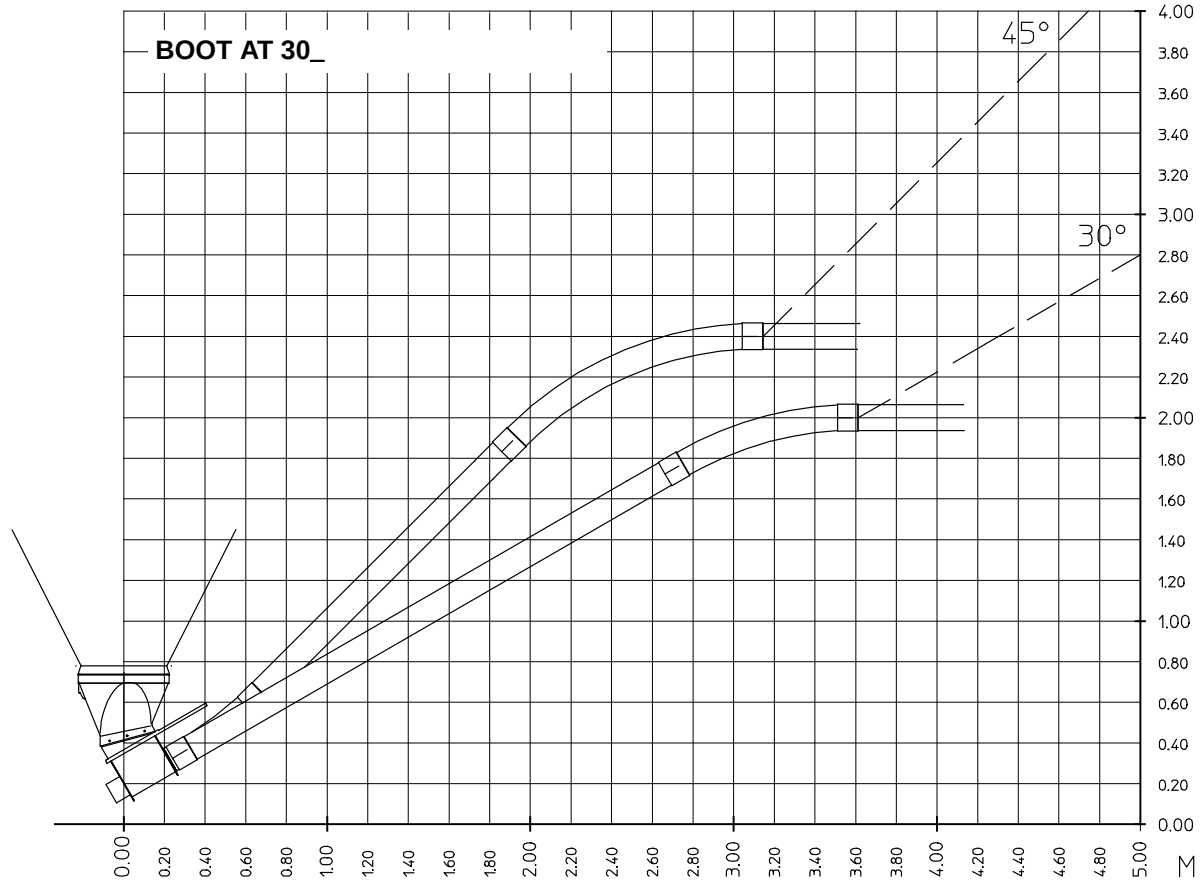
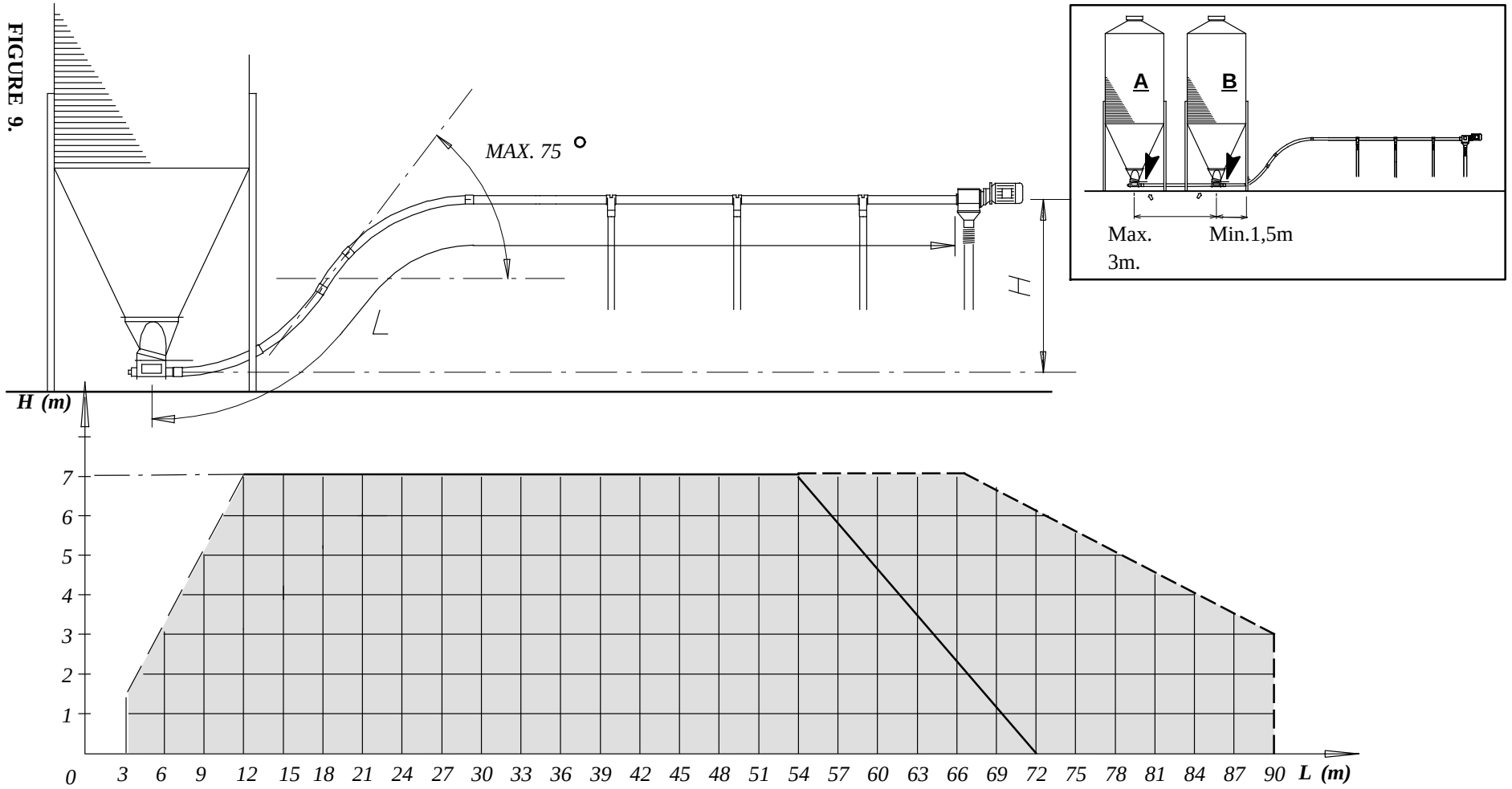


FIGURE 8.

GRAPH WITH MAXIMUM LENGTHS - MODEL 55

FIGURE 9.

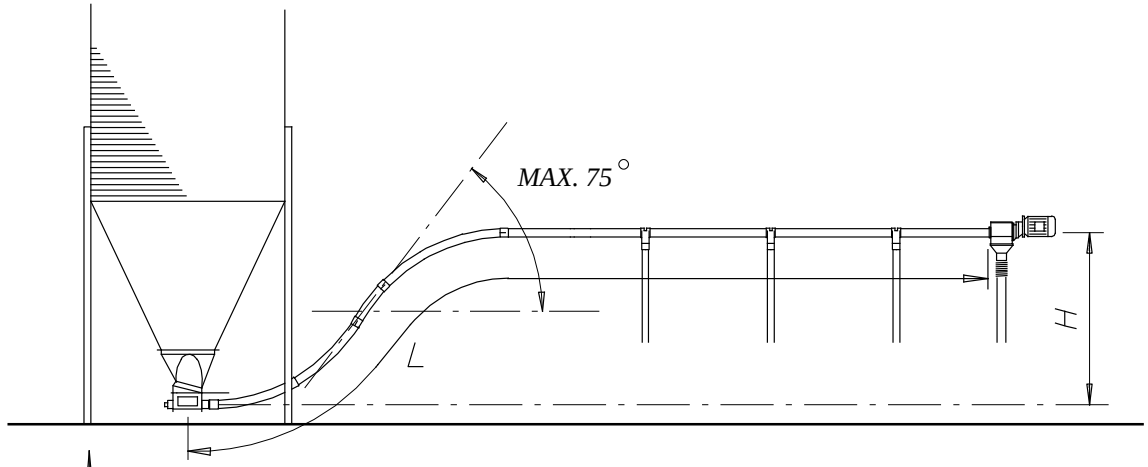


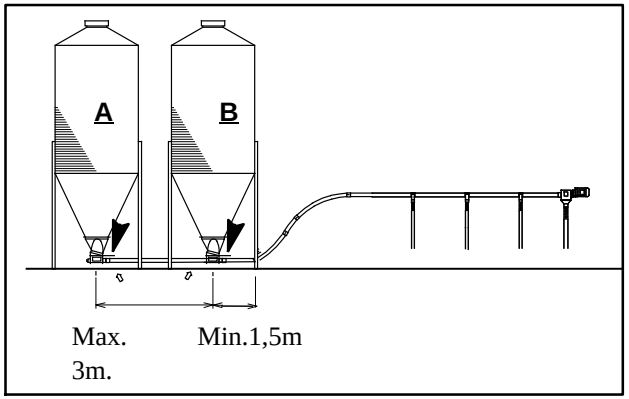
— — — — — — — with fill points every 0,5 m

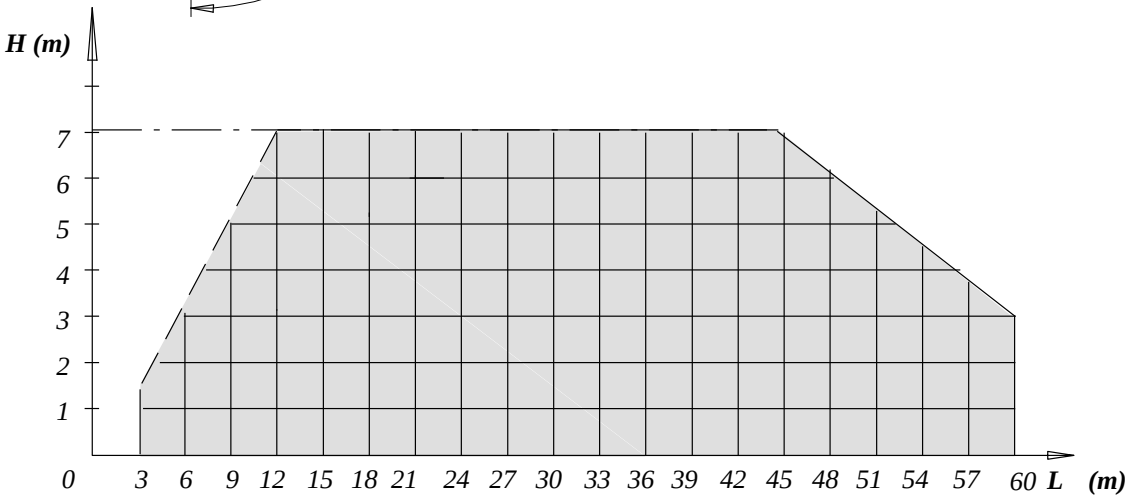
The first extra elbow (45°) reduces the maximum length with 3 meters. The followiing extra elbows with 4,5 m.

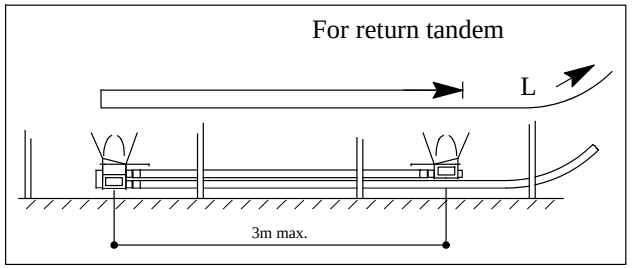
All lengths within the graph are allowed. If dimensions pass the graph limits, use an extension boot, and consider the system as two separate transport systems.

FIGURE 10.







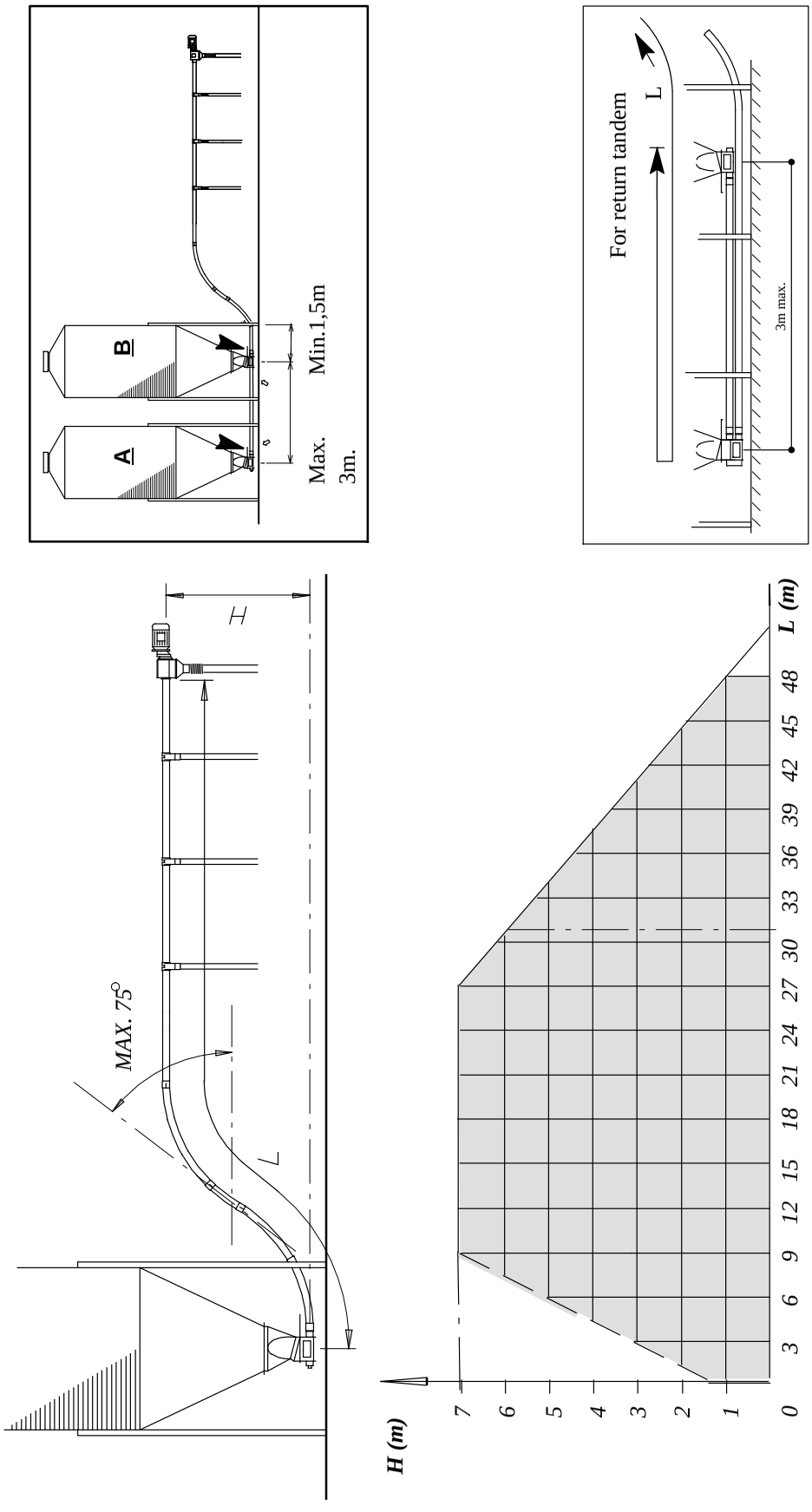


The first extra elbow (45°) reduces the maximum length with 3 meters. The followiing extra elbows with 4,5 m.

All lengths within the graph are allowed. If dimensions pass the graph limits, use an extension boot, and consider the system as two separate transport systems.

GRAPH WITH MAXIMUM LENGTHS - MODEL 75

GRAPH WITH MAXIMUM LENGTHS – MODEL 90



The first extra elbow (45°) reduces the maximum length with 3 meters. The followiing extra elbows with 4,5 m.

All lengths within the graph are allowed. If dimensions pass the graph limits, use an extension boot, and consider the system as two separate transport systems.

FIGURE 11.

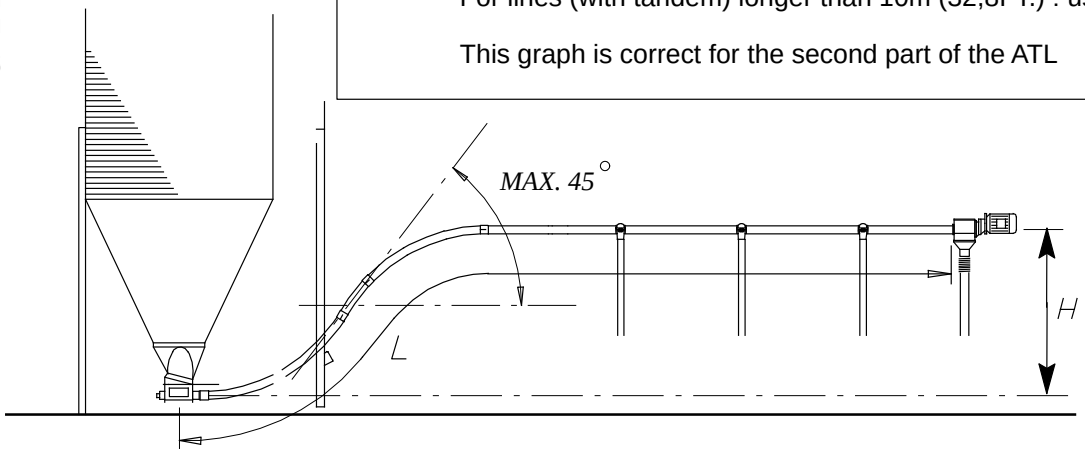
GRAPH WITH MAXIMUM LENGTHS - MODEL 125

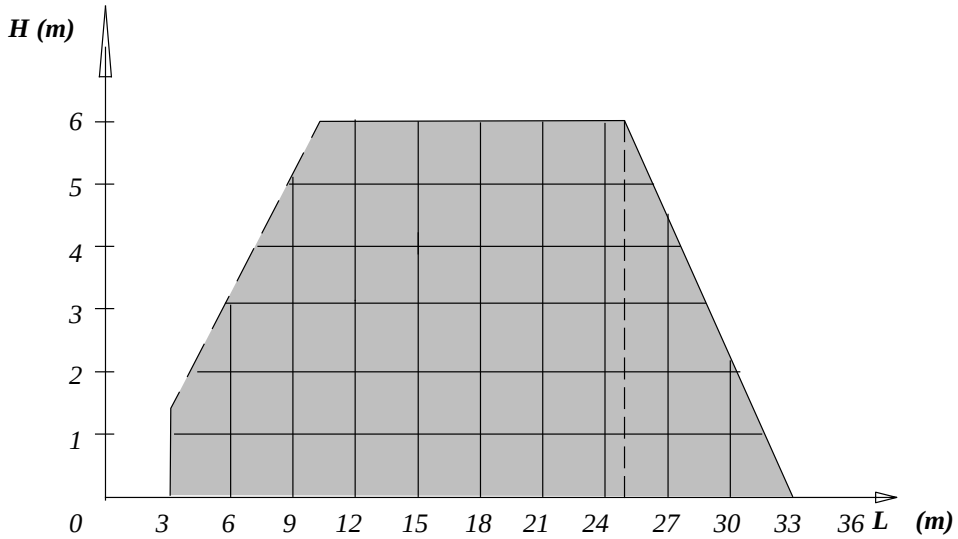
FIGURE 12.

Graph is for one bin only !!!

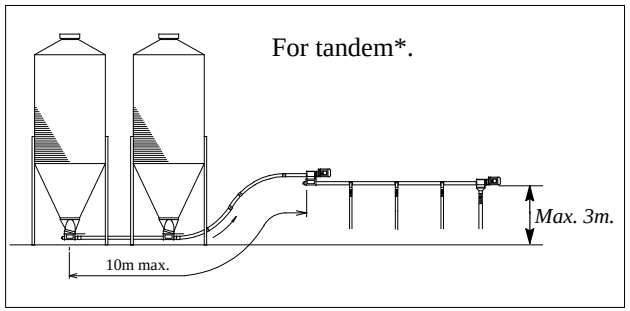
For lines (with tandem) longer than 10m (32,8FT.) : use an extra power unit.

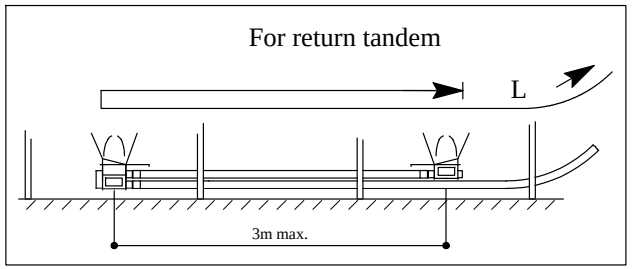
This graph is correct for the second part of the ATL





* See also page III-48.





The first extra elbow (45°) reduces the maximum length with 3 meters. The followiing extra elbows with 4,5 m.

All lengths within the graph are allowed. If dimentions pass the graph limits, use an extention boot, and consider the system as two separate ATL Model 125

TO INSTALL THE WEIGHER (IF USED) : SEE PAGE III-40 UP TO III-47

TRANSPORT LINE LOCATION

SINGLE ROW OF FEEDING TROUGHS

Install the drop tube.

- in a feeding trough : against the back wall.
- in 100kg hopper : in the center.

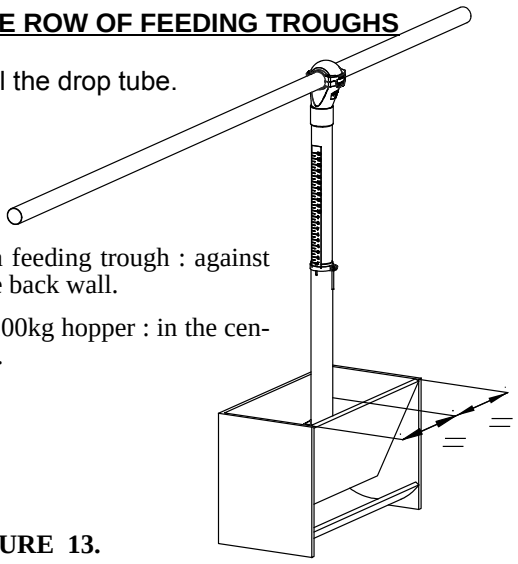


FIGURE 13.

DOUBLE ROW OF FEEDING TROUGHS

Suspend the line in the center.

Max. 30° **meal**

Max. 45° **pellets**

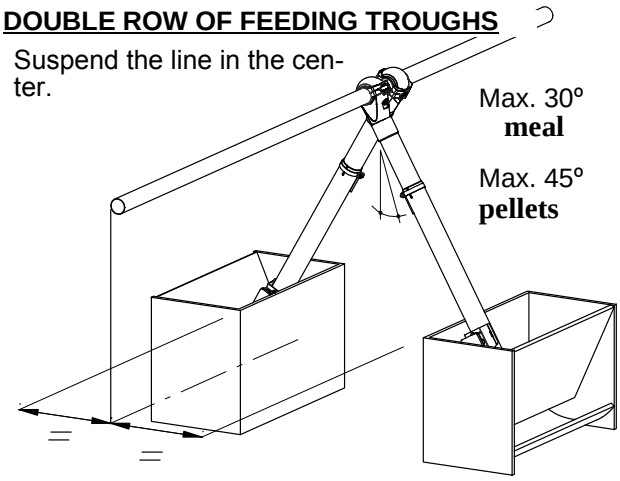


FIGURE 14.

DISTANCE BETWEEN SUSPENSION POINTS

Recommendation: **SUSPEND ALL** ATL components !
Suspension in auger direction (no fixation of tube support).
Maximum tensile force of the S-hook : 60kg.
Closing the S-hook increases the resistance.

MODEL 55, 75, 90 AND 125 (PLASTIC): 3M

If distance between outlets is less than 2m , use one suspension per outlet.
For distance more than 2m : use an extra suspension in between.
For tubes without outlets: suspension every 2m.

MODEL 90 AND 125 (METAL) : 3M

One suspension per tube will do.

Max load (kg) (inclusive safety factor 3)						
Material Tube	ATL	ATL length			Extension boot	Power unit
		1 m	2 m	3 m		
PLASTIC	ATL55	6	13		53	59
	ATL75	14	28		68	74
	ATL90	16	33		87	93
	ATL125	29	59		98	94
METAL	ATL90			67	87	93
	ATL125			118	98	94

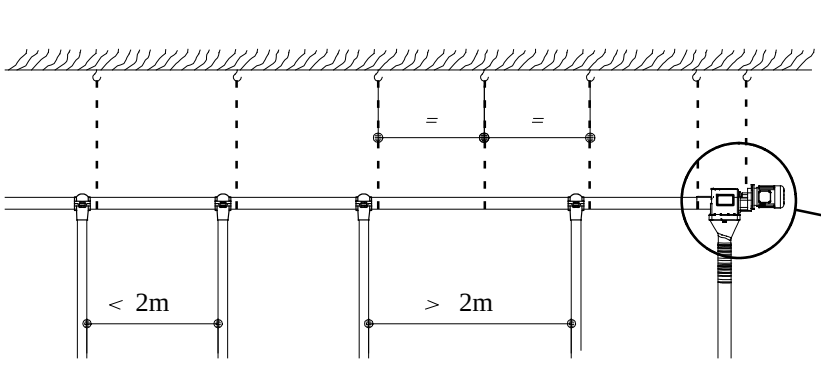


FIGURE 15.

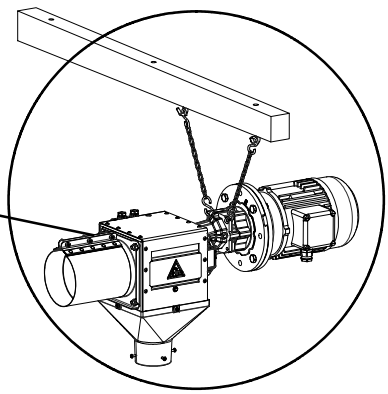


FIGURE 16.

TO INSTALL THE SUSPENSION POINTS

- MAKE SURE THAT SUSPENSIONS ARE FIRMLY FIXED.
- INSTALL SUSPENSION POINTS IN A STRAIGHT LINE.

EACH SUSPENSION POINT SHOULD BE ABLE TO HOLD A LOAD OF 50KG (100KG AT THE POWER UNIT).

IN A WOODEN BEAM :

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

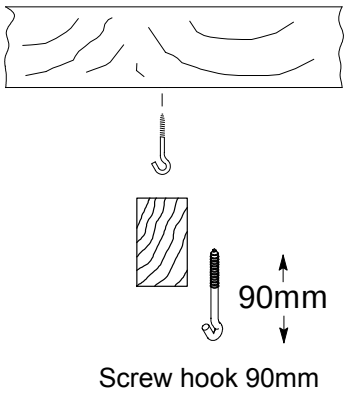


FIGURE 17.

IN A CONCRETE BEAM :

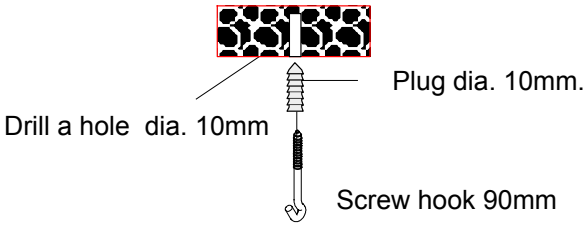
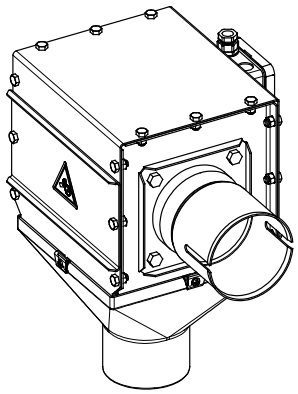


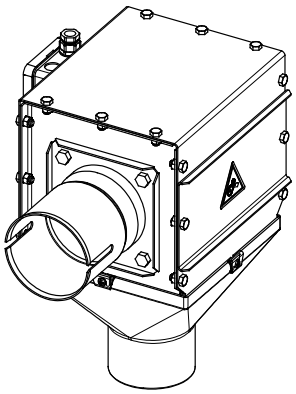
FIGURE 18.

CONTROL UNIT ASSEMBLY AND INSTALLATION

You can use the control unit either left or right.

The tube anchor can be fixed on both sides of the control unit. In both cases, the slide gives easy access to the auger.

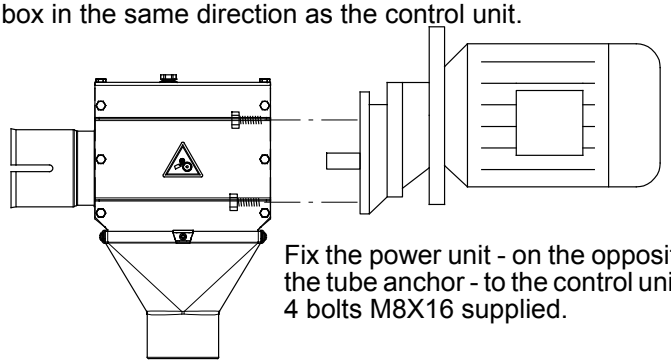




CONTROL UNIT SLIDE POINTED TOWARDS THE HOUSE PASSAGE.
YOU MUST BE ABLE TO OPEN THE SLIDE AFTER INSTALLING THE GEARHEAD.

FIGURE 19. **FIGURE 20.**

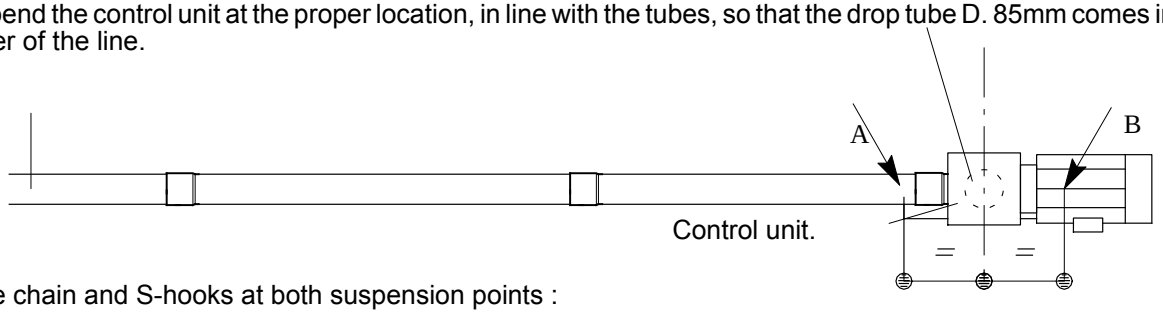
Install the motor with the connection box in the same direction as the control unit.



Fix the power unit - on the opposite side of the tube anchor - to the control unit with the 4 bolts M8X16 supplied.

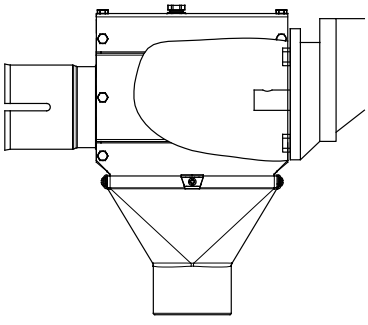
FIGURE 21.

Suspend the control unit at the proper location, in line with the tubes, so that the drop tube D. 85mm comes in the center of the line.



Use chain and S-hooks at both suspension points :

- 1 before the control unit (A).
- 1 at the power unit (B).



SLIDE THE AUGER ANCHOR OVER THE GEARHEAD SHAFT.
TIGHTEN THE SCREWS, BUT LEAVE THE ANCHOR BLOCK LOOSE TO INSTALL THE AUGER.

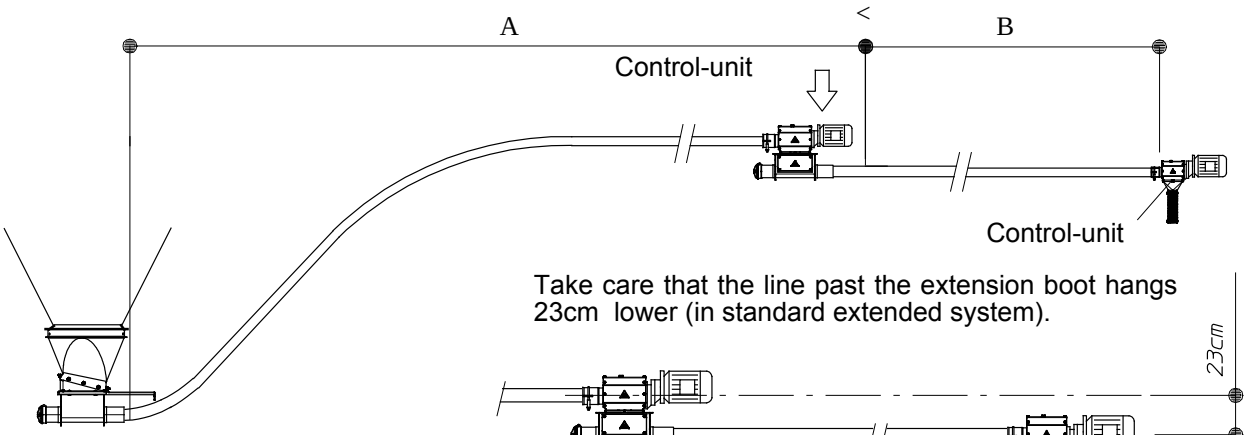
FIGURE 22.

EXTENSION BOOT ASSEMBLY AND INSTALLATION

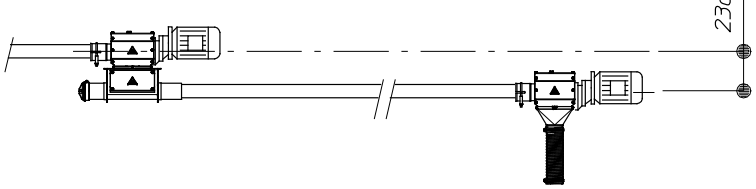
Suspend the extension boot the same way as the control unit.

Point the slide towards the house passage. Fix the extension boot underneath with 4 parcker screws.

Suspend the extension boot before the middle of the line (bin - control unit).



Take care that the line past the extension boot hangs 23cm lower (in standard extended system).



If you absolutely need an extra elbow in the system :

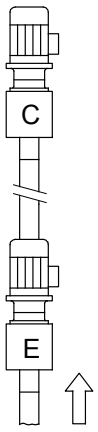
- always install the extension boot before this elbow.
- always install the outlets behind this elbow.

You can compensate the difference in levels by installing 2 small elbows.

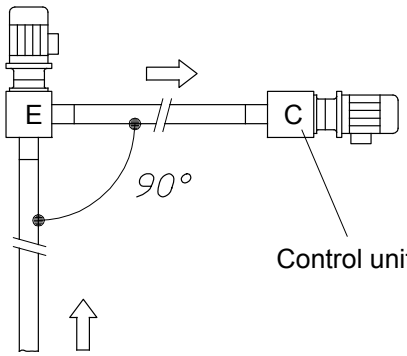
FIGURE 23.

WITH AN EXTENSION BOOT, YOU CAN TURN THE LINE 90_ LEFT OR RIGHT AND SAVE AN ELBOW.

Straight-out



To the right.



Direction transport line.

To the left.

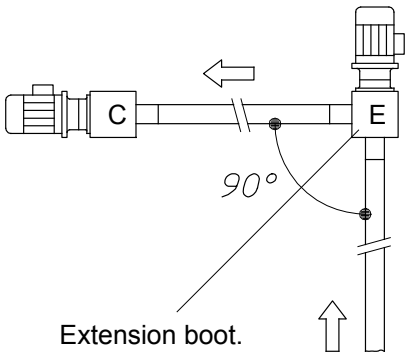


FIGURE 24.

TO MAKE THE DROP HOLES IN THE TUBES

Only use a hole saw.
Make holes well aligned per tube.

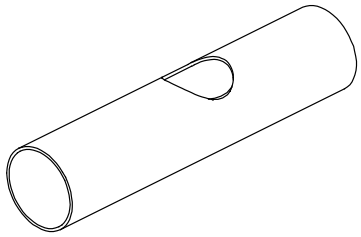


FIGURE 25.

Option : if you only have a hand saw or a grinder available, make square holes in the tubes.

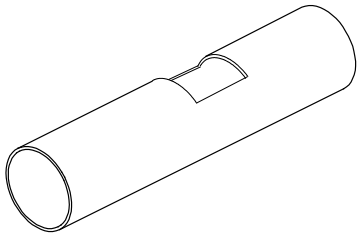


FIGURE 26.

DROP HOLE DIAMETER	
AUGER TRANSPORT LINE	**DIAMETER**
MODEL 55	**40mm**
MODEL 75	**60mm**
MODEL 90	**76mm**
MODEL 125	**108mm**
MAKE SURE THAT HOLES IN A TUBE ARE IN A STRAIGHT LINE.	

IF YOU HAVE TWO ROWS OF FEEDING TROUGHS : INSTALL OUTLETS IN PAIRS AT THE FOLLOWING DISTANCES :

AUGER TRANSPORT LINE	MINIMUM DISTANCE BETWEEN HOLES
MODEL 55	**106mm**
MODEL 75	**116mm**
MODEL 90	**125mm**
MODEL 125	**250mm**

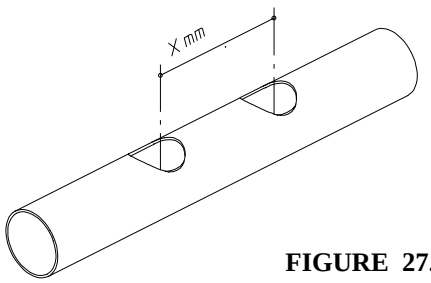


FIGURE 27.

HOLE FOR MAXIMUM FEED DROP OUT		
AUGER TRANSPORT LINE	**HOLE LENGTH**	**MAX. HOLE WIDTH (W)**
MODEL 55	**70mm**	**40mm**
MODEL 75	**80mm**	**60mm**
MODEL 90	**80mm**	**76mm**
MODEL 125	**108mm**	**108mm**

Here you use 1 outlet w/o closing slide.

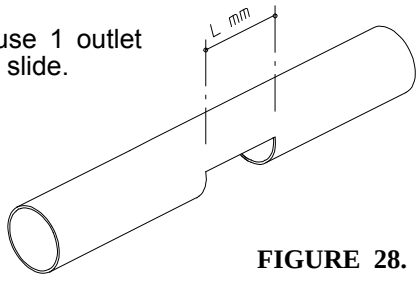


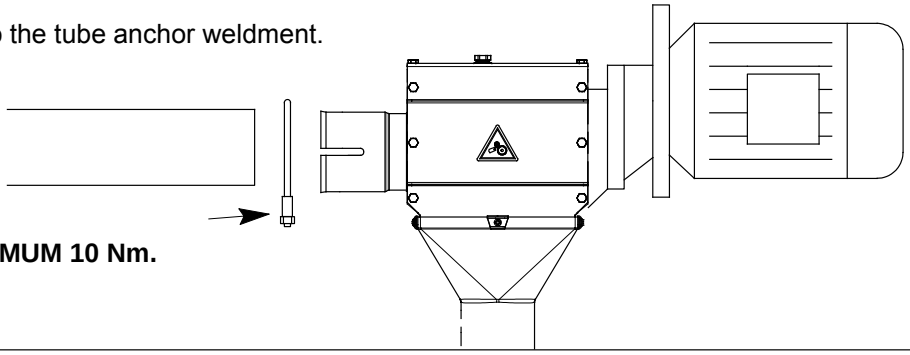
FIGURE 28.

TO INSTALL THE TUBES

ALWAYS START FROM THE CONTROL UNIT. NEVER USE AN OUTLET TO CONNECT THE TUBES.

MODEL55mm/75mm/90mm

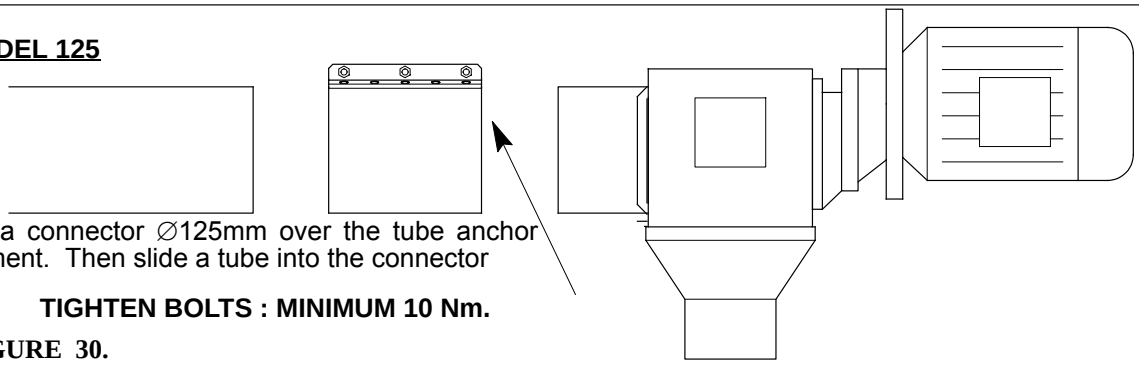
Slide a tube ∅90mm into the tube anchor weldment.



TIGHTEN BOLTS : MINIMUM 10 Nm.

FIGURE 29.

MODEL 125



Slide a connector ∅125mm over the tube anchor weldment. Then slide a tube into the connector

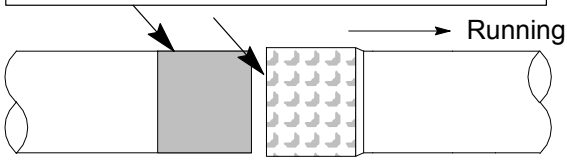
TIGHTEN BOLTS : MINIMUM 10 Nm.

FIGURE 30.

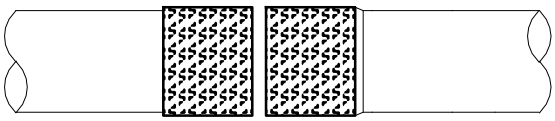
MAKE SURE THAT DROP HOLES :
- POINT DOWNWARDS AND ARE IN A STRAIGHT LINE
- ARE IN THE CENTRE OF THE OUTLET

Degrease the surfaces to be glued.

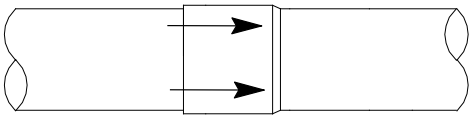
Running direction of the auger.



Only use the supplied glue.



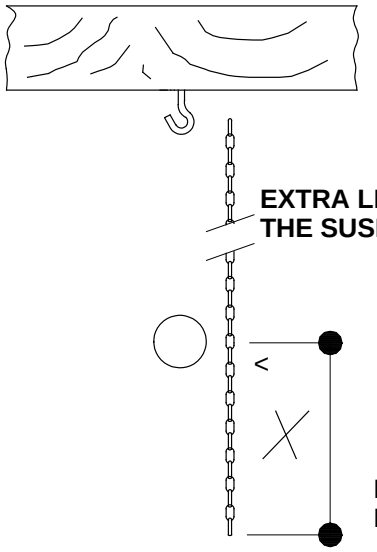
Put a layer of glue with a brush on the inside of the expanded end and on the tube.
Slide the tube directly into the expanded end up against the stop.



After connecting, do not put strength on the tubes for one hour, so that they can dry properly.

FIGURE 31.

WITH THE LOOP, YOU CAN ADJUST THE HEIGHT OF THE TRANSPORT LINE.



EXTRA LENGTH OF CHAIN NEEDED TO MAKE THE SUSPENSION LOOP :

x = 40cm for Model 55 and 75
x = 60cm for Model 90 and 125

IN THIS WAY, SUSPEND ALL TUBES PERFECTLY LEVEL.

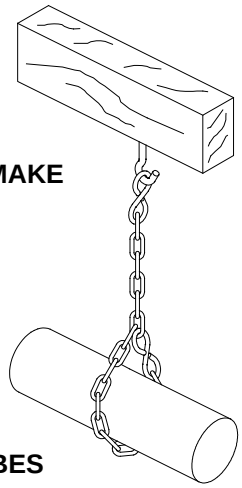


FIGURE 32.

FIGURE 33.

PROCEED THAT WAY UNTIL YOU CAN DETERMINE THE LOCATION OF THE HOLE IN THE WALL. ONLY NOW YOU CAN INSTALL THE BOOT UNDERNEATH THE BIN.

TO INSTALL THE OUTLETS

Knot the rope in the middle.

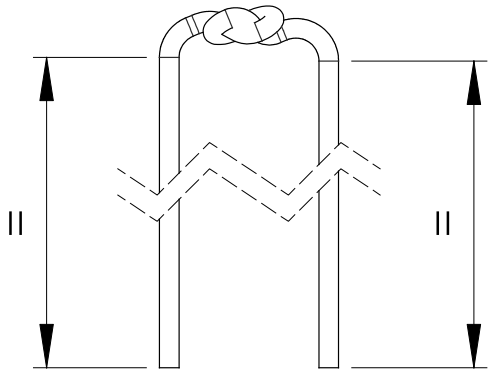


FIGURE 34.

Slide the cord through the shut-off-plate.
Make a second knot.

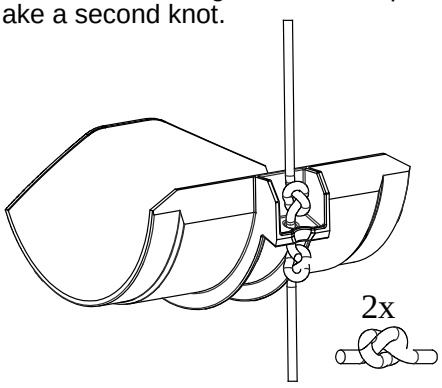


FIGURE 35.

Install the closing slide in the correct position !

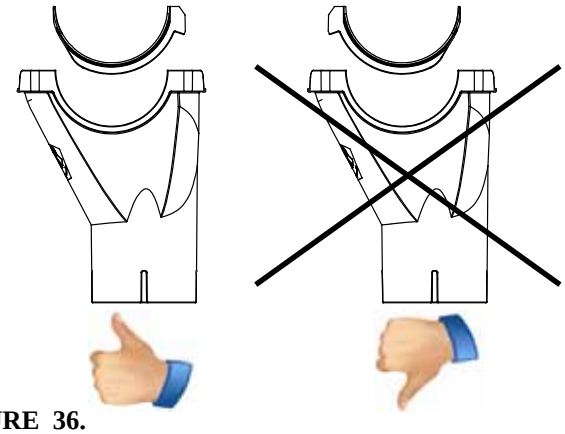
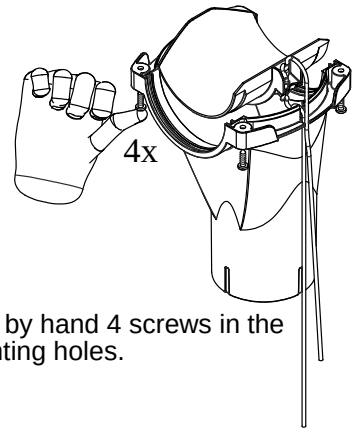
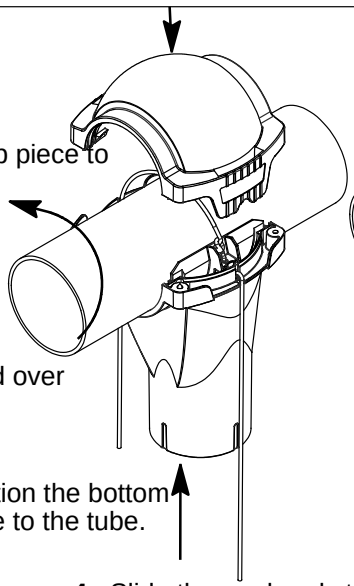


FIGURE 36.



Push by hand 4 screws in the mounting holes.

FIGURE 37.



3. Click the top piece to the outlet.

2. Put the cord over the tube.

1. Position the bottom piece to the tube.

4. Slide the cord ends through the small balls and make a knot.

FIGURE 38.

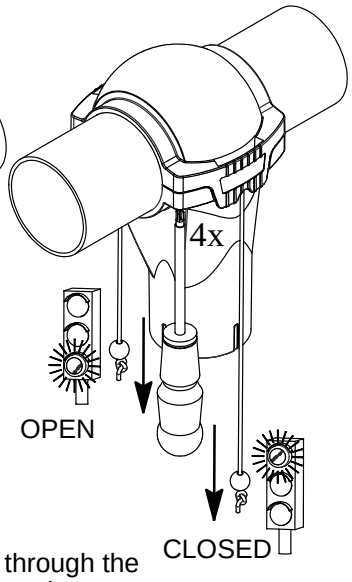
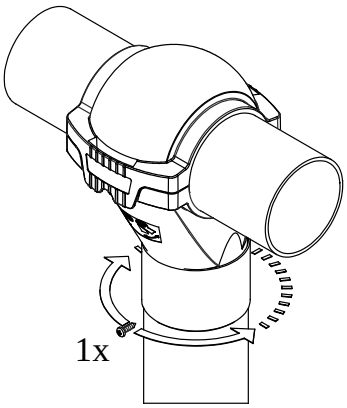


FIGURE 39.



Fix the drop tube with 1 parcker screw.
Take care the screw is not in the feed flow !

FIGURE 40.

MODEL 125

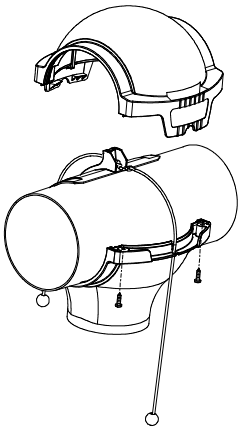


FIGURE 41.

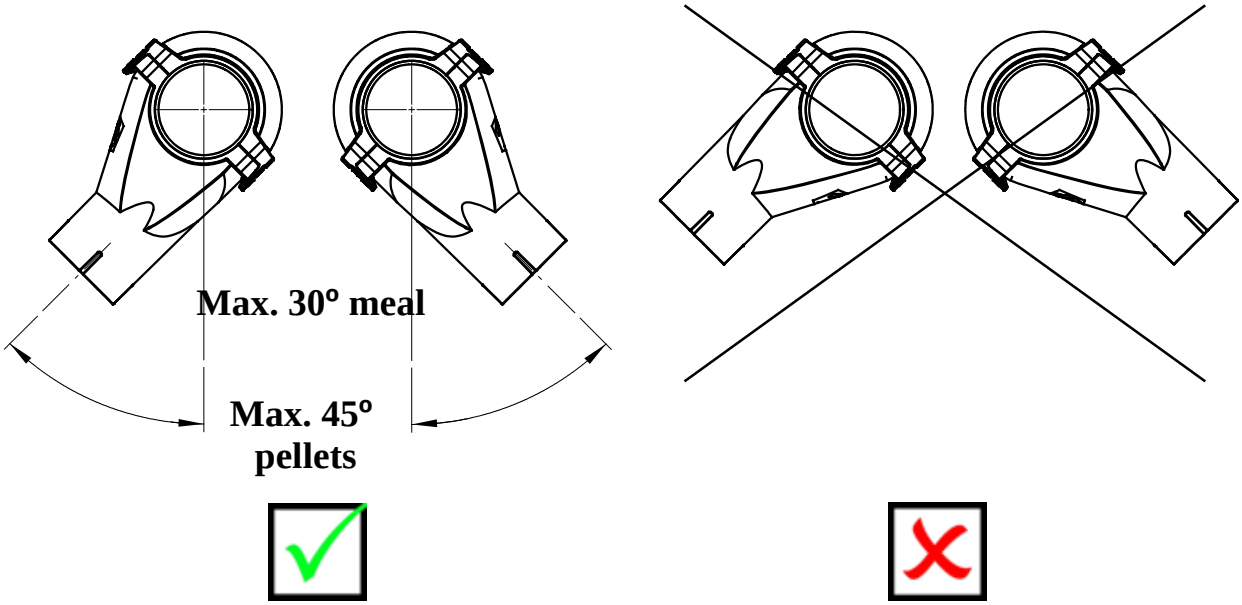
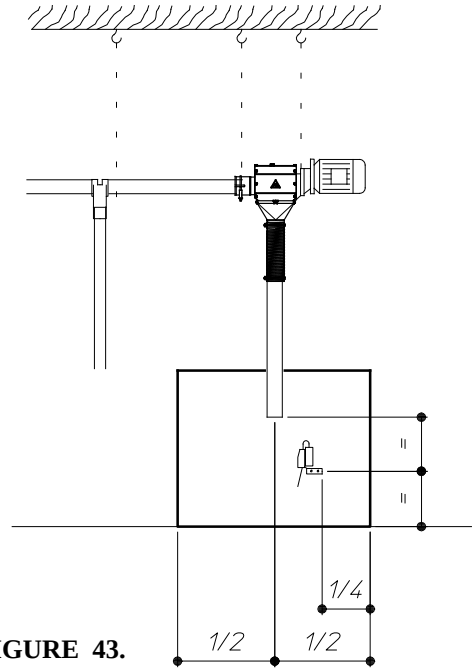


FIGURE 42.

POSITION OF THE CONTROL UNIT DROP TUBE

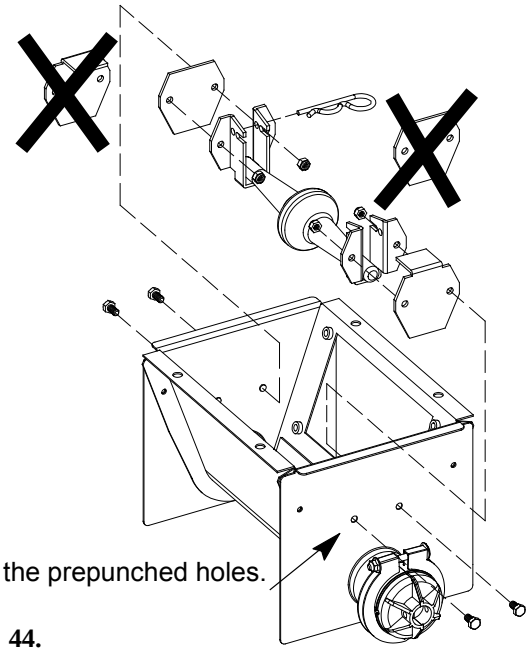


Install the level switch at the right spot !

Respect distances.

FIGURE 43.

TO INSTALL THE THUMPER – MODEL 55mm / 75mm / 90mm

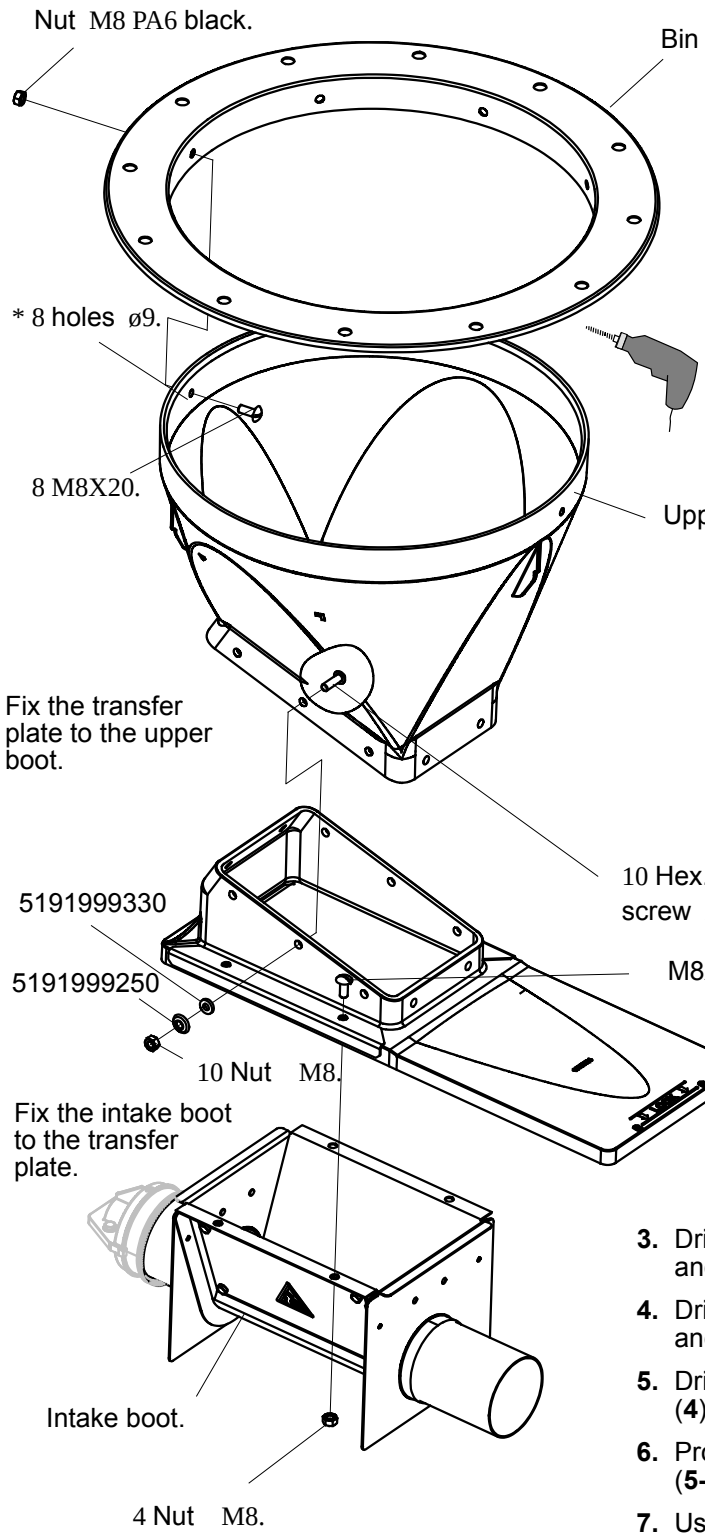


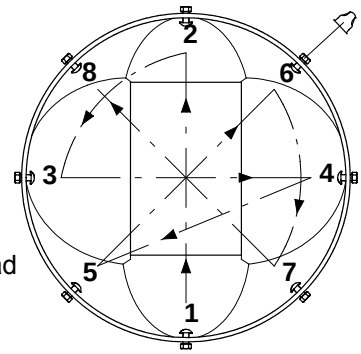
Punch the prepunched holes.

FIGURE 44.

TO INSTALL THE BOOT ASSEMBLY

ASSEMBLY - EXAMPLE UPPER BOOT (0_)





1. Slide the edge of the upper boot as far as possible in the bin collar.
2. Make sure that the lower part of the boot points in the direction the transport lines will follow !
3. Drill a hole dia. 9 mm (**1**). Fix by hand with the bolt and the nut.
4. Drill the opposite hole (**2**). Fix by hand with the bolt and the nut.
5. Drill a hole at 90_ (**3**), then drill the opposite hole (**4**). Fix by hand with the bolt and the nut.
6. Proceed in the same way for the other fixing points (**5-8**).
7. Use a ring spanner to tighten all nuts with a moment of 4Nm in the same sequence (**1-8**). Do not tighten too much (cracks!).

FIGURE 45.

AUGER TRANSPORT LINE 125 :
First check sense of rotation of the auger, then install the thumper.

QUADRUPLE BOOT ASSEMBLY

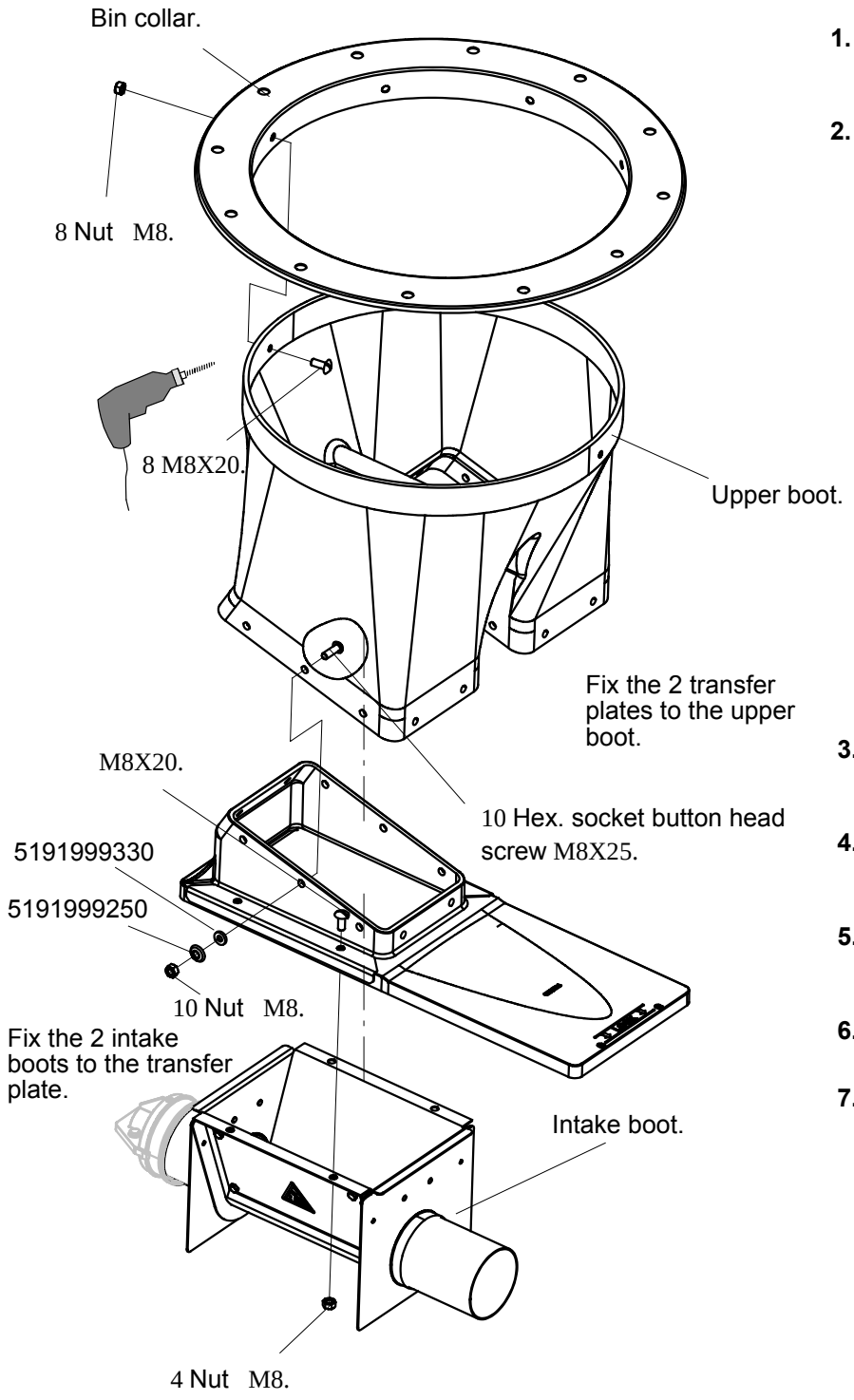


FIGURE 47.

1. Slide the edge of the upper boot as far as possible in the bin collar.
2. Make sure that the lower part of the boot points in the direction the transport lines will follow !

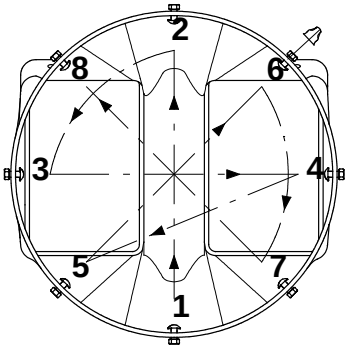


FIGURE 46.

3. Drill a hole dia. 9 mm (**1**). Fix by hand with the bolt and the nut.
4. Drill the opposite hole (**2**). Fix by hand with the bolt and the nut.
5. Drill a hole at 90_ (**3**), then drill the opposite hole (**4**). Fix by hand with the bolt and the nut.
6. Proceed in the same way for the other fixing points (**5-8**).
7. Use a ring spanner to tighten all nuts with a moment of 4Nm in the same sequence (**1-8**). Do not tighten too much (cracks!).

FLEX AUGER 125 :
First check sense of rotation of the auger, then install the thumper.

REMARK :
you can turn the intake boot 180°.

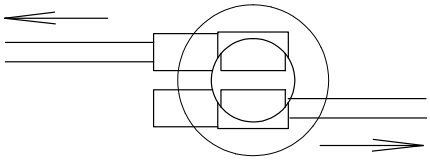
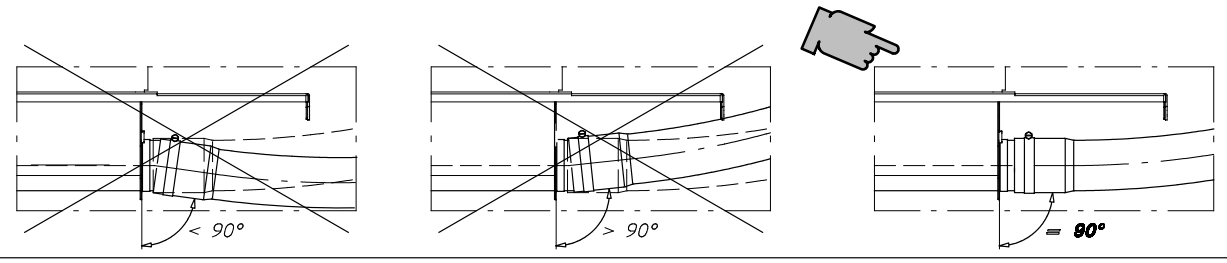
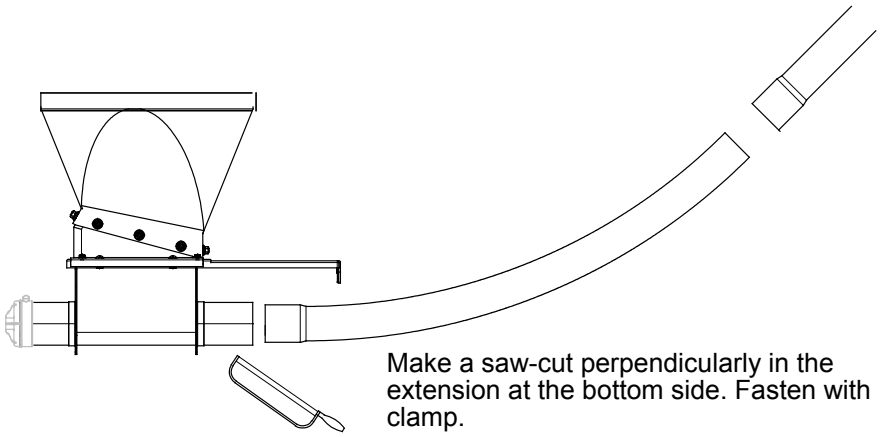


FIGURE 48.

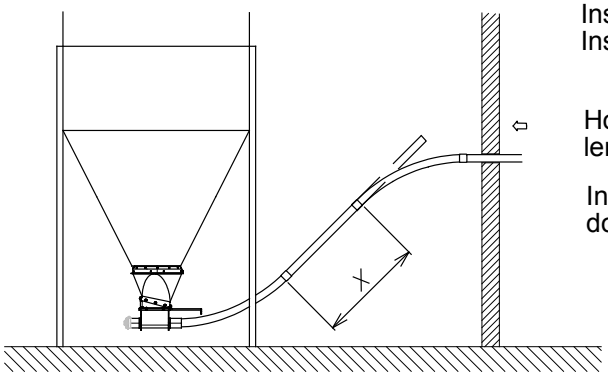
TO CONNECT THE AUGER TRANSPORT LINE TO THE BIN





Make a saw-cut perpendicularly in the extension at the bottom side. Fasten with clamp.

FIGURE 49.



Install the horizontal tube straight through the wall.
Install an elbow (45_) pointed towards the bin boot.

Hold a tube between both elbows to determine the required length (X) of the straight tube.

Install tubes outside with expanded ends downwards to prevent water from leaking in.

USE CAULKING OR SILICONES : TUBE CONNECTIONS OUTSIDE THE HOUSE MUST BE WATERTIGHT !

FIGURE 50.

Cut the 45_ elbow to get the correct inclination to the hole in the wall.

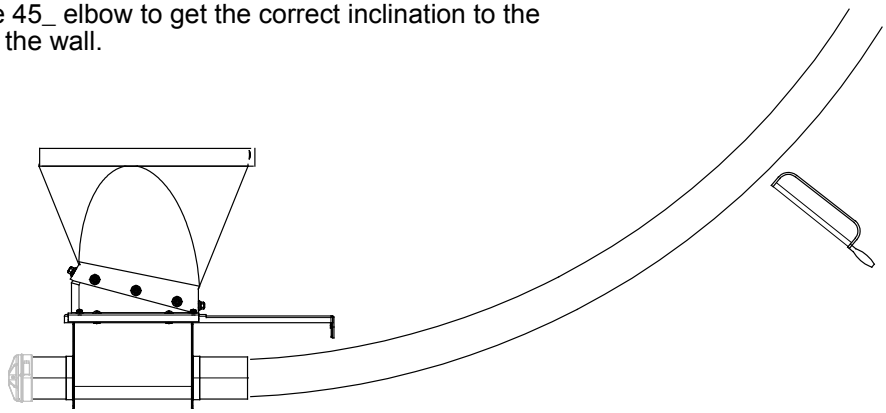


FIGURE 51.

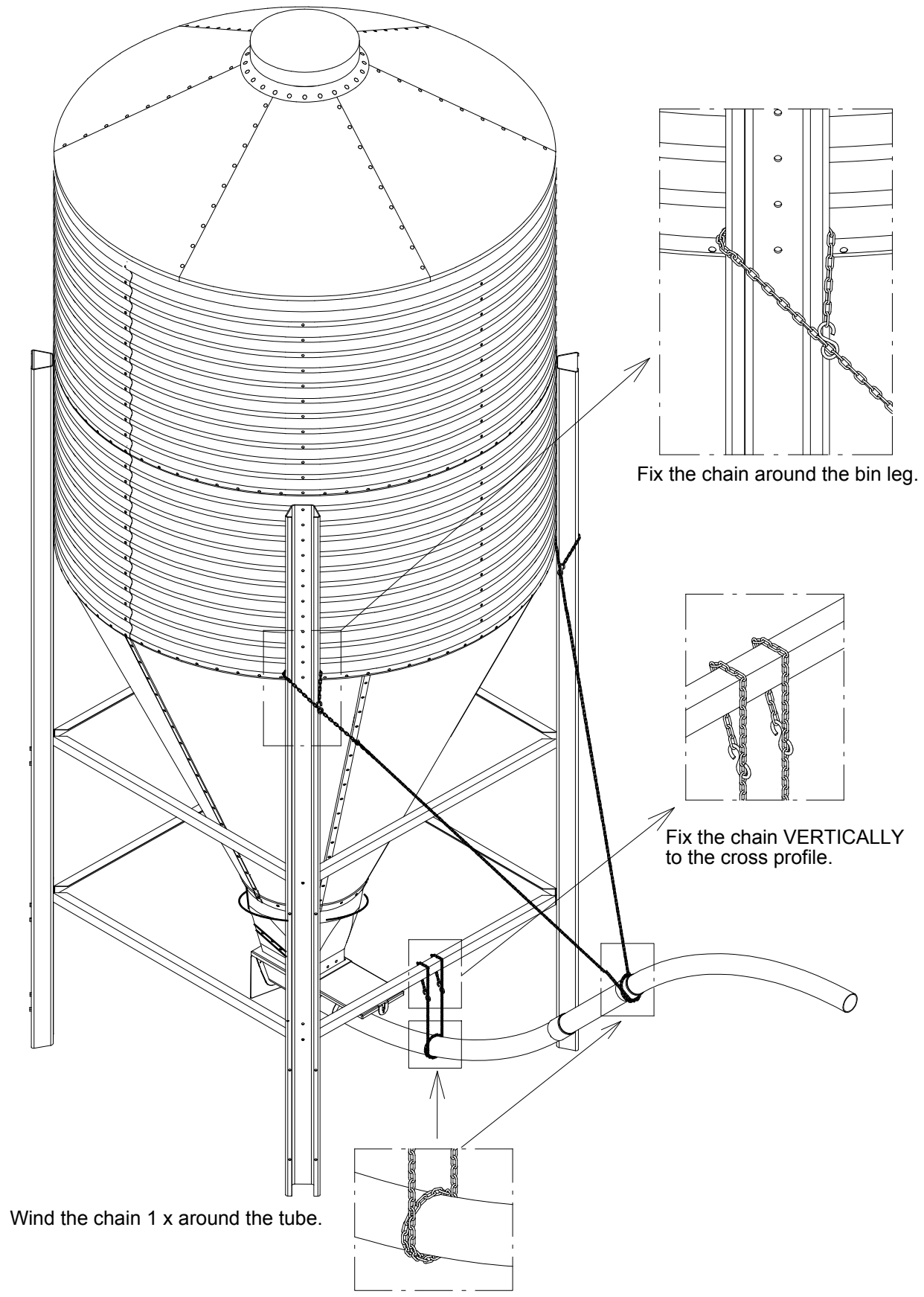

The hopper must not carry the weight of the tubes.
So support the tubes with 2 chains.
Fix the chain around the bin leg.
Fix the chain VERTICALLY
to the cross profile.
Wind the chain 1 x around the tube.

FIGURE 52.

TO INSTALL THE AUGER

ALWAYS USE SAFETY GLOVES WHEN YOU WORK ON THE AUGER !

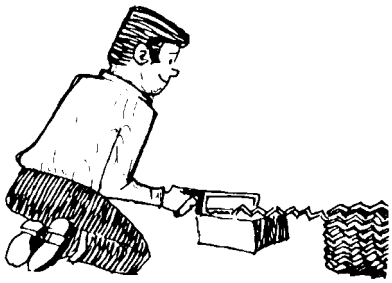
Remove all wires, labels etc... from the auger.

TAKE CARE THAT THE AUGER DOES NOT UNROLL !

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

FIGURE 53.

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



! KINKS OR DENTS WEAR OUT THE TUBES !

FIGURE 54.

AUGER BRAZING

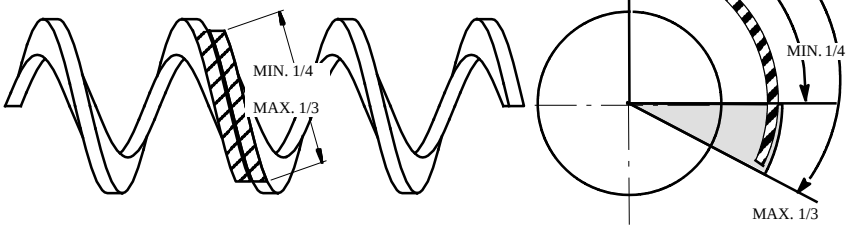
Firmly clamp the auger ends against one another, in one line, in an angle or channel iron.

Have the joint as closely as possible to the MOTOR. NEVER have a joint in an elbow !

FIGURE 55.

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.

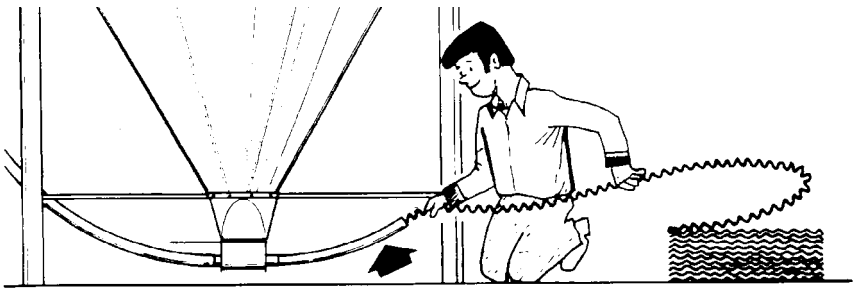
Weld length.
Min. $^1/_4$ of the auger circumference, up to max. $^1/_3$ of the auger circumference.



Allow the joint to air cool. Rapid cooling makes the joint brittle and breakable. Remove alle sharp welding seams that could wear out the tube from the outer edges of the auger !

FIGURE 56.

Slide the auger into the tubes through the rear end of the boot with short strokes.



You can use a piece of elbow to work more easily.

FIGURE 57.

TO CONNECT THE AUGER

TO THE POWER UNIT

MODEL 55 :

Use a tube 22 x 1,25. Clamp the auger under the anchor block.

FIRMLY TIGHTEN THE BOLT.

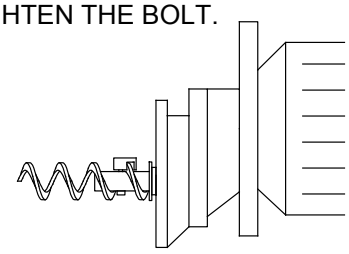


FIGURE 58.

MODEL 75mm, 90mm, 125mm

Clamp the auger under the anchor block.

FIRMLY TIGHTEN BOTH BOLTS.

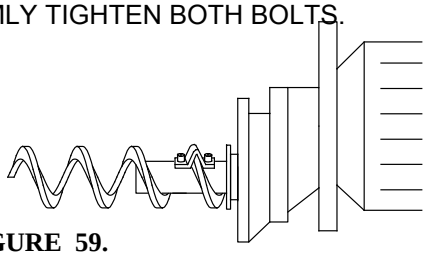
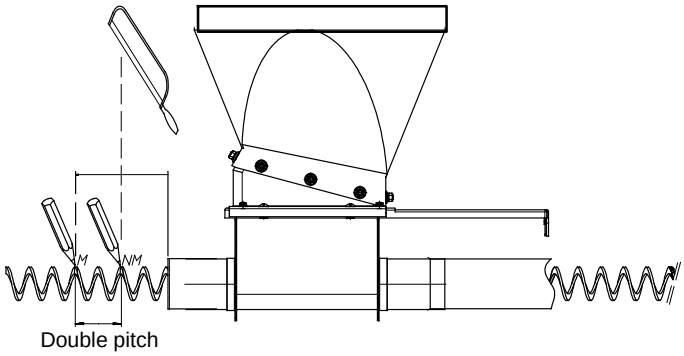
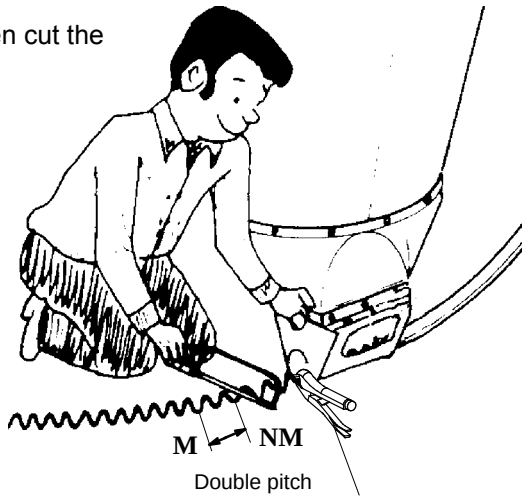


FIGURE 59.

TO THE BOOT

Pull a few times at the auger, so it takes its natural length.
Mark the auger (M) at the rear of the boot.
Stretch the auger a double pitch and put a new mark (NM), then cut the auger at this new mark.





Lock grip pliers

FIGURE 60.

ALWAYS SEE THAT THE AUGER CANNOT SPRING BACK (BY USING CLAMPS OR A HAMMER IN THE BOOT).

MODEL 55 :
Firmly tighten the set screw.

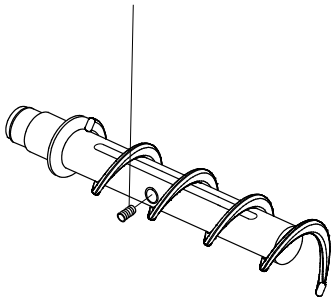


FIGURE 61.

Model 75 and 90 :
Firmly tighten the set screw.

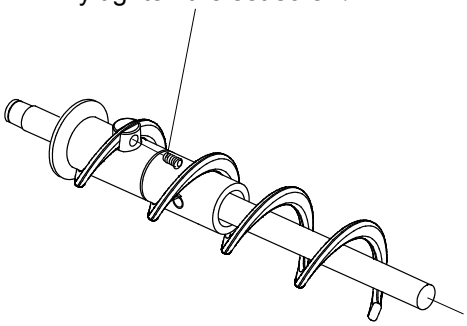


FIGURE 62.

MODEL 125 :
Firmly tighten the bolts

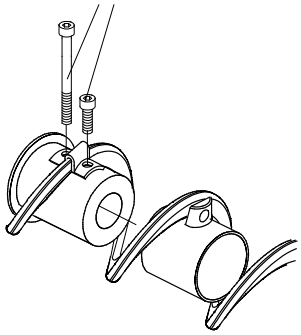


FIGURE 63.

Slowly slide the auger back into the tube. Firmly fix with a tube clamp.

NEVER PUT TENSILE STRESS ON THE AUGER !

BEARING CAP HOLDER

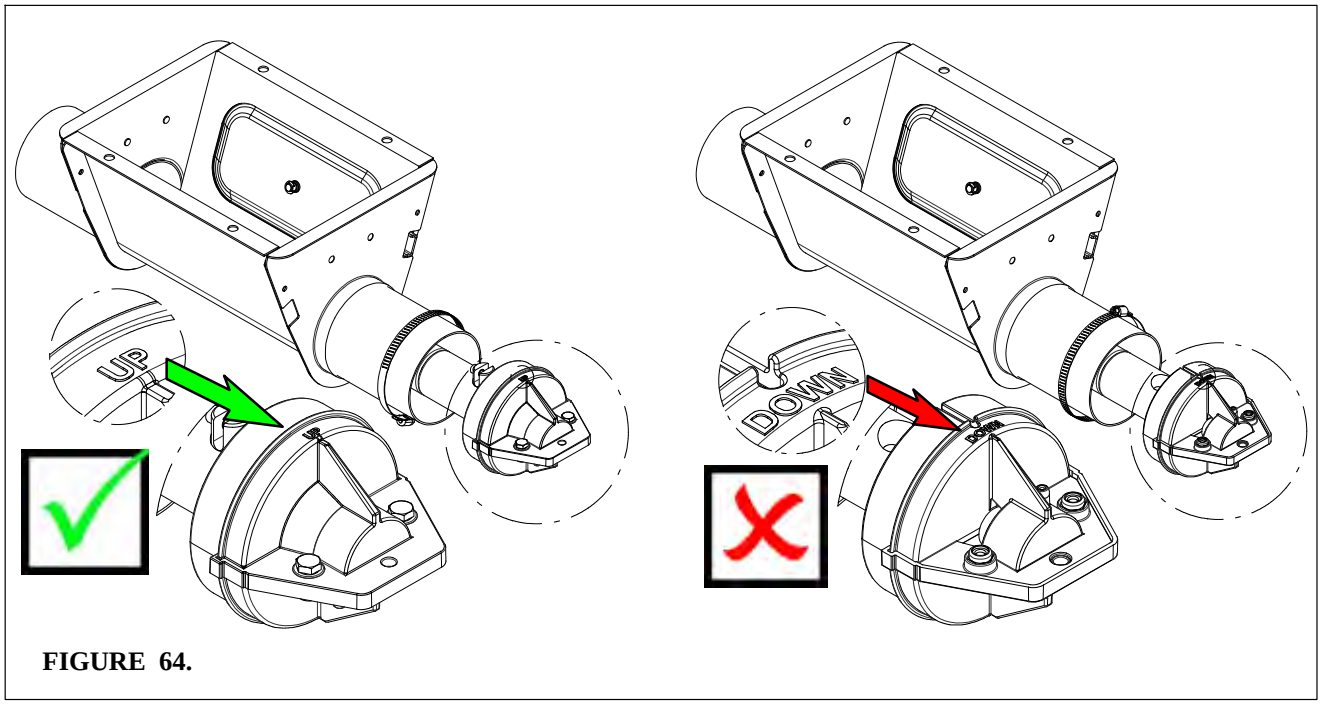


FIGURE 64.

FLOW REGULATION MODEL 75 & 90

CHECK IF THE DIRECTION OF ROTATION OF THE AUGER IS COUNTER CLOCKWISE LOOKING FROM BIN TO CONTROL UNIT.

FLOW REGULATOR OPEN

Maximum feed flow.

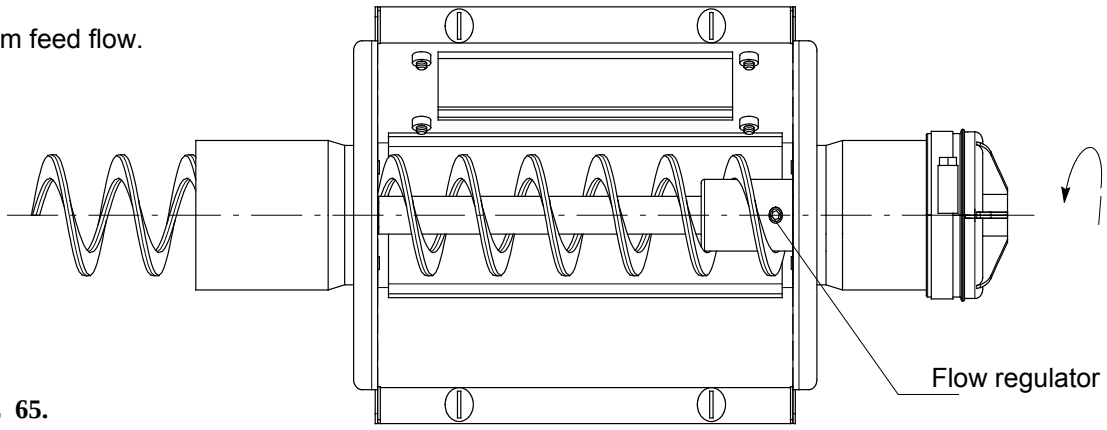


FIGURE 65.

FLOW REGULATOR CLOSED

Minimum feed flow.

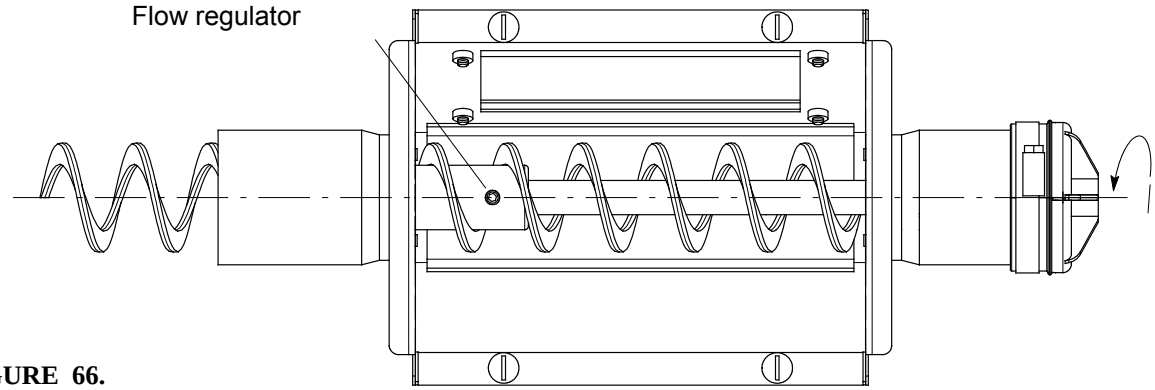


FIGURE 66.

IF YOU USE AN EXTENSION BOOT : Adjust flow regulator in such a way that the second part of the line could convey more feed than the first part.

TO INSTALL THE THUMPER - FLOW REGULATION - MODEL 125

Install the thumper on the right side of the boot (looking from the bin to the control unit).

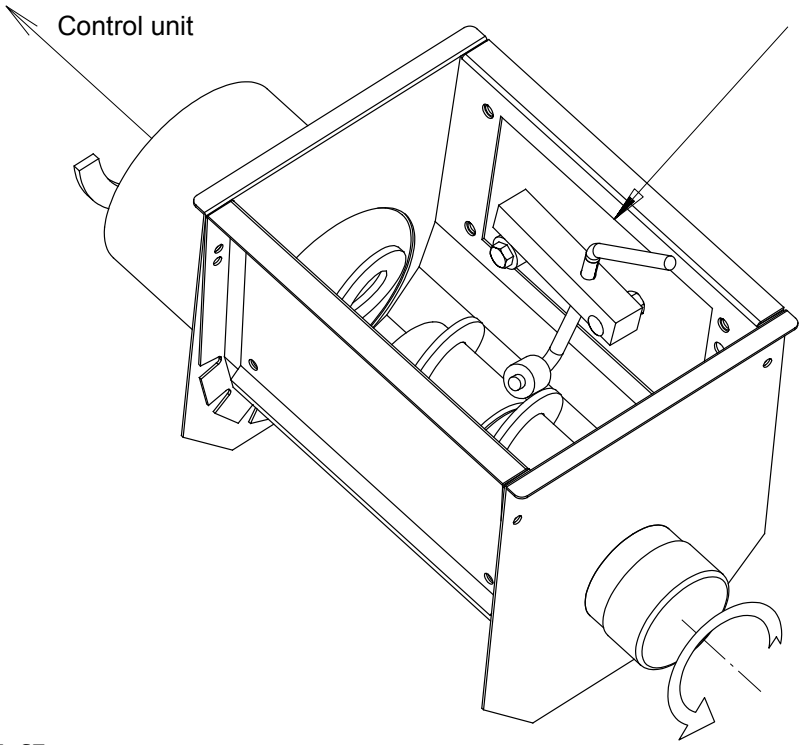


FIGURE 67.

Check if the rotation direction of the auger is counterclockwise (looking from the bin to the control unit).

Install the transition plate in such a way that the slide is on the side of the control unit.
You lift up the thumper when you close the slide.

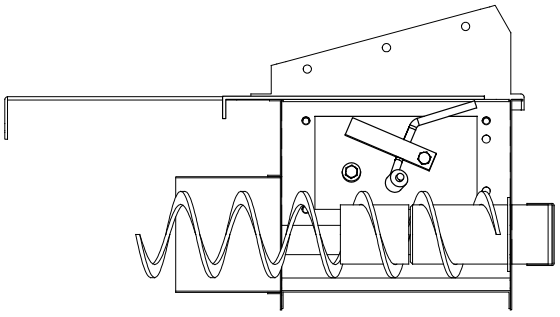


FIGURE 68.

You cannot close the slide when it is installed on the wrong side.

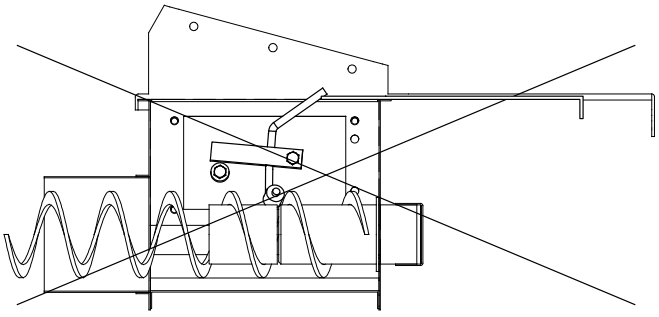


FIGURE 69.

FLOW REGULATION WITH MODEL 125 :

Flow regulator in the boot, as supplied standard.

Maximum feed flow.

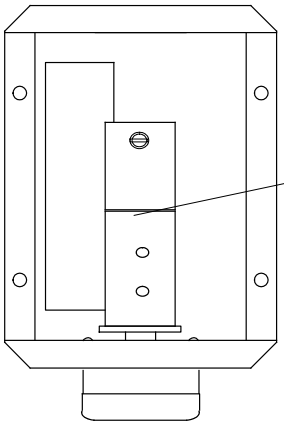


FIGURE 70.

Minimum feed flow.

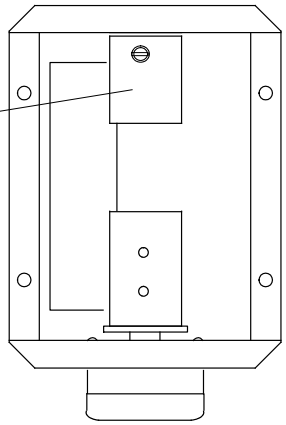


FIGURE 71.

TO INSTALL THE DROP TUBES

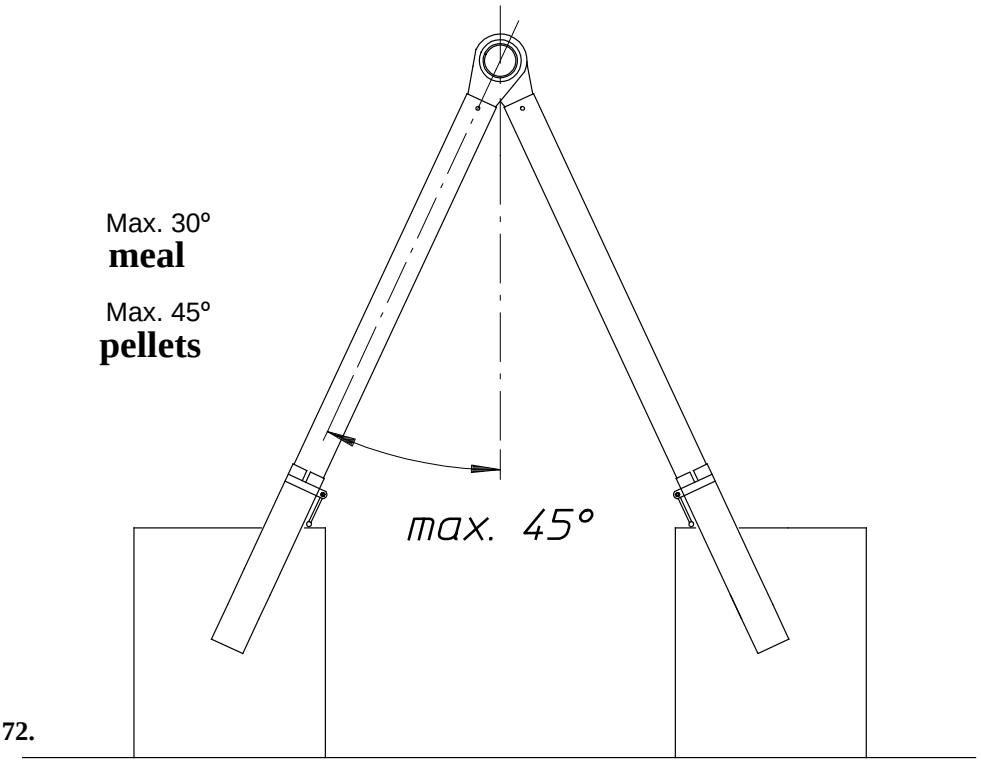
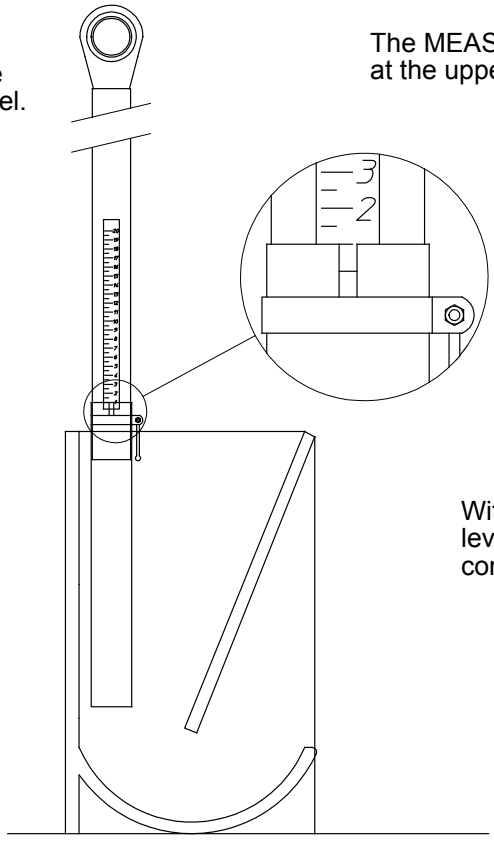


FIGURE 72.

TO ADJUST THE TELESCOPICAL TUBE

Put the telescopical tube in the feeding trough at its lowest level.

The MEASURE DECAL is placed with 1 at the upper end of the telescopical tube.



With this decal, you can adjust feed level in the trough and make comparisons between pens.

FIGURE 73.

TO INSTALL THE TANDEM IN LINE (MODEL 75/90/125)

This tandem is a straight-through auger transport line. Install the exact tube length between both bins.

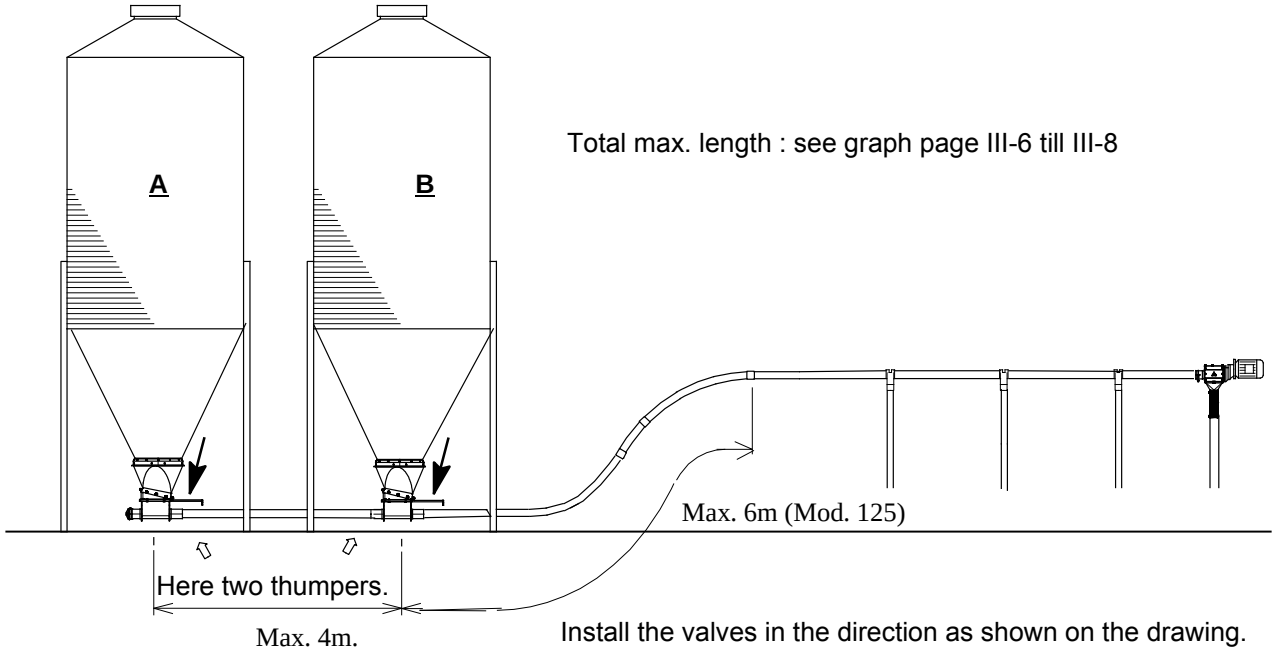


FIGURE 74.

REDUCING THE CAPACITY

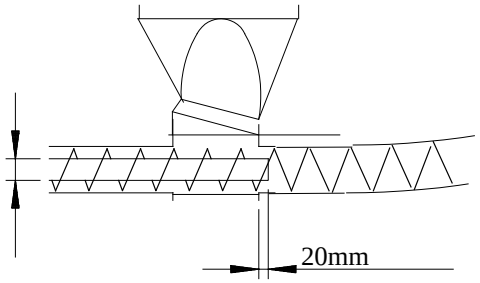
Mount a tube in the auger between the two bins to avoid the auger from blocking.

RESTRICTION WITH TUBES

- FOR TANDEM IN LINE (MODEL 75)
by installing a tube dia. 32mm (592092550) to the anchor of feed bin A.

- FOR TANDEM IN LINE (MODEL 90)
by installing a poultry tube (dia. 44,5mm) without holes (5990911580) to the anchor of feed bin A

- FOR TANDEM IN LINE (MODEL 125)
by installing a tube dia. 60mm (5926997500) to the anchor of feed bin A.



This tube must extend up to about 20mm past the boot of feed bin B.

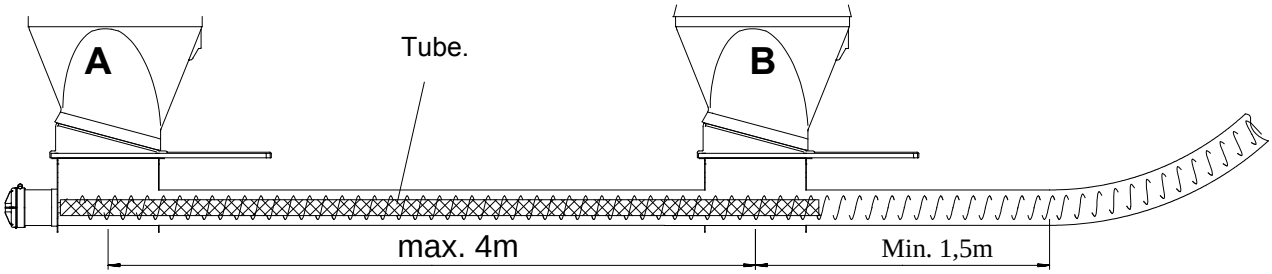


FIGURE 75.

AUGER STRETCHING (STRAIGHT THROUGH TANDEM)

Do not yet connect the auger in the intake boot A (leave some 20cm outside the boot).
Open Feed Bin valve A and start the auger transport line.
Let the auger transport line run untill the feed comes out at the control unit. Stop the auger transport line and mark the auger (M1).
Close feed bin valve A and let the auger transport line run empty.
Open feed bin valve B and start the auger transport line again. Let the auger run until the feed comes out at the control unit. Stop the auger transport line and mark the auger (M2).
Cut the auger in the middle between M1 and M2 and connect in the intake boot with the anchor and bearing assembly.

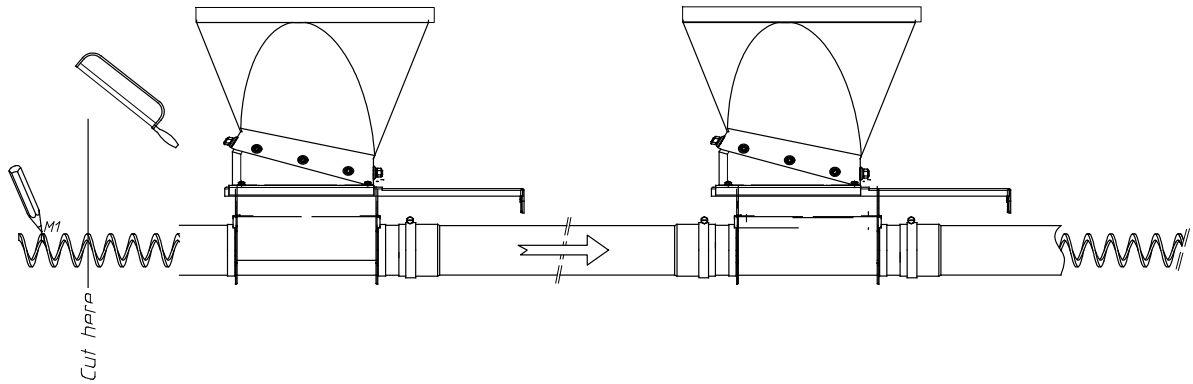


FIGURE 76.

TO INSTALL THE HOPPER LEVEL SWITCH

IN A FEEDING TROUGH (SEE fig. 43. PAGE. III- 20)

IN 100KG HOPPER

Install the level switch in such a way that no feed can get behind the paddle.

The location depends upon the drop tube.

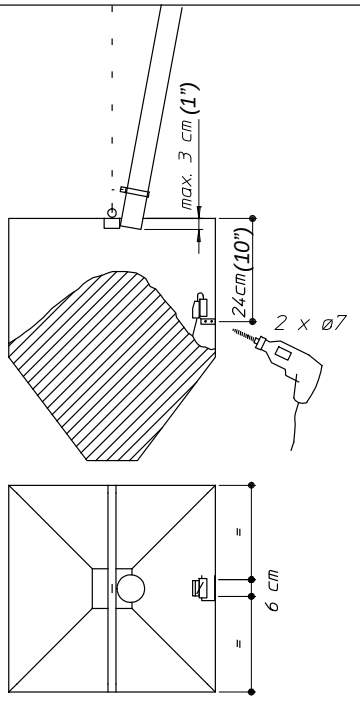
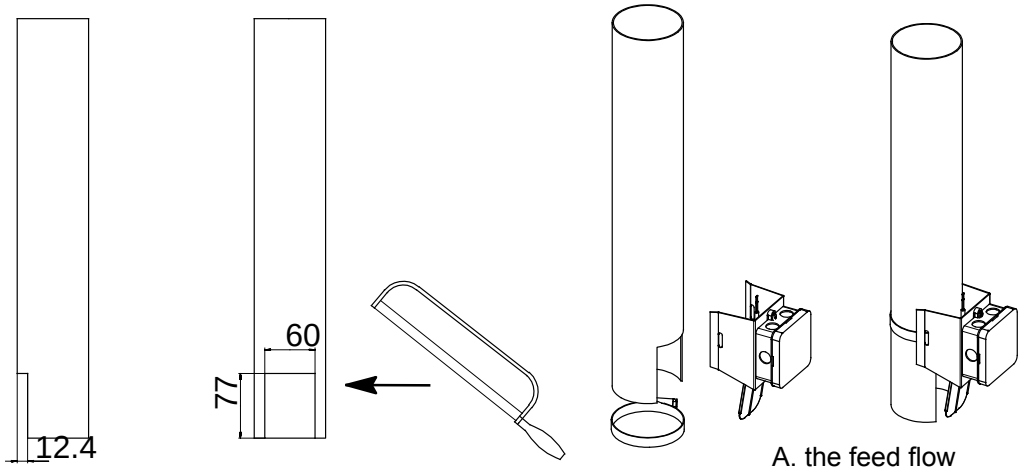


FIGURE 77.

TO INSTALL THE DROP TUBE LEVEL SWITCH



Install the level switch in such a way that it CANNOT be activated by :

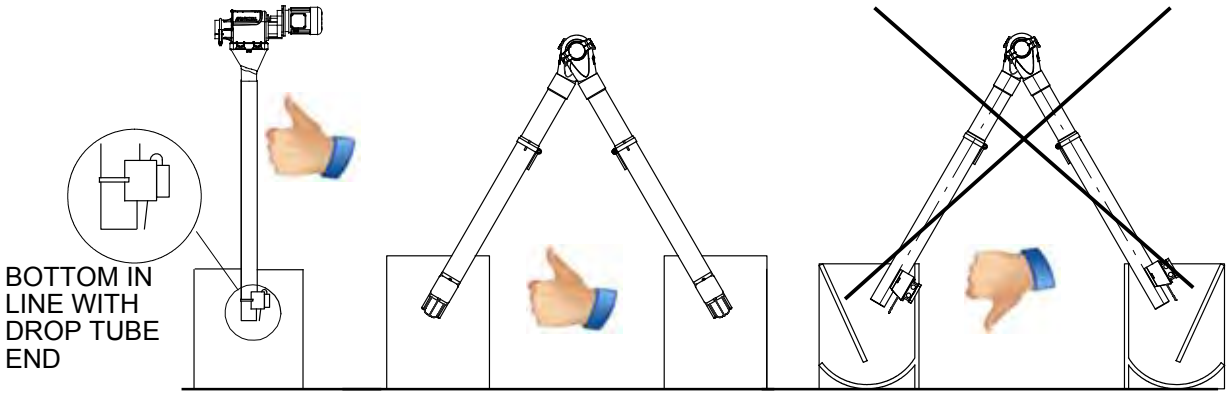
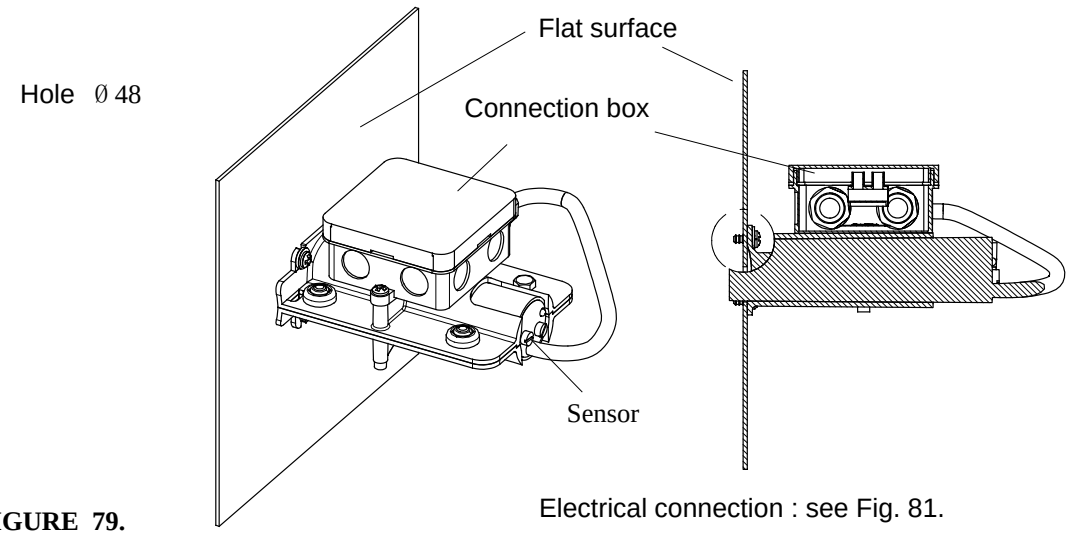


FIGURE 78.

TO INSTALL THE SENSOR ON A FLAT SURFACE



Electrical connection : see Fig. 81.

FIGURE 79.

TO INSTALL THE SENSOR ON A DROP TUBE

INSTALL THE SENSOR AS HIGH AS POSSIBLE.
DO NOT INSTALL THE SENSOR IN THE FEED FLOW (HOUSING MAY WEAR OUT).

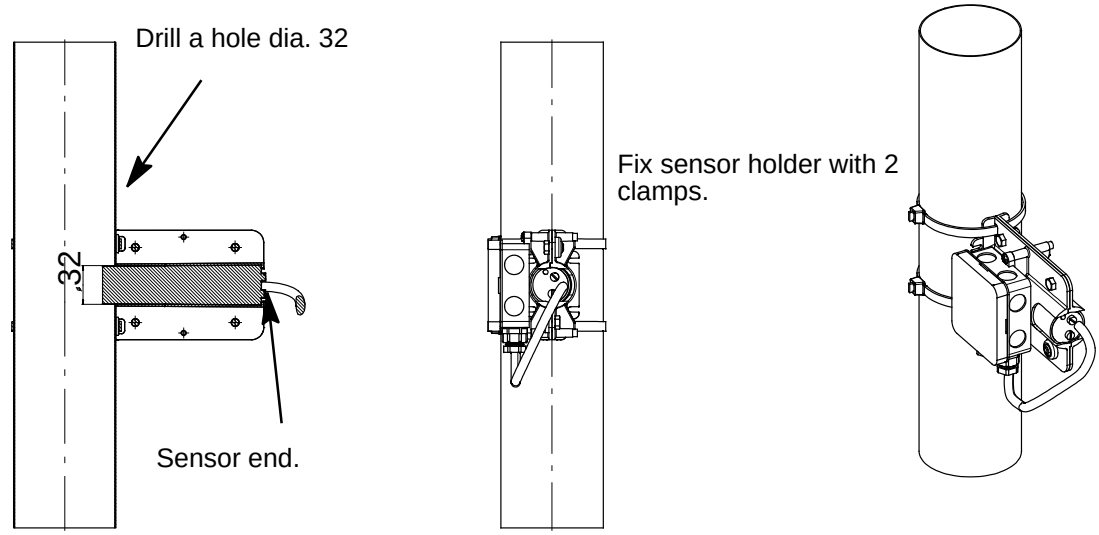
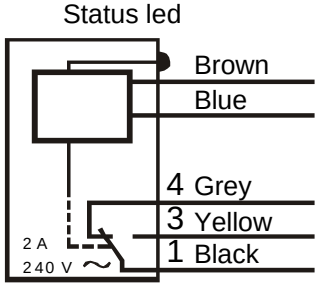


FIGURE 80.

CONNECTION

5920934350 : SENSOR .VC12

5920934270 : SENSOR VC11



Supply
230VAC
+
24VDC

When supply off

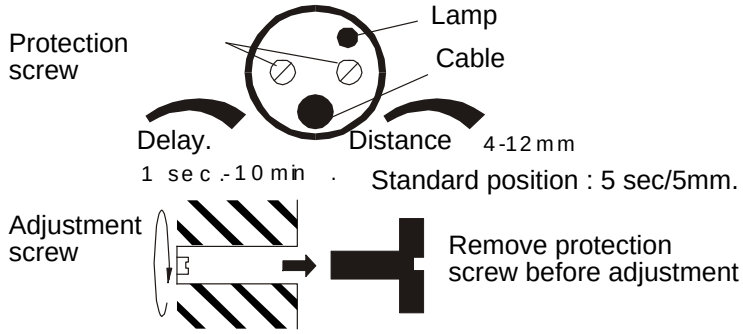


FIGURE 81.

TO INSTALL THE DROP TUBE LEVEL SWITCH IN A LINE WITH EXTENSION BOOT

PROVIDE 100 % FEED DROP FROM THE OUTLET JUST BEFORE THE EXTENSION BOOT

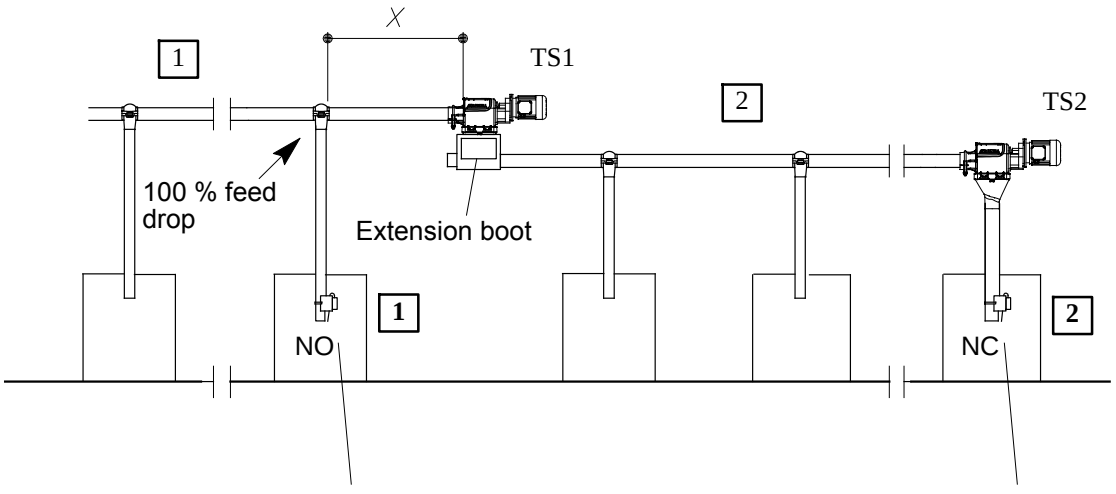


FIGURE 82.

PRINCIPLE :

Auger transport line 1 starts and runs until level switch 2 (NC) is activated.

Auger transport line 2 always starts as auger transport line 1 runs, but only during a preset period "T". This period is programmed on a time relay in the control panel. Purpose : empty part "x" at every start.

Example : X = 1m --- T = A about 5 seconds
X = 2m --- T = B about 10 seconds

Auger transport line 2 always starts when level switch 1 (NO) is activated.

TIME DELAY

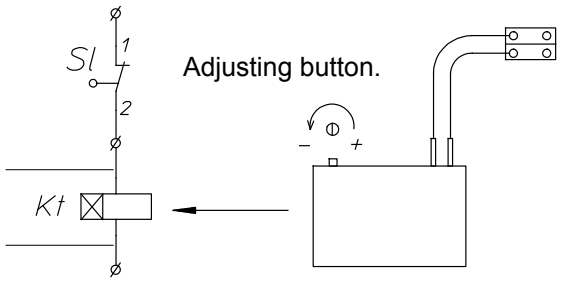
TO INSTALL THE DELAY BLOCK

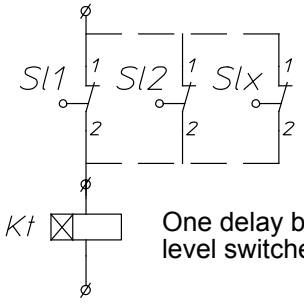
Connect the delay block (delay ON) in series with the level switch you want to activate.

You can connect to the level switch box or to the control panel.

Red.

ALWAYS ADJUST TIME DELAY ON MAXIMUM
IF LEVEL SWITCH IS USED IN A FEEDING TROUGH OR OUR 100KG HOPPER.
ALWAYS ADJUST TIME DELAY ON MINIMUM IF LEVEL SWITCH IS USED AS INTERMEDIATE SWITCH IN THE EXTENSION BOOT.





One delay block will operate several level switches in parallel.

FIGURE 83.

ELECTRICITY .... WATCH OUT !

LEAVE CONNECTIONS TO THE SYSTEM TO A QUALIFIED ELECTRICIAN !

DANGER

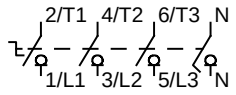
- Wire the system with the utmost care and attention.
- Always provide a solid earthing.
- Check all connections before you switch on.
- Always follow the wiring diagrams included in the control panels.
- Compare setting of the motor protection with the data on the motor label.
- Motor protections are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

3x380V+N
3x415V+N } (IEC38- 3x400V+N)

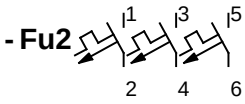
3x220V
3x240V
3x200V } (IEC38- 3x230V)

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-49

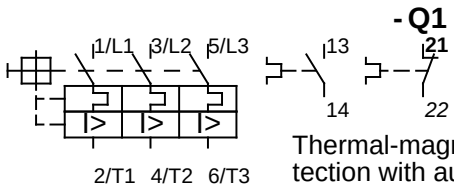
ELECTRICAL SYMBOLS



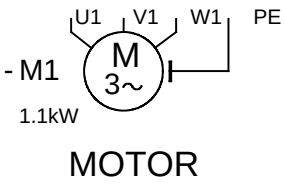
- Si1 — Main Switch



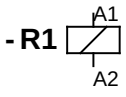
Automatic fuse

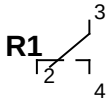


Thermal-magnetic motor protection with auxiliary contacts

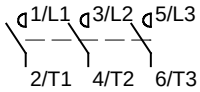


Motor

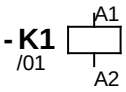




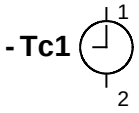
Control circuit relay

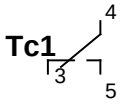


- K1

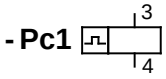


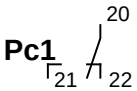
Contactor





Time clock

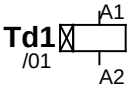


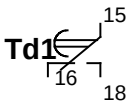


Preset counter

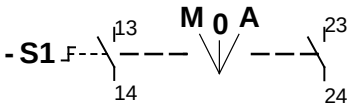
Signal Lamp

Serial timer

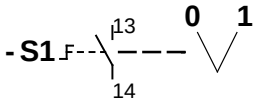




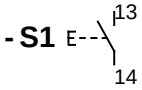
Adjustable timer with mode selection



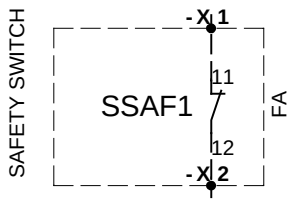
3-position switch with M/0/A indication plate



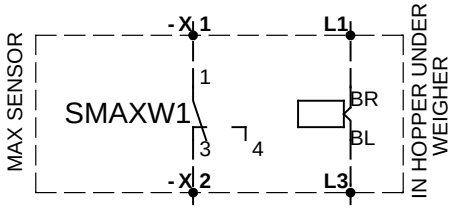
2-position switch with 0/1 indication plate



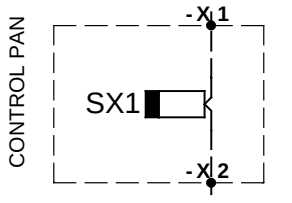
Push button



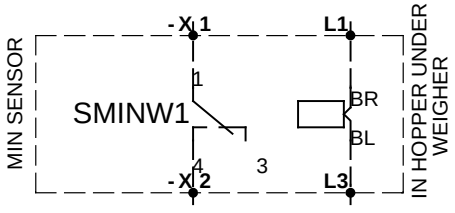
Safety or level switch for ATL, CTC...



Sensor with NC-contact (supply on)

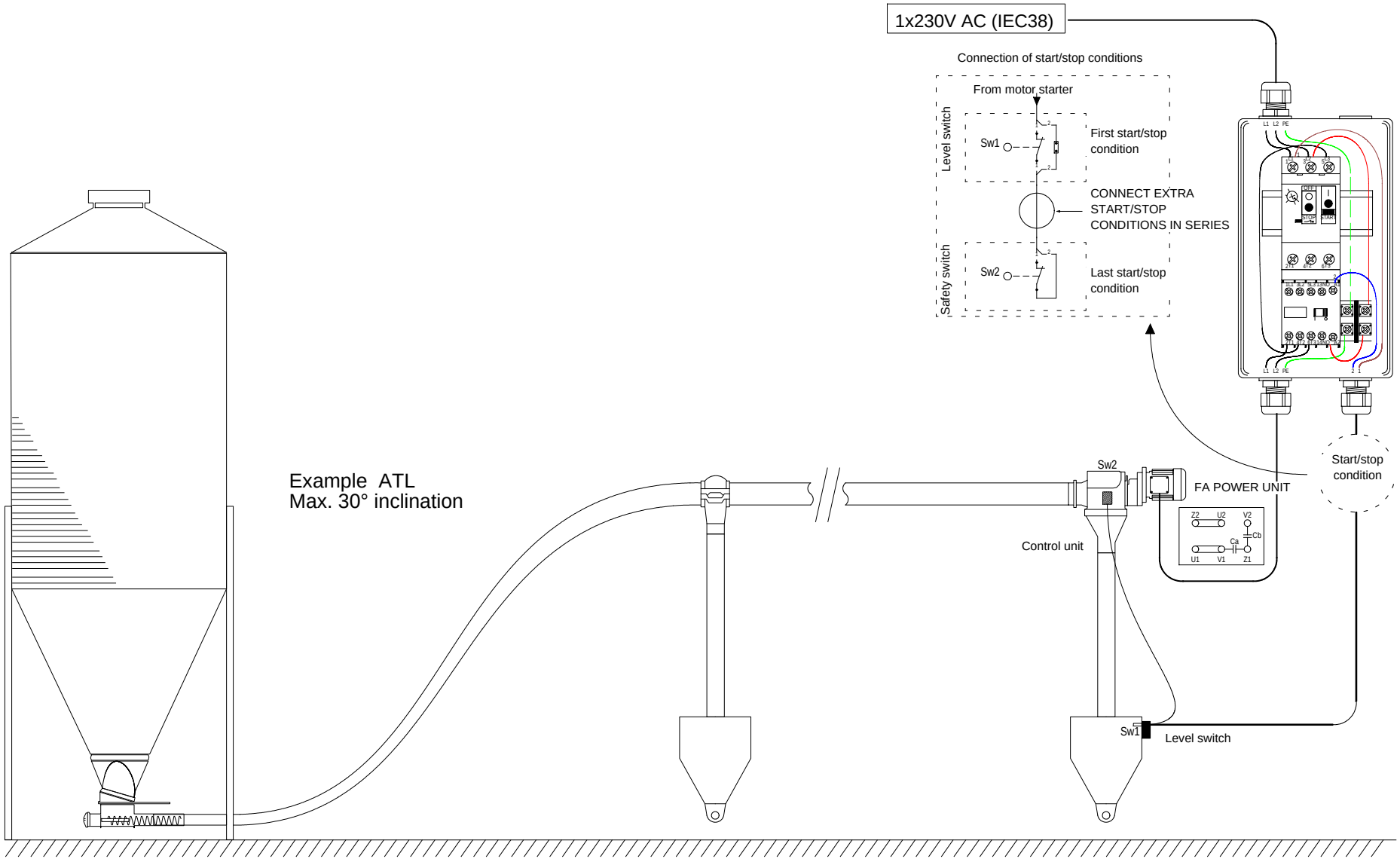


Control sensor for pans



Sensor with NO-contact (supply on)

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-58

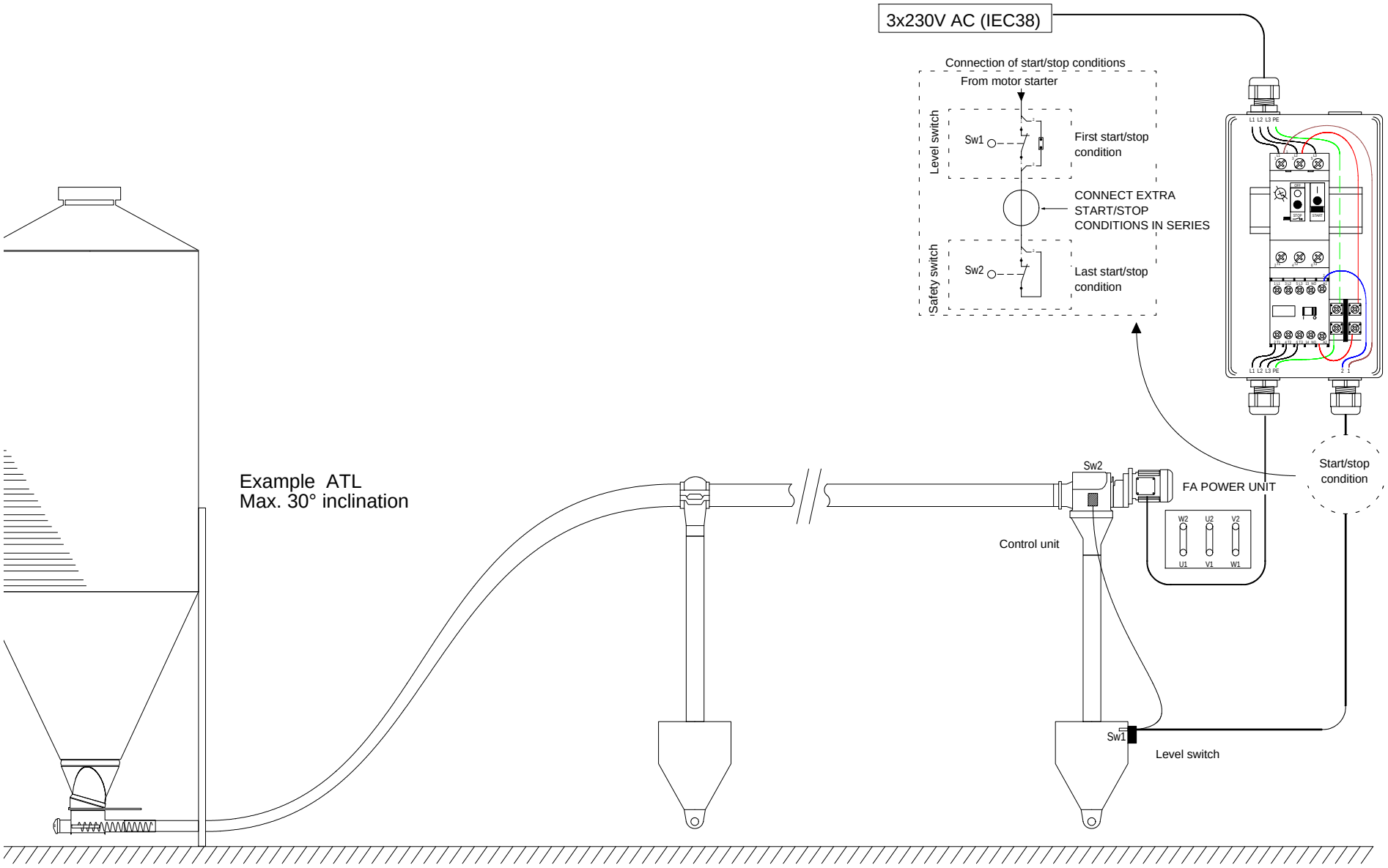


Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.

WIRING DIAGRAM FOR 1X230V

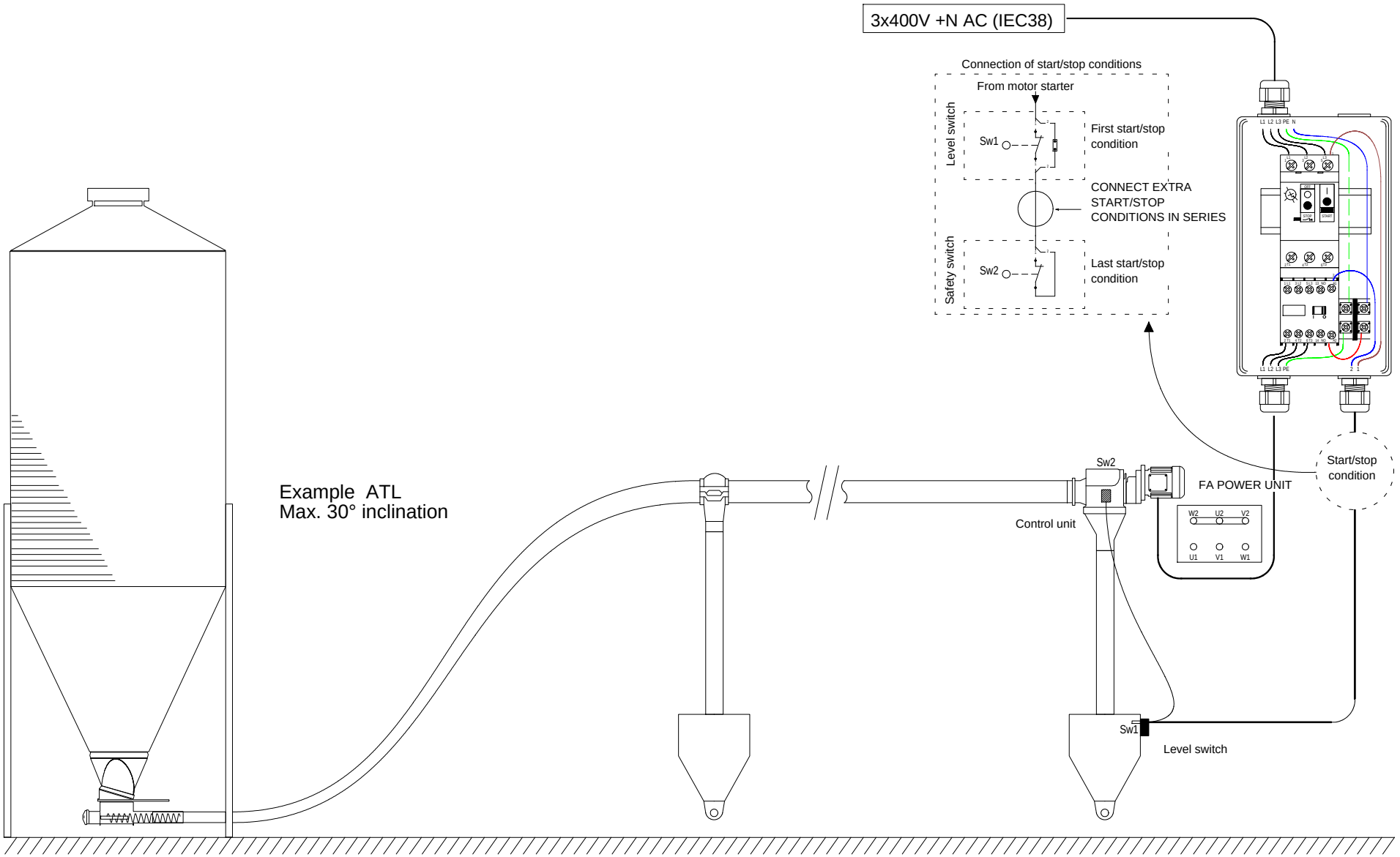
WIRING DIAGRAM FOR 3X230V

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-58



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

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-58

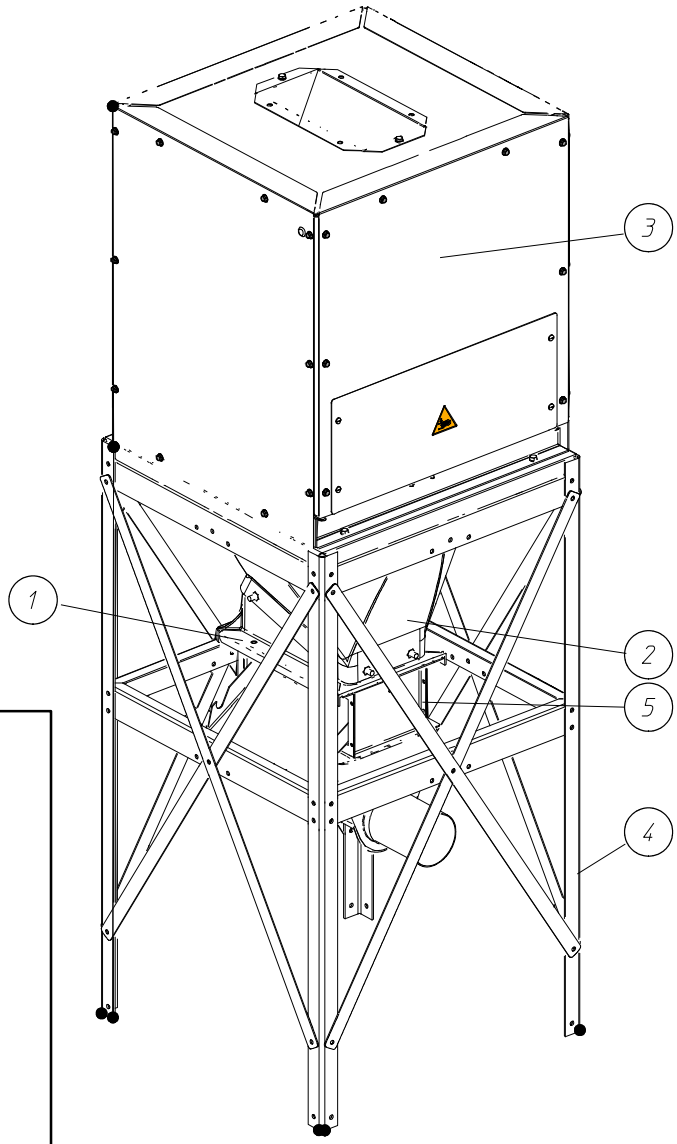


Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.

WIRING DIAGRAM FOR 3X400V

LAY-OUT WEIGHER 6.5 TON- PRODUCT NUMBERS - 5638999330

KEY	PART NR.
1	5696999990
2	5629993880
3	5638999330
4	5991995310
5	5696999070



DIMENSIONS

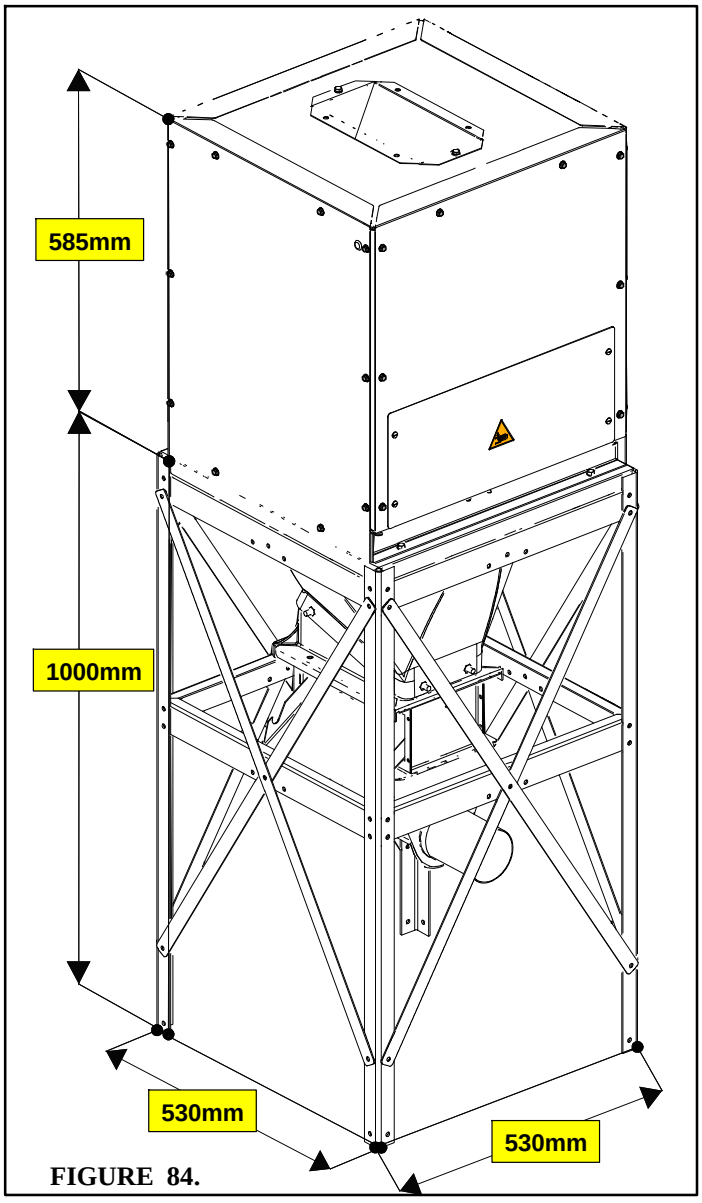
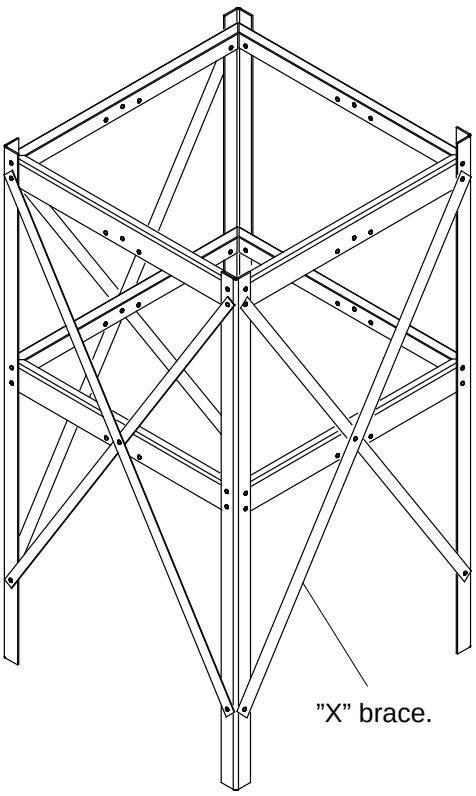


FIGURE 84.

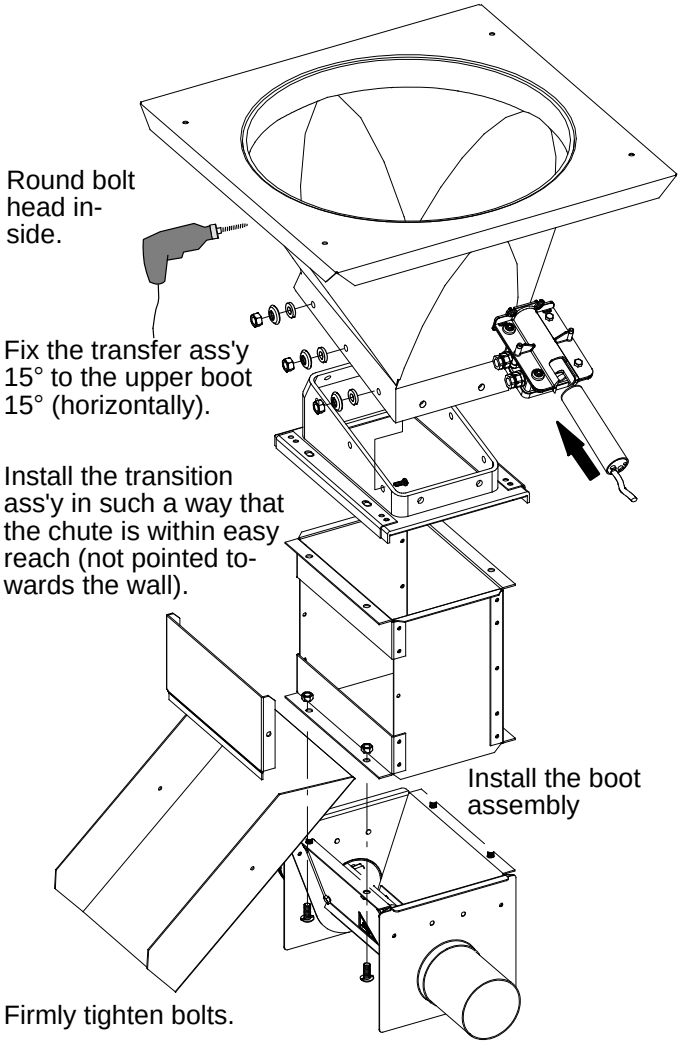
Install the stand. Bolts and nuts are packed with the transition assembly.



Firmly tighten bolts.

FIGURE 85.

Slide the universal collar over the upper boot 15° and drill 8 holes dia 9.

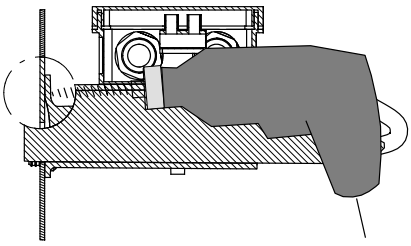


Firmly tighten bolts.

FIGURE 86.

Drill a hole dia. 32

Drill 4 holes dia 3,5mm



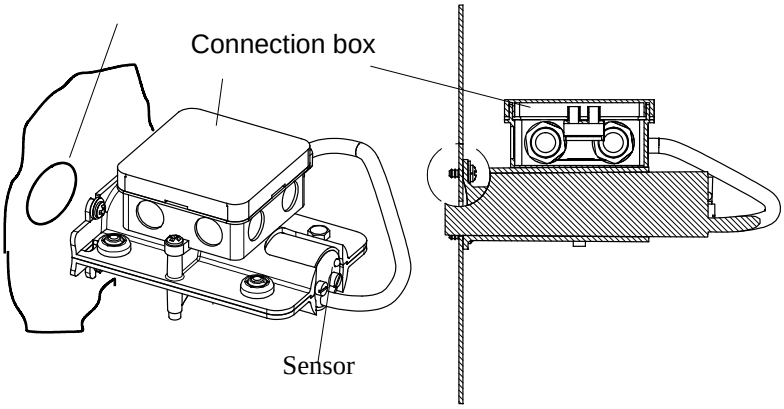


FIGURE 87.

Electrical connection : see Fig. 88. page III-43

CONNECTION

5920934350 : SENSOR .VC12

5920934270 : SENSOR VC11

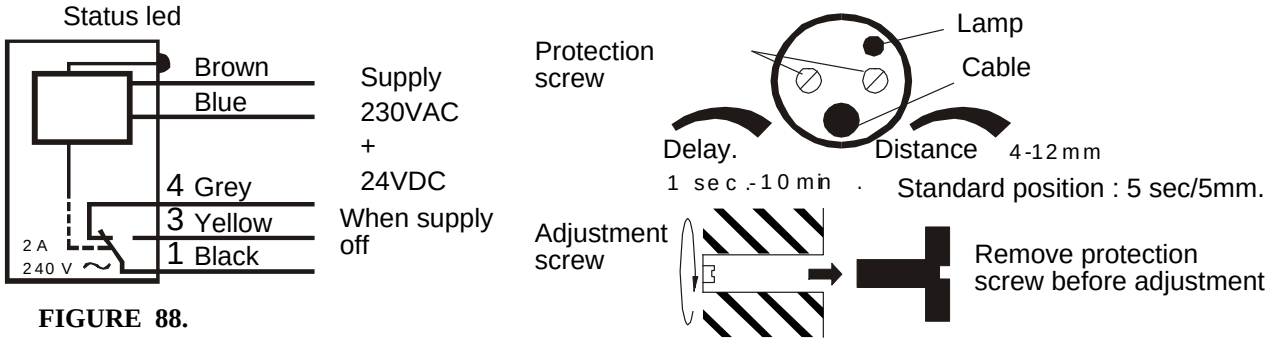


FIGURE 88.

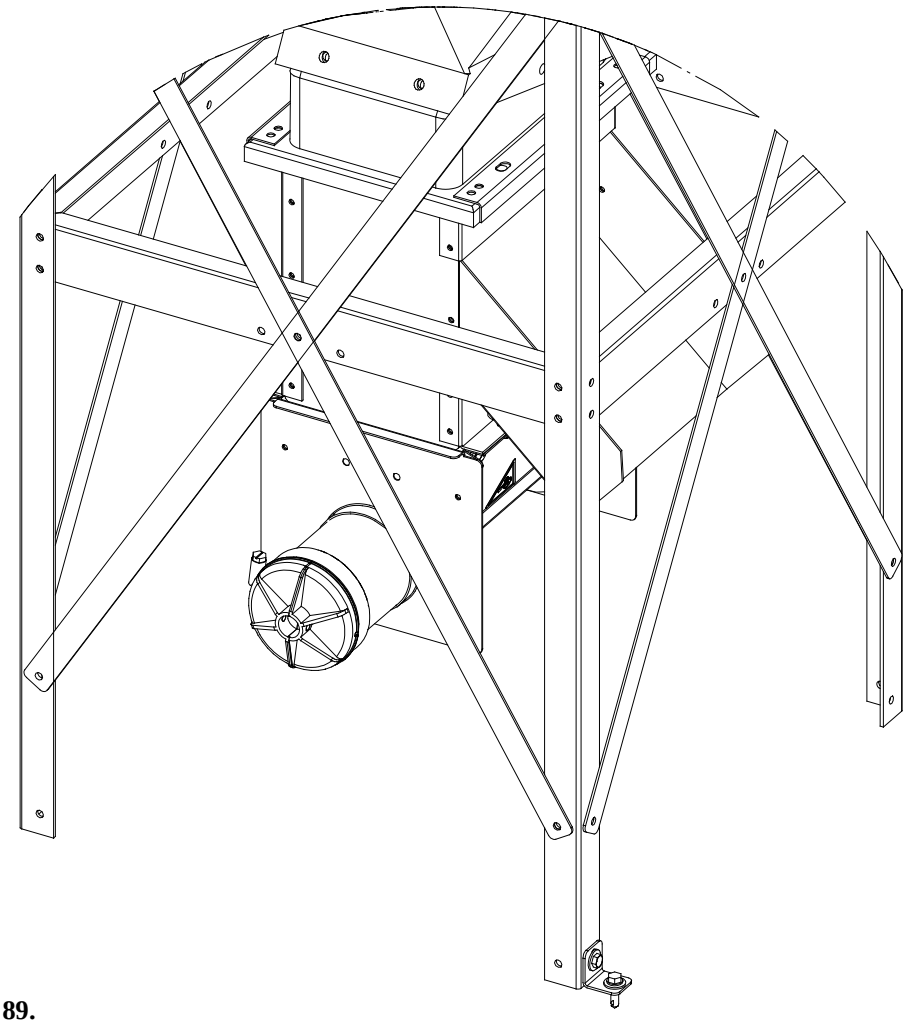


FIGURE 89.

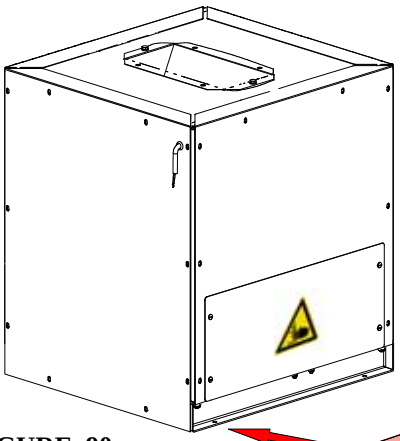


FIGURE 90.

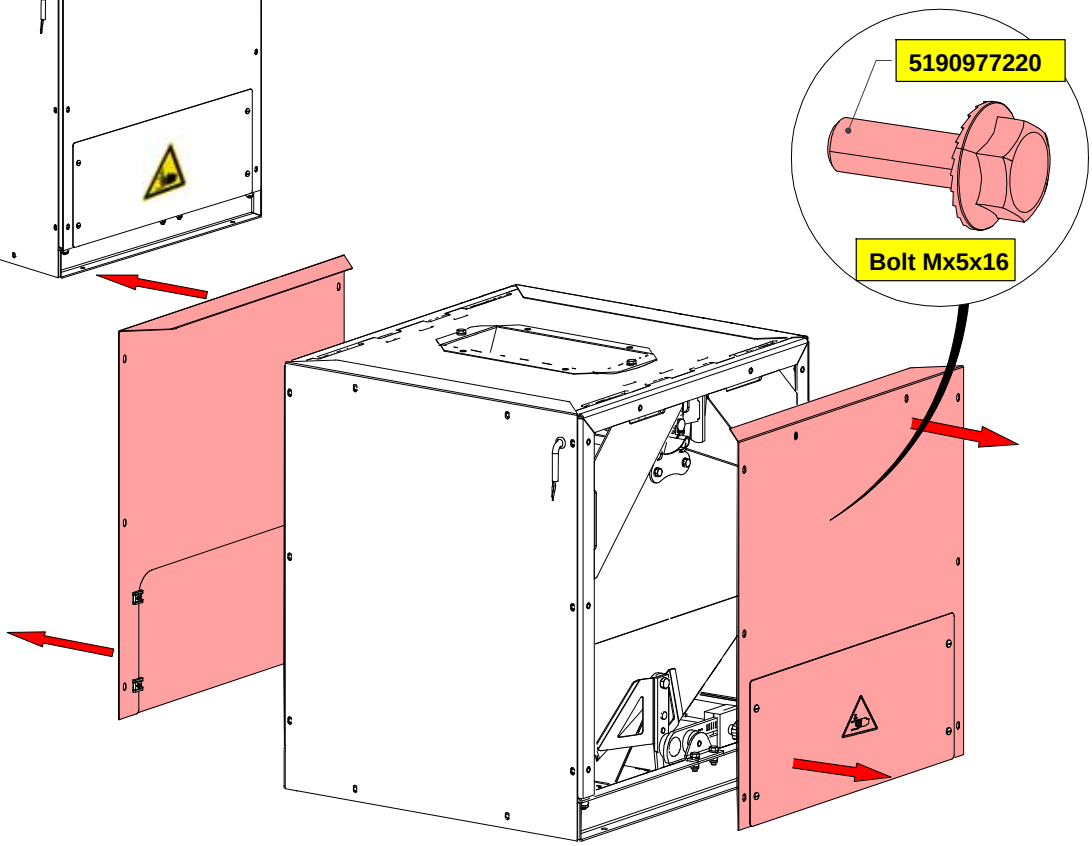


FIGURE 91.

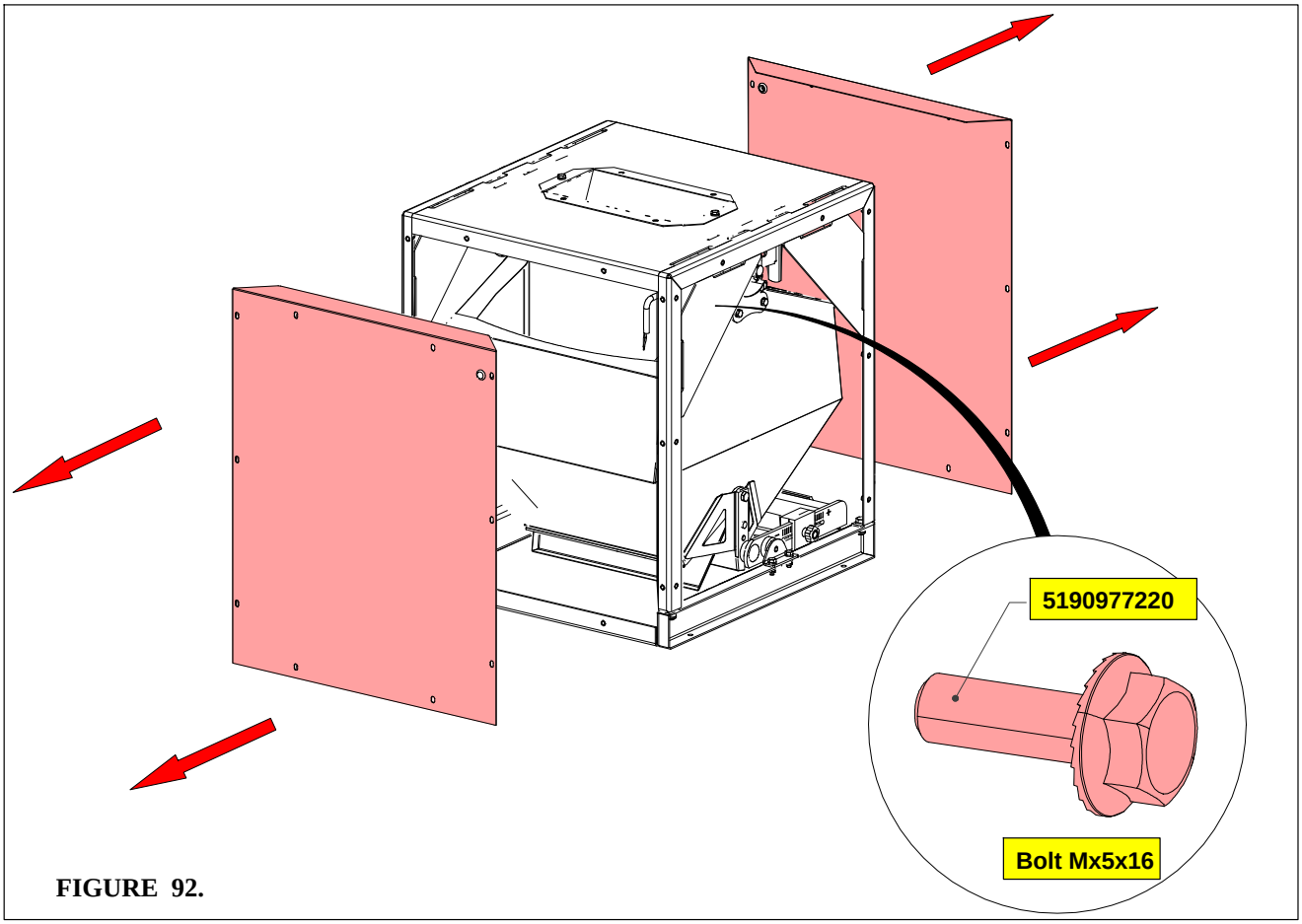


FIGURE 92.

TAKE CARE TO INSTALL THE WEIGHER PERFECTLY LEVEL !

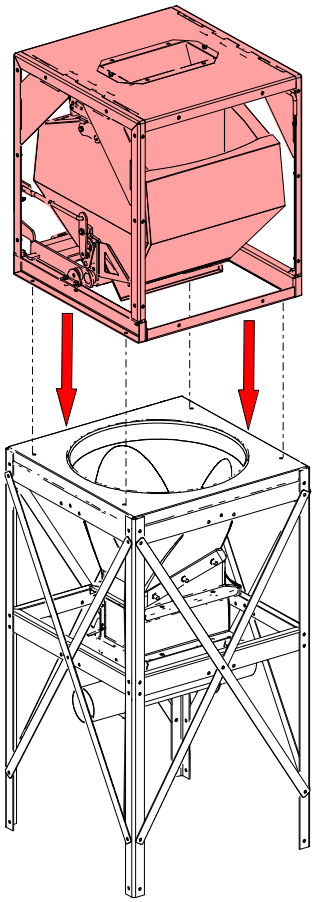


FIGURE 93.

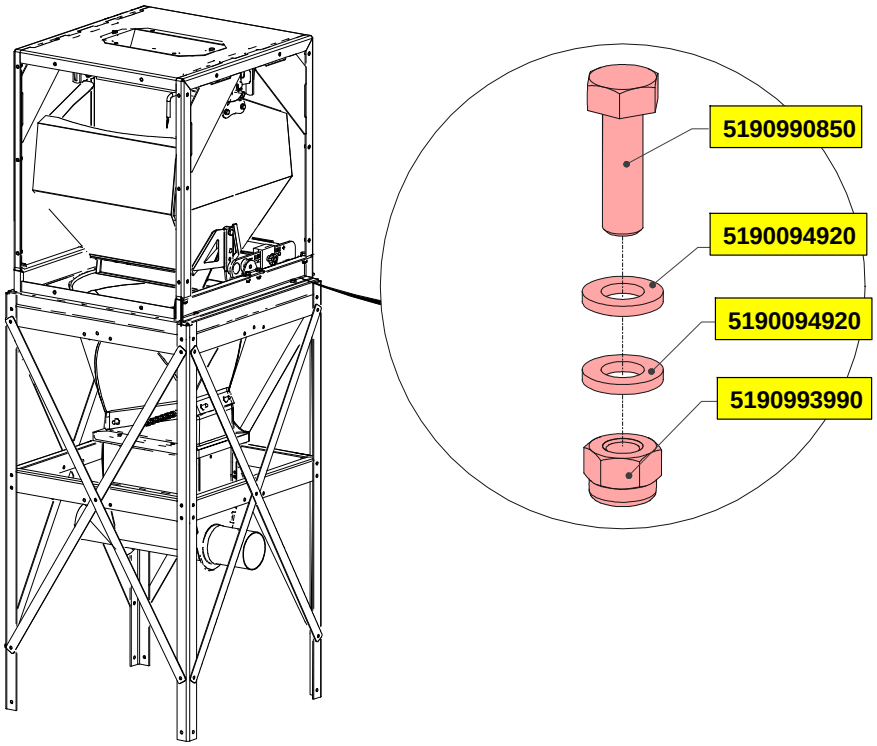


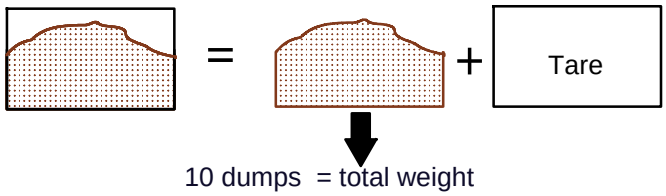
FIGURE 94.

TO ADJUST

* Put the FA in position ”MAN”.
* Catch 10 dumps (w/man. operation) in a bag/ box.
* Weigh on an accurate weigher.

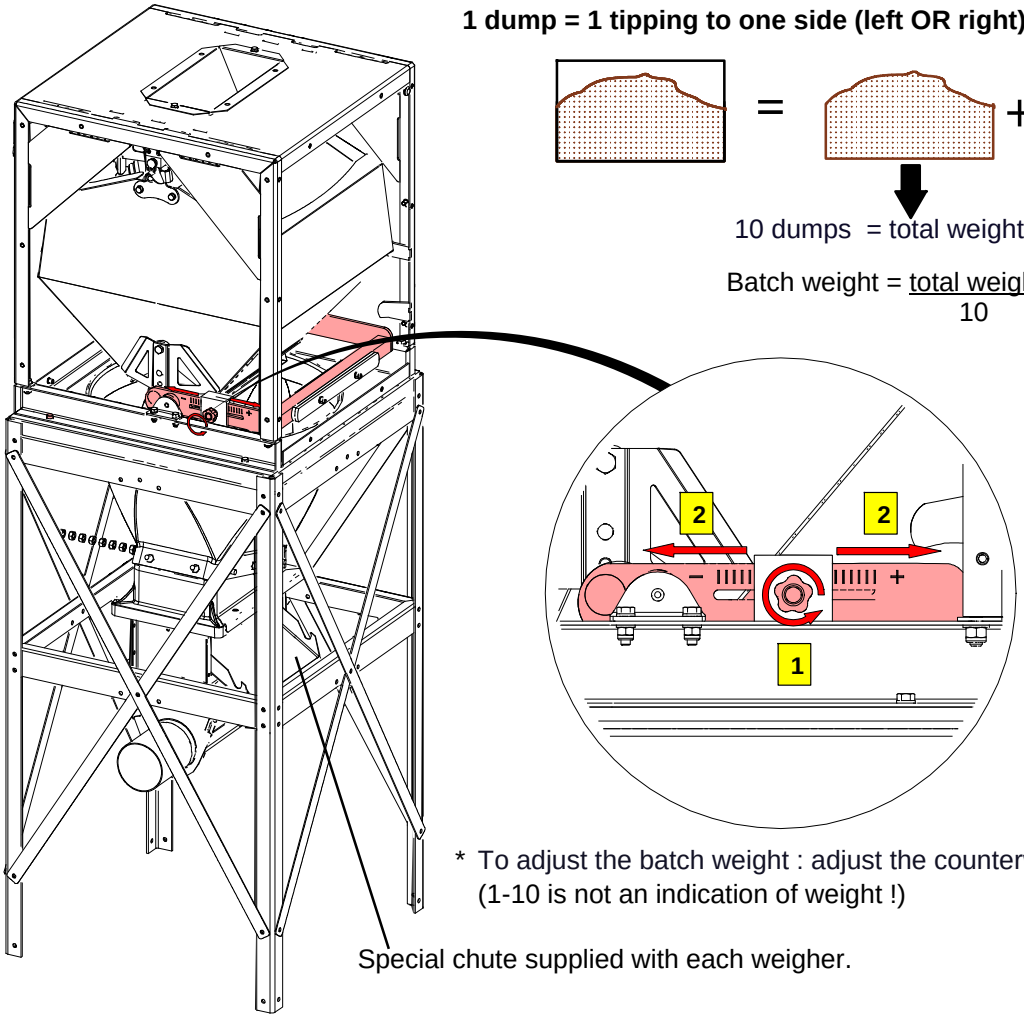
Attention !

1 dump = 1 tipping to one side (left OR right).



10 dumps = total weight

Batch weight = $\frac{\text{total weight}}{10}$



* To adjust the batch weight : adjust the counterweight. (1-10 is not an indication of weight !)

Special chute supplied with each weigher.

To further decrease batch weight : remove counter weight one by one !

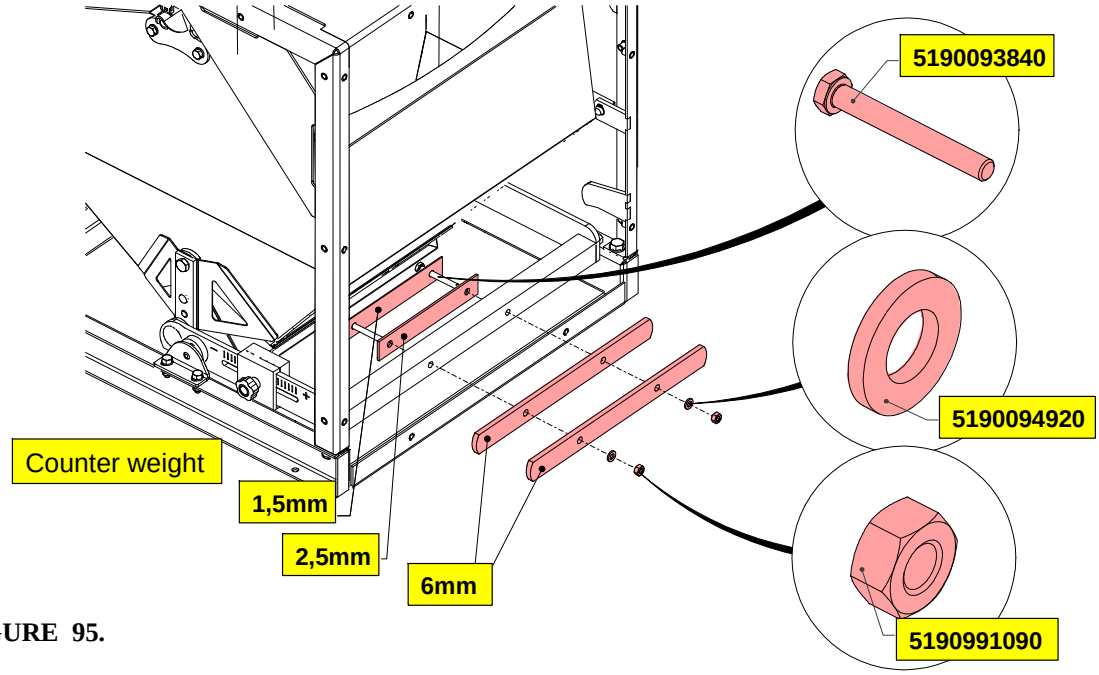


FIGURE 95.

CONNECTION IMPULSE SWITCH MECHANICAL WEIGHER

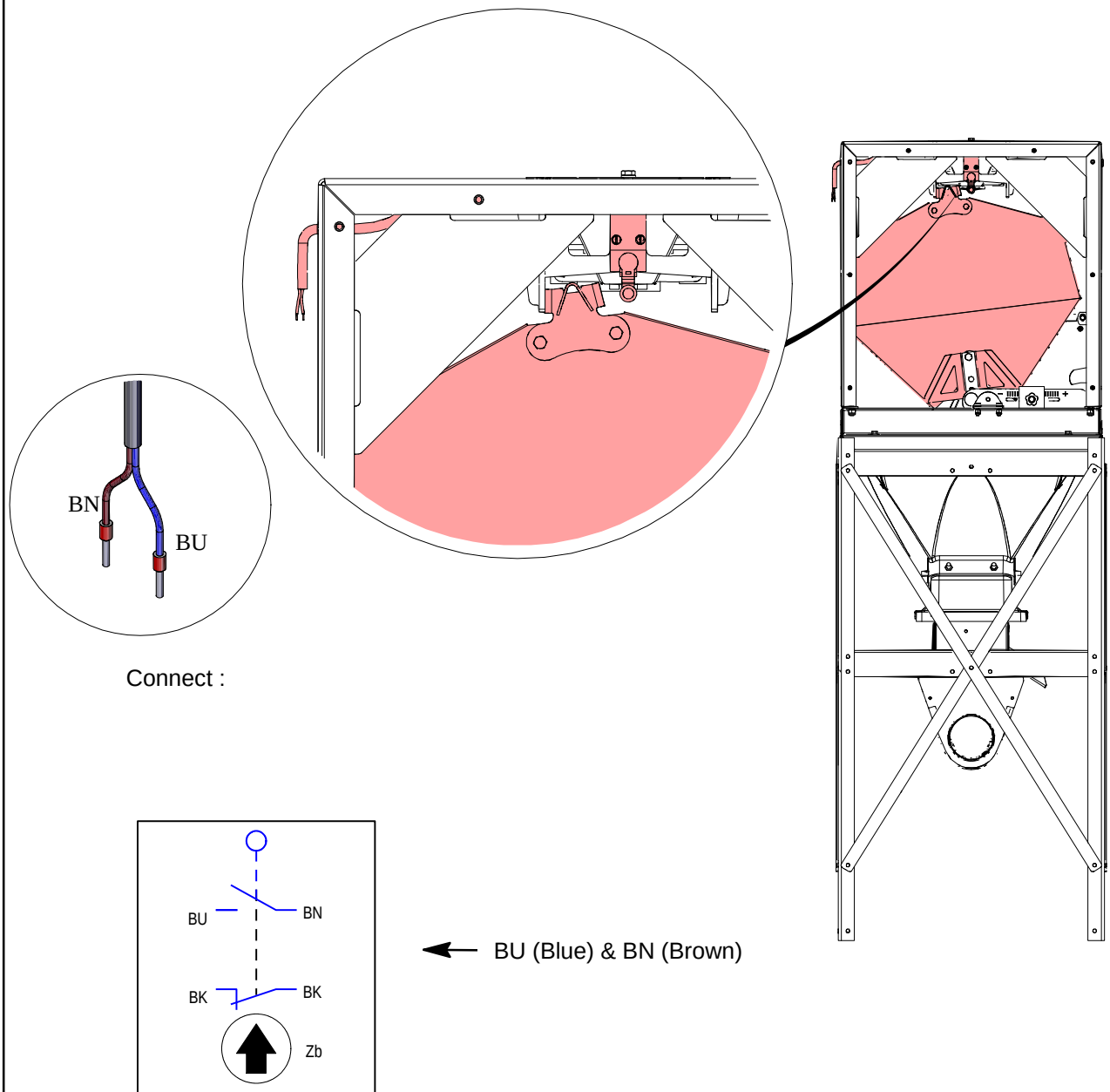


FIGURE 96.

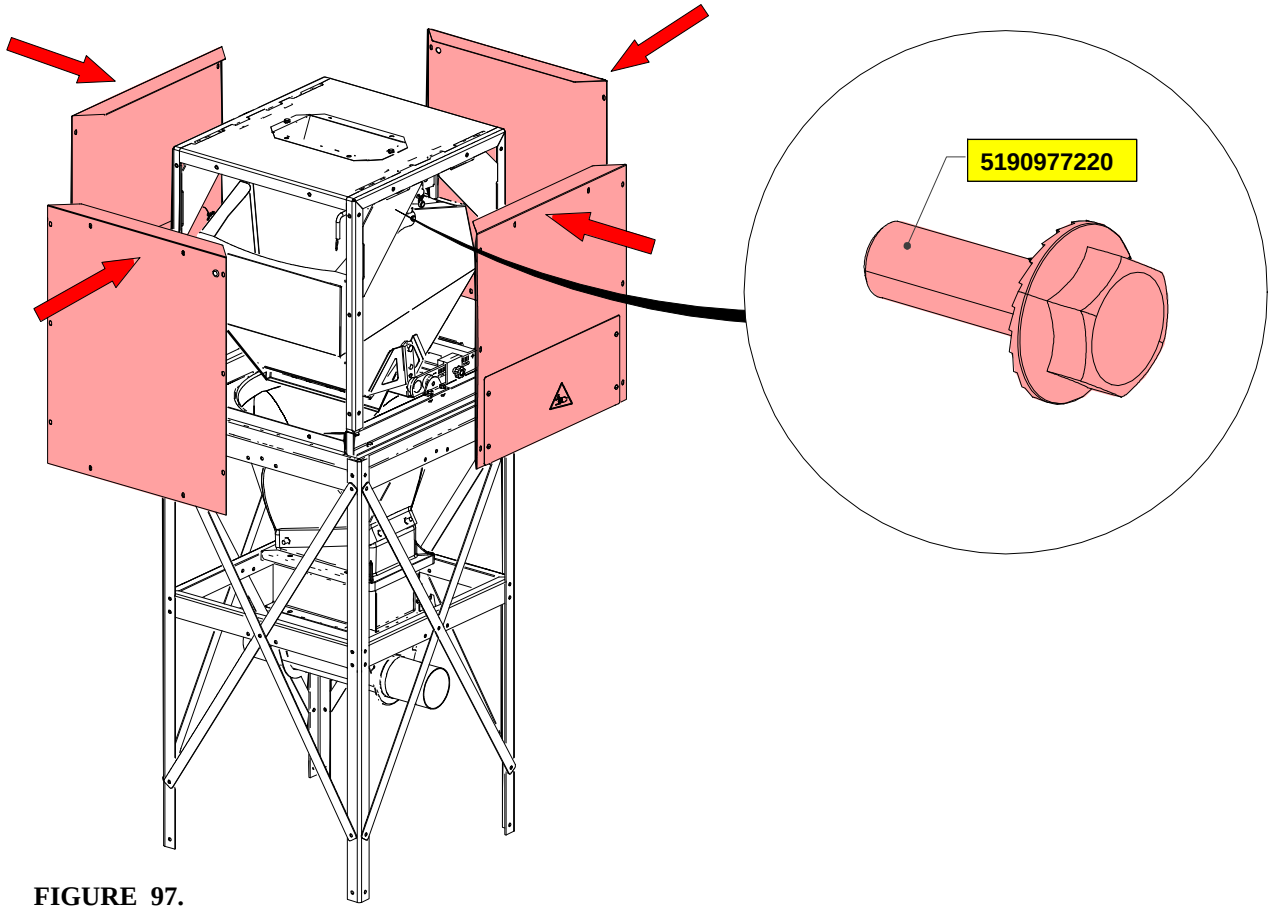


FIGURE 97.

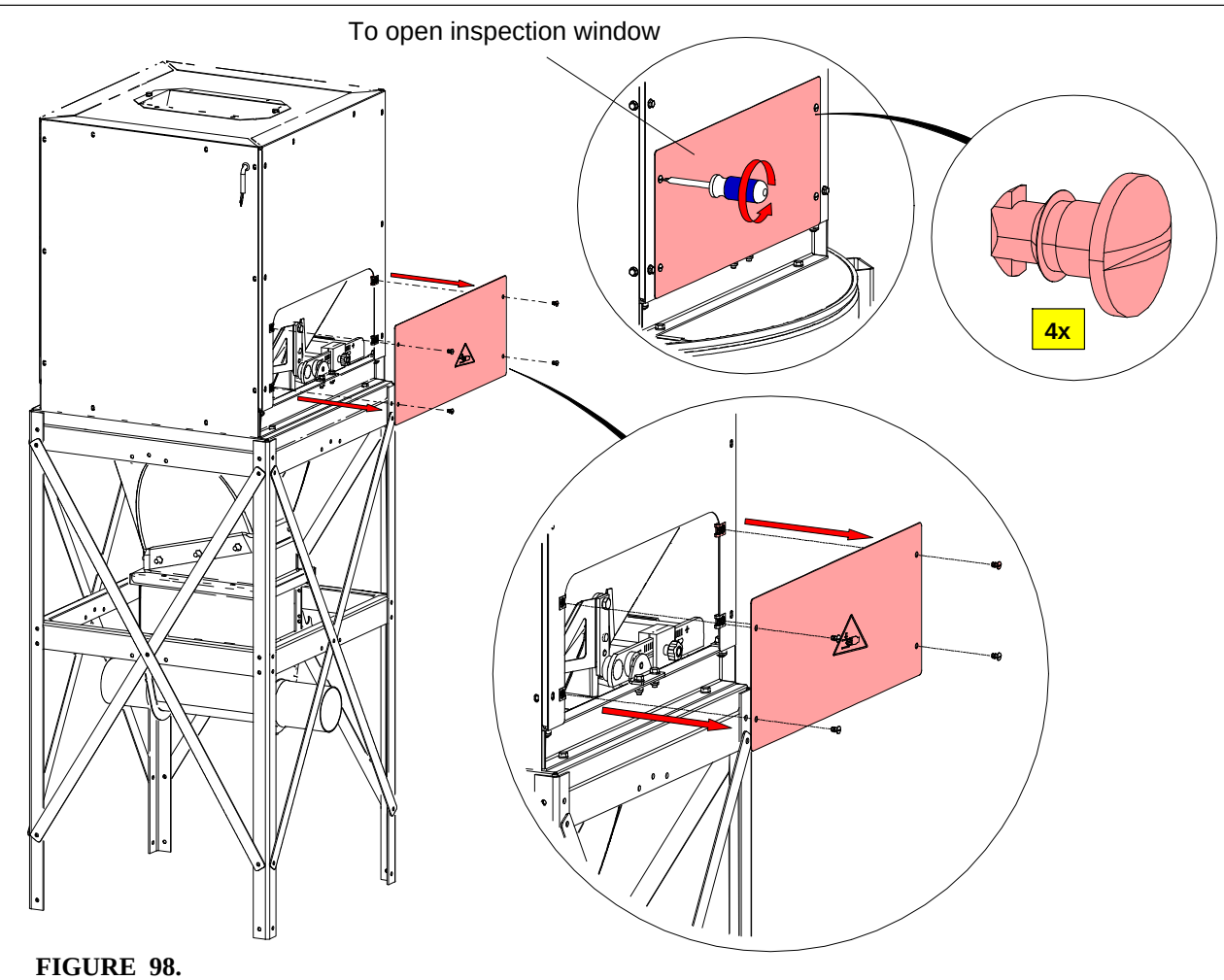
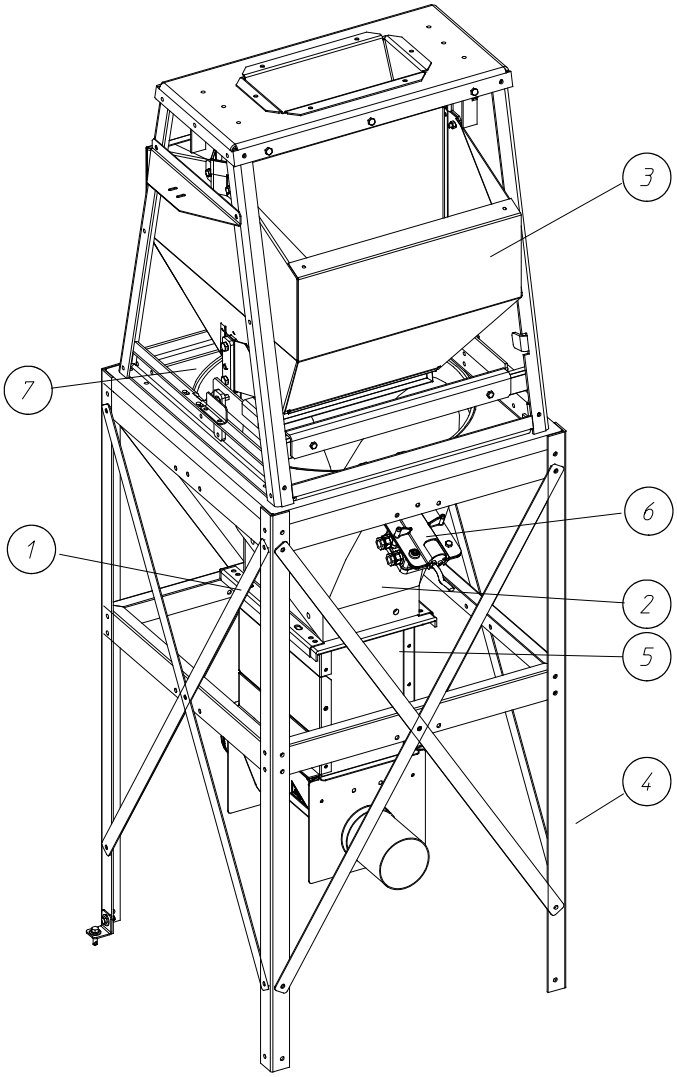


FIGURE 98.

AUTOMATIC WEIGHER - 13 TON - 5695999910



KEY	PART NR.
1	5696999990
2	5629992630
3	5695999910
4	5991995310
5	5696999070
6	5920929630
7	5920919900

DIMENSIONS

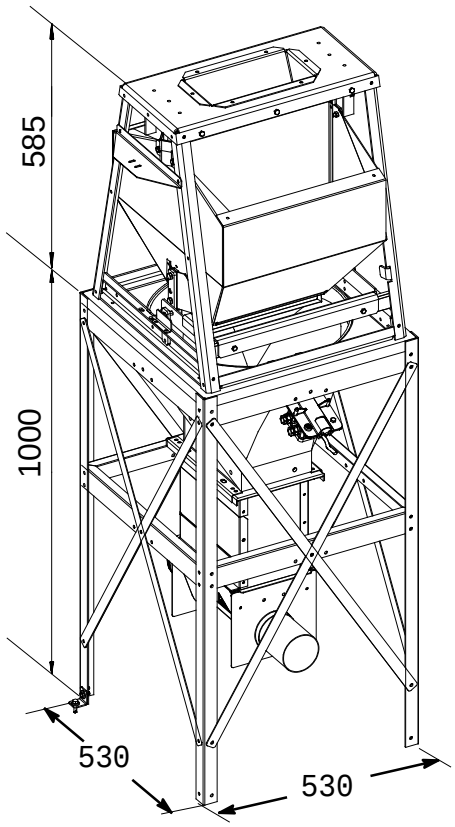
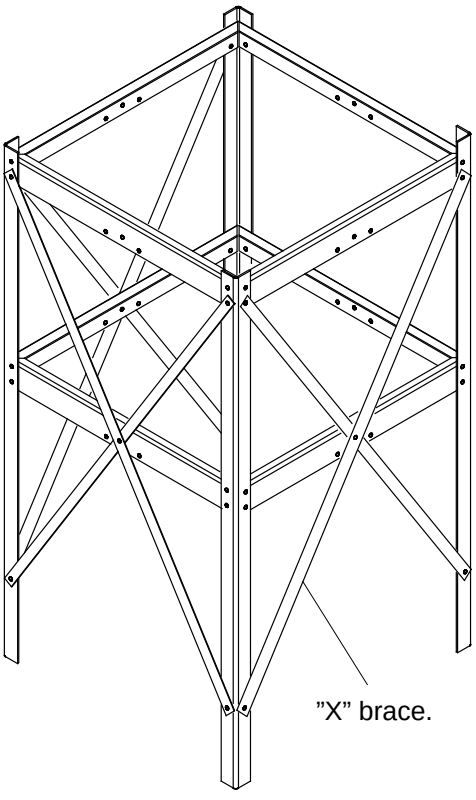


FIGURE 99.

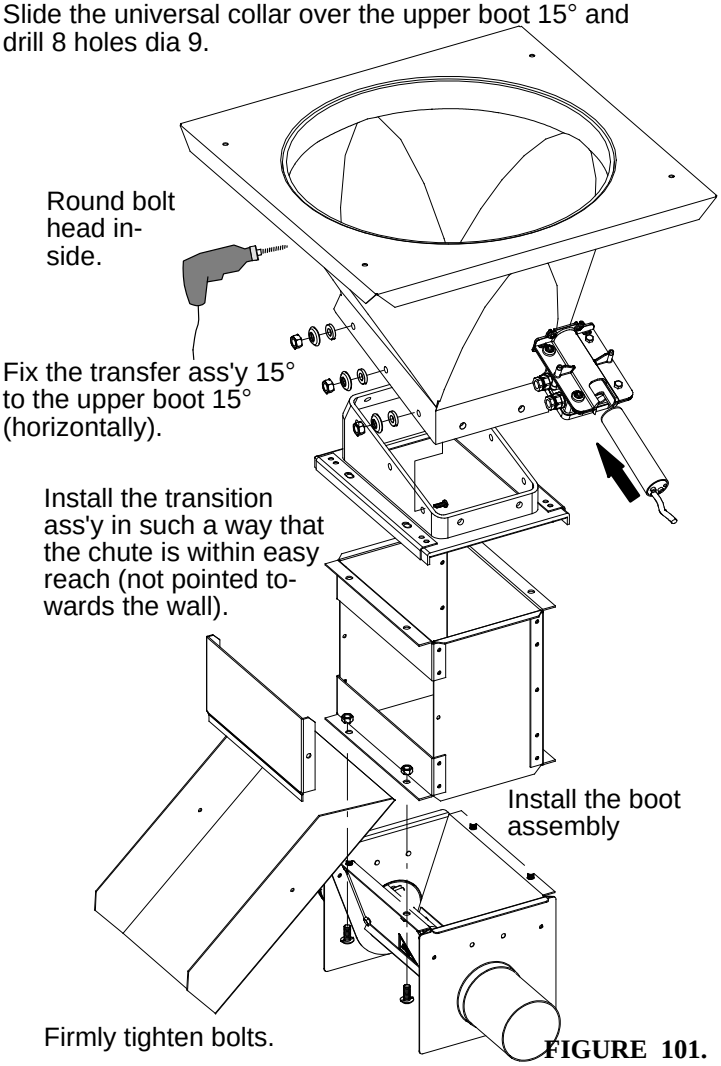
Install the stand. Bolts and nuts are packed with the transition assembly.



Firmly tighten bolts.

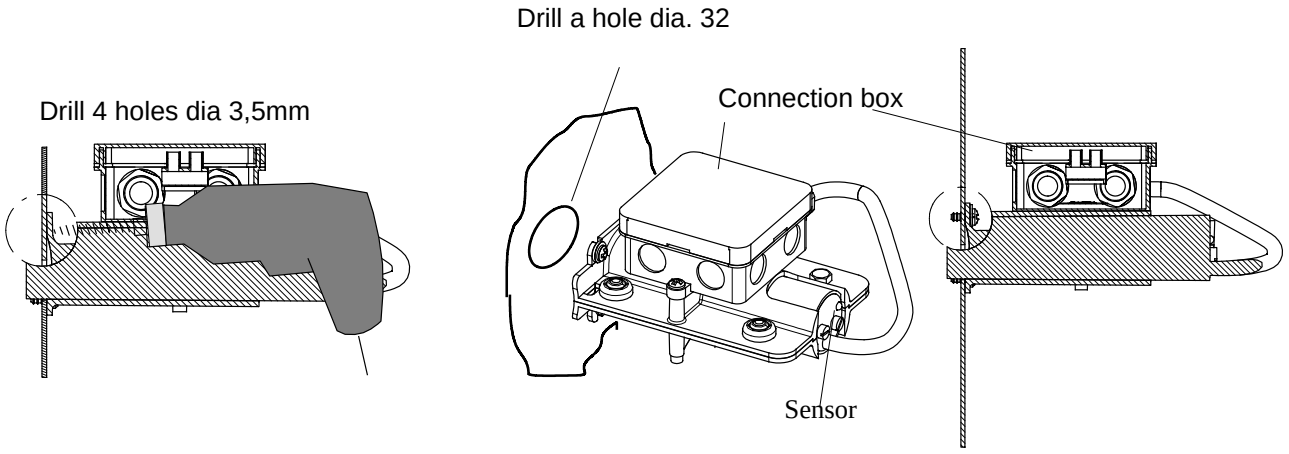
FIGURE 100.

Slide the universal collar over the upper boot 15° and drill 8 holes dia 9.



Firmly tighten bolts.

FIGURE 101.



Electrical connection : see Fig. 103.

FIGURE 102.

CONNECTION

5920934350 : SENSOR .VC12

5920934270 : SENSOR VC11

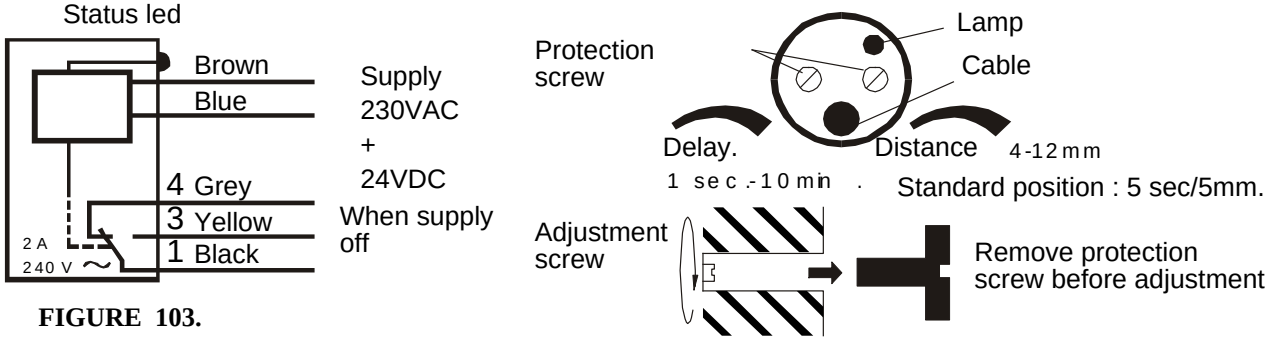


FIGURE 103.

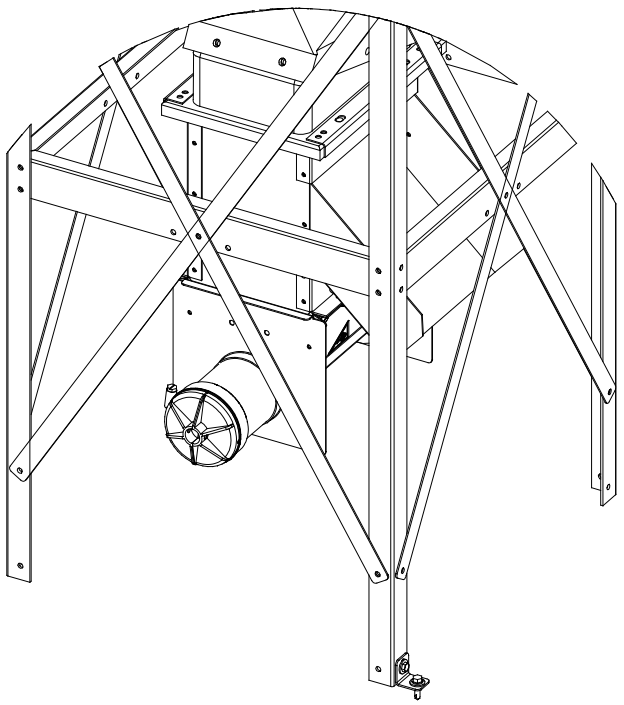
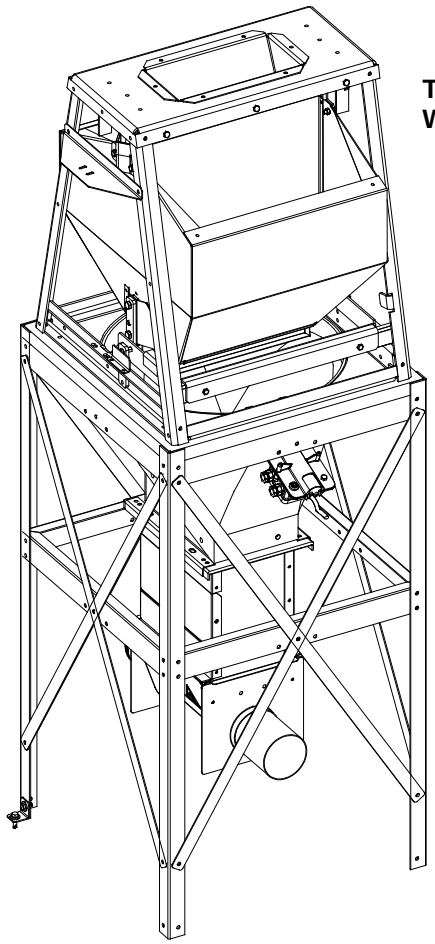


FIGURE 104.

Loosen the strap.



TAKE CARE TO INSTALL THE WEIGHER <u>PERFECTLY LEVEL</u> !

Fix the weigher.

FIGURE 105.

TO ADJUST THE WEIGHER

Special chute supplied with each weigher.

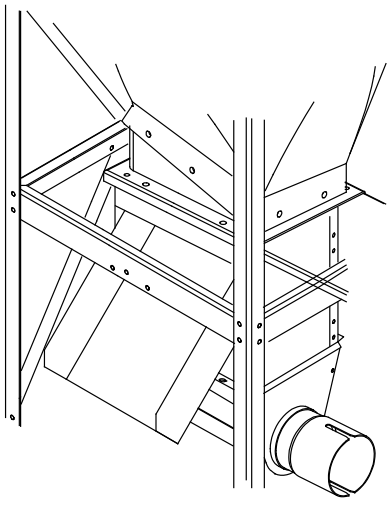


FIGURE 106.

* Put switch in position ”MAN”.
* Put TS switch in position II.
* Catch at least 5 dumps (with manual operation) in a bag or box.
* Weigh on an accurate weigher.
* Attention : do not forget the tare weight.

Adjust the counterweight.
1-10 is not an indication of weight.

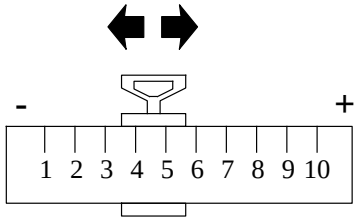
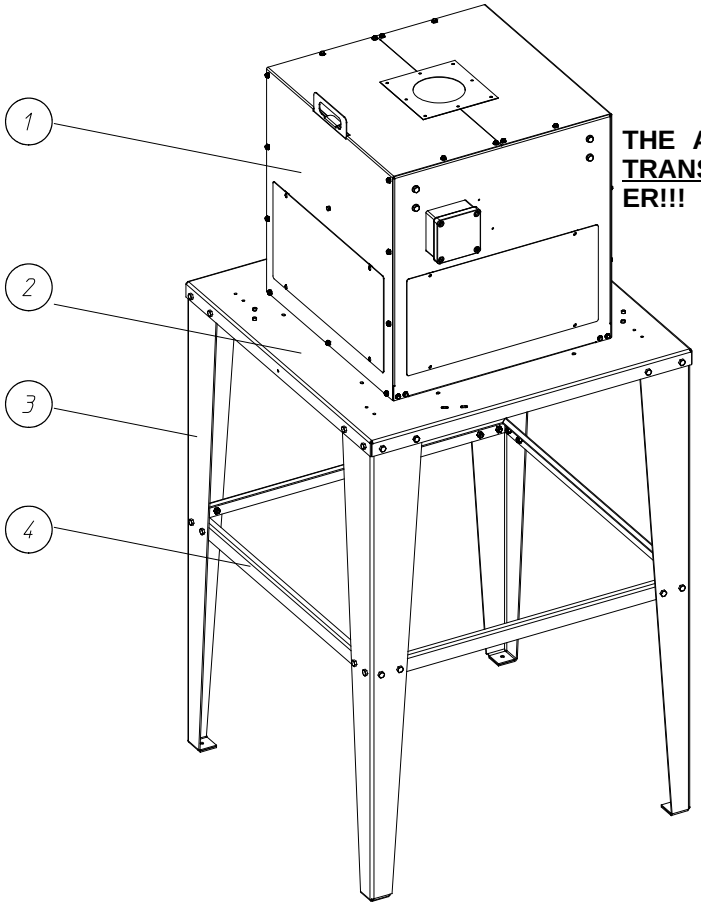


FIGURE 107.

LAY-OUT EBW70 - PRODUCT NUMBERS



THE AUGER TRANSPORT LINE MAY <u>NOT TRANSFER ANY VIBRATIONS</u> TO THE WEIGHER!!!

KEY	DESCRIPTION	PART NR.
1	ELECTRONIC BATCHWEIGHER EBW- 70 + LCC	5938960900
2	TABLE TOP	5938935670
3	TABLE LEG	5938935750
4	TABLE LEG BRACE	5938935830
	HARDWARE KIT FOR TABLE EBW70 (NOT SHOWN)	5938935340

DIMENSIONS EBW70

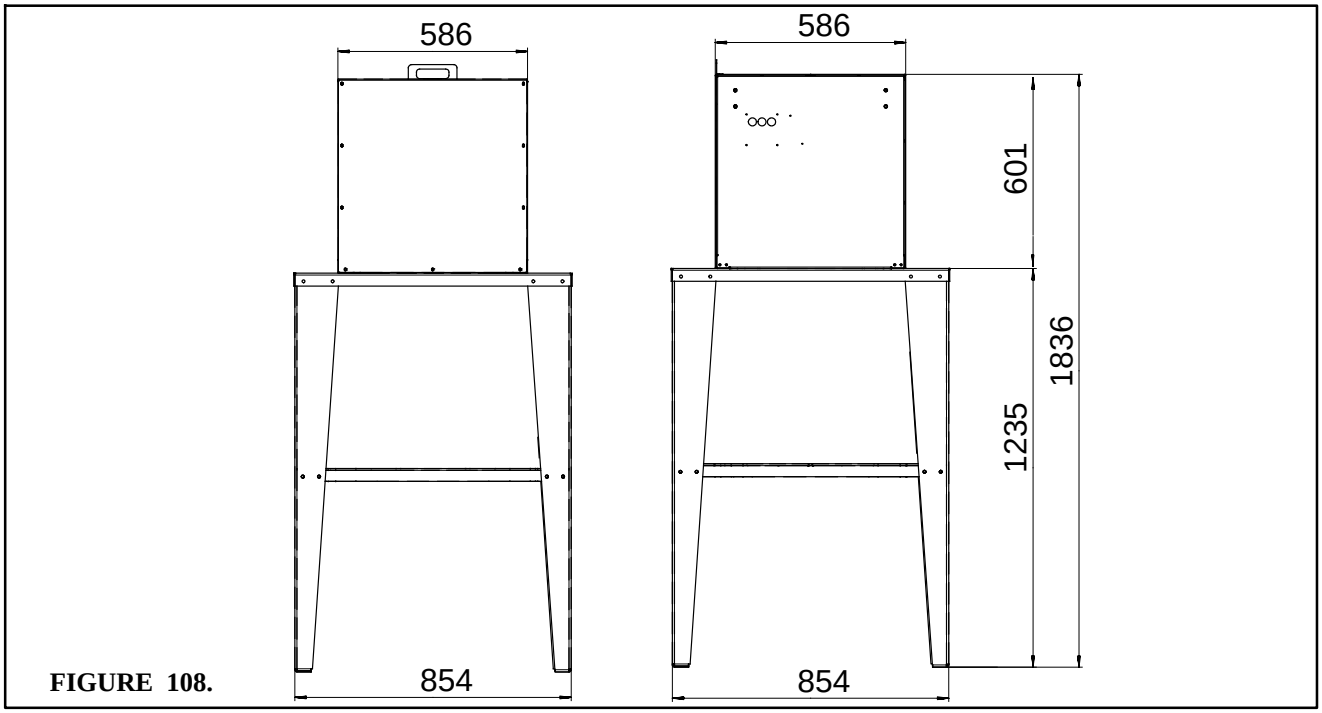


FIGURE 108.

INSTALLATION EBW 70

WEIGHER TABLE

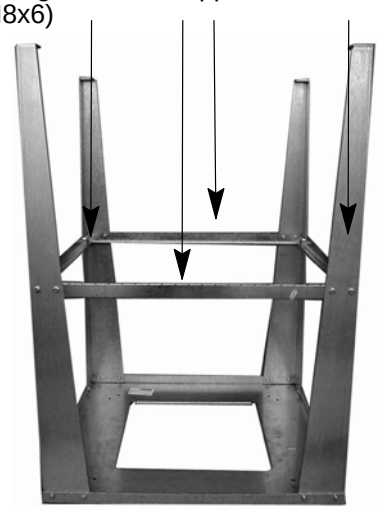
Install the table legs.

Hardware kit
04904645

FIGURE 109.

FIGURE 110.

Fasten the table leg braces between the legs with the supplied bolts (M8x6)



Tighten the bolts.

FIGURE 111.

Install the table vibration free on a solid ground.

FIGURE 112.

INSTALL THE WEIGHING UNIT <u>ALWAYS</u> LEVEL WITH THE SUPPLIED ADJUSTMENT PLATES (IN THE HARDWARE KIT). IF NOT THERE WILL BE DEVIATIONS IN THE WEIGHING PROCESS.

ELECTRICAL INSTALLATION

RECOMMENDATION : INSTALL A MINIMUM SENSOR AFTER THE WEIGHER TO CONTROL THE DEPARTING AUGER TRANSPORT LINE

SWITCH OFF THE POWER BEFORE YOU START TO INSTALL.

On the weighing unit is a label indicating where to connect the earth wire.

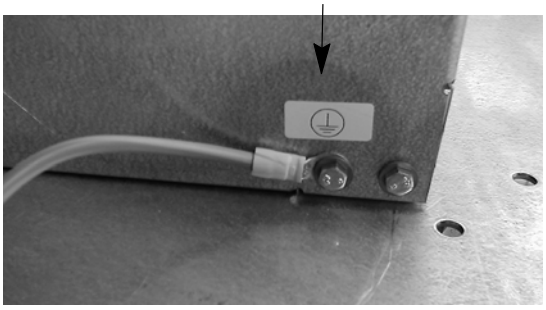
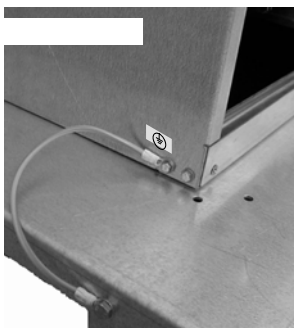


FIGURE 113.



Install the cables such that they cannot be damaged. See that the cables can be easily replaced in case of failure.

FIGURE 114.

SWITCH ON THE CURRENT ONLY AFTER HAVING CONNECTED ALL CABLES CORRECTLY

TRANSPORT SECURITY

THE TRANSPORT SECURITY SEES THAT THE WEIGHER BOX DOES NOT REST ON THE WEIGHER BARS DURING TRANSPORT OR WHEN YOU SWITCH A BAR. WHEN THE TRANSPORT SECURITY IS NOT REMOVED, THE WEIGHER CANNOT WEIGH

Unscrew the outer plates of the front and rear of the weigher box.

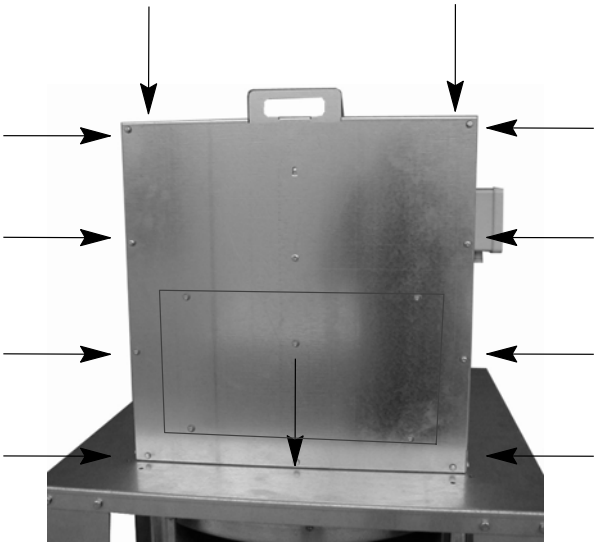


FIGURE 115.

Loosen the two transport bolts at the front and rear side with a hexagonal key number 4.

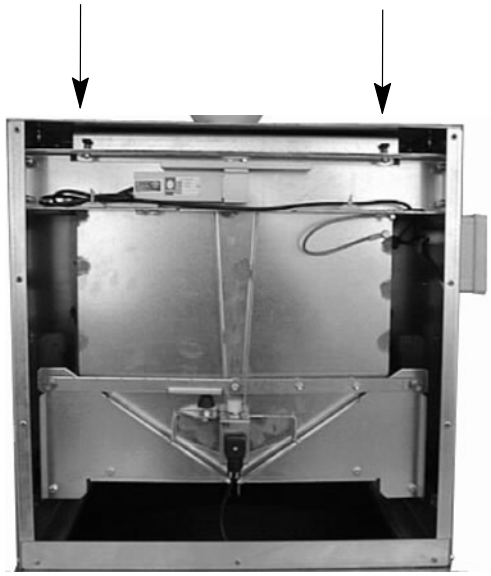


FIGURE 116.

Move the bolts (to keep the weigher box on place during transport) from outside to the middle .

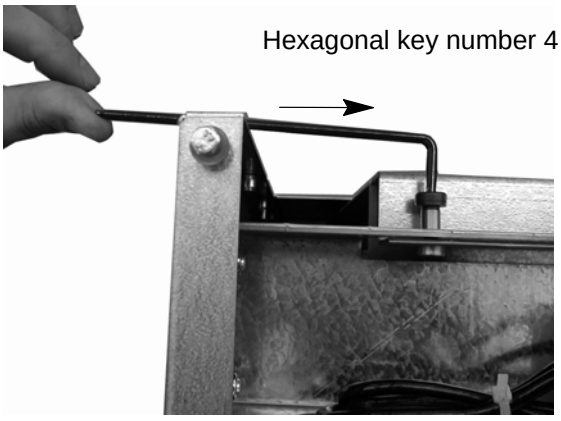


FIGURE 117.

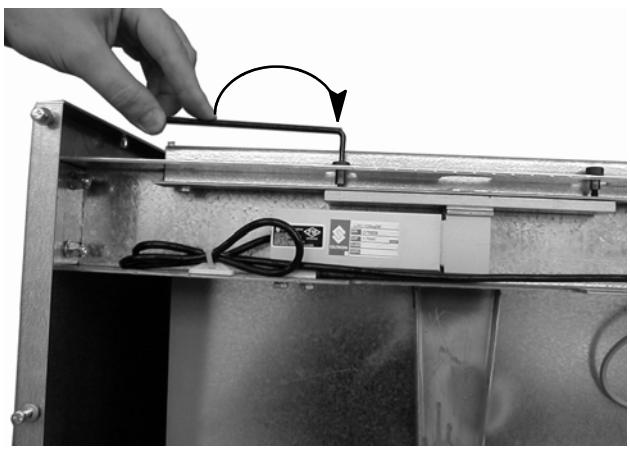
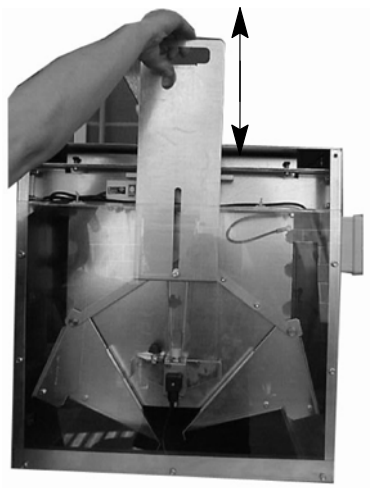


FIGURE 118.

MANUAL DISCHARGE VALVE

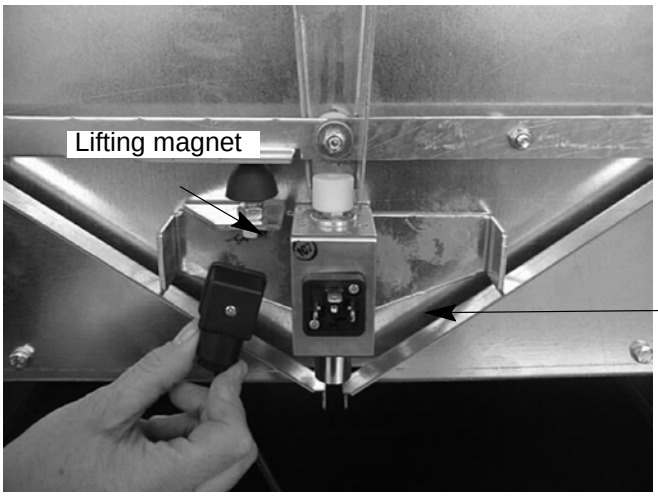


When the discharge valve does not automatically open or close you can open and close it manually.

You open the discharge valve by raising the slide and you close it again by pushing it down.

FIGURE 119.

REMOVAL OF THE LIFTING MAGNET



DISCONNECT THE CURRENT OF THE CONTROL PANEL !

Remove the side plate with the handle.

Loosen the bolts (in the box) with which the lifting magnet is fastened.

Disconnect the plug of the lifting magnet.

Replace the failing lifting magnet and refasten.

FIGURE 120.

DISASSEMBLY WEIGHING BAR (IN CASE OF FAILURE)

TURN OFF THE CURRENT OF THE CONTROL PANEL

Remove the outer plate of the front and rear of the weigher box.

Tighten the two transport bolts again at the front and rear in the two outermost holes.

Remove the two bolts at the underside of the weighing bar

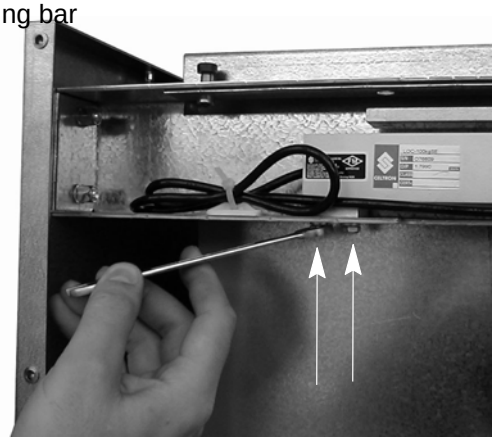


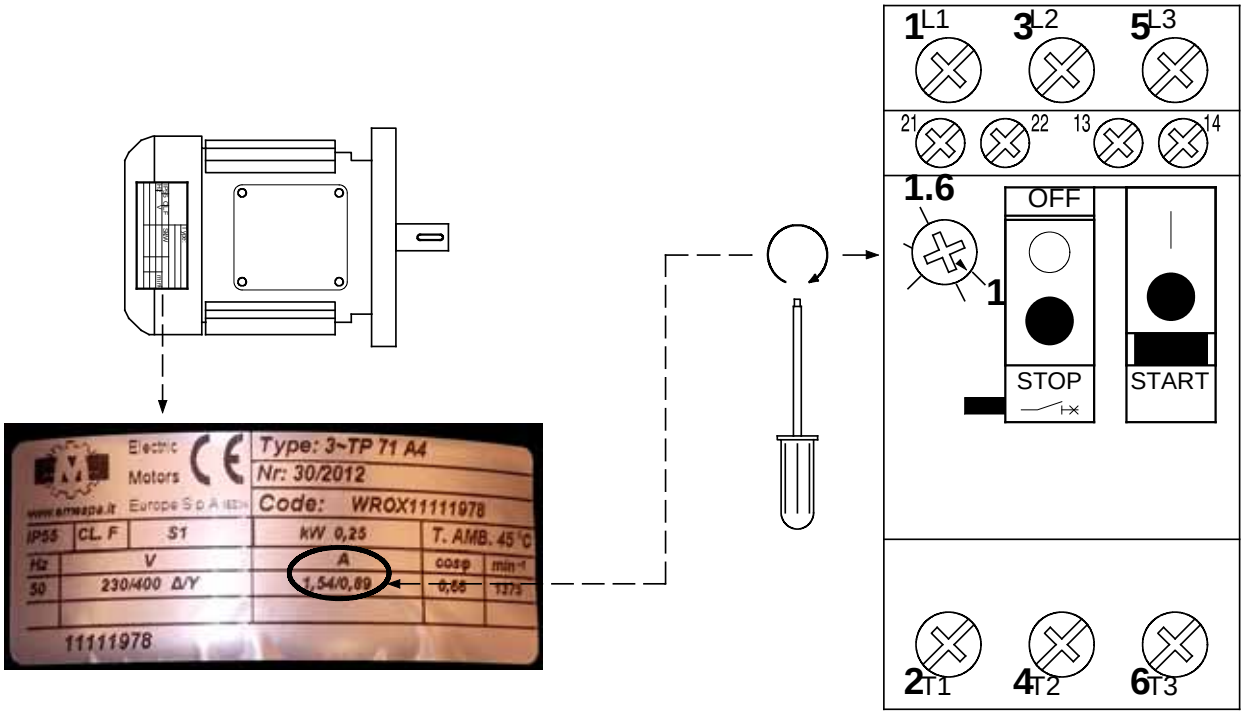
FIGURE 121.

Remove the two bolts at the upper side of the load-cell

FIGURE 122.

Loosen the electrical wiring at the weighing bar.
Follow the opposite procedure for the installation.

MOTOR PROTECTION



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 (mm²)
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
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

Motor Power (kW)	Net voltage	Protection	Max. cable length (m)	Wire gauge (mm²)
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
1.5	1x230V 50Hz	GV2ME14	0 - 27	1.5
			28 - 46	2.5
			47 - 74	4
	3x230V 50Hz	GV2ME10	0 - 44	1.5
			45 - 73	2.5
			74 - 117	4
	3x400V 50Hz	GV2ME08	0 - 123	1.5
			124 - 205	2.5
			206 - 328	4
1.8	3x220V 60Hz 3x230V 60Hz	GV2ME14	0 - 26	1.5
			27 - 44	2.5
			45 - 71	4
	3x380V 60Hz 3x400V 60Hz	GV2ME10	0 - 74	1.5
			75 - 124	2.5
			125 - 199	4
2.2	3x230V 50Hz	GV2ME14	0 - 27	1.5
			28 - 46	2.5
			47 - 74	4
	3x400V 50Hz	GV2ME10	0 - 78	1.5
			79 - 130	2.5
			130 - 208	4
2.64	3x380V 60Hz 3x400V 60Hz	GV2ME14	0 - 47	1.5
			48 - 78	2.5
			79 - 125	4

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

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

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