USER'S MANUAL

Overhead conveyor
Stainless steel

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COPYRIGHT

GUARANTEE

The data contained in this User's Manual are based on the latest information available at the time of printing. They are supplied subject to subsequent changes.

We reserve the right to change the design and/or configuration of our products at any time, without any obligation on our part to change any previous supplies accordingly.

It should be noted that the guarantee carried by this equipment will become null and void, if:

- the service and/or maintenance operations are not performed strictly in accordance with the User's Manual, repairs are not made by our personnel, repairs are made without our prior written consent
- alterations have been made in the equipment supplied without our prior written permission
- parts other than the original Marel Poultry parts or lubricants other than those specified are used
- the equipment is used in an improper, incorrect or negligent manner, or in a manner inconsistent with its purpose and/or intended use

All parts subject to wear are exempted from the guarantee.

Our General Terms of Delivery and Payment for Export also apply.

PREFACE

IN THIS USER'S MANUAL ....

This user's manual contains information on:
- safety measures
- machine functions
- the required connections
- the settings to be made
- operation
- cleaning
- maintenance

In addition, you will find a listing of possible defects and remedies attached.

This User's Manual has following appendices:
- the Technical Data sheet, which gives the technical specifications of the machine

- the instruction for Cleaning and Disinfection, which gives guidelines for cleaning and disinfection of the machine

- the Spare Parts Book, which gives instructions for parts identfication and ordering

PLEASE REMEMBER !

The purchaser/user has a duty to familiarise the operatives, cleaning and maintenance staff with the instructions given in this manual.

We would like to emphasise to the purchaser/user that additional safety measures may be required, if the equipment is not installed according to the lay-out drawings, or if this is dictated by local authorities.

If you have any questions, please do not hesitate to contact the Marel Poultry service department.

Danger of personal injury caused by sharp objects

Danger of personal injury caused by rotating parts

Danger of personal injury caused by seizure

Danger of personal injury caused by electrical power

Approaching danger zone

SAFETY

KNOW THE PICTOGRAPHS

Marel Poultry equipment has been fitted with safety and protective devices.
Yet it is imperative that caution be exercised when performing machine operations. The adjacent pictographs alert the user to possible dangers. You will find them on the machine and in the text explaining the dangerous operations.

Check at regular intervals that the pictographs are still present in the relevant positions on the machine.

If any pictographs have been lost or damaged, apply new pictographs. Please see section on Maintenance.

UNIT OUT OF OPERATION ?

If the unit is to be taken out of operation for a prolonged period of time or if it is to be dismantled, all hazardous parts such as knives, protruding guides, etc. should be removed.

SAFETY AT WORK !

Marel Poultry has made every possible effort to provide you with comprehensive, accurate information as regards any hazards relating to the operation of the machine. The purchaser / user shall be responsible for the implementation and proper observance of the safety procedures.

We would like to emphasise to the purchaser/user that additional safety measures may be required, if the equipment is not installed according to the lay-out drawings, or if this is dictated by local authorities.

Danger of hearing impairments through noise pollution

NOISE POLLUTION

Marel Poultry designs and builds machines and installations in which noise pollution is reduced to a minimum within reason.

However, as a result of local conditions, it is still possible that staff is subjected to a noise level which can cause hearing impairments.

The noise level of the machine or installation is indicated in the Technical Data sheet.

To prevent hearing impairments caused by excessive noise levels we urge you to provide hearing protection devices for machine operators.

In addition to this urgent advice please bear in mind that legal standards and regulations for noise pollution must, of course, be observed at all times. If necessary, measures must be taken.

We would also like to draw your attention to the fact that incorrect settings and overdue maintenance can lead to noise pollution.

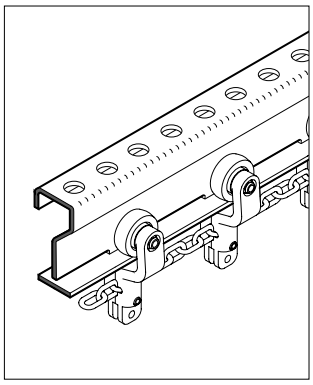

fig.7.1 Sigma profile

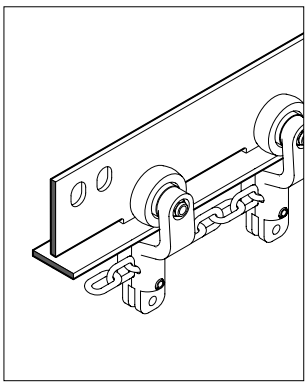

fig.7.2 T-profile

GENERAL

The overhead conveyor carries products through the processing plant. The conveyor is of modular construction. This means that the overhead conveyor, depending upon the required set-up, can be composed of various components.

The installation of the various components of the overhead conveyor is described in this User's Manual. A distinction is made in the manual between the Sigma profile and the T-profile. The T-profile is only fitted on the chilling line, to bridge great lengths.
See figures 7.1 and 7.2.

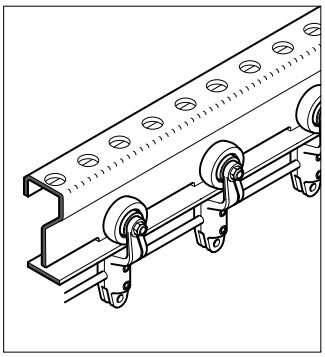

fig.7.3 Trolley with conveyor cable

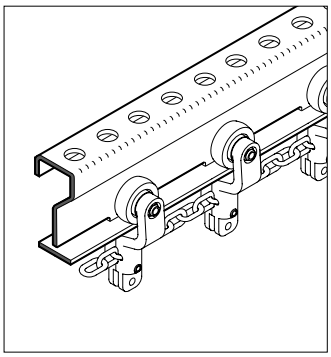

fig.7.4 Trolley with conveyor chain

The trolleys run over the Sigma or T-profile and are fitted on a chain or cable.
See figures 7.3 and 7.4.
The Sigma profile has a standard length of 4500 mm, while the T-profile has a standard length of 6000 mm.

The overhead conveyor for the MX portioning system is equipped with special trolleys, to which the portioning shackle can be attached. See figure 7.5.
The overhead conveyors for the NT portioning system are
fitted with special trolleys. For every two shackle fastening points
there is a single portioning shackle attached.
See figure 7.6.
In the case of dual pack lines (Nu-Tech), the shackle attachment has been removed from each second trolley on the lower overhead conveyor. See figure 7.7.
All trolleys in the Nu-Tech Nuova viscera pack line are fitted with a shackle suspension point.
See figure 7.8

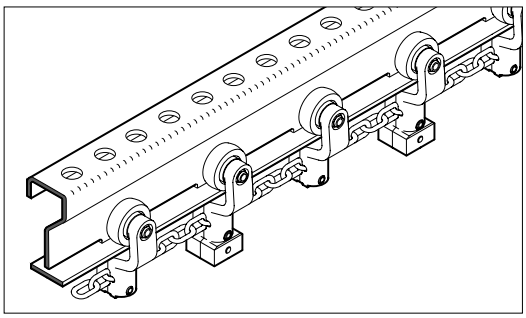

fig.7.5 Trolleys in the MX portioning system

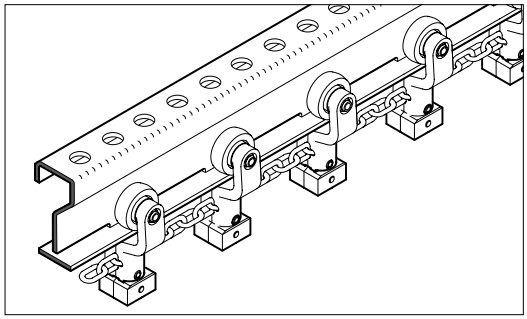

Fig.7.6 Trolleys in the NT portioning system

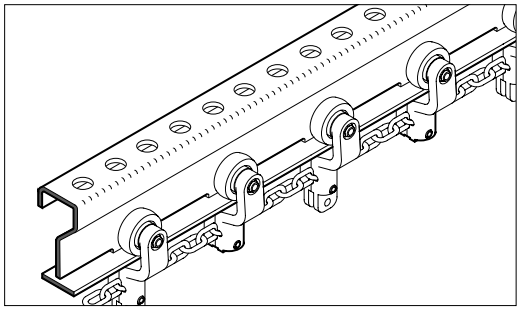

fig.7.6 Trolleys on the pack line

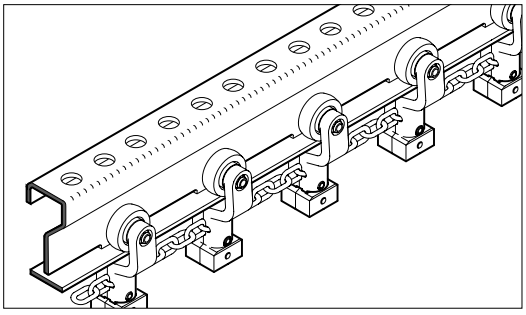

fig.7.7 Trolleys in Nu-Tech Nuova viscera pack line

NAMES USED

1. Drive
2. Track tensioner
3. Conveyor bend 90°
4. Conveyor bend 180°
5. Conveyor section
6. Up/down conveyor section
7. Switchbox
8. Trolley
See figure 8.1.

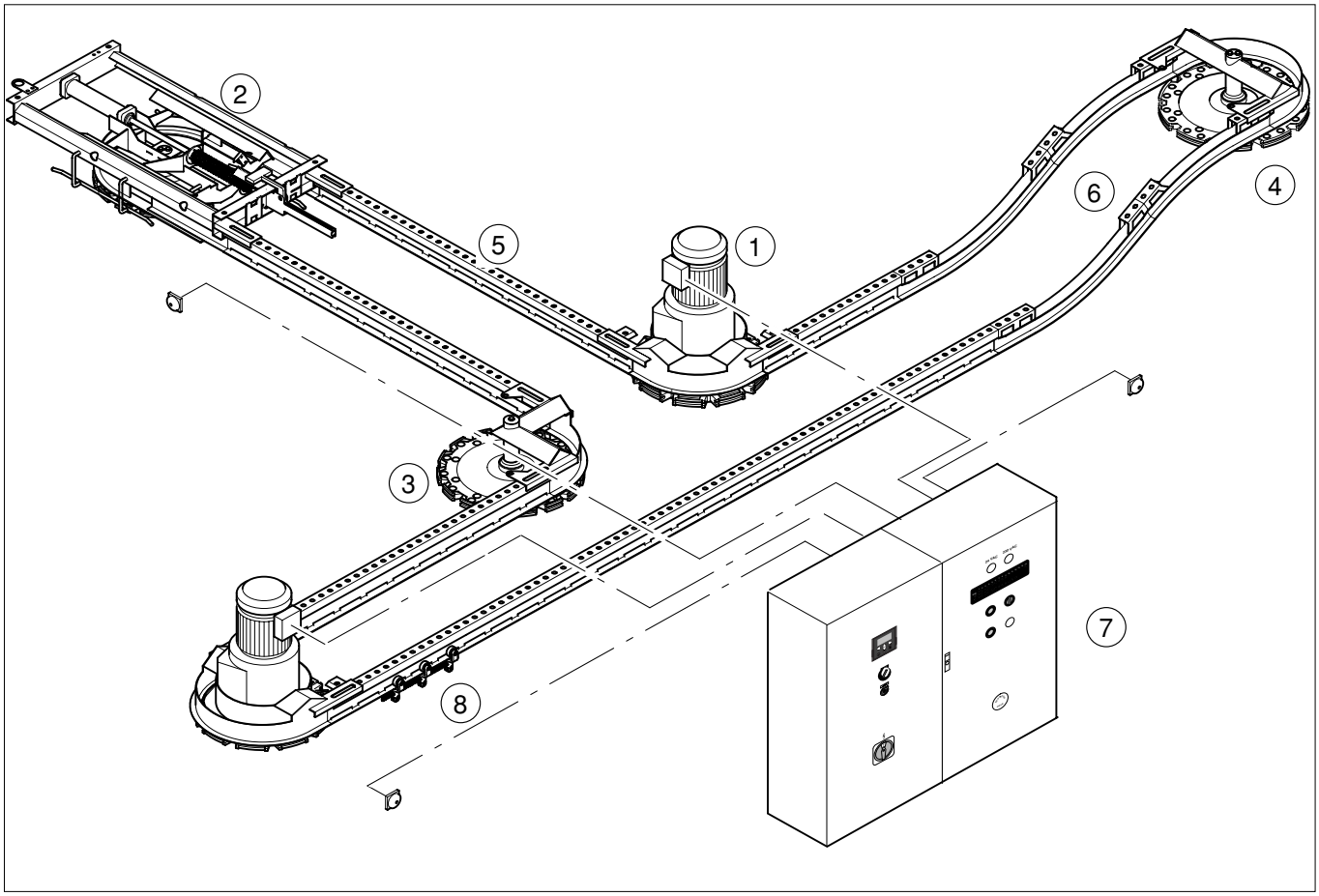

fig.8.1 Sigma profile

FUNCTIONING

The overhead conveyor carries the products through the processing plant. The conveyor is composed of sections which a chain or cable with attached trolleys guides.

Several conveyor bends are fitted on the overhead conveyor, in order to change the direction of travel. Height differences on the overhead conveyor can be coped with by means of up and down conveyor sections.
The overhead conveyor is driven by motors mounted on the conveyor bends.

The cable or chain is pneumatically tensioned by the track tensioner. The track tensioner has a dual function:
1. To eliminate the difference in length of the overhead conveyor by elongation or wear of the cable or chain.
2. To cope with tensioning fluctuations while the overhead conveyor is in operation.

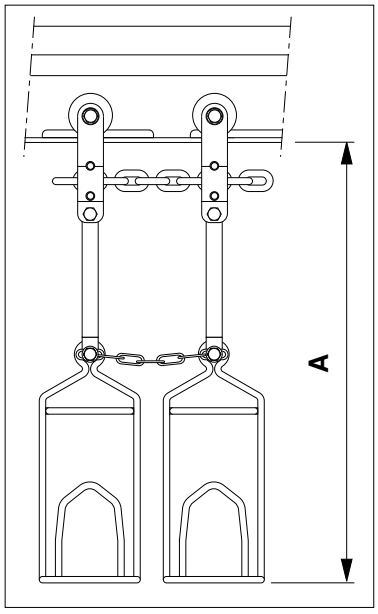

fig.9.1 Killing shackles

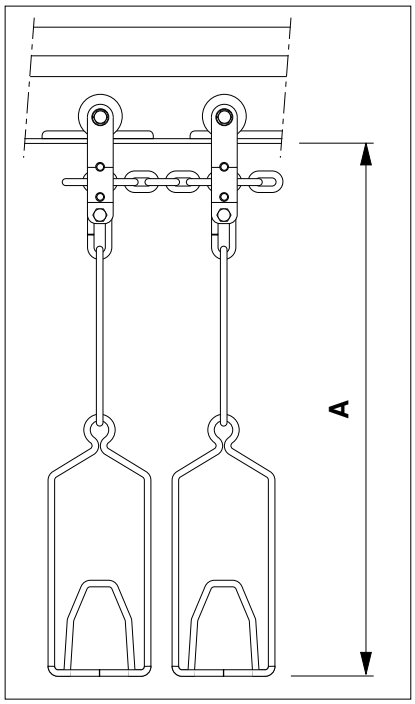

fig.9.2 Evisceration shackles

SET-UP

The overhead conveyor must be set up in accordance with the set-up drawings: the beam plan and the mounting and layout drawings. These drawings are supplied with the equipment by Marel Poultry . For the set-up and connecting data, also see the Technical Data sheet.

> We would like to emphasise to the purchaser/user that additional safety measures may be required, if the equipment is not installed according to the lay-out drawings, or if this is dictated by local authorities.

Check shackle assembly:
- only use shackles and suspension rods approved by Marel Poultry
- bent shackles and significant deviations in shackle assembly **A** can cause breakdowns and serious damage

See figures 9.1 and 9.2

CONNECTIONS

Connections must be carried out by skilled staff.

ELECTRICITY

Always make sure that the voltage supply has been switched off prior to any operation involving the electrical installation of the machine.

When making the connection please check whether the voltage supply and frequency match those indicated on the type plate.
Please make sure that you observe local regulations when making connections.
Also consult the connection specifications given in the Technical Data sheet.

- Make the connections in the switchbox.
- After making the connections (before fitting the drive gear), check the direction of rotation of the drives.
- Connect up the sensors of the track tensioners in the switchbox.
- Connect the valve of the track tensioner in the switch box.
- Connect up the switchbox to the electrical system (also see the User's Manual for Overhead conveyor switchbox).

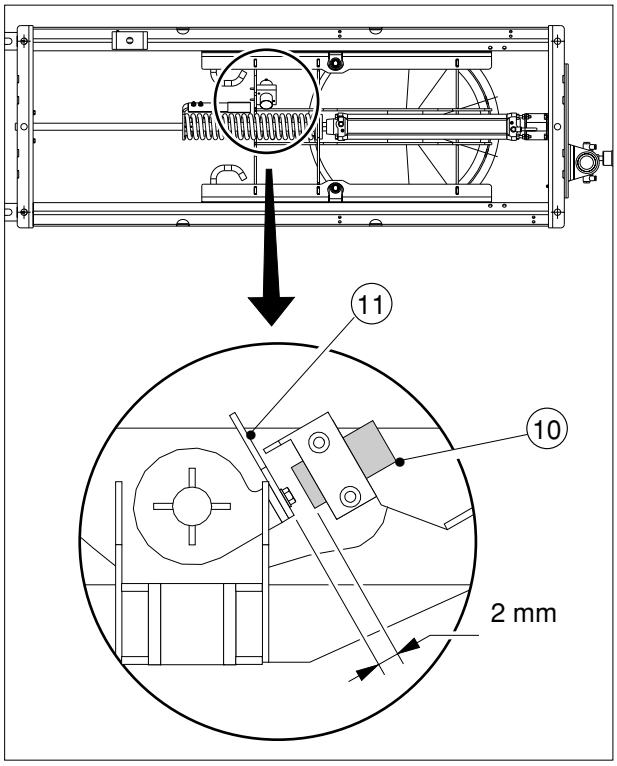

fig.11.1 Track tensioner proximity switch

CONNECTING TRACK TENSIONER PROXIMITY SWITCH

If the force in the overhead conveyor is too large or too small, proximity switch **10** is deactivated. This switches off the drive motor(s) of the overhead conveyor.

> To avoid serious damage to the overhead conveyor, it is essential that the proximity switch functions correctly.

- Connect up proximity switch **10** so that the drive motor(s) of the overhead conveyor is (are) switched off when the proximity switch is deactivated.

See figure 11.1

SETTING TRACK TENSIONER PROXIMITY SWITCH

- Set proximity switch **10** so that the distance between the proximity switch and indication plate **11** is 2 mm.

See figure 11.1.

CONNECTING TRACK TENSIONER TO AIR SUPPLY

Cylinder **13** is controlled using compressed air in order to
bring the track tensioner to the desired tension. The compressed air pressure is regulated by the filter pressure regulator **15**..

- Connect point **14** to the compressed air supply system.

Please see figure 12.1.
Also consult the Technical Data sheet for connection and consumption data.

> The condition of the compressed air must be optimal. Compressed air containing water or contaminations will cause defects and accelerate wear. Mount an air supply unit in the compressed air supply line.

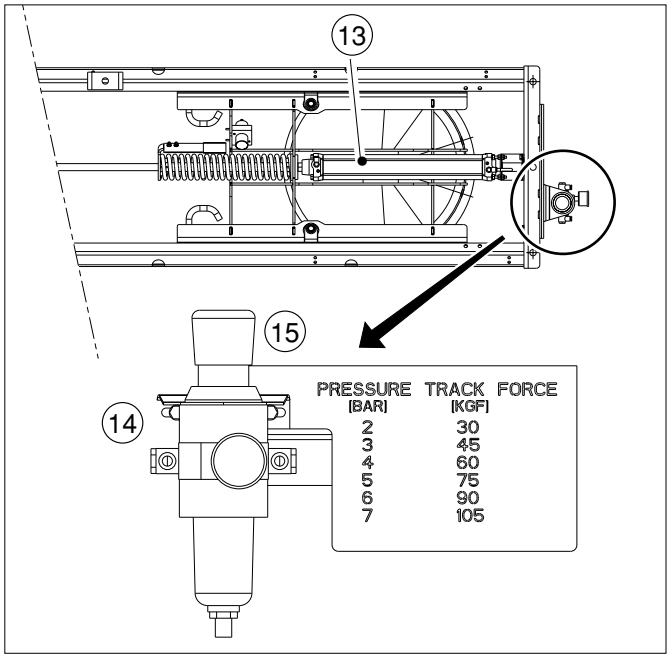

fig.12.1 Compressed air connection

INSTALLATION

Make sure that when alterations are made to an existing overhead conveyor, the conveyor cannot be started. Even when an overhead conveyor is stationary, installation must be undertaken with all due care.

The installation of the various components of the overhead conveyor is described in this chapter.

With the Sigma profile, the conveyor sections must first be installed, followed by the conveyor bends and the drives.

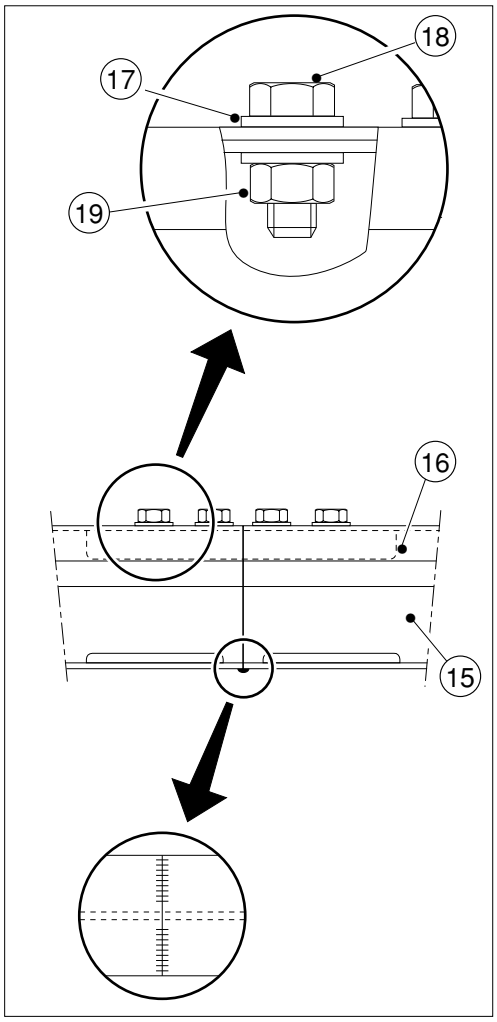

fig.13.1 Joining conveyor sections

JOINING SIGMA-PROFILE CONVEYOR SECTIONS

Join conveyor sections **15** as follows:

1. If necessary, saw the conveyor sections to the correct size at right angles.
2. Remove all burrs.
3. Install the conveyor sections with the aid of connecting profile **16**, washers **17**, bolts **18** (M16 x 35) and nuts **19** (M16).
4. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the two conveyor sections to each other by making a small weld on the underside.

See figure 13.1.

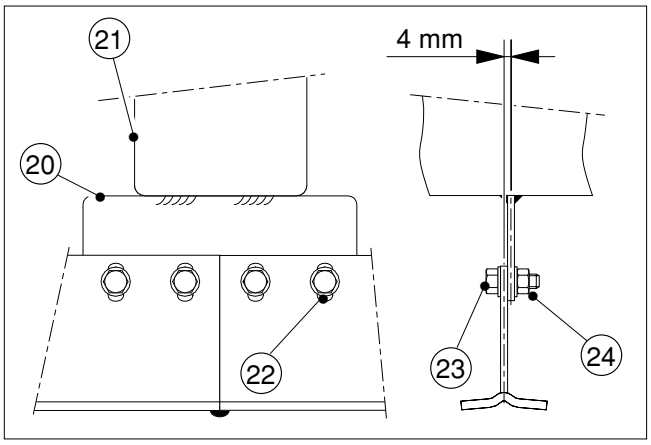

fig.14.1

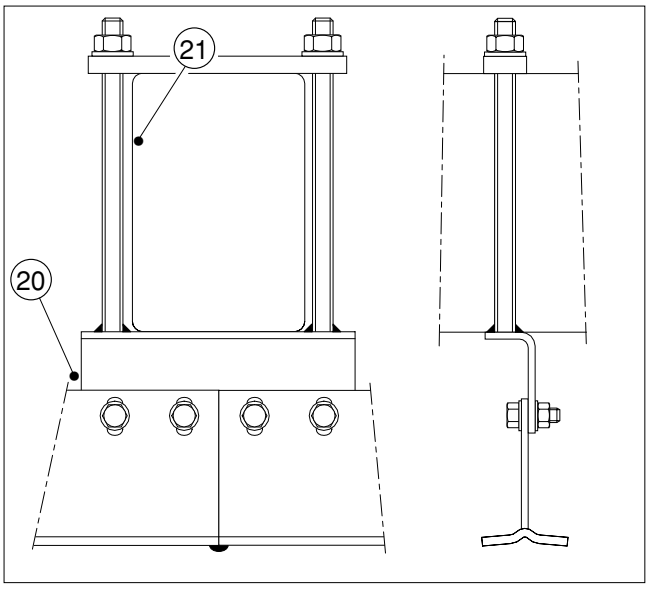

fig.14.2

JOINING T-PROFILE CONVEYOR SECTIONS

The T-profile is used on the chilling line instead of the Sigma profile, in order to bridge great lengths.

Join the conveyor sections as follows:

1. Fit connecting strip **20** on beam **21** by:
   - welding the connecting strip to the beam. See figure 14.1.
   - clamping the connecting strip to the beam. See figure 14.2.
2. If necessary, saw the conveyor sections to the correct size at right angles.
3. Remove all burrs.
4. Install the conveyor sections with connecting strip **20**, washers **22**, bolts **23** (M8 x 25) and nuts **24** (M8).
   If necessary, drill holes in the T-profile.
5. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the two conveyor sections to each other by making a small weld on the underside.

See figure 14.1.

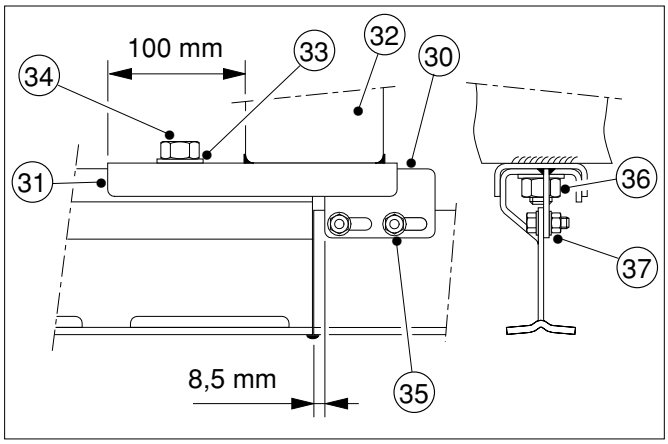

fig.15.1

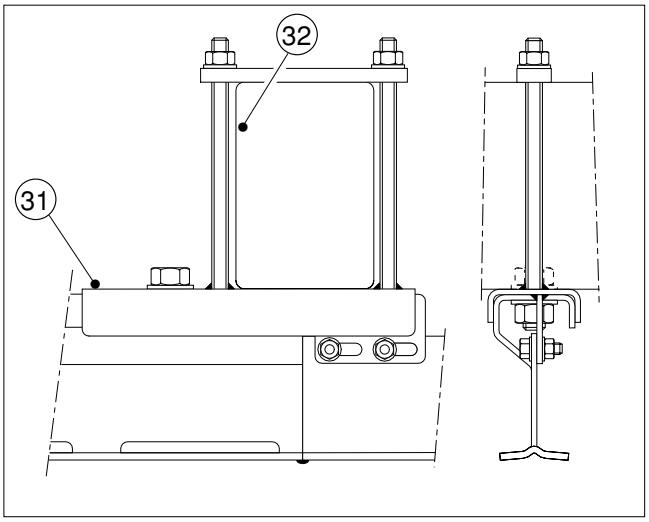

fig.15.2

JOINING SIGMA-PROFILE CONVEYOR SECTIONS TO T-PROFILES

For the sake of stability, no conveyor bend may be fitted on the T-profile. A Sigma conveyor section should therefore be fitted between a conveyor bend and the T-profile.

Join the conveyor sections as follows:

1. Weld plate **30** to connecting profile **31**.
2. Fit connecting profile **31** on beam **32** by:
   - welding the connecting profile to the beam. Make sure that the distance between the edge of the connecting profile and the outside of the beam is 100 mm. See figure 15.1.
   - clamping the connecting profile to the beam. See figure 15.2.
3. If necessary, saw the profiles to the correct size at right angles.
4. Remove all burrs.
5. Install the conveyor sections with the aid of connecting profile **31**, washers **33**, bolts **34** (M16 x 35), bolts **35** (M8 x 25), nuts **36** (M16) and **37** (M8). If necessary, drill holes in the T-profile.
6. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the two conveyor sections to each other by making a small weld on the underside.

See figure 15.1.

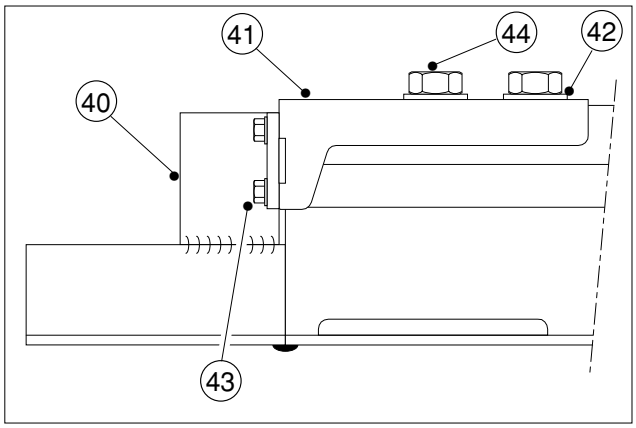

fig.16.1

JOINING SIGMA-PROFILE CONVEYOR SECTIONS TO T-50 PROFILES

Join the conveyor sections as follows:

1. If necessary, saw the profiles to the correct size at right angles.
2. Remove all burrs.
3. Weld coupling plate **40** to the T-50 profile.
4. Install the conveyor sections with the aid of connecting profile **41**, washers **42**, bolts **43** (M6 x 25) and **44** (M16 x 35).
5. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the two conveyor sections to each other by making a small weld on the underside.

See figure 16.1.

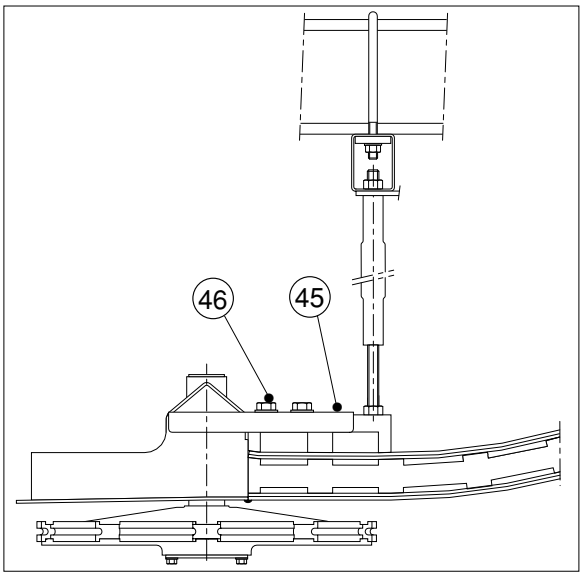

fig.17.1

INSTALLING UP/DOWN CONVEYOR SECTIONS

In order to cope with height differences on the conveyor belt, use can be made of up and down conveyor sections.
The set-up drawings show where they should be installed.

Join the conveyor sections with connecting profile **45**, bolts **46**, (M16 x 35) and nuts (M16), as indicated in figure 17.1.
Inspect the transition between the two conveyor sections. Attach the profiles to each other by making a small weld on the underside.

If the height difference between the conveyor sections is smaller than 500 mm (**B** < 500 mm), the conveyor sections must be installed as shown in figure 18.1. The maximum distance between the mounting rods is 4500 mm.

If the height difference is greater than 500 mm (**B** > 500 mm), a mounting rod can be fitted on the up/down conveyor section. See figure 18.2.

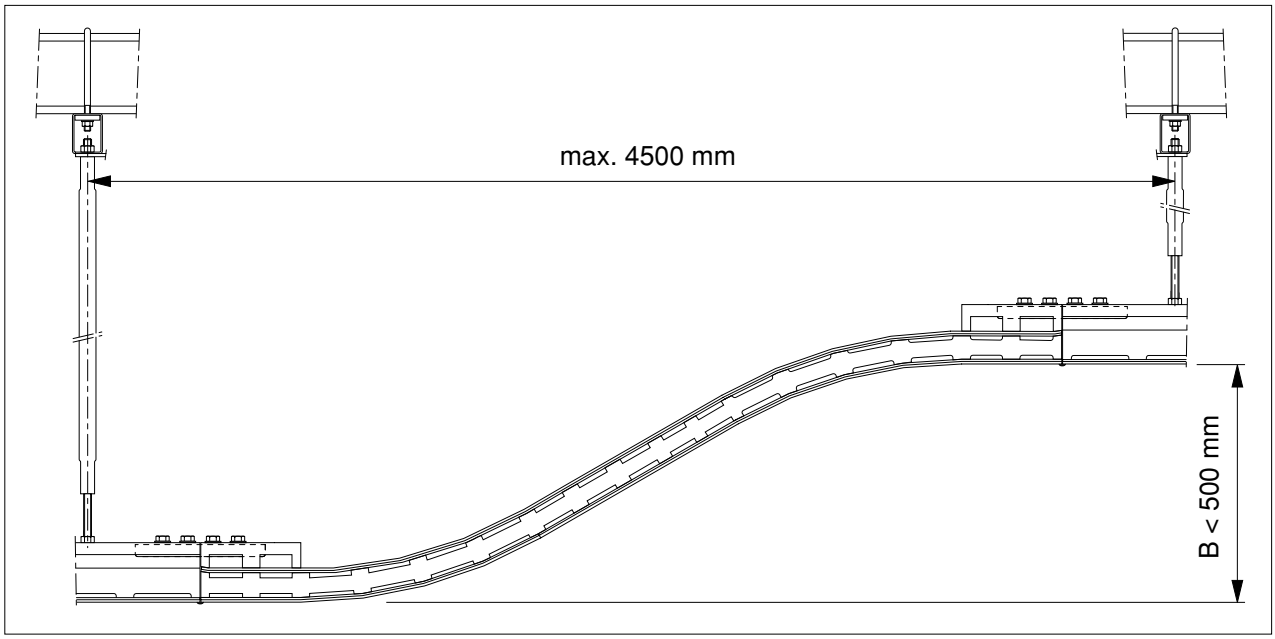

fig.18.1

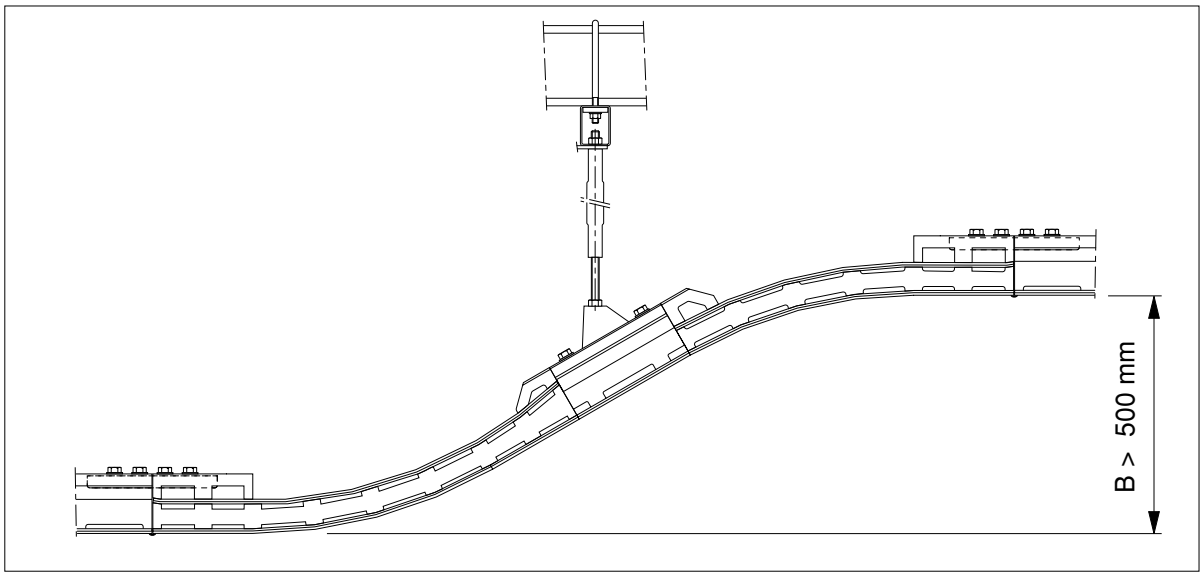

fig.18.2

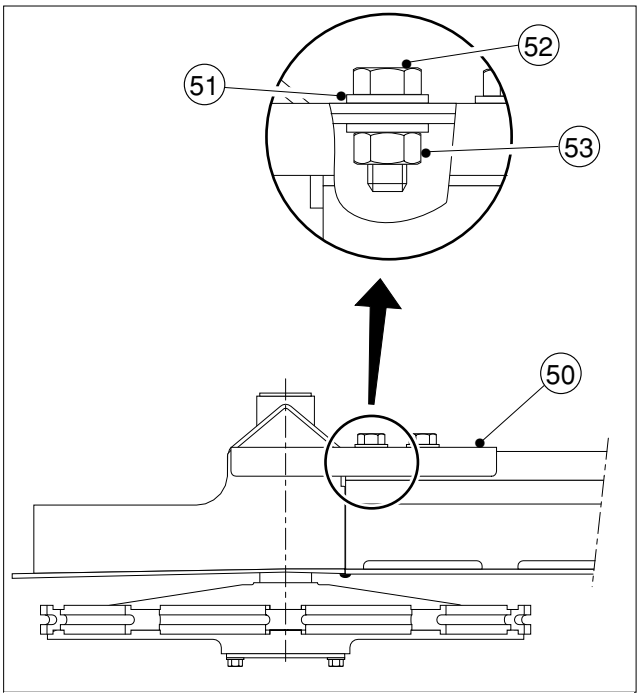

fig.19.1 Fitting conveyor bend to conveyor section

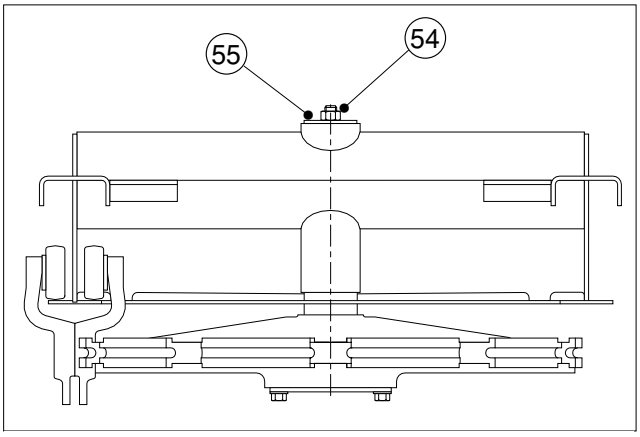

fig.19.2 Fitting curve wheel

INSTALLING CONVEYOR BENDS AND CURVE WHEELS

Bends less than 90° must be suspended from the beams with a mounting rod and brace. See under Installing suspension material and the set-up drawings. Conveyor bends of 90° or more are self-supporting and can be fitted directly on the conveyor sections.

> Make sure that the conveyor sections are absolutely level before fitting the conveyor bends.

Fit the conveyor bend to the conveyor section as follows:

1. Join the conveyor bend to the conveyor section with connecting profile **50**, washers **51**, bolts **52** (M16 x 35) and nuts **53** (M16).
2. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the conveyor section and the conveyor bend to each other by making a small weld on the underside.

See figure 19.1.

Install the curve wheel by tightening nut **54** (M10) with washer **55**. The height of the curve wheel does not need to be adjusted after installing the wheel.
See figure 19.2.

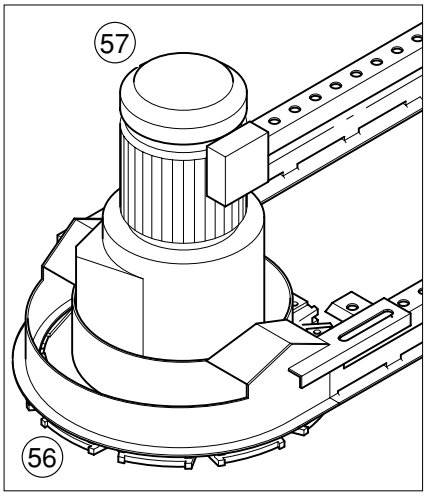

fig.20.1 Drive

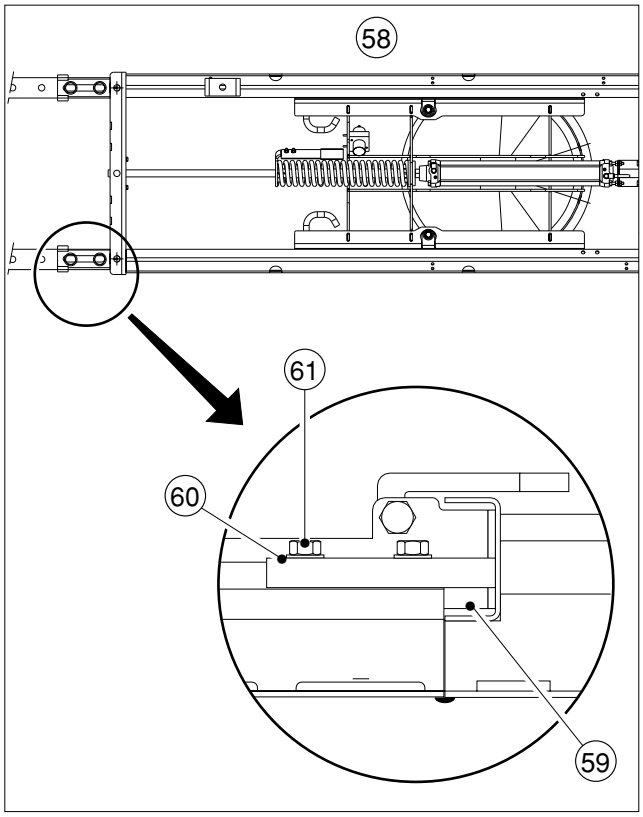

fig.20.2 Installing track tensioner

INSTALLING DRIVE

The motors for driving the overhead conveyor can be fitted on either 90° or 180° conveyor bends.
The set-up drawings show where conveyor bend **56** with drive **57** has to be installed.
See figure 20.1.

> Make sure that the conveyor sections are absolutely level before fitting the drives.

Join the Sigma profile to the conveyor bend as described under Installing conveyor bends and curve wheels.

INSTALLING TRACK TENSIONER

Track tensioner **58** must be installed as shown on the set-up drawings.

> Make sure that the conveyor sections are absolutely level before installing the track tensioners.

Fit the track tensioner to the Sigma profile as follows:

1. Install the track tensioner on the conveyor sections with connecting profile **59**, washers **60**, bolts **61** (M16 x 35) and nuts (M16).
2. Inspect the transition between the two conveyor sections. The conveyor sections must abut correctly against each other, so that there is no break or ridge on the track. The opening between the two conveyor sections should also be minimal. Attach the conveyor section and the track tensioner to each other by making a small weld on the underside.

See figure 20.2.

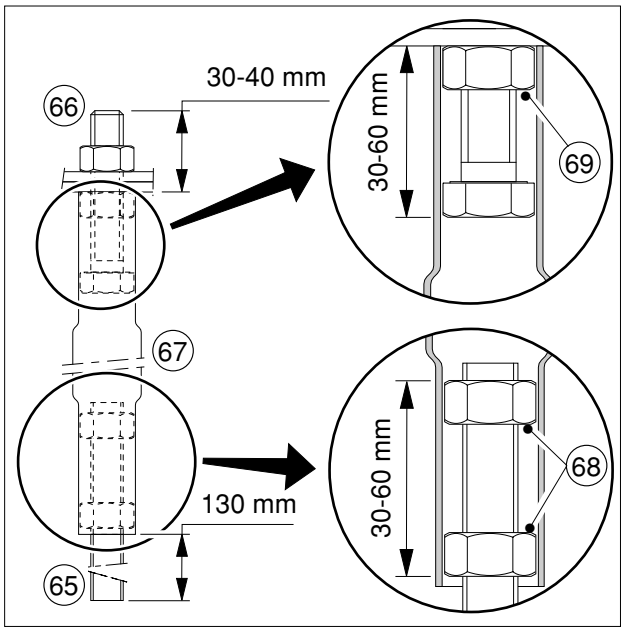

fig.21.1 Mounting rods

INSTALLING SUSPENSION MATERIAL The parts supplied with the equipment by Marel Poultry are used as suspension material.
The mounting rods consists of 33.7 mm dia. stainless steel or galvanized pipes, with stud **65** pressed in at the bottom and bolt **66** at the top.

Install the conveyor sections as follows:
1. Determine the length of the mounting rods.
2. Saw pipe **67** to the correct length. Remove all burrs.
3. Clamp stud **65** (M16 x 200) with nuts **68** (M16) in the pipe using the pipe press.
   See figure 21.1 and the User's Manual for the pipe press.
4. Clamp nut **66** (M16 x 80) with nut **69** (M16) in the pipe using the pipe press.
   See figure 21.1 and the User's Manual for the pipe press.
5. Install the mounting rods as shown in figure 21.2. Since the mounting rods have to be positioned vertically, member **70** is provided with slots.
6. Check whether the conveyor sections are absolutely level. Turn nuts **71** to make the conveyor sections absolutely level:
   - mounting point higher: turn the nuts clockwise
   - mounting point lower: turn the nuts counterclockwise

See figures 21.1 and 21.2.

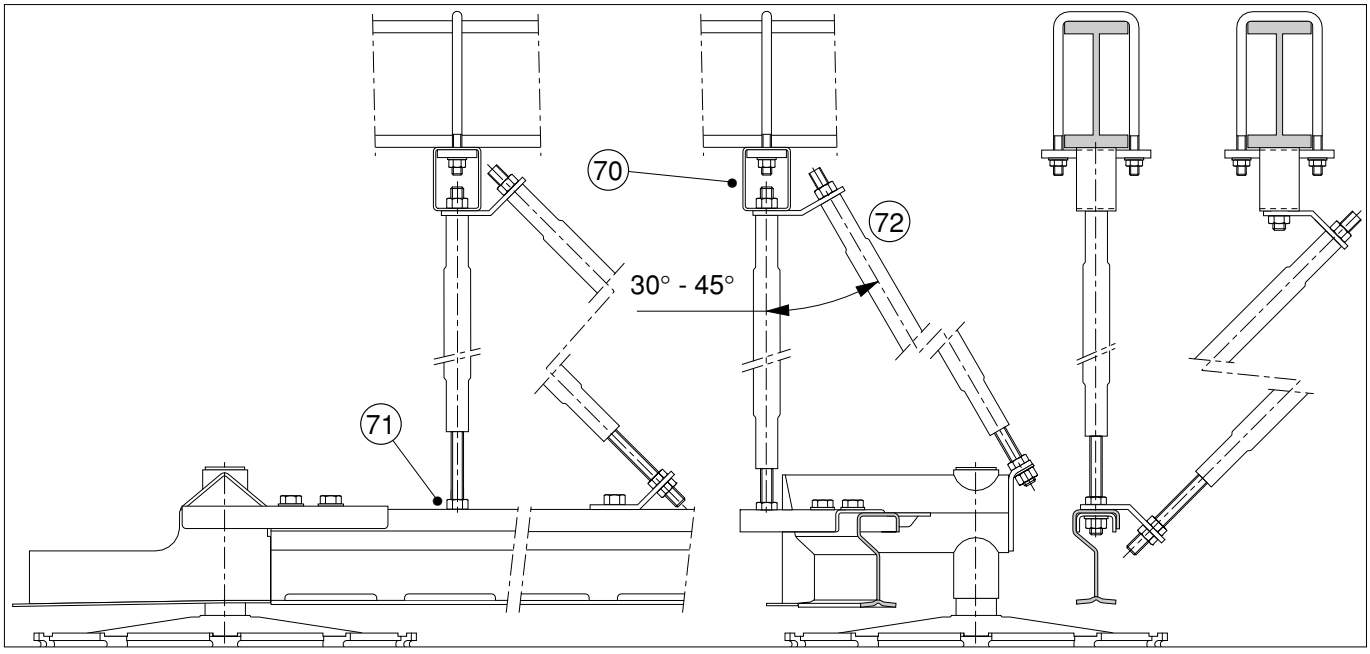

fig.21.2 Clamping braces

Braces **72** are used to obtain sufficient stiffness in the overhead conveyor.
Make sure that the angle between the mounting rod and the brace is between 30° and 45°. Ensure that all the conveyor sections are properly in line.
See figure 21.2.

The braces must be installed in such a way that they are subjected to a tensile load.

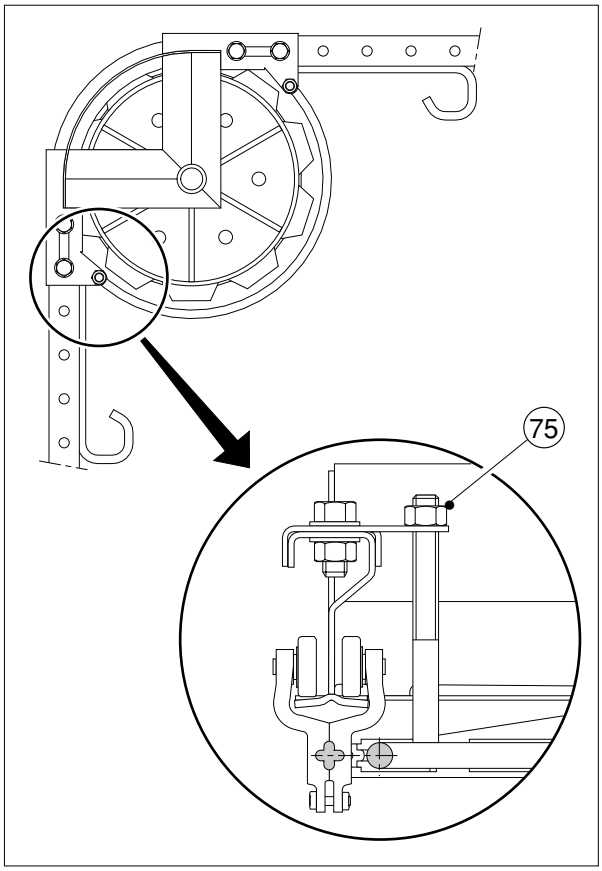

fig.23.1 Protecting bracket, 90° bend

INSTALLING PROTECTING BRACKET

To prevent fingers getting caught between the curve wheel and the chain or cable, protecting brackets are provided at a number of conveyor bends.
Conveyor bends which have to be provided with a protecting bracket are indicated on the set-up drawings.

Install the protecting bracket as shown in figure 23.1. Make sure that the centre of the protecting bracket is in line with the centre of the chain or cable. Set the height of the protecting bracket by turning nuts **75** (M16).

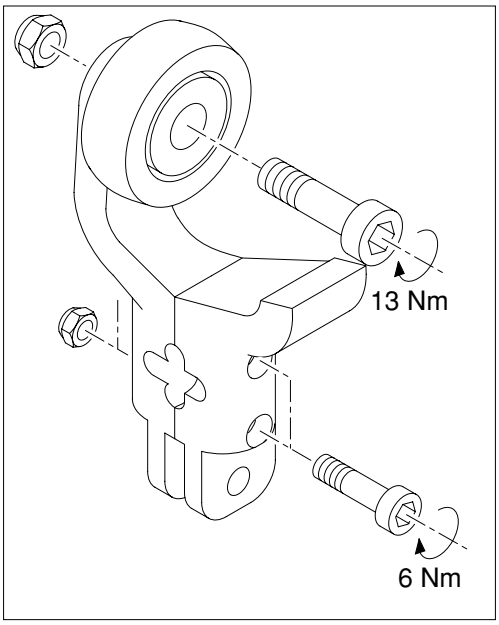

fig.24.1 Plastic trolley chain

INSTALLING TROLLEYS

The trolley consists of two equal halves and is fitted on a chain or cable.
Install the trolley halves as shown in figures 24.1, 24.2 and 24.3.

For fitting the trolleys use the bolts supplied by Marel Poultry.

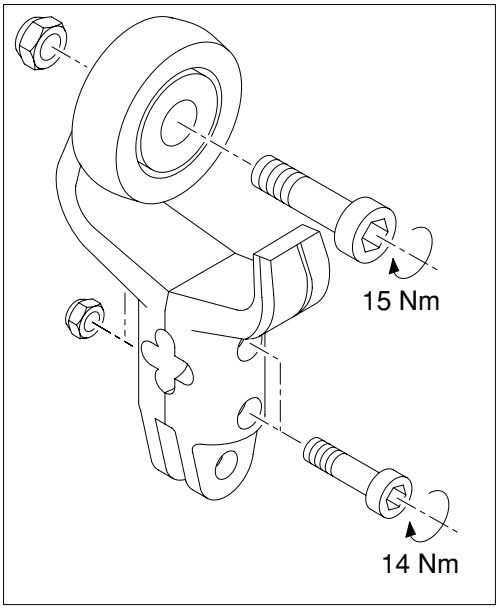

fig.24.2 Aluminium trolley chain

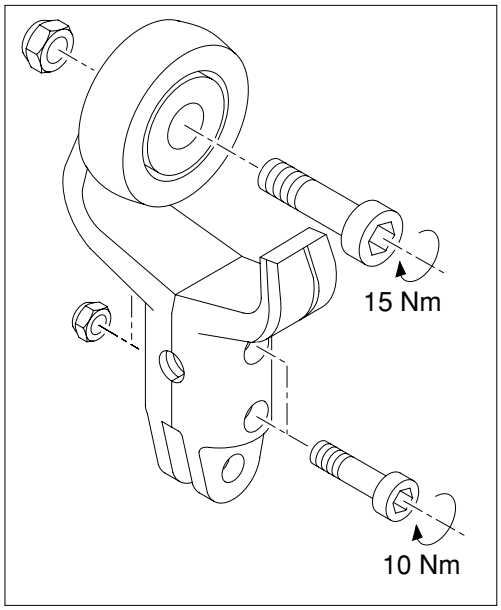

fig.24.3 Aluminium trolley cable

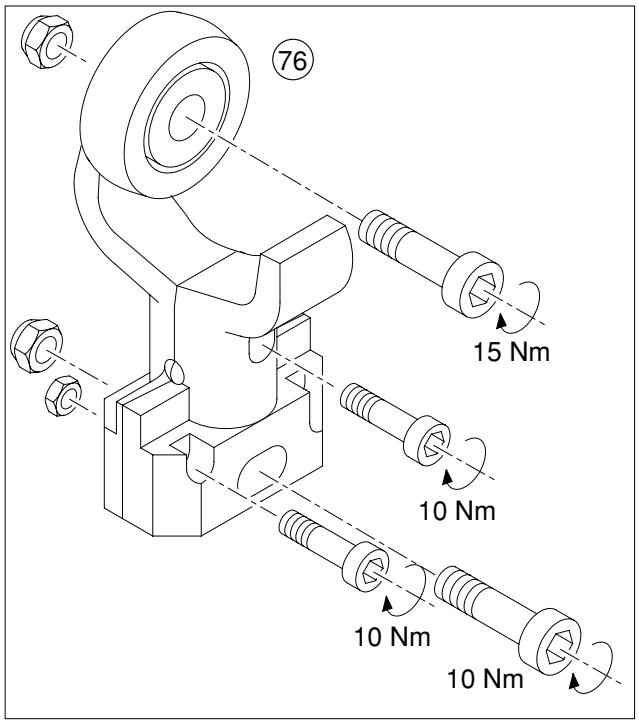

fig.25.1 Closing trolley

INSTALLING CONVEYOR CABLE

After the trolleys have been attached to the conveyor cable, the conveyor cable or chain can be installed.

Install the conveyor cable as follows:

1. Join the two cable ends together, using the assembly fixture.
2. Connect up the ends of the cable with closing trolley **76**. Install the trolley halves as shown in figure 25.1.

Make sure that the distance between trolleys and closing trolley remains the same.

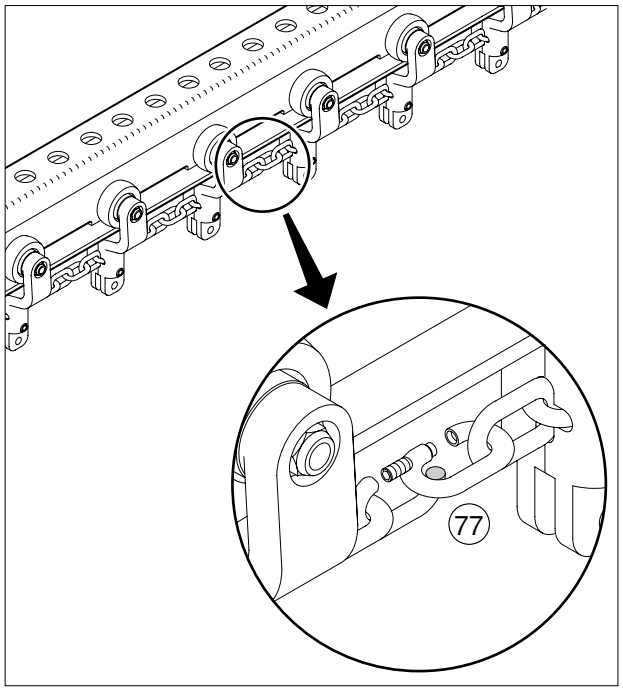

fig.25.2 Closing link

INSTALLING CONVEYOR CHAIN

Connect up the ends of the conveyor chain with closing link **77**.
See figure 25.2.

If a new chain is used in combination with an old chain, the length of the old chain may then at most deviate:

- 20 mm from the length of a new chain, measured over a distance of 10 trolleys with a pitch of 6"
- 18.5 mm from the length of a new chain, measured over a distance of 7 trolleys with a pitch of 8"
- 20 mm from the length of a new chain, measured over a distance of 6 trolleys with a pitch of 10"
- 20 mm from the length of a new chain, measured over a distance of 5 trolleys with a pitch of 12"

Tension the cable or chain with the track tensioner. See under Tensioning track tensioner.

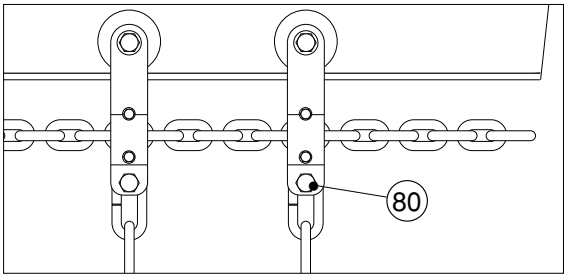

fig.26.1 Installing eviscerating-line shackle and killing-line shackle

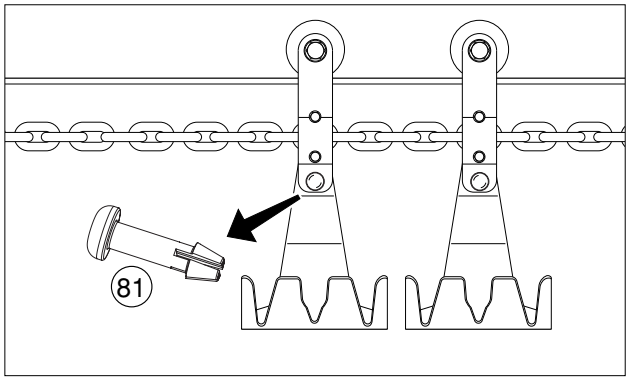

fig.26.2 Installing chilling-line shackle

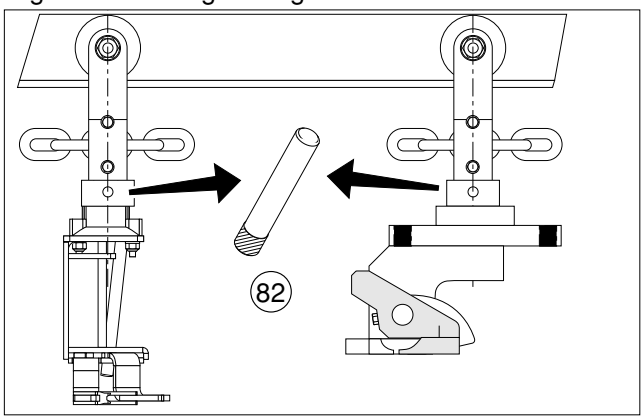

fig.26.3 Installing viscera shackle and portioning-line shackle

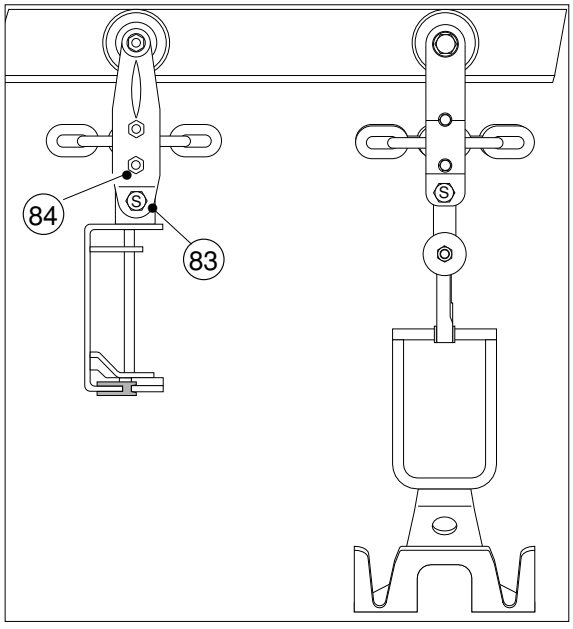

fig.26.4 Installing viscera shackle and grading-line shackle

INSTALLING SHACKLES

Depending upon the product, product weight and the manner of hanging, various types of shackle have been developed.

Install the shackles, except for chilling shackles type KD and KDM, with bolt **80** (M8 x 35) and locknut (M8). Tighten the bolt fingertight.
See figure 26.1.

Install the chilling-line shackle as follows:
1. Install the shackle with plastic pin **81.** Secure the pin by carefully hitting the pin with a plastic hammer.
See figure 26.2.

Install the viscera shackle type Nu-Tech Nuova and the portioning-line shackle as follows:
1. Place pin **82** with the milled side in the shackle.
2. Secure the pin by carefully hitting it with a plastic hammer.

See figure 26.3.

Install the viscera shackle type Nu-Tech and the grading-line shackle as follows:
1. Install the shackle with Marel Poultry bolt **83** (M8 x 35). This bolt has a thread length of 13 mm and a mark "S" on the head. Tighten the bolt to a torque of 13 Nm, clamping the shackle in the trolley.
2. Tightening bolt **83** may slacken bolt **84**. If necessary, tighten bolt **84**.

See figure 26.4.

> The use of a pneumatic impact wrench to tighten the nut is strongly advised against.

> For fitting the shackles use the bolts supplied by Marel Poultry.

INSTALLING SHACKLE GUIDES

The shackle guides guide the shackles, so that the products hang in the right position for processing. The shackle guide consists of brackets **85**, to which guide rod **86** is welded.
The brackets are supplied in various heights **C**. The height depends upon the type of shackle.

Install the shackle guides as follows:

1. Determine the position of the shackle guides. The position of the guides can be found on the set-up drawings.
2. Fit bracket **85** with connecting plate **87** to the Sigma profile with bolts **88** (M16). The distance between the brackets must be between 1.5 and 2 metres.
3. Weld guide rod **86** to the brackets.

See figure 27.1.

To prevent the shackle guide engaging a shackle, the shackle guide is provided with an entry loop at the beginning.
See figure 27.2.

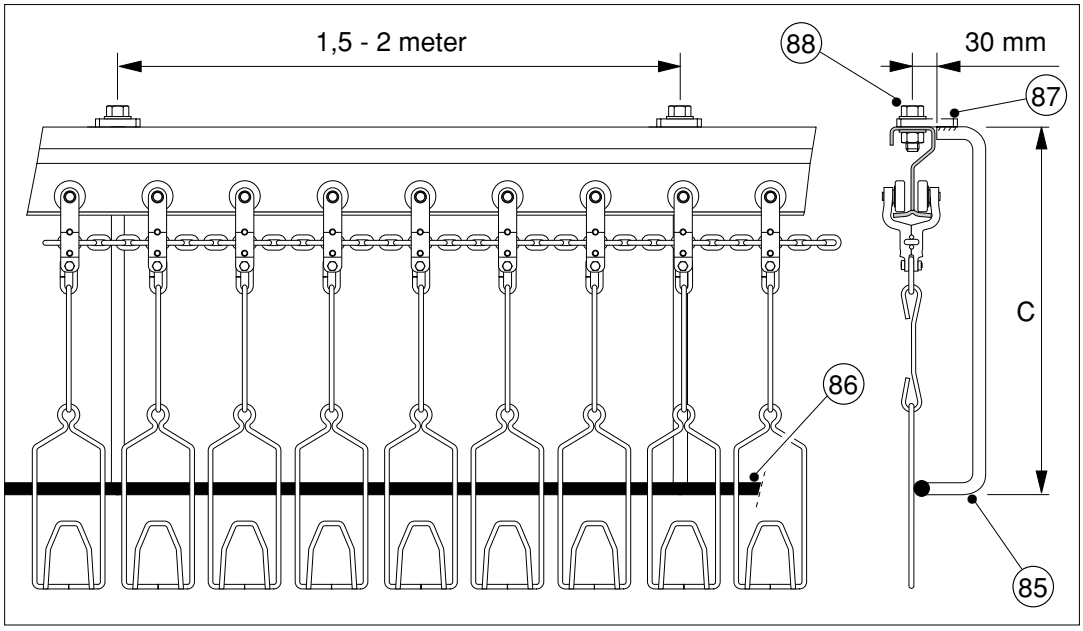

fig.27.1 Shackle guide

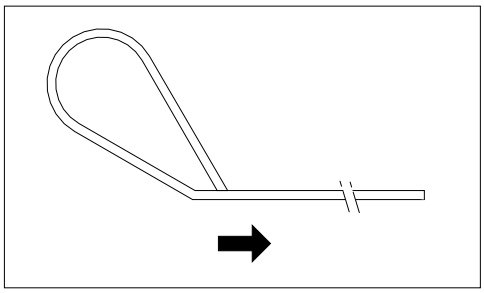

fig.27.2 Top view of entry loop

SETTINGS

Setting operations should only be carried out when the machine is stationary. Even when the machine is stationary, setting operations must be carried out with extreme care.

Setting operations must be carried out by skilled staff.

The setting data given below are basic data, which may have to be adjusted for proper machine performance.

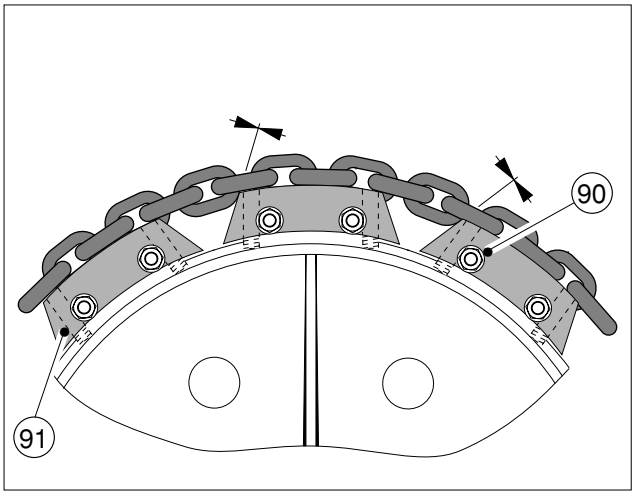

fig.28.1 Chain teeth correctly adjusted

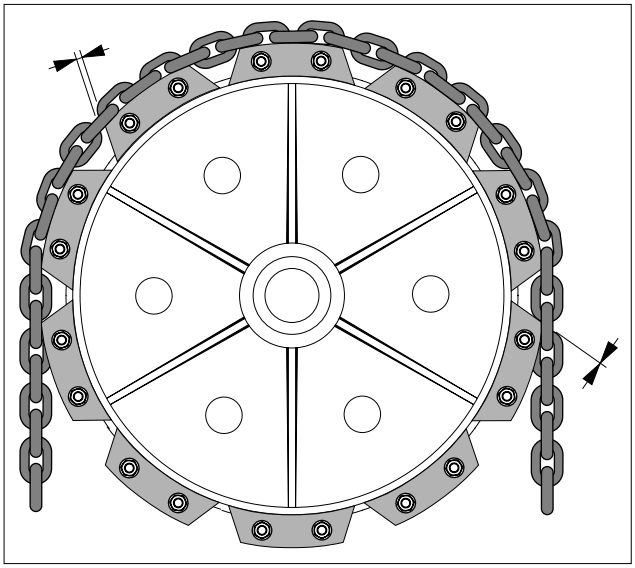

fig.28.2 Chain teeth require adjustment

SETTING CHAIN TEETH

To avoid rapid wear of the chain teeth, they must be reset regularly.
In figure 28.1 the chain teeth are correctly set. The chain teeth of figure 28.2 must be reset.

Set the chain teeth as follows:
1. Unscrew fixing bolts **90**.
2. Turn socket head screws **91**:
   -clockwise: chain teeth outwards
   -counterclockwise: chain teeth inwards
3. Tighten the fixing bolts.

See figure 28.1.

Make sure that the adjustment is the same for all the teeth of each wheel.

TENSIONING / SLACKEN TRACK TENSIONER

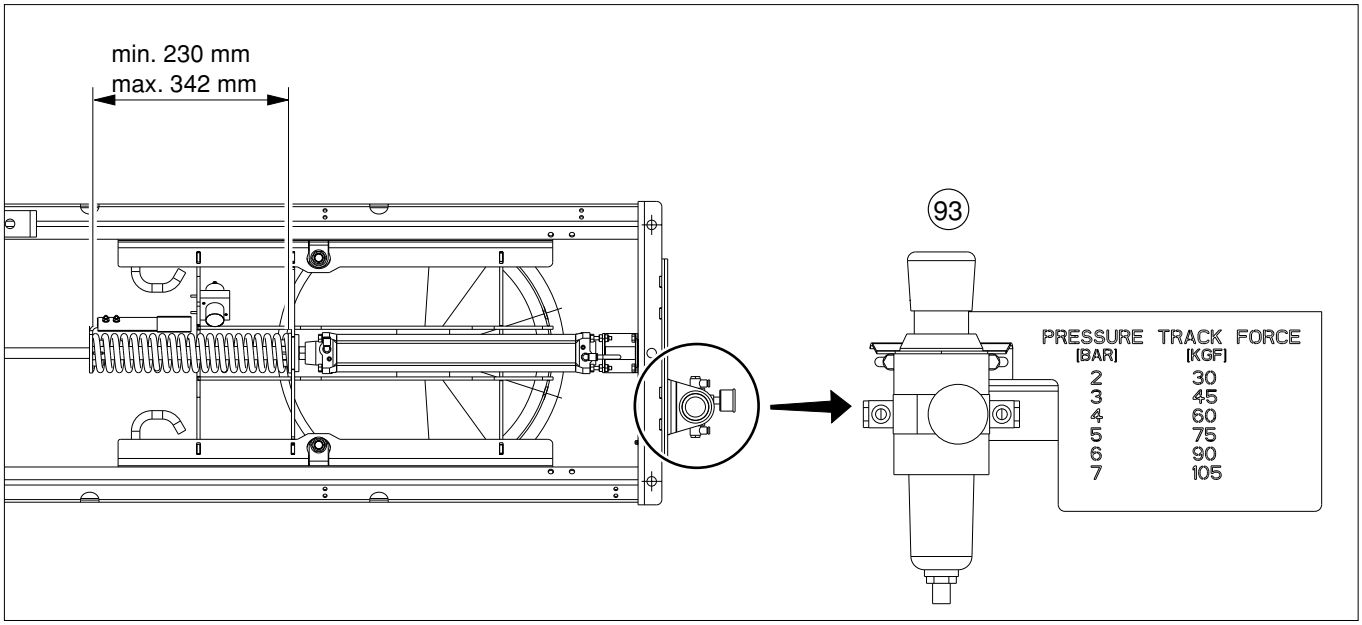

fig.29.1 Indication plate

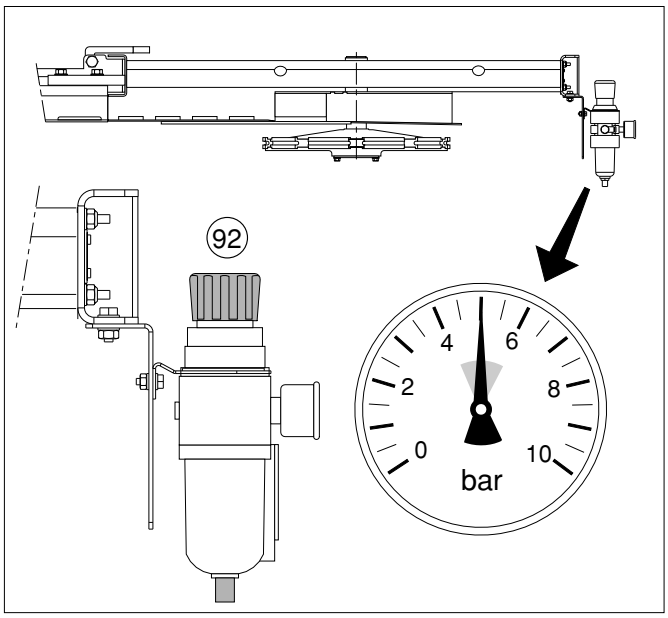

fig.29.1 Tensioning track tensioner

The track tensioner is fitted with indicator plate 93. On the indicator plate the compressed air pressure to be set is shown with the associated track force (TRACK FORCE).
See figure 29.1.

Tension the track tensioner
Tension the track tensioner by setting the compressed air pressure.

Tension the track tensioner as follows:
1. Pull out knob **92** on the filter/pressure regulator.
2. Use the knob to set the desired tension for the track tensioner. The tension must lie between 400 kP and 600 kPa.
3. Push knob **92** in.

See figures 29.1 and 29.3.

While the overhead conveyor is in operation, the spring is compressed more or less. The overhead conveyor must be switched off if the spring length becomes shorter than 230 mm (track force is 200 kgf) or longer than 342 mm (track force is 40 kgf).

Slacken the track tensioner
Slacken the track tensioner by turning the knob **92** anti-clockwise until the clamp curve is fully slackened.
See figure 29.2.

If the overhead conveyor is switched off, the track tensioner must be retensioned. Proceed by briefly switching on the valve.

OPERATION

The purchaser/user has a duty to familiarise the operatives, cleaning and maintenance staff with the instructions given in this manual.

During machine operation, it is possible to come within reach of danger zones.

PLEASE READ THIS BEFORE SETTING THE MACHINE INTO OPERATION

■ EMERGENCY STOP!!

If different or supplementary safety devices are provided locally, observe the appropriate instructions.

If a defect occurs or an emergency situation arises, you must depress the emergency stop switch or pull the emergency stop cord.
See figures 31.1 and 31.2.

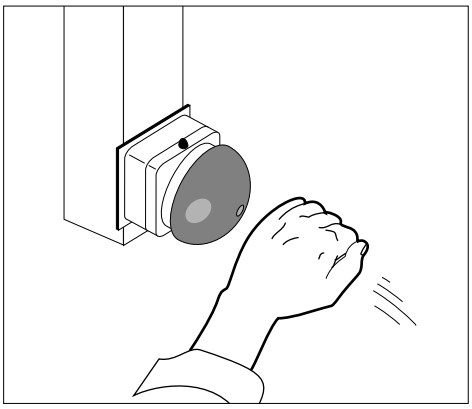

fig.31.1 Emergency stop

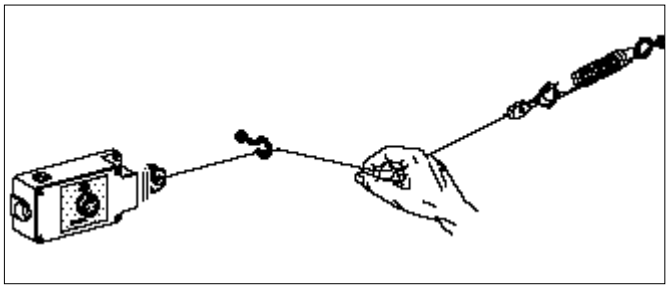

fig.31.2 Emergency stop cord

Please make sure that no one is working on the machine, before lifting the interlock.
Alert everyone before putting the machine into operation.

If you depress the emergency stop switch or pull the emergency stop cord, the emergency stop device is locked.
After remedying any defects, you can release the lock by depressing the button on the emergency stop device.

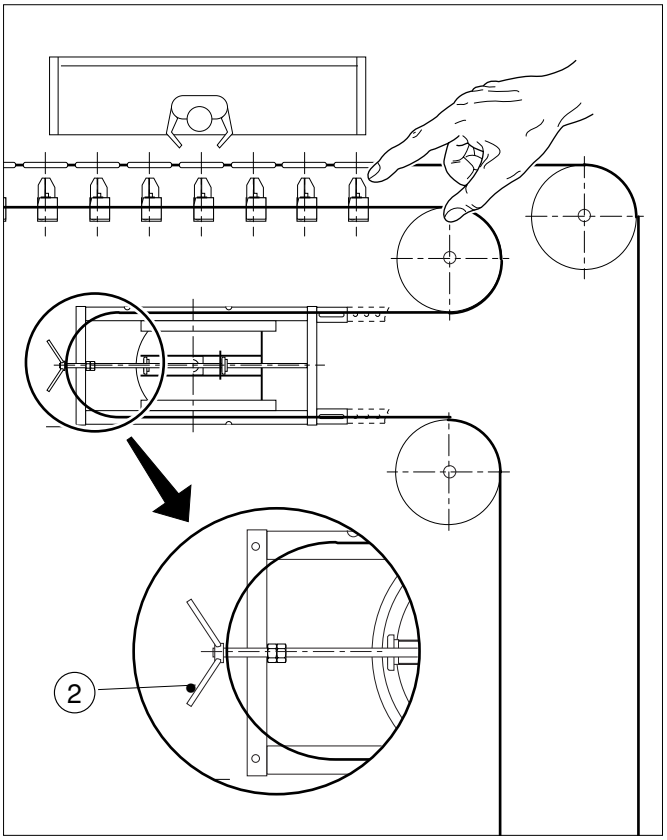

fig.32.1 Synchronisation of viscera-pack line and eviscerating line

■ **SETTING SYNCHRONISATION BEND WHIILE THE OVERHEAD CONVEYOR IS IN OPERATION**

Setting the synchronisation bend takes place when the overhead conveyor is in operation. Set the synchronisation bend with due care.

When the viscera pack has been removed, it is rehung into the viscera pack line. The product remains in the eviscerating line. In order to inspect the product with the corresponding viscera pack, the lines must run synchronously.

Set as follows:
1. Set the track tensioner. See Tensioning track tensioner.
2. Start the overhead conveyor. See User's Manual Overhead conveyor switch box.
3. Set with wheel **2** the viscera-pack line and the eviscerating line so the lines run synchronously at the inspection station.

See figure 32.1.

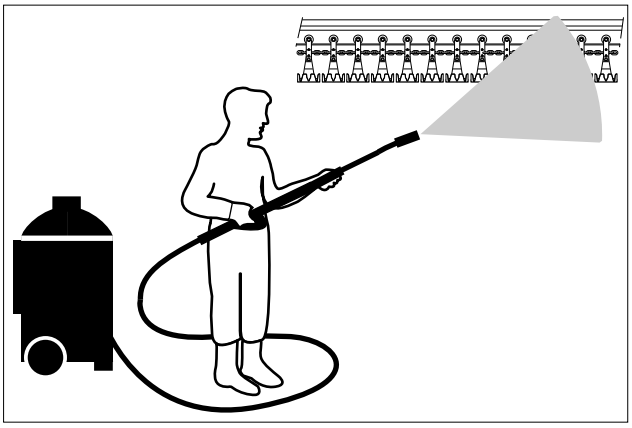

fig.32.2 Cleaning

CLEANING

Cleaning operations should only be carried out when the machine is stationary. Even when the machine is stationary cleaning operations must be carried out with extreme care.

Never remove, by-pass or block safety devices.

Please take measures to ensure that the overhead conveyor cannot be started.

- Clean the machine daily both inside and out. Also see the instructions in Cleaning and disinfection.

MAINTENANCE

Maintenance operations should only be carried out when the machine is stationary. Even when the machine is stationary maintenance operations must be carried out with extreme care.

Never remove, by-pass or block safety devices.

Maintenance operations must be carried out by skilled staff.

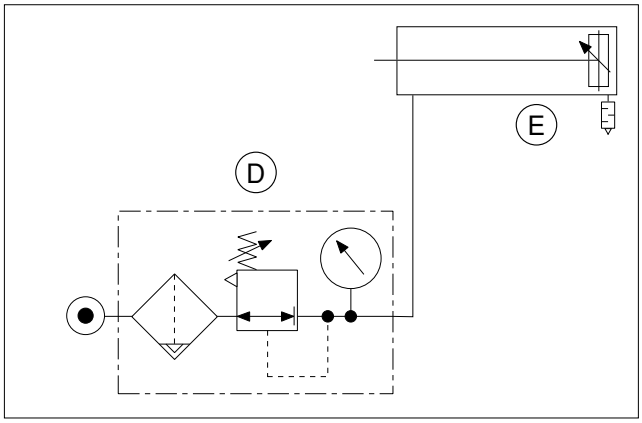

fig.33.1 Pneumatic diagram

PNEUMATIC DIAGRAM OF TRACK TENSIONER

See figure 33.1.

D Filter/pressure regulator
E Pneumatic cylinder for tensioning track tensioner

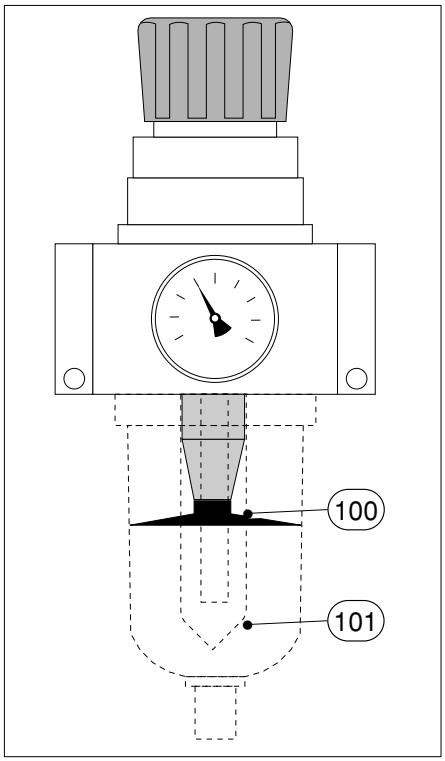

fig.33.2 Filter/pressure regulator

TRACK TENSIONER FILTER/PRESSURE REGULATOR

Monthly

- Clean filter cartridge **100** of the filter/pressure regulator as follows:
  1. Stop the supply of compressed air.
  2. Unscrew reservoir **101**.
  3. Unscrew filter cartridge **100**.
  4. Clean the filter cartridge with a solvent.
     Do not use aggressive substances for cleaning, such as ; benzol, acetone, glycerin, chloroform, methanol, etc.
  5. Use compressed air to blow dry the filter cartridge from the inside out.
  6. Mount the filter cartridge and the reservoir.

See figure 33.2.

PREVENTIVE MAINTENANCE

For optimum technical operation of the overhead conveyor, you are advised to make the following checks:

100 hours after putting into operation

- Tighten trolley bolts.

Daily

- Check the operation of the safety devices and any indicators which are provided.
- Check whether the pictographs are present.
- Inspect the trolleys for fracture and loose trolley wheels.

Weekly

- Check the operation of the track tensioner. If the cable or chain can no longer be tensioned owing to elongation or wear, the cable or chain should then be shortened by a number of trolley distances.
- Check the oil level of the motor reducer. See the motor reducer documentation.

Monthly

- Check the setting of the chain teeth.
- Check whether the trolley wheels run clear of the track profile in the bends, also in machines.
- Check whether the cable runs in the middle of the teeth in the bends, also in machines.
- Check that the trolley wheels do not run against the side of the T-profile or Sigma profile on up or down conveyor sections.
- Check whether the length of the chain is:
  - greater than 1560 mm, measured over a distance of 10 trolleys with a pitch of 6"
  - greater than 1455 mm, measured over a distance of 7 trolleys with a pitch of 8"
  - greater than 1560 mm, measured over a distance of 6 trolleys with a pitch of 10"
  - greater than 1560 mm, measured over a distance of 5 trolleys with a pitch of 12"

  If this is the case, the chain must be replaced.
- Inspect the entire overhead conveyor for wear, fracture and easy movement of the moving parts.

Every 5000 operating hours

- Change the oil in the motor reducer. See the motor reducer documentation.

LIST OF DEFECTS

DEFECT	CAUSE	REMEDY
trolley wheels wear too rapidly	the transition between the conveyor sections is not properly finished	inspect the conveyor transition. Make sure that the conveyor sections abut correctly against each other, so that there is no break or ridge on the track
overhead conveyor stops because the proximity switch on the track tensioner is not energized	the track force is too high	check whether all the shackles are hanging properly and that no shackles are caught in the guides
overhead conveyor does not start	track tensioner has wrong setting	check the tension, see Tensioning track tensioner