

# TENDER STAR

By

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## *User's guide*

### *Tender Star*

*Electric meat tenderizer type TSHY.*

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# **I. INTRODUCTION**

## **I.1 General introduction**

The electrical meat tenderizer “Tender Star” was conceived according to the latest hygiene and safety regulations.

To make it work correctly and without danger, we would like to ask you to **read it, and have it read by the persons who will have to use, clean and maintain** the tenderizer. This user’s guide is also available in French and in Dutch.

This machine was conceived according to the directive ( **98/79/CE**, and particularly the norms **EN 14121-1: 2007, EN 1672-1, EN 1672-2, EN 292-1, EN 292-2, EN 6024**.

To all the:

- Users
- Buyers
- Persons in charge of the safety
- Teams leaders
- Engineers
- Maintenance staff
- Cleaning staff

Read this handbook before:

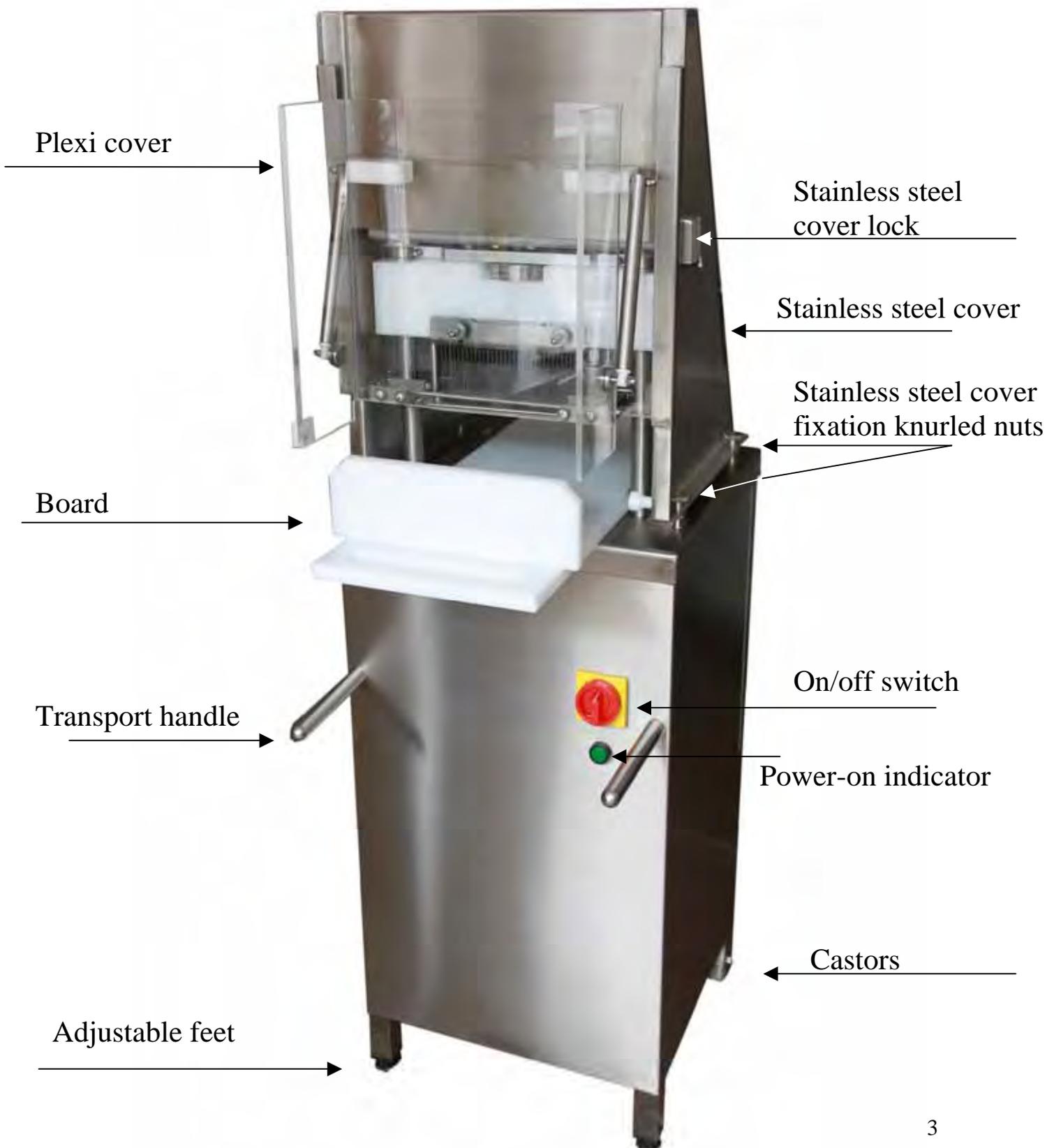
- Installing
- Using
- Cleaning
- Regulating
- Repairing
- Transporting the hydraulic Meat Tenderizer “Tender Star”.

A copy of this handbook must be given to all staff members who are **using, cleaning, maintaining or repairing** this machine. It is extremely important that it is **read and understood** by everyone !

If necessary, these instructions and indications concerning the safety **must** be **explained** to all the persons who cannot read or understand them.

I.2.View of the machine :

a) The tenderizer



## **b) The blade-unit:**

- Blade set
- Strutbar polyacetal
- Stainless steel meat press
- Front fastening bar



## **c) Technical data**

Total height :	160cm
Depth machine :	49cm
Width machine :	52cm
Weight :	115kg
Motor :	220V Tri 7.2A-380V Tri 4.2A
Functioning :	Hydraulic piston
Blade path :	Set by hydraulic piston
Speed of the blade unit :	55 strokes per minute

Unidirectional safety board in polythene.

Dimension of the board :	Length 80cm
	Width 30cm
	Height 26cm

Useful surface : 70cm x 30cm

Maximum thickness of pieces of meat to be tenderized : 12cm

## II. STARTING OFF

### II. 1. Safety advice

The « Tender Star » presents specific dangers such as :

- High voltage
- Pieces in fast rotation
- Cutting edges and blades
- Crushing risk
- As well as other specific devices for the treatment of the meat

Safety involves the responsibility of everyone.

Please take some time to read the safety instructions before installing, starting, maintaining and repairing the machine. **Not observing these instructions could provoke injuries.** If you have any problem or question, take contact with *Paulus Stuart*.

#### II.1a Dangers coming from the machine.



This machine was only designed to tenderize **boneless** and **rindless, fresh** or **unfrozen meat**.

**NEVER** use the machine for any inappropriate use, or for an use for which it was not designed.

**Never** work at the electrical equipment of the machine as long as it is **installed, plugged and/or switched on**. This can only be done by specialized personnel.

All the works concerning **maintenance, repair, regulation and detection of defaults** must only be done when the machine has been **switched off and unplugged**.

**Never** use the machine **without the safety devices** that have been installed .

**Never try to annihilate or modify or withdraw the safety devices and never use inappropriate spare parts, or spare parts that are not certified “Tender Star”.**

IF THE MACHINE WERE TO SHOW ANY DEFICIENCY, ALL WORK WITH IT MUST IMMEDIATELY BE STOPPED!

**If you have any problem with the working of the machine, do not attempt any makeshift repair, but call your technician or *Paulus Stuart*.**

**Only use certified “Tender Star” spare parts.**

**Always keep your Tender Star perfectly spotless!**

**II.1b Dangers coming from an incorrect use :** 

**Never put your hands or any other part of your body** under the blade unit, of the machine when it is plugged in, in running or not!

**Never leave the machine** unattended when it is plugged and turned on (switch on “0”)!

Never touch the blade unit or any other mobile element when the wall-plug is connected (except for the front plexi hood).

Do not try to place the “Tender Star” on **any other foot** than the one it was delivered with.

Never let a child or unskilled persons approach the tenderizer.

Work in a **quiet and safe place** and wear an outfit adapted to the situation.

When you dismantle **the blade unit**, place it in a safe spot where it will not fall or hurt someone. Place the blade unit on a wooden or plastic board so as not to bend the blades.

**This symbol means there is a danger for cutting or mutilation**



## *II.2. Connection and switching the machine on*

### II.2.a .Installation

Place your tenderizer in a calm and safe place. Wear an adapted outfit. Before connecting your tenderizer on circuit, make sure you dispose of TRIPHASE electricity with EARTH AND NEUTRAL CONNECTIONS. The power (220V-380V) will have been adapted to your needs. Be sure to have a sector protection against short-circuit maximum 5KA.

Make sure also that the power of the wall plug is the same as the power of the machine. Place the wall-plug correctly.

### II.b.b Implementation

Make sure the front plexi hood is in « **low** » position.

The board must be pushed into the slides as far as possible. If it has been placed correctly, you will be able so slide it back and forth.

Switching the machine on must be done in two steps :

- Turn the « on-off » switch in front of the machine. If it is plugged correctly, the green power-on indicator light will be lit, and you will be able to start tenderizing.
- When running the tenderizer, the plexi hood will prevent the user or any other person to place his hands under the blade-unit.

Notice : If the machine has a back hood, make sure it is placed correctly. If not, the machine might not start.

### **III TENDERIZING**

When all the doors are locked, the board is set in place and the green pilot light is burning, this means that the Tender Star is ready to tenderize.

You will have to:

Prepare the pieces of meat that should be tenderized and place them within reach. You can put as many pieces of meat as you wish on the board, as long as you stay between the lines. You should limit the meat width to the width of the blade unit.

Close the hood of the front door and grasp the **handle** of the board

Push the board until the meat is under the **blades**.

**Push** the hood down. You will see that this movement makes the blades go down and thus tenderize the meat.

Continue this movement while pushing the board back and forth until all the pieces of meat are tenderized.

As the blades are extremely long they can tenderize very big pieces of meat (max.120mm) but you will have to turn them if they are thicker than 60mm.

When the tenderizing is finished, you can **lift** the cap up, and pull the **board** as far as you can towards yourself.

Extract the tenderized pieces of meat from the board.

**Start over** with a new pieces of meat.

## IV. MAINTENANCE

We advice to dismantle and sterilize every part coming in contact with meat at least every **four** hours, so as to avoid any hygiene problem.

You can clean an sterilize **the blade unit, the board, the two strut bars** and the **meat press** in the dishwasher. You can also sterilize them with any other thermic or chemical mean.

**The frame and the stand** can be cleaned with soap and warm water. You can also use high pressure or steam.

It is strictly forbidden to direct the steam or the water on the switches.

It is **forbidden** to use aggressive cleaning products that might damage the tenderizer, or even scratch its surface.

WHEN YOU REPLACE CERTAIN PARTS OF THE TENDER STAR, MAKE SURE YOU ONLY USE CERTIFIED TENDER STAR SPARE PARTS.

### IV.1. Dismantling

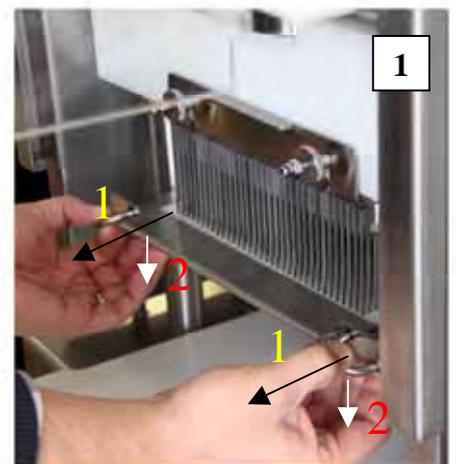


#### **DANGEROUS OPERATION**

This operation should ONLY be done by qualified persons who have read and understood this user's guide!

#### a) The blade-unit :

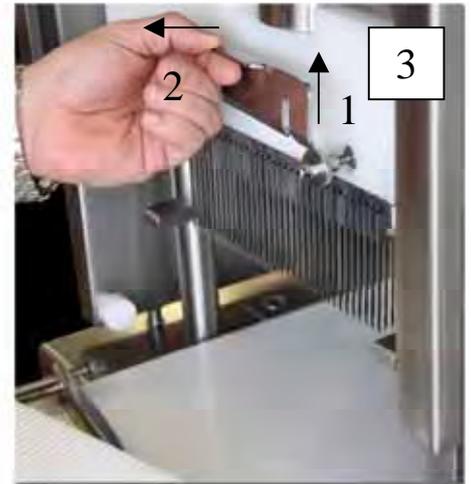
- ① Stand in front of the Tender Star.  
Put the plexi cover in vertical position. Lift the plexi unit (hood and panel) +/- 25cm upwards by sliding them until you reach the latch.  
Pull on the two meat press locks with your thumbs.  
Tip the front of the meat press downwards. Release the back of the meat press by pushing it backwards. Withdraw the strutbar.



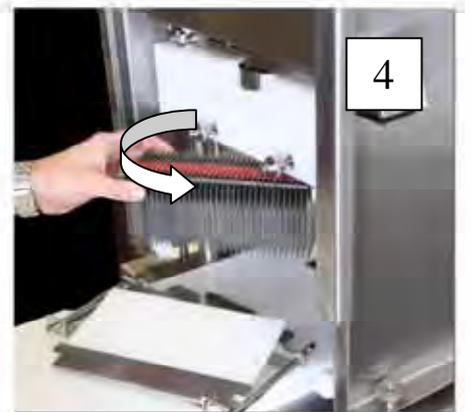
- ② Unscrew the two nuts of the front fastening bar.



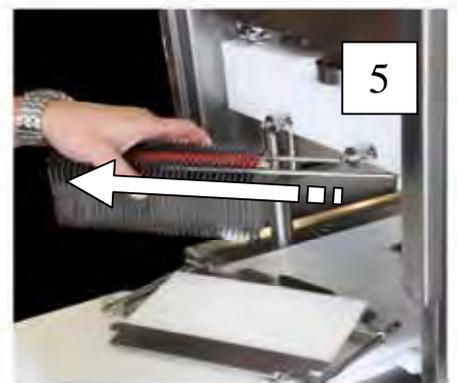
- ③ Withdraw the front fastening bar.



- ④ Pivot the blade unit on its axis by pulling the two support axis towards you. Make sure you do NOT take the blade unit underneath as the blades are very sharp and dangerous!



- ⑤ Slide the blade unit. Put it in a safe place.



**b). The board :**

Make it slid towards the front of the machine.

## IV.b. Mounting :

### a). The Blade-unit :

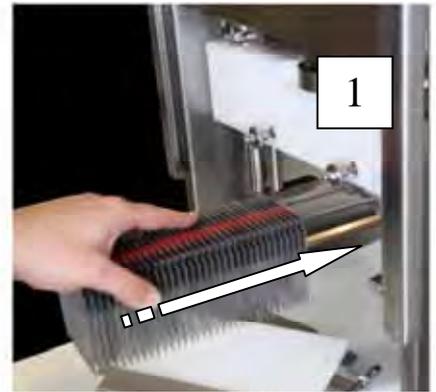
① Stand in front of the Tender and make sure you have all the parts of the machine within reach.

Take the blade unit at its top, and place its two holes in front of the two small bars of the blade unit holder. Slide the blade unit along the two small bars. Make sure you push it against the thrust bearing in the back of the holder. Spin the unit round under the sliding unit. Make sure that you don't bend the two small bars during these operations.

② Replace the front blade unit fastening bar. Screw the two nuts, but do not tighten them thoroughly. Replace the meat press by putting its back in the two skids.

③ Pull the two locks of the meat press and make them slide on top of the front part of the skids.

④ Take the strut bar by the strut bar fixation between your thumb and your forefinger, and inserts its extremities between the blades **on top** of the blade unit. Push the strut bar through the blade unit, so as to make it come out at the back of the blade unit. Push the strut bar down against the meat press. Insert the extremities of the strut bar in the back groove of the meat press. While doing this, make sure you do not bend or brake a blade. Pull the meat press locks and push the strut bar down against the back of the meat press. Release the locks but be sure the bended extremities are above the stainless steel fixation of the strut bar. Screw the two nuts thoroughly



⑤ Lift the plexi hood +/- 1cm. Up and push the latch backwards. **Hold the plexi hood** while still pulling the latch backwards and let the hood slide delicately down towards the stops.

b). The board :

Slide the board in the grooves on the flat top of the frame and make sure the handle is up. Push it till the end.

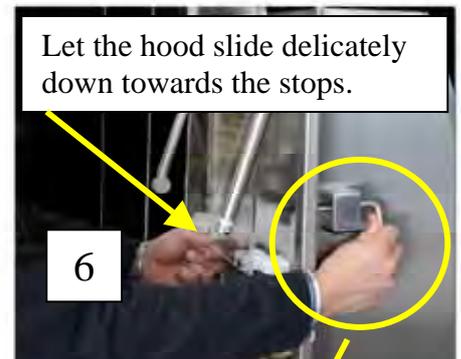
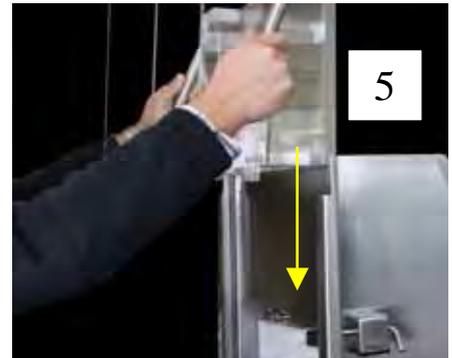
### **IV.3. Sharpening of the blades :**

When the blades of the tenderizer need to be sharpened, they must be returned to “Paulus Stuart”.

Te blades need to sharpened approximately every six months, depending on the frequency of tenderizing, the toughness of the meat and the quality of maintenance and handling. A simple test can tell you if the blades have become blunt or not: look at the cutting edges of the blades.

If there are shining, it means that there is a flat on the cutting edge and that it needs to be sharpened.

Blades that are curved can not be restraightened and sharpened, they must be replaced. They can in some occasions be sharpened when only the cutting edges are bent. This usually happens when the blade unit is being laid on a surface too hard (other than polyacetal), and can be seen when small pieces of meat still hang on the cutting edges after tenderizing.



## **V.TENDERIZING TIPS**

- Put the fibers of you meat parallel to the **length of the board** so as to make tenderizing invisible.
- The blade unit of the tenderizer is placed **diagonally** compared to the board. This means that you will never cut “slices” in your meat. This also means that you will not have to constantly move your meat on the board.
- Make sure you tenderize **boneless, rind less and peeled meat**. Otherwise you might risk making tenderizing visible or even bend or break the blades.
- Do not forget to sterilize each part coming in contact with meat **every four hours at least**. You will be sure then that you will only sell healthy meat.

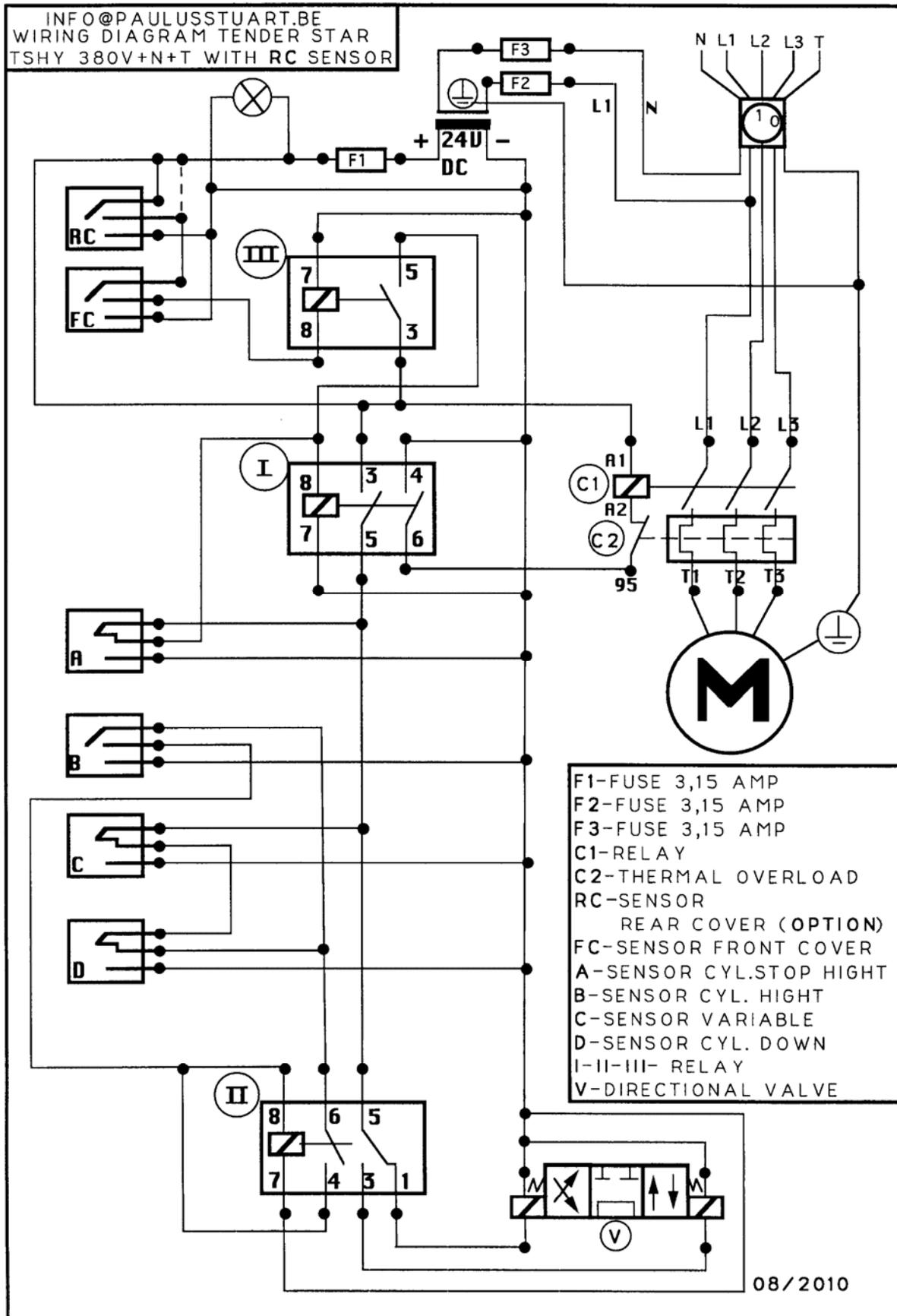
## **VI.TECHNICAL FAILURES**

Before calling a technician, check that the wall plug is connected and that the fuses and the wires are in good condition. Also make sure that the doors are correctly closed and that the board is placed.

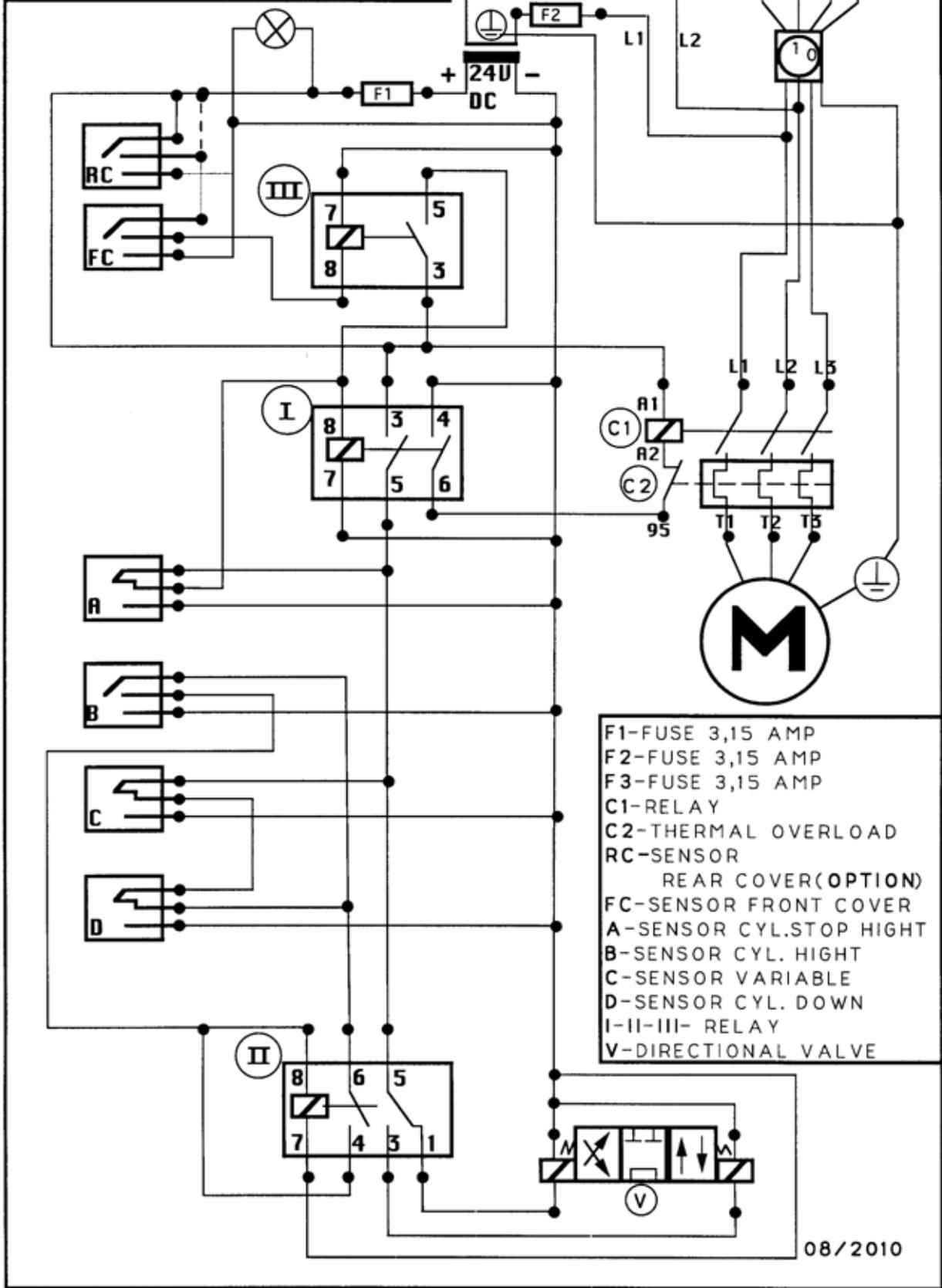
If everything seems normal, and the machine still will not work, call your Tender Star retailer.

**Use only original “Tender Star” spare parts. We do not take any responsibility for accidents that could occur with not original “Tender Star” spare parts.**

## VII. ELECTRIC DIAGRAMS



INFO@PAULUSSTUART.BE  
 WIRING DIAGRAM TENDER STAR  
 TSHY THREE-PHASE 220V+T 50/60HZ



- F1-FUSE 3,15 AMP
- F2-FUSE 3,15 AMP
- F3-FUSE 3,15 AMP
- C1-RELAY
- C2-THERMAL OVERLOAD
- RC-SENSOR  
 REAR COVER(OPTION)
- FC-SENSOR FRONT COVER
- A-SENSOR CYL.STOP HIGHT
- B-SENSOR CYL. HIGHT
- C-SENSOR VARIABLE
- D-SENSOR CYL. DOWN
- I-II-III- RELAY
- V-DIRECTIONAL VALVE

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