

Operating Manual

**Short Systems Curve
Conveyors & Rod Conveyors**

Code No. 99-97-2911

Edition: 11/2012 GB

PRODUCT INFORMATION

Pictograph: Safety for children from 0-15 years

The new pictograph for all driven units shall prevent that children under the age of 15 years stay in the house.



 BUSINESS UNIT ☒ Egg ☒ Poultry ☒ Pig	RELEASED ☐ Regionally ☒ Internationally	NUMBER OF PUBLICATION 01-0010 (per region) PUBLISHED ON 19.10.2016 (date)	NO. OF PAGES INCL. COVER 3			
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RELEASED BY NAME 1 Ludger Themann Central Technologies NAME 2 Erik Diekmann Central Technologies NAME 3 NAME 4						
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With this pictograph (code no. 00-00-1519), the operator of systems points out that the access for children from 0 - 15 years is prohibited.

Applies to all driven units:



This pictograph must be attached to all models with driven units or units with rotating parts as of January 1, 2016. Deliveries may only be executed with this pictograph.

PRODUCT INFORMATION

Rope pull emergency switch for curve conveyor

additional safety devices by means of emergency stop function

In case of emergency, persons which stay in the area of the conveyor can stop the system by actuating the rope pull emergency switch



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The requirements for safety devices for machines have increased considerably in recent years in many countries. The person responsible for initial operation must ensure that the respective installation meets the locally valid requirements (in the EU: Machinery Directive 12100 2006/42/EC)

The curve conveyor must be secured by additional safety measures in areas where it is possible to reach into the conveying chain or drive unit. The risk of injury is significantly increased in these areas. For example, such areas can be in the immediate proximity of a workplace, in the passage area or where it is directly worked on the conveyor.

For this purpose, a rope pull emergency switch set will be available in future. This is coded under:

Code no.	Description
57-05-0106	Rope pull emergency switch set for curve conveyor all widths up to 15m conveyor length

In case of an emergency, the complete curve conveyor can be stopped by pulling on the rope pull. The set is designed for a length of **up to 15m** and can be used for all curve-, rod- and vertical conveyors.

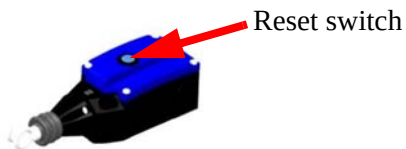
If longer distances must be secured, for example due to the house width or because the cross collection runs through several houses at the intervention height, several rope pull sets must be installed. If the conveyor is accessible from both sides, the rope pull sets must be mounted on both sides. In this case, the number of required rope pull sets is doubled.

The rope pull emergency switch set 57-05-0106 consists of the following components:

1 pc	12 pc	1 pc	1 pc
57-05-0113	57-05-0116	57-05-0017	57-05-0114
Rope pull emergency switch set	Bracket with eye screw	End bracket	Rope cpl. 15 m
			

For a correct operation, the rope pull must be pre-tensioned. If the pre-tension is loosened, the system stops. This can happen for example if the rope pull is torn.

The system cannot be switched on again by accident after the emergency switch has released since the emergency switch has a reset switch.



The rope pull emergency switch must be correctly connected to the switch box/control panel of the conveying system. It has to be ensured that the used electrical components for the connection of safety-relevant components are admitted.

The rope pull can be installed at inner and outer bends as well as in ascending and descending slopes. The brackets are installed at the existing connection points of the conveying system (e.g. on the aluminium cross traverses).



Examples for installation:

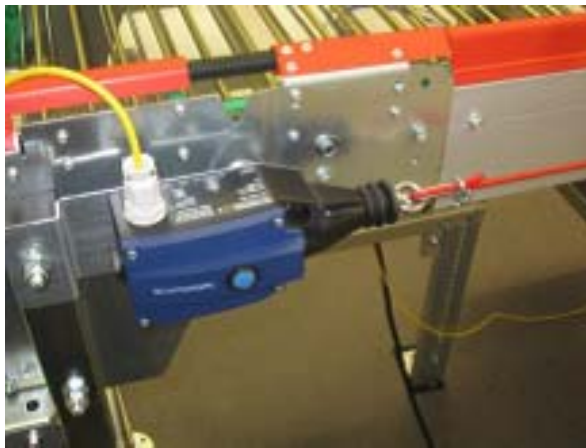


Figure 1: Installation at the front drive



Figure 2: End bracket



Figure 3: Installation at the bend



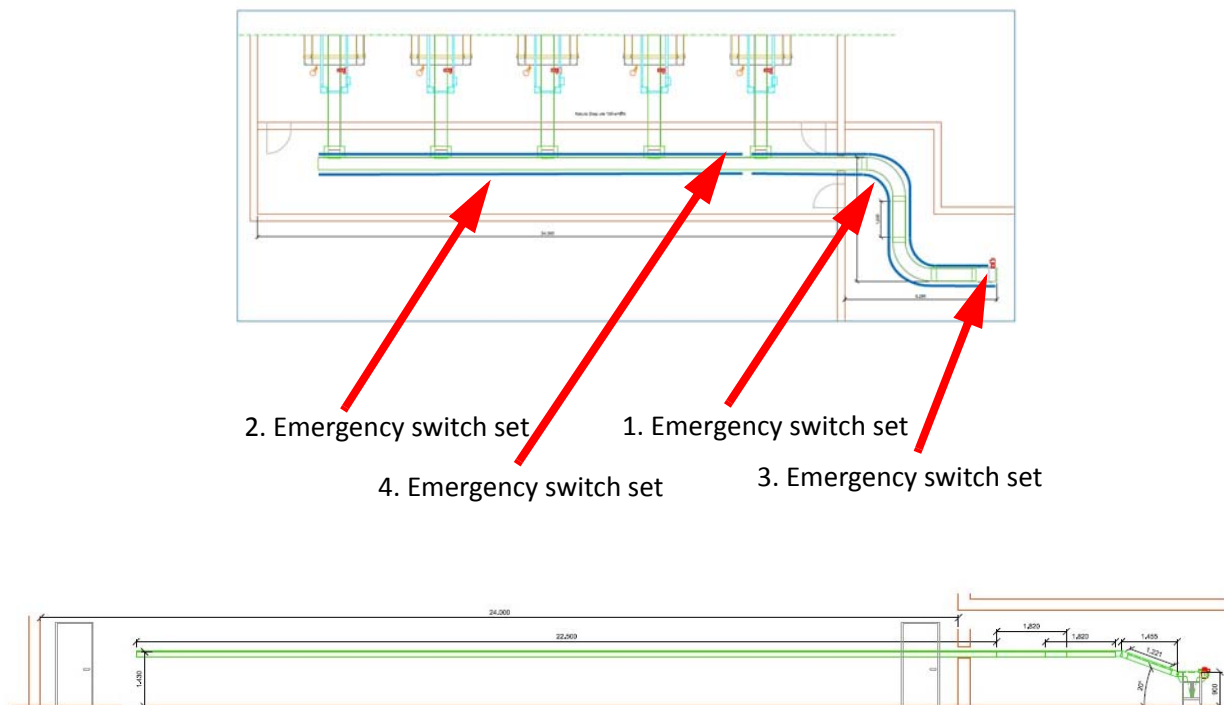
Figure 4: Bracket at middle piece



Caution!

The rope pull emergency switches are not supplied automatically but have to be entered and ordered separately depending on the individual installation situation of the conveyor.

Calculation example:



In this example, the conveyor is at the direct intervention height over the whole length. Due to the length of the conveyor, two emergency switch sets have to be mounted on both sides. In this case, a total of **4 emergency switch sets** is required.

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1 Basic instructions



Please take care of this manual and always keep it in the same place close to the installation for quick reference. All persons working with the system, assembling, cleaning and servicing have to be familiar with the contents of these instructions.

Please observe the contained safety instructions!

If this manual gets damaged or lost, request a new copy from **Big Dutchman**.

1.1 Basics

The **Big Dutchman** installation has been constructed according to the current state of the art and all acknowledged regulations regarding technical safety. The installation is reliable. Upon operation, however, dangers to life and limb of the user or third persons or impairments of the system or other material property are still possible.

The system may only be mounted, attended, repaired und used:

- for due use
- in an excellent state from the safety and technical point of view
- by persons who are familiar with the safety regulations

In the event of special problems which are not described in detail in this manual, we recommend to contact us for your own safety.



1.2 Explaining the symbols

1.2.1 Safety symbols in this manual

Upon reading this **manual** you will come across the following symbols

	WARNING This symbol indicates risks possibly leading to personal injury resulting in death or to severe injuries.
	CAUTION This symbol indicates risks or insecure procedures possibly leading to injuries or material damage.
	NOTE This symbol indicates notes leading to an effective, economic and environmentally-conscious handling of the installation.

1.2.2 Safety symbols in the manual and on the installation

These safety symbols illustrate remaining dangers when handling the system. They are supplements to the above-mentioned symbols:

	Warning against dangerous electrical voltage
	Warning against the cold
	Warning against slippery surface

1.2.3 Safety symbols and notes on your installation

Depending on the type of installation you will find the following safety symbols. They indicate technically remaining dangers when handling the system and give information on how to avoid these dangers.

	GENERAL DANGER ! Installation automatically starts working. Before starting repair, maintenance or cleaning work, put main switch to "OFF".
	Danger of bruising due to rotating machine parts! Close protective devices each time before taking the system into operation. Opening protective devices is only allowed when the system is in a standstill. People have to be authorised for this.
	RISK OF INJURY due to operating auger, chain or cable discs! Never reach into or climb into a feed container or trough while the motor is running.
	DANGER OF SKIN CORROSION due to purifying agents! Always wear protective clothing when repairing, maintaining and cleaning the installation. Always observe the manufacturer's instructions when using acids!

Implicitly observe the instructions attached to the installation, such as the arrow on the motor indicating the direction of rotation.

The signs and safety instructions always have to be visible and must not be damaged. If they are soiled by dust, manure, feed remains, oil or grease, clean them by means of a water-detergent mixture.

	If a safety symbol or instruction is fixed to a part to be replaced, ensure that it will be fixed to the new part as well.
---	--



1.3 Designated use

These installation may only be used in laying houses.

The aim of these installations is to convey hen eggs. This aim defines the basis for the designated use of the installations. The **Big Dutchman** systems may only be used for the purpose for which they are intended.

Every other use is considered as non-designated use. The manufacturer does not accept liability for damages resulting from other uses, the user alone has to bear the risk. The designated use also includes the exact following of the operation, maintenance and repair conditions as prescribed by the manufacturer.

1.4 Prevention of reasonably predictable incorrect uses

The following uses of the **Big Dutchman** system are not permitted and qualify as misuse:

- Transport of persons.
- Transport of animals.
- Transport of objects.
- Mechanical loading of the system in excess of stipulated loads.
- Operation of the system with wrong tension of the chain.
- Use of improper detergents and disinfectants.
- Too long residence time of detergents and disinfectants.

A non-designated use will lead to a liability exclusion by **Big Dutchman**.

Only the user of the system takes the risk resulting from a misuse!

1.5 General safety instructions

All established safety precautions and other generally accepted safety regulations and medical references have to be observed. Please check safety and function control devices to ensure safe and accurate operation:

- before putting into operation
- at adequate time intervals
- after modifications and repairs.

Check the proper functioning of the system after any kind of repair works. You may only take the device into operation, when all protective systems have been put into place again. Follow the directions of the electric and water supply company.

1.6 Safety regulations for the use of electrical appliances

You have to make sure that the system with the electrical appliances is operated and maintained according to the electro-technical regulations.



Installations and work on the electric components/structural groups may only be carried out by qualified personnel according to electro-technical regulations (e.g. EN60204, DIN VDE 0100/0113/0160).



Dangerous electric tensions are bare in case of open control equipment. Please be aware of the danger and keep workers of other professions away from the dangerous spot!

Do not install control units directly in the house but in the service room in order to prevent damages due to ammonia vapours (NH₃).

Immediately switch off the installation in the event of malfunctions of the power supply units. Use a bipolar voltage probe to make sure that the electrical equipment is not alive.

Check the electrical wiring and cables for recognisable damage before putting the device into operation. Replace damaged wiring and cables before taking the device into operation.

Only use the fuses indicated in the circuit diagram. Immediately replace damaged fuses.



Warning

Never repair or bypass the fuses!



Damaged fuses have to be replaced with new fuses!

Never cover the electrical motor. This can cause high temperatures so that fire results and the working means can break down. The control box as well as the terminal and connector boxes of the installation must always be kept shut. Have damaged or broken plugs replaced by an electrician. For the respective connections please see the enclosed connecting plan of the system parts delivered.



1.7 Dangers resulting from non-compliance with the safety instructions

Non-observance of these instructions can cause severe danger for life and health of people or can lead to material or environmental damages and to the forfeiture of any claim for damages. To be precise, the non-observance of these instructions can lead to:

- Failure of vital functions of the installation
- Failure of prescribed maintenance methods
- Dangers for people owing to electrical and mechanical influences.

1.8 Clothing for personal safety

     	When operating, maintaining and cleaning the system, avoid wearing wide, fluttering clothes, rings and watches. Make sure that long hair is tied back when approaching moving system parts. Hair can get caught in the parts in motion and thus create severe injuries. Wear protective clothes and safety footwear upon operating, maintaining and cleaning the system, if required also use a safety helmet, ear protection, safety glasses, protective gloves and gas mask.
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1.9 Assembly and maintenance

Assembly of the system can be carried out by the operator himself or by an authorised person. We require that the operator or the authorised person possesses the required knowledge and practical experience or technical training and qualification necessary for a proper assembly.

Repairs may only be carried out by persons who are competent and can guarantee proper handling because of special training or knowledge and practical experience with the unit. The operator has the sole power of decision. Work on the electric components may only be carried out by technically skilled personnel and under consideration of German Industry Standards, VDE regulations, safety instructions and electro-technical regulations of the power supply industry (EVU). Only work with appropriate tools; in case of possible danger to hands, use protective gloves, and safety glasses in case of danger to the eyes.



Repair, maintenance and cleaning operations as well as the removal of functional disorders may generally only be carried out when the installation is turned off and the power supply is disconnected.



Protect the installation by means of a sign fixed to the main switch reading "Do not put into operation!" Refer to maintenance works in case of need.

Check the proper functioning of the system after any kind of repair or maintenance. You may only take the device into operation, when all protective systems have been put into place again.

1.10 Employing external personnel

Mounting, maintenance and repair work is frequently carried out by non-operating personnel, which is not familiar with the special circumstances and the inherent dangers



As supervisor, you are responsible for the safety of external personnel!

You as operator are to survey the personnel and to define responsibilities and powers. Inform these people in detail on the dangers of their area of work. Check their method of working and intervene as soon as possible.

1.11 Ordering spare parts



Operational safety is the prime necessity!

For your own safety only use original **Big Dutchman** spare parts. For foreign products that have not been released or recommended or for modifications carried out (e.g. software, control units) we cannot judge whether there is a safety risk in connection with the **Big Dutchman** systems.



You can find the exact description (Code No.) of the parts for ordering spare parts by means of the position numbers in the spare parts lists (see appendix).

Indicate the following for ordering spare parts:

- Code No. and description of the spare part or
- Invoice No. of original invoice
- Power supply e.g. 230/400V-3Ph.- 50/60Hz

1.12 Obligations

Closely adhere to the instructions in this manual.

A basic condition for safe operation and trouble-free handling of this system is the knowledge of the basic safety instructions and regulations.

These mounting and operating instructions, particularly the safety instructions, have to be observed by everyone working with this system. Moreover, the regulations and instructions for the prevention of accidents valid at the respective place of use have to be observed.

The manufacturer is not responsible for any damages to the machine resulting from changes done by the user.

1.13 Warranty and liability

Warranty and liability claims regarding personal and material damage are excluded if they result from one or several of the following causes:

- non-designated use of the installation
- inappropriate mounting and operating of the system
- operating the system with defective safety equipment or not duly fixed or not functioning safety and protective devices,
- non-observance of the instructions in this manual regarding transport, stock keeping, mounting, maintenance, operating and upgrading of the system
- unauthorised modifications on the system
- inappropriate repairs
- in the event of disasters caused by foreign matters or force majeure.

1.14 Disorders due to power failure

We recommend the installation of warning systems for a better monitoring of your production units and the installation of an emergency power-generating set for adequate supply with power in case of power failure. By this, you protect the animals and thus your own economical health. For further information please contact your property insurance.

1.15 First aid

For the case of an accident, unless specified otherwise, a first-aid kit must always be available at the place of work. Material taken out and used is to be replaced immediately.

If you need help, describe the accident as follows:

- where it happened
- what happened
- the number of persons injured
- what type of injury
- who is reporting the accident (your data)!

1.16 Waste disposal

After finishing the assembly or repair of this installation, dispose of the packing material and remains which do not need to be further used according to the legal provisions for recycling. The same applies to the component parts after putting the installation out of service.

1.17 Notes for use

We reserve the right to modify the construction and technical data for reasons of further development. Therefore, no claims can be derived from the information, pictures, drawings and descriptions. Subject to correction! In addition to the safety-relevant instructions in this manual and the safety precautions valid in the country of use, also observe the generally acknowledged technical regulations (safe and appropriate working according to UVV, VBG, VDE etc.). In addition to these operating instructions, please also observe the instructions supplied by the manufacturers (e.g. sensors).

1.18 Copyright

This manual is subject to copyright. The information and drawings included in this manual shall not be copied without the manufacturer's consent, nor shall they be used for anything other than the designated use. Neither shall they be given to third parties. If you find mistakes or unclear information in this manual, please do not hesitate to let us know.

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2 Special safety instructions

2.1 Personal safety instructions

These safety instructions are intended to make you familiar with all information regarding the system that are important for your safety and that of the system.

Maintenance may only be carried out by specially trained and briefed users.

Keep with the safety instructions in this manual.

2.2 Clothing and procedures for personal safety

2.2.1 Clothing and footwear

- Wide, fluttering clothes increase the risk of an accident.
- Wide pieces of clothing, ties, scarves etc. can get caught in the moving or rotating system parts.
- High heels are a safety risk.
- If you stumble, you can knock against sharp-edged, moving or rotating system parts and get severely injured.



Secure wide, fluttering clothes or take them off!

When working at or on the system, only wear slip-free footwear and safety shoes when replacing heavy system parts!

2.2.2 Jewellery

- Loose or large jewellery increases the risk of an accident.
- The large or loose parts of jewellery can get caught in components of the installation.



Take off all jewellery, particularly necklaces, bracelets and rings!



2.2.3 Hair

- Long hair increases the risk of an accident.
- Long hair can get caught in moving or rotating system parts.



Secure long hair by tying it back or wearing a bandanna or cap!

2.3 System safety instructions

The different areas of the **Big Dutchman** installations are characterised by different types of construction.

There are several system parts that run out, rotate or slide that can increase the risk of an accident when you are unaware of the type of construction.

Therefore:

It is essential to bear in mind the following instructions during maintenance, repair or operation of the system!

2.3.1 Entire system



Note concerning accident prevention:

Whenever the curve conveyor is put into operation, check that nobody is working on it or in the immediate vicinity and that no objects or tools have been left either on or, especially with lift systems, underneath the conveyor.

The switch boxes for this type of system should, wherever possible, be located so that the whole conveyor run is visible.

Operators must be completely familiar with all the operational details of these conveyors and must be capable of closing it down very rapidly in case of emergency.

If any questions should arise, concerning the operating instructions, do not hesitate to contact the service department in your area or our factory directly.

- Parts lying about on the system or around it can cause you to stumble or fall so that you can get injured by the constructional parts of the system.
- Ignorance of the constructional structure of the system can lead to injuries.

- Parts lying about in / on the components (e.g. in the feed trough, on the egg belt, in the nests etc.) can severely damage the system.

	After repair or maintenance work, never place any objects (e.g. spare parts, replaced parts, tools, cleaning implements etc.) in the accessible areas of the system or around it! Make sure that all loose or replaced parts have been removed from the system components before the system is taken into operation again! Make yourself familiar with the construction of the system in sufficient light! If this is not possible at site, get all available information on the remaining dangers in connection with this system! When working under the installation, always wear a safety helmet!
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2.3.2 Individual components

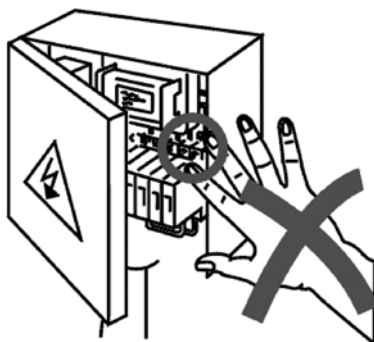
2.3.2.1 Egg collection system

- Rotating parts (drive rollers, guide rollers and idler rollers etc.) can lead to severe injuries!

	Never touch drive, guide or idler rollers when the egg collection system is in operation! Make sure all covering caps or protection covers are properly closed and secured!
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2.3.2.2 Electrical components

**High electric tension!**

If touching live parts, severe injuries due to electric shocks are possible!

During repair or maintenance work, live elements can be bare!

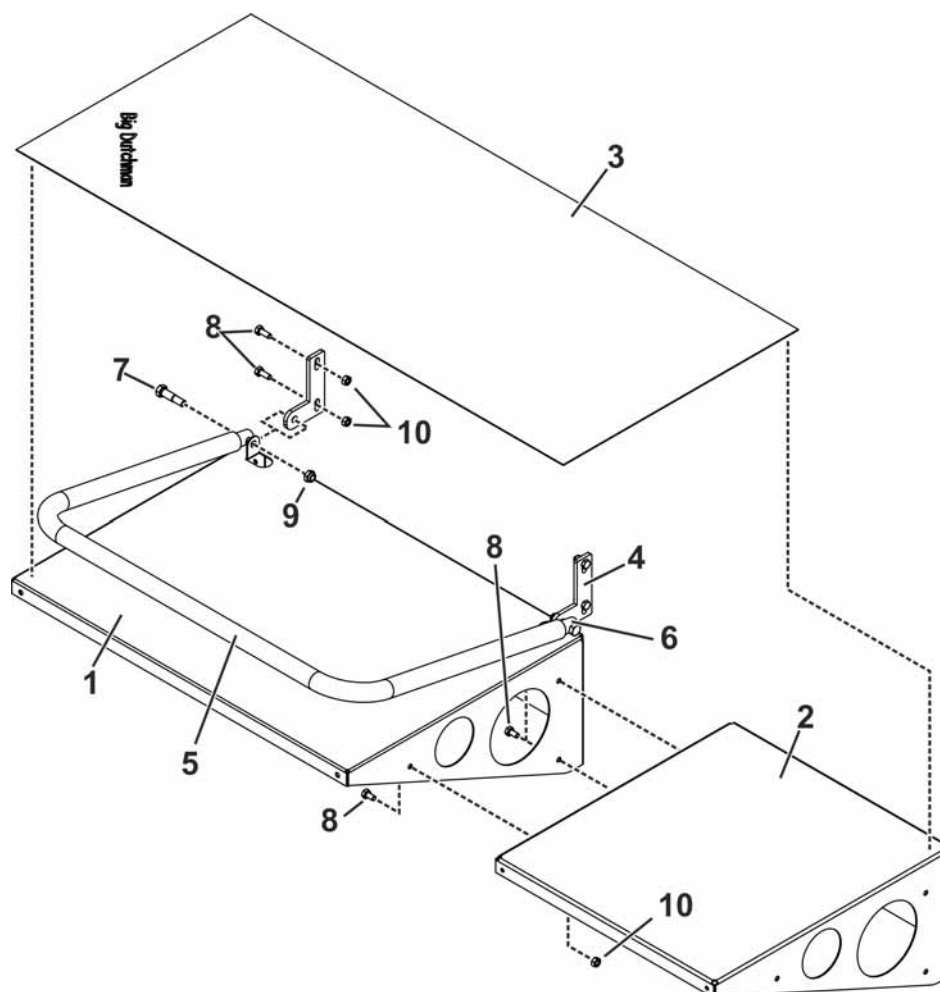
Never touch bare electrical components. Staff members must not use machines with bare electrical components.

3 Manual collecting tables

3.1 Hinged manual collecting table

3.1.1 For longitudinal belt drive 245/350

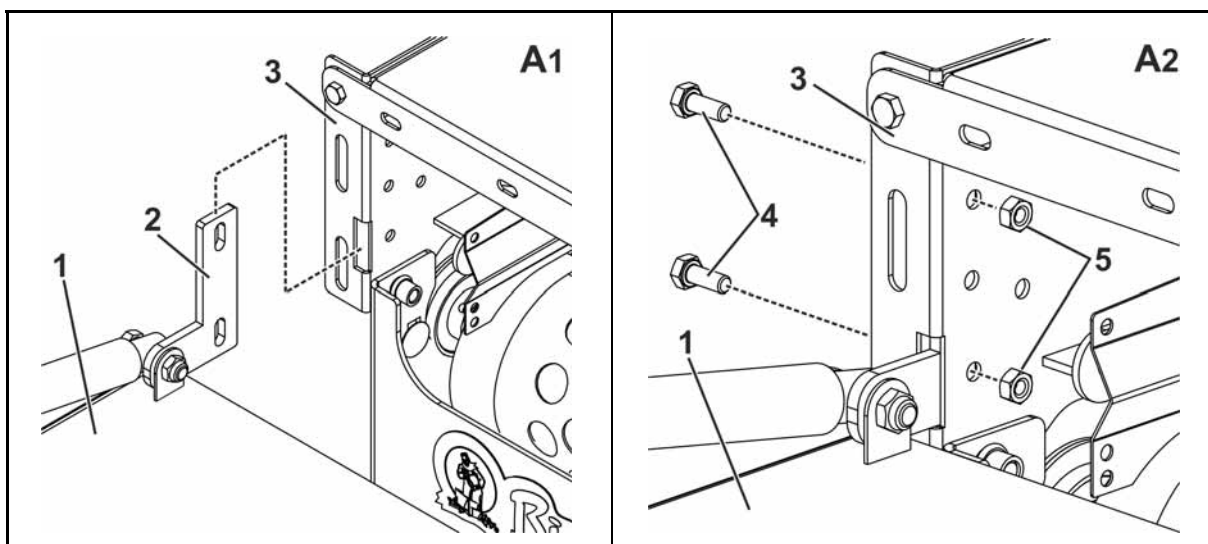
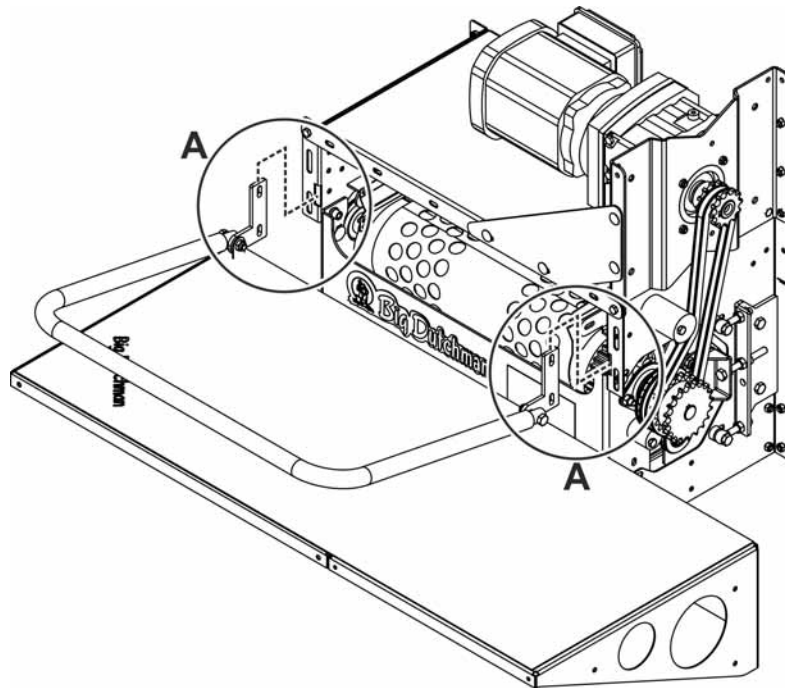
Pos.	Code no.	Description
	36-03-6601	Hinged manual collecting table, compl., for drive LB 245/350, per tier



Pos.	Qty.	Code no.	Description
1		36-03-6591	Hinged manual collecting table w/ frame f/ drive LB 245/350, p/ tier
2		36-03-6593	Packing table left/right, stackable, for drive LB 245/350/500
3		36-00-0001	Collecting mat, size 1 920x395 f/ hinged table, compl., drive LB 245/350 w/o table
4		83-02-0727	Bracket for hinged frame, drive LB 245/350/500
5		83-01-8193	Cushion for frame on manual collecting table, drive LB 245/350
6		83-01-8191	Frame for hinged manual collecting table, drive LB 245/350
7		99-10-1248	Hexagon screw M8 x 35 galv. DIN 933 8.8

Pos.	Qty.	Code no.	Description
8		99-10-1067	Hexagon bolt M6 x 16, galv. DIN 933 8.8
9		99-20-1064	Self-locking nut M8 DIN 985-6 galv.
10		99-10-1045	Hexagon nut M 6 galv. DIN 934-8

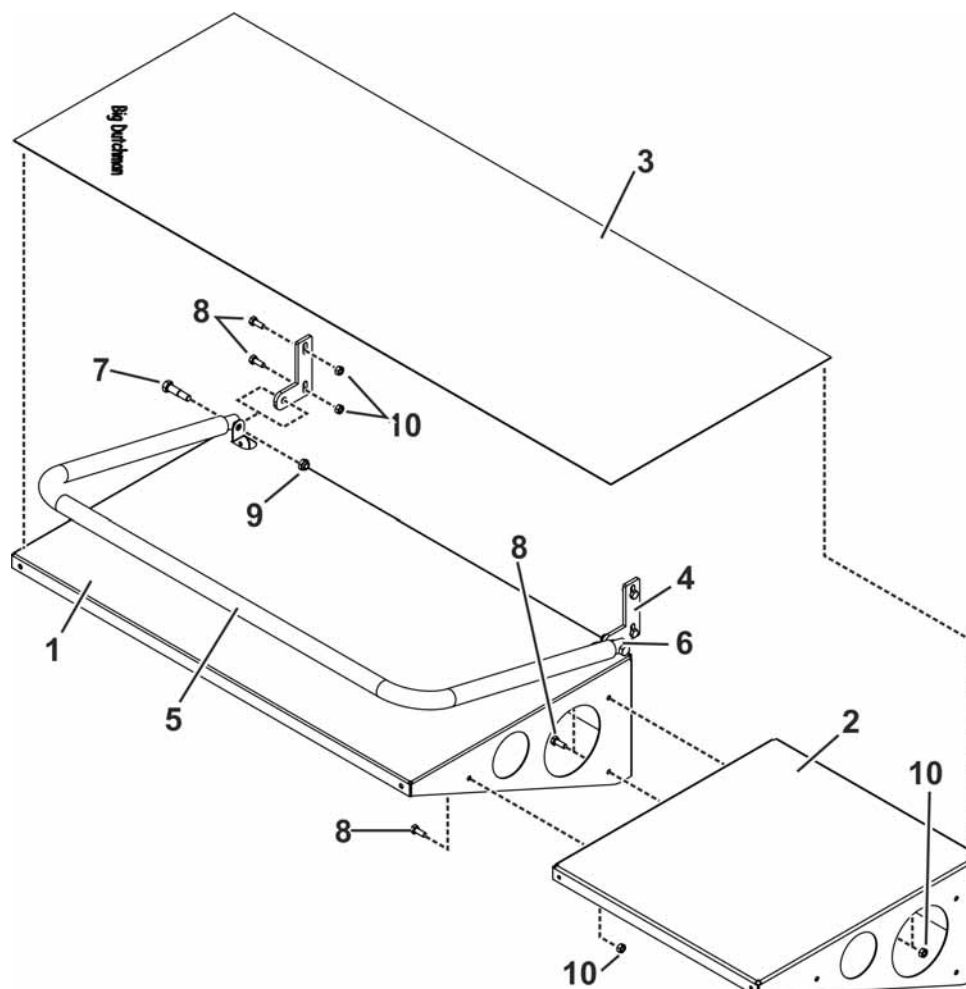
3.1.1.1 Fastening to the longitudinal belt drive



Pos.	Qty.	Code no.	Description
1		36-03-6591	Hinged manual collecting table w/ frame f/ drive LB 245/350, p/ tier
2		83-02-0727	Bracket for hinged frame, drive LB 245/350/500
3			Frame
4		99-10-1067	Hexagon bolt M6 x 16, galv. DIN 933 8.8
5		99-10-1045	Hexagon nut M 6 galv. DIN 934-8

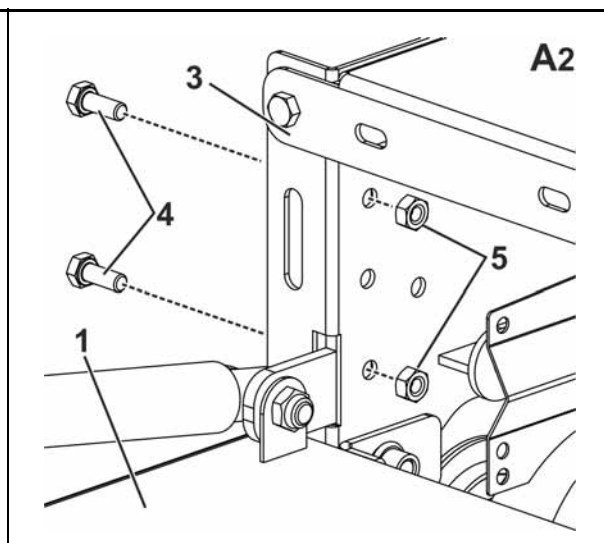
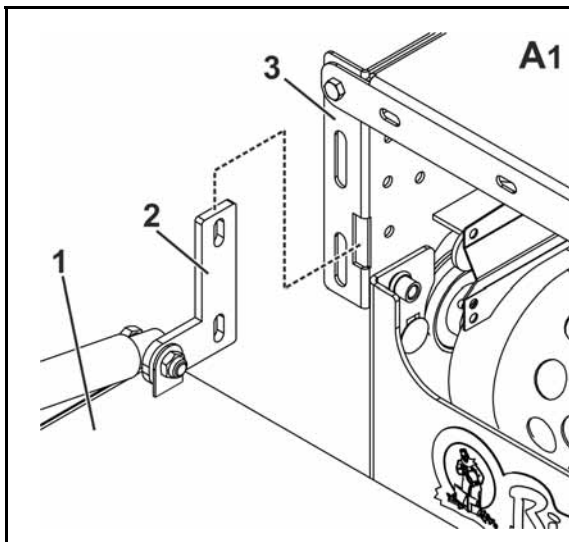
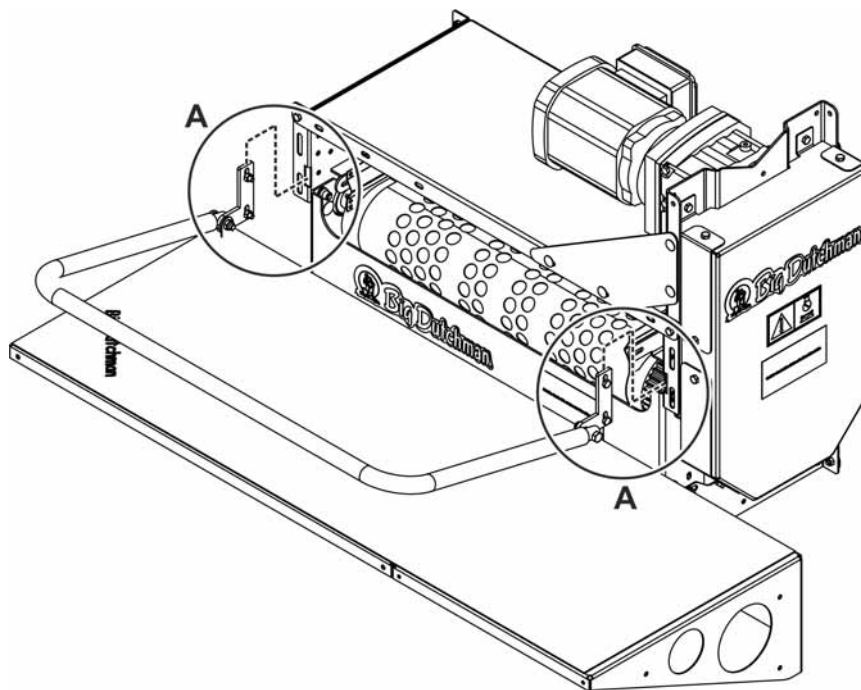
3.1.2 For longitudinal belt drive 500

Pos.	Code no.	Description
	36-03-6602	Hinged manual collecting table, compl., for drive LB 500, per tier



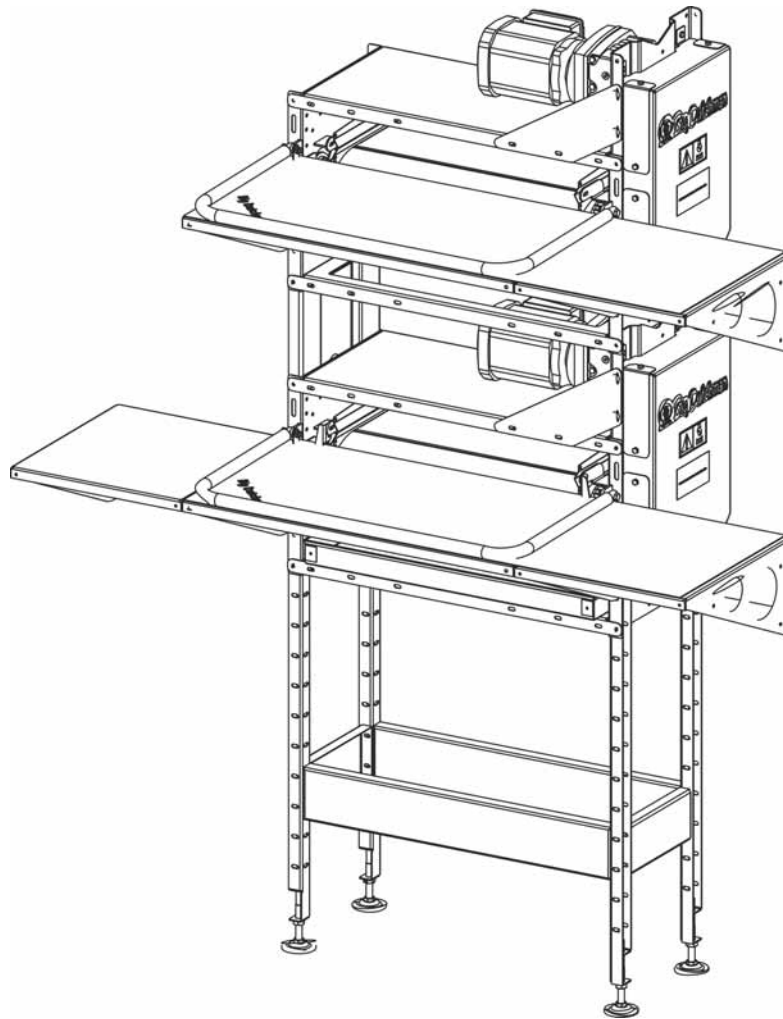
Pos.	Qty.	Code no.	Description
1		36-03-6592	Hinged manual collecting table w/ frame for drive LB 500, per tier
2		36-03-6593	Packing table left/right, stackable, for drive LB 245/350/500
3		36-00-0002	Collecting mat, size 2 1070x395 f/ folding table, compl., drive LB 500 w/o table
4		83-02-0727	Bracket for hinged frame, drive LB 245/350/500
5		83-01-8715	Cushion for frame on manual collecting table, drive LB 500
6		83-02-2327	Frame on manual collecting table, drive LB 500
7		99-10-1248	Hexagon screw M8 x 35 galv. DIN 933 8.8
8		99-10-1067	Hexagon bolt M6 x 16, galv. DIN 933 8.8
9		99-20-1064	Self-locking nut M8 DIN 985-6 galv.
10		99-10-1045	Hexagon nut M 6 galv. DIN 934-8

3.1.2.1 Fastening to the longitudinal belt drive



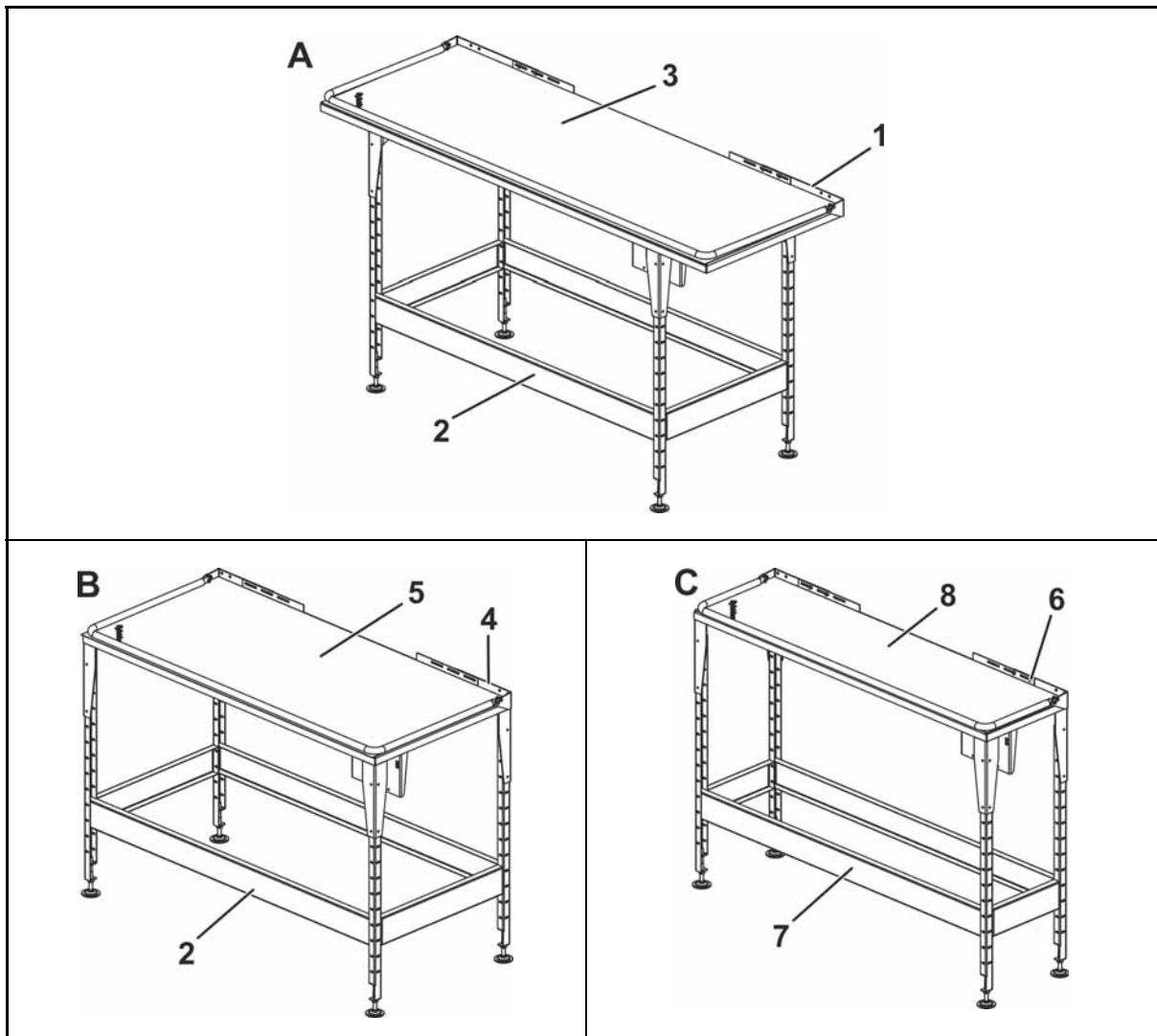
Pos.	Qty.	Code no.	Description
1		36-03-6592	Hinged manual collecting table w/ frame for drive LB 500, per tier
2		83-02-0727	Bracket for hinged frame, drive LB 245/350/500
3			Frame
4		99-10-1067	Hexagon bolt M6 x 16, galv. DIN 933 8.8
5		99-10-1045	Hexagon nut M 6 galv. DIN 934-8

3.1.3 Hinged manual collecting table for drives 2 tier

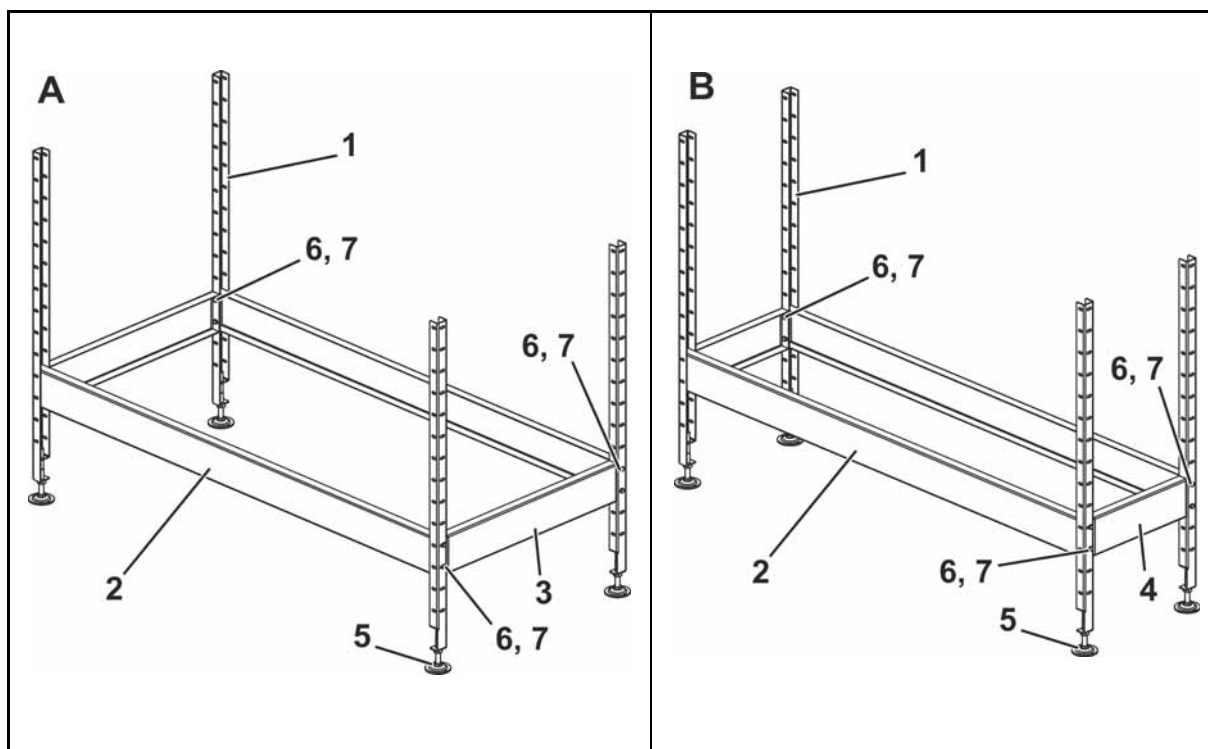


The hinged manual collecting tables (for drives LB 245/350 and LB 500) can also be used for 2-tier installations.

3.2 Egg gathering tray stand-alone



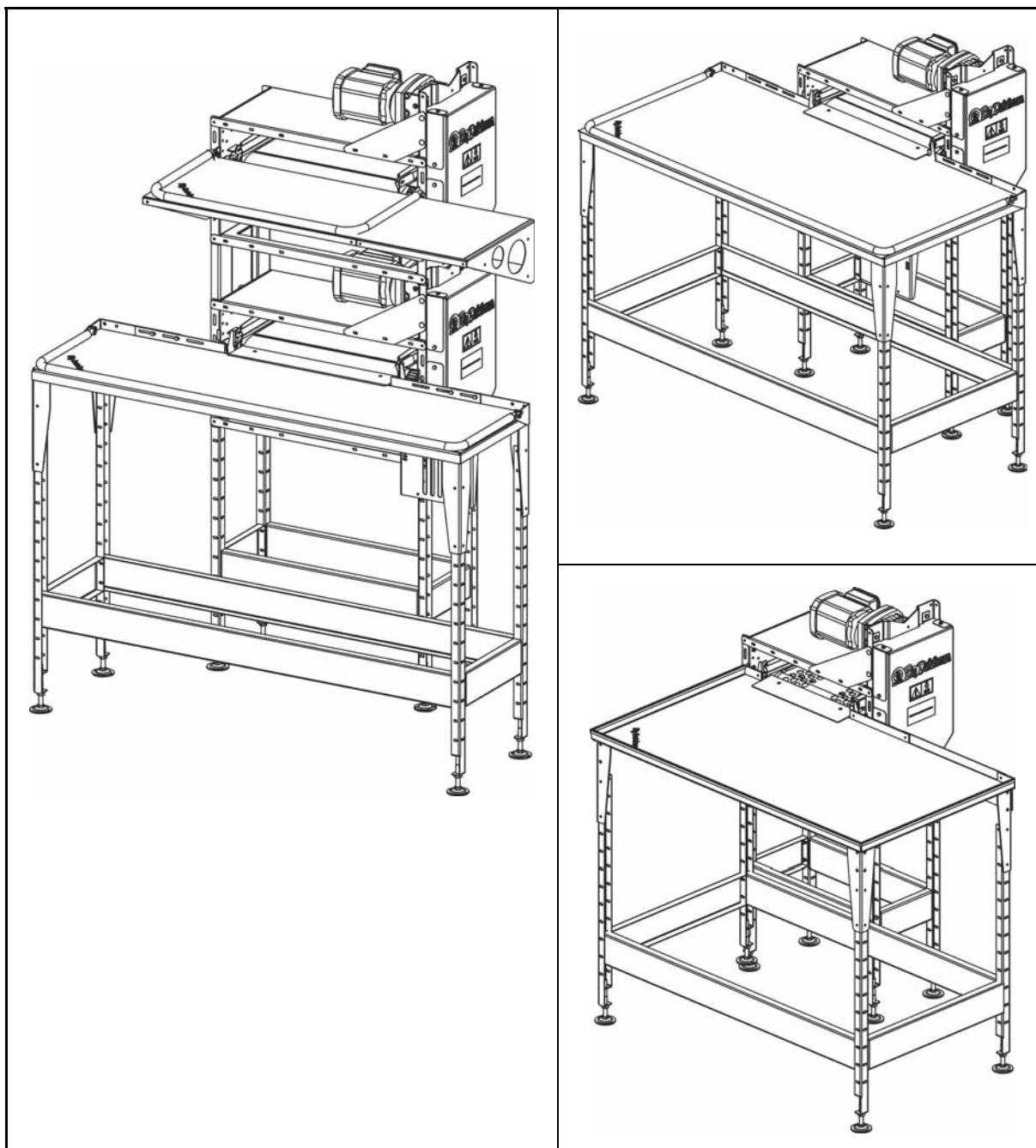
Pos.	Code no.	Description
A	36-03-6606	Egg gathering tray alone cpl. 1900x700
1	83-02-3640	Egg gathering tray alone 1900x700
2	36-03-7290	Substructure table drive LB 500 - height up to 1020mm
3	36-00-0004	Collecting mat size 4 1890x675 for gathering table stand-alone 1900x700
B	36-03-6605	Egg gathering tray alone cpl. 1500x700
4	83-02-0330	Egg gathering tray alone 1500x700
5	36-00-0003	Collecting mat size 3 1430x675 for gathering table stand-alone 1500x700
C	36-03-6607	Egg gathering tray alone cpl. 1500x400
6	83-06-1374	Egg gathering tray alone 1500x400
7	36-03-7245	Subframe egg gathering table 1500x400 LB height up to 1020 mm
8	36-00-0010	Collecting mat size 10 1430x390 for gathering table 1500x400



Pos.	Code no.	Description
A	36-03-7290	Substructure table drive LB 500 - height up to 1020mm
B	36-03-7245	Subframe egg gathering table 1500x400 LB height up to 1020 mm
1	83-03-0952	U-channel post galv. for table drive 350/500
2	83-02-4653	Stabilizing profile long for substructure table drive 500
3	83-02-2207	Stabilizing profile short for substructure table drive 500
4	83-06-1375	Stabilizing profile short for substructure GB 1500x400
5	83-02-3984	Foot adjustable M12x140 PA/galv. cpl.
6	99-10-1100	Hexagon head screw M 6x 12 galv. DIN 933 8.8
7	99-10-1045	Hexagonal nut M 6 galv. DIN 934-8



3.3 Egg gathering tray directly in front of drive

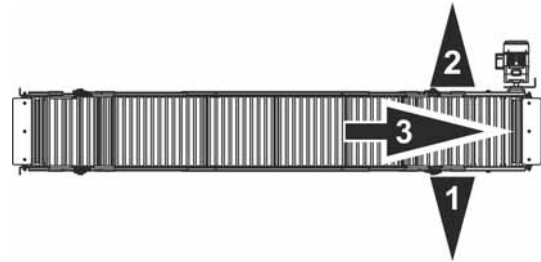


Pos.	Code no.	Description
1	36-03-6607	Egg gathering tray alone cpl. 1500x400
2	36-03-6605	Egg gathering tray alone cpl. 1500x700
3	81-03-9879	Egg gathering table stand alone 1200x700 lh/rh for wall nest

4 Rod conveyor

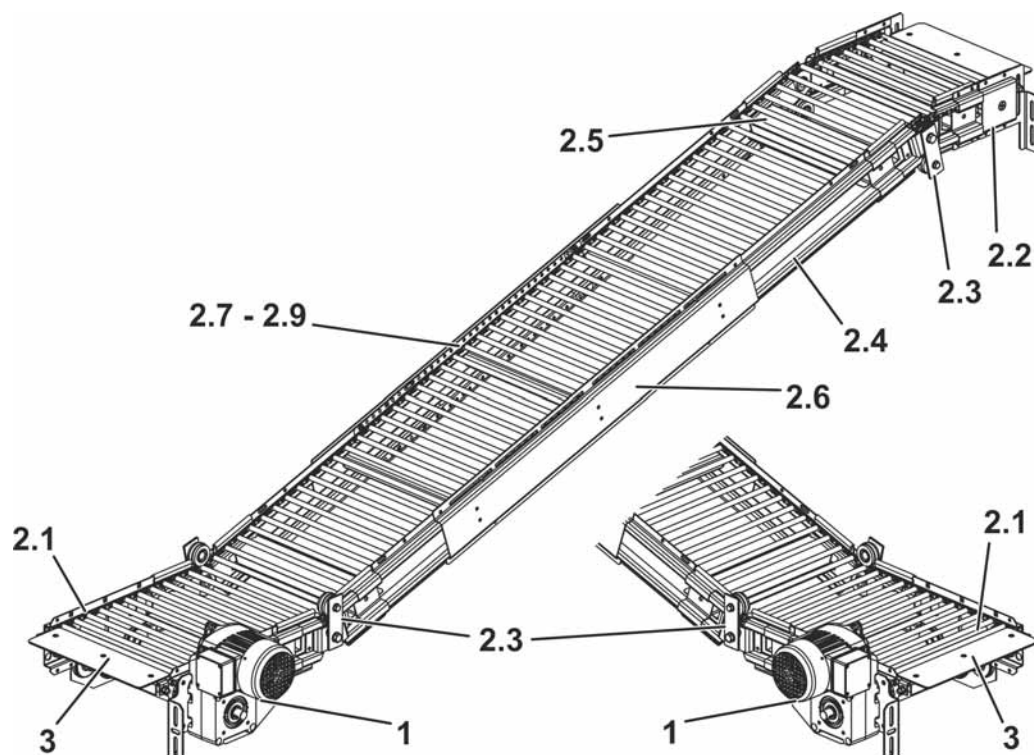
Definition right/left:

The descriptions right (1) and left (2) always refer to the conveying direction of the installation (3)!



Conveying widths	1x 350; 1x 500; 2x 350	
Conveyor chain	Roller chain with plastic rods	
Gradient / slope	25° 470mm/m	
Conveying speed	5 m / min	
Total length of both lines max.	15 m	
Suitable for curved lines	No	

4.1 Rod conveyor 1 tier



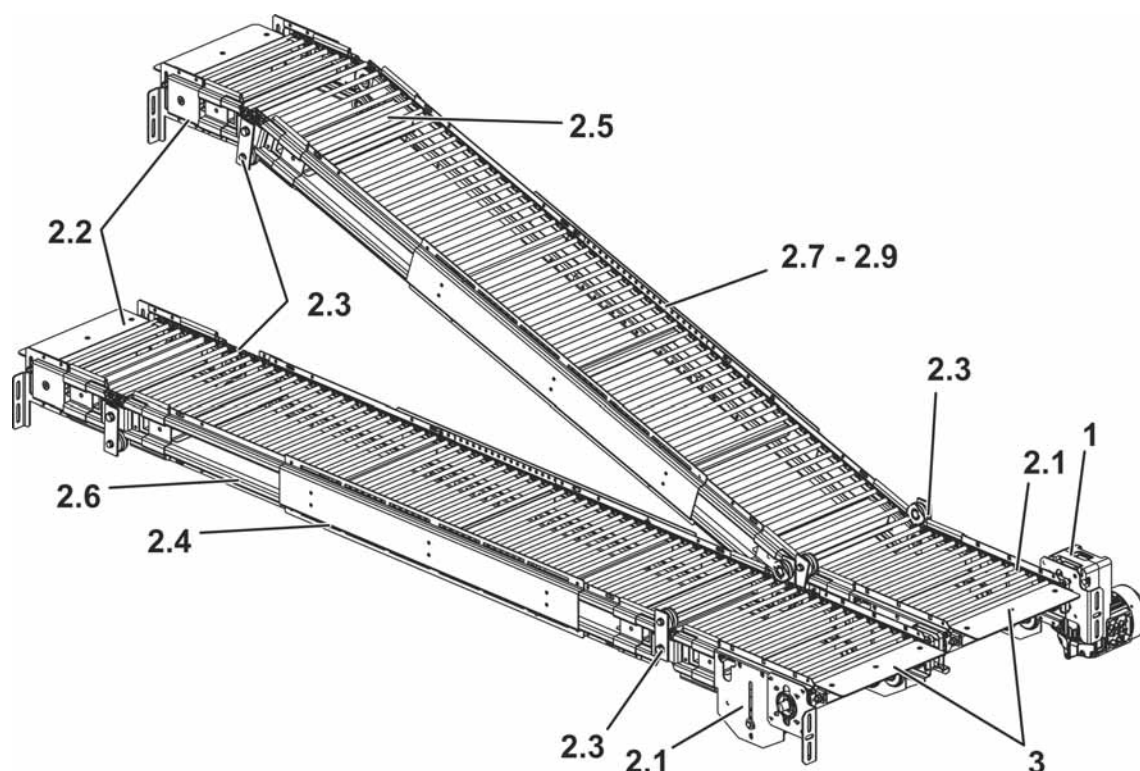
Rod conveyor 350

Pos.	Code no.	Description
	57-01-1121	Rod conveyor unit 0.18kW lh 1x350x2000 pre-assembled
	57-01-1126	Rod conveyor unit 0.18kW lh 1x350x2500 pre-assembled
	57-01-1131	Rod conveyor unit 0.18kW lh 1x350x3000 pre-assembled
	57-01-1136	Rod conveyor unit 0.18kW lh 1x350x3500 pre-assembled
	57-01-1141	Rod conveyor unit 0.18kW lh 1x350x4000 pre-assembled
	57-01-1146	Rod conveyor unit 0.18kW lh 1x350x4500 pre-assembled
	57-01-1151	Rod conveyor unit 0.18kW lh 1x350x5000 pre-assembled
	57-01-1122	Rod conveyor unit 0.18kW rh 1x350x2000 pre-assembled
	57-01-1127	Rod conveyor unit 0.18kW rh 1x350x2500 pre-assembled
	57-01-1132	Rod conveyor unit 0.18kW rh 1x350x3000 pre-assembled
	57-01-1137	Rod conveyor unit 0.18kW rh 1x350x3500 pre-assembled
	57-01-1142	Rod conveyor unit 0.18kW rh 1x350x4000 pre-assembled
	57-01-1147	Rod conveyor unit 0.18kW rh 1x350x4500 pre-assembled
	57-01-1152	Rod conveyor unit 0.18kW rh 1x350x5000 pre-assembled
1	57-05-3582	Mot-g 0.18 230/400/50 17.6r FGA 103/4DB63A sl. shaft 20 1.0/0.57A
2	57-01-1021	Rod conv. lh 0.18kW 1x350x2000 adjustable without mot assembled
	57-01-1026	Rod conv. lh 0.18kW 1x350x2500 adjustable without mot assembled
	57-01-1031	Rod conv. lh 0.18kW 1x350x3000 adjustable without mot assembled
	57-01-1036	Rod conv. lh 0.18kW 1x350x3500 adjustable without mot assembled
	57-01-1041	Rod conv. lh 0.18kW 1x350x4000 adjustable without mot assembled
	57-01-1046	Rod conv. lh 0.18kW 1x350x4500 adjustable without mot assembled
	57-01-1051	Rod conv. lh 0.18kW 1x350x5000 adjustable without mot assembled
	57-01-1022	Rod conv. rh 0.18kW 1x350x2000 adjustable without mot assembled
	57-01-1026	Rod conv. rh 0.18kW 1x350x2500 adjustable without mot assembled
	57-01-1032	Rod conv. rh 0.18kW 1x350x3000 adjustable without mot assembled
	57-01-1037	Rod conv. rh 0.18kW 1x350x3500 adjustable without mot assembled
	57-01-1042	Rod conv. rh 0.18kW 1x350x4000 adjustable without mot assembled
	57-01-1047	Rod conv. rh 0.18kW 1x350x4500 adjustable without mot assembled
	57-01-1052	Rod conv. rh 0.18kW 1x350x5000 adjustable without mot assembled
2.1	57-01-3020	Short drive lh 0.18 kW tensioner without motor rod conveyor 350
	57-01-3019	Short drive rh 0.18 kW tensioner without motor rod conveyor 350
2.2	57-01-3069	Idler including transfer/bracket rod conveyor 350
2.3	36-01-3699	Pivoting-unit short 0-25deg rod conveyor 350
2.4	57-01-3700	Shifting unit for rod conveyor 350
2.5	57-01-3002	Traverse rod conveyor 350/4751
2.6	57-00-3023	Side channel 1000m rod conveyor all width 4709
	57-00-3049	Side channel 2000mm rod conveyor all width 4710
2.7	57-01-3015	Conveyor chain 350/up to 25 degrees rod conveyor 350/4748
2.8	57-00-3067	Chain joint 1/2"x5/16" for hollow pin chain rod conveyor L3610507
2.9	83-05-6286	Egg slide strip 3x57x1000 PVC gray
3	57-01-3576	Transfer plate PVC 330x95 rod conveyor 350
	57-01-3575	Transfer plate cpl. rod conveyor 350
4	38-75-9803	Oil for drip-oiler can à 1L

Rod conveyor 500

Pos.	Code no.	Description
	57-00-1121	Rod conveyor unit 0.18kW lh 1x500x2000 pre-assembled
	57-00-1126	Rod conveyor unit 0.18kW lh 1x500x2500 pre-assembled
	57-00-1131	Rod conveyor unit 0.18kW lh 1x500x3000 pre-assembled
	57-00-1136	Rod conveyor unit 0.18kW lh 1x500x3500 pre-assembled
	57-00-1141	Rod conveyor unit 0.18kW lh 1x500x4000 pre-assembled
	57-00-1146	Rod conveyor unit 0.18kW lh 1x500x4500 pre-assembled
	57-00-1151	Rod conveyor unit 0.18kW lh 1x500x5000 pre-assembled
	57-00-1122	Rod conveyor unit 0.18kW rh 1x500x2000 pre-assembled
	57-00-1127	Rod conveyor unit 0.18kW rh 1x500x2500 pre-assembled
	57-00-1132	Rod conveyor unit 0.18kW rh 1x500x3000 pre-assembled
	57-00-1137	Rod conveyor unit 0.18kW rh 1x500x3500 pre-assembled
	57-00-1142	Rod conveyor unit 0.18kW rh 1x500x4000 pre-assembled
	57-00-1147	Rod conveyor unit 0.18kW rh 1x500x4500 pre-assembled
	57-00-1152	Rod conveyor unit 0.18kW rh 1x500x5000 pre-assembled
1	57-05-3582	Mot-g 0.18 230/400/50 17.6r FGA 103/4DB63A sl. shaft 20 1.0/0.57A
2	57-00-1021	Rod conv. lh 0.18kW 1x500x2000 adjustable without mot assembled
	57-00-1026	Rod conv. lh 0.18kW 1x500x2500 adjustable without mot assembled
	57-00-1031	Rod conv. lh 0.18kW 1x500x3000 adjustable without mot assembled
	57-00-1036	Rod conv. lh 0.18kW 1x500x3500 adjustable without mot assembled
	57-00-1041	Rod conv. lh 0.18kW 1x500x4000 adjustable without mot assembled
	57-00-1046	Rod conv. lh 0.18kW 1x500x4500 adjustable without mot assembled
	57-00-1051	Rod conv. lh 0.18kW 1x500x5000 adjustable without mot assembled
	57-00-1022	Rod conv. rh 0.18kW 1x500x2000 adjustable without mot assembled
	57-00-1027	Rod conv. rh 0.18kW 1x500x2500 adjustable without mot assembled
	57-00-1032	Rod conv. rh 0.18kW 1x500x3000 adjustable without mot assembled
	57-00-1037	Rod conv. rh 0.18kW 1x500x3500 adjustable without mot assembled
	57-00-1042	Rod conv. rh 0.18kW 1x500x4000 adjustable without mot assembled
	57-00-1047	Rod conv. rh 0.18kW 1x500x4500 adjustable without mot assembled
	57-00-1052	Rod conv. rh 0.18kW 1x500x5000 adjustable without mot assembled
2.1	57-00-3020	Short drive lh 0.18 kW tensioner without motor rod conveyor 500
	57-00-3019	Short drive rh 0.18 kW tensioner without motor rod conveyor 500
2.2	57-00-3069	Idler including transfer/bracket rod conveyor 500
2.3	36-00-3699	Pivoting-unit short 0-25deg rod conveyor 500
2.4	57-00-3700	Shifting unit for rod conveyor 500
2.5	57-00-3002	Traverse rod conveyor 500/4716
2.6	57-00-3023	Side channel 1000m rod conveyor all width 4709
	57-00-3049	Side channel 2000mm rod conveyor all width 4710
2.7	57-00-3015	Conveyor chain 500/up to 25 degrees rod conveyor 500/4707
2.8	57-00-3067	Chain joint 1/2"x5/16" for hollow pin chain rod conveyor L3610507
2.9	83-05-6286	Egg slide strip 3x57x1000 PVC gray
3	57-00-3576	Transfer plate PVC 480x95 rod conveyor 500
	57-00-3575	Transfer plate cpl. rod conveyor 500
4	38-75-9803	Oil for drip-oiler can à 1L

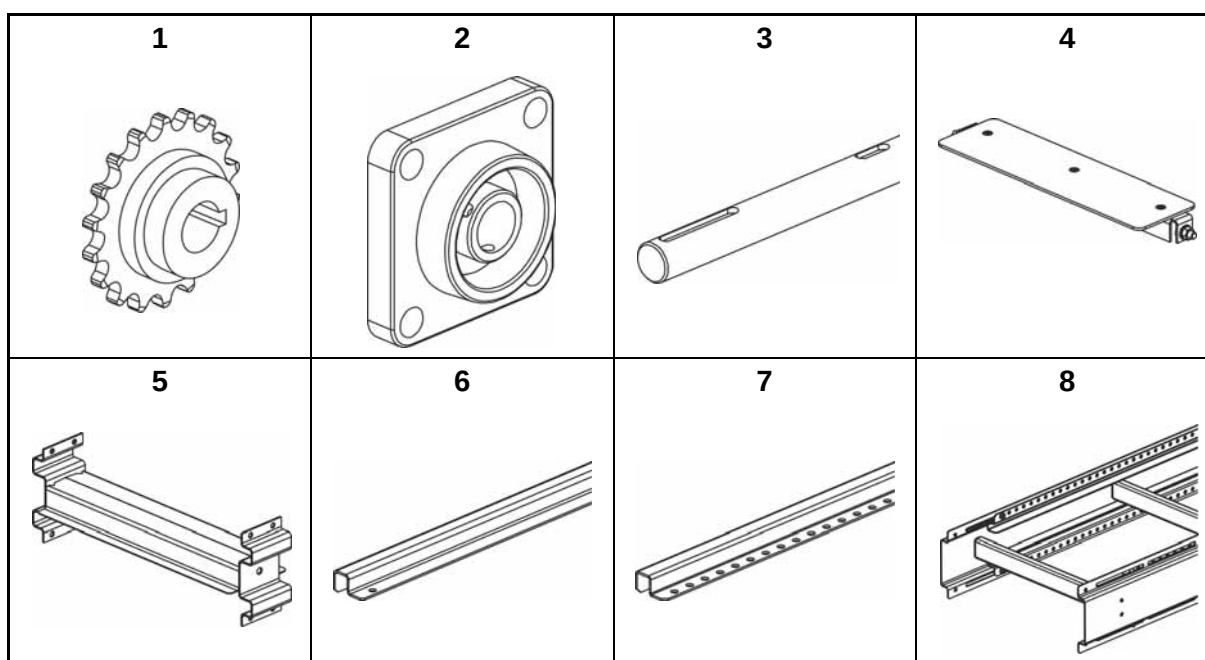
4.2 Rod conveyors 2 tiers



Pos.	Code no.	Description
	57-11-1121	Rod conveyor unit 0.18kW lh 2x350x2000 pre-assembled
	57-11-1126	Rod conveyor unit 0.18kW lh 2x350x2500 pre-assembled
	57-11-1131	Rod conveyor unit 0.18kW lh 2x350x3000 pre-assembled
	57-11-1136	Rod conveyor unit 0.18kW lh 2x350x3500 pre-assembled
	57-11-1141	Rod conveyor unit 0.18kW lh 2x350x4000 pre-assembled
	57-11-1146	Rod conveyor unit 0.18kW lh 2x350x4500 pre-assembled
	57-11-1151	Rod conveyor unit 0.18kW lh 2x350x5000 pre-assembled
1	57-05-3582	Mot-g 0.18 230/400/50 17.6r FGA 103/4DB63A sl. shaft 20 1.0/0.57A
2	57-11-1021	Rod conv. lh 0.18kW 2x350x2000 adjustable without mot assembled
	57-11-1026	Rod conv. lh 0.18kW 2x350x2500 adjustable without mot assembled
	57-11-1031	Rod conv. lh 0.18kW 2x350x3000 adjustable without mot assembled
	57-11-1036	Rod conv. lh 0.18kW 2x350x3500 adjustable without mot assembled
	57-11-1041	Rod conv. lh 0.18kW 2x350x4000 adjustable without mot assembled
	57-11-1046	Rod conv. lh 0.18kW 2x350x4500 adjustable without mot assembled
	57-11-1051	Rod conv. lh 0.18kW 2x350x5000 adjustable without mot assembled
2.1	57-01-3523	Short drive lh 0.18 kW double tightener without motor rod conv. 350
2.2	57-01-3069	Idler including transfer/bracket rod conveyor 350
2.3	36-01-3699	Pivoting-unit short 0-25deg rod conveyor 350
2.4	57-01-3700	Shifting unit for rod conveyor 350
2.5	57-01-3002	Traverse rod conveyor 350/4751
2.6	57-00-3023	Side channel 1000m rod conveyor all width 4709
	57-00-3049	Side channel 2000mm rod conveyor all width 4710

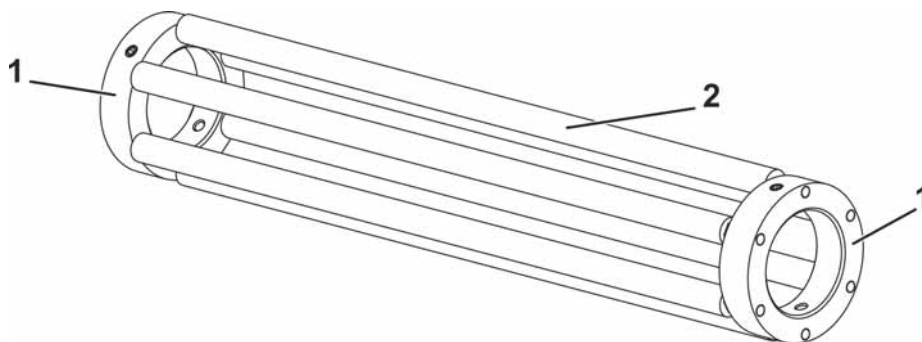
Pos.	Code no.	Description
2.7	57-01-3015	Conveyor chain 350/up to 25 degrees rod conveyor 350/4748
2.8	57-00-3067	Chain joint 1/2"x5/16" for hollow pin chain rod conveyor L3610507
2.9	83-05-6286	Egg slide strip 3x57x1000 PVC gray
3	57-01-3576	Transfer plate PVC 330x95 rod conveyor 350
	57-01-3575	Transfer plate cpl. rod conveyor 350
4	38-75-9803	Oil for drip-oiler can à 1L

4.3 Spare parts for all widths



Pos.	Code no.	Description
1	57-00-0011	Chain wheel 1/2" 18t bo20 rod-conveyor L 321 515 06 01
2	57-00-0010	Flange bearing for drive shaft type 500 FG16204
3	57-01-3111	Drive shaft 20x560 rod conveyor 0.18kW 1x350 lh/rh
	57-11-3111	Drive shaft 20x989 rod conveyor 0.18kW 2x350 lh/rh
	57-00-3111	Drive shaft 20x710 rod conveyor 0.18kW 2x500 lh/rh
4	57-01-3575	Transfer plate cpl. rod conveyor 350 L311 500 22 09
	57-00-3575	Transfer plate cpl. rod conveyor 500 L321 500 22 09
	57-01-3576	Transfer plate PVC 330x95 rod conveyor 350
	57-00-3576	Transfer plate PVC 480x95 rod conveyor 500
5	57-01-3002	Traverse rod conveyor 350/4751
	57-00-3102	Traverse rod conveyor 500/4716
6	57-00-3023	Side channel 1000m rod conveyor all width 4709
	57-00-3049	Side channel 2000mm rod conveyor all width 4710
	57-00-3109	Side channel 3000mm rod conveyor all width 4711
7	57-00-3701	Profile perforated in shifting unit for rod conveyor all widths
8	57-01-3700	Shifting unit for rod conveyor 350
	57-00-3700	Shifting unit for rod conveyor 500

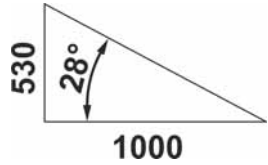
4.4 Discharge wheel cpl.

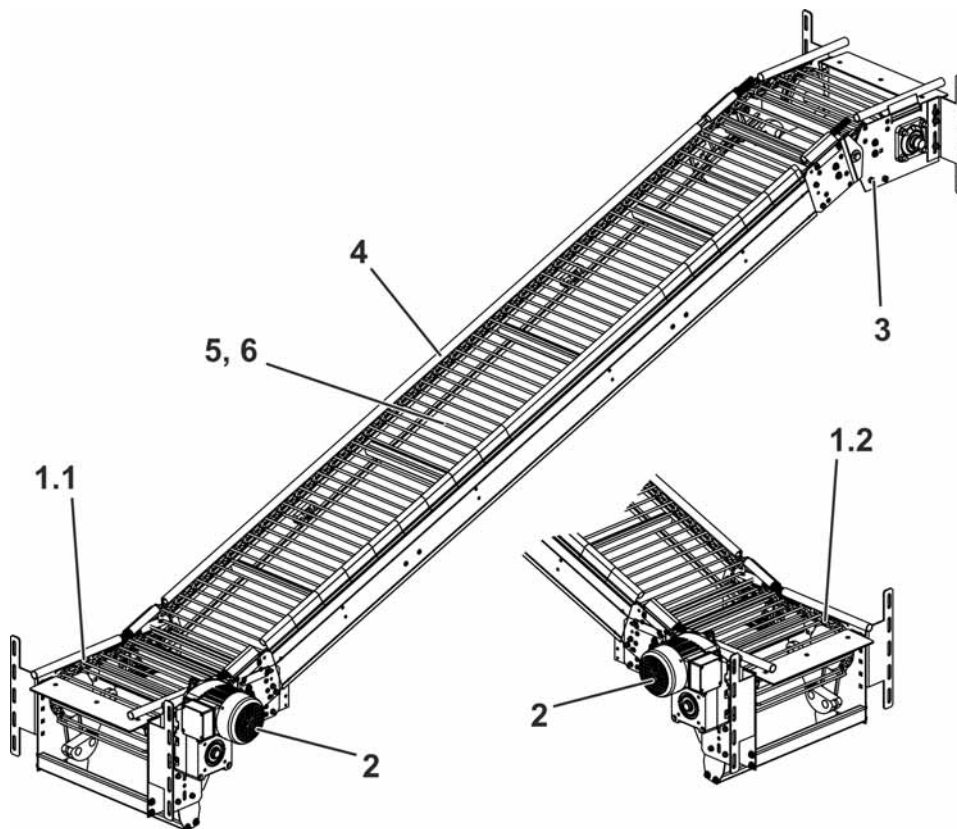


Pos.	Code no.	Description
	57-01-3040	Discharge wheel cpl. rod conveyor 350
	57-00-3040	Discharge wheel cpl. rod conveyor 500
1	57-00-3033	Driving plate for discharge wheel rod conveyor all widths
2	57-01-3036	Tubule 311mm in discharge wheel rod conveyor 350
	57-00-3036	Tubule 461mm in discharge wheel rod conveyor 500

5 Curve conveyor up to 28°

5.1 Curve conveyor 1 tier straight

Conveying widths	1x 250; 1x 350; 2x 500	
Conveyor chain	Up/down chain up to 28°	
Gradient / slope	28° 530 mm/m	
Conveying speed	5 m / min	
Max. length	15 m	



Curve conveyor 250

Pos.	Code no.	Description
	57-08-5000	Short conveyor 0.18kW lh 1x250x3500 straight to 28 degrees
	57-08-5001	Short conveyor 0.18kW rh 1x250x3500 straight to 28 degrees
1.1	57-08-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 250
1.2	57-08-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 250
2	57-05-3682	Mot-g 0.18 230/400/50 17.6r FGA 103/4DB63A hollow shaft 20 1.0/0.57A
3	57-08-0011	Idler with hinge curve conveyor 250/486 005 07 00
4	57-08-3520	Connecting part closed 3000 curve conveyor 250/4908
5	57-08-3513	Conveyor chain 250/4922 28 degrees up/down curve conveyor 250
6	57-08-3518	Chain connector 250 with fuse element curve conveyor 250/4924

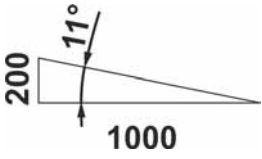
Curve conveyor 350

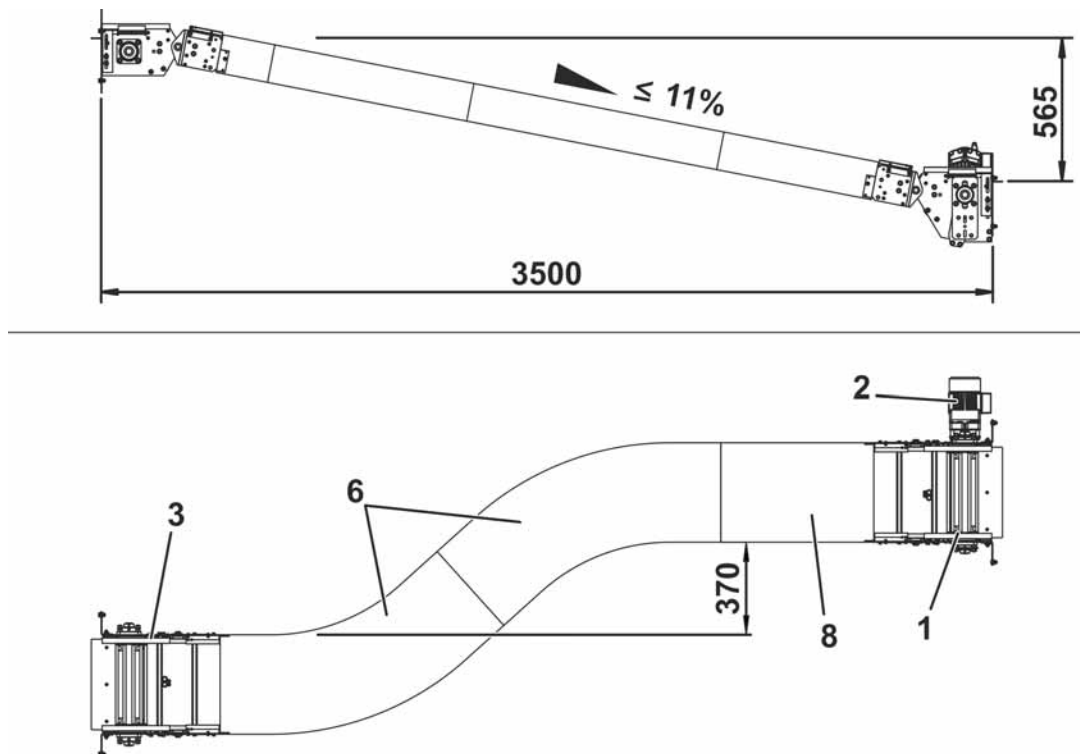
Pos.	Code no.	Description
	57-06-5000	Short conveyor 0.18kW lh 1x350x3500 straight to 28 degrees
	57-06-5001	Short conveyor 0.18kW rh 1x350x3500 straight to 28 degrees
1.1	57-06-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 350
1.2	57-06-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 350
2	57-05-3682	Mot-g 0.18 230/400/50 17.6r FGA 103/4DB63A hollow shaft 20 1.0/0.57A
3	57-06-0011	Idler with hinge curve conveyor 350/8147
4	57-06-3520	Connecting part closed 3000 curve conveyor 350/4847
5	57-06-3513	Conveyor chain 250/4862 28 degrees up/down curve conveyor 350
6	57-06-3518	Chain connector 350 with fuse element Curve conveyor 350/4864

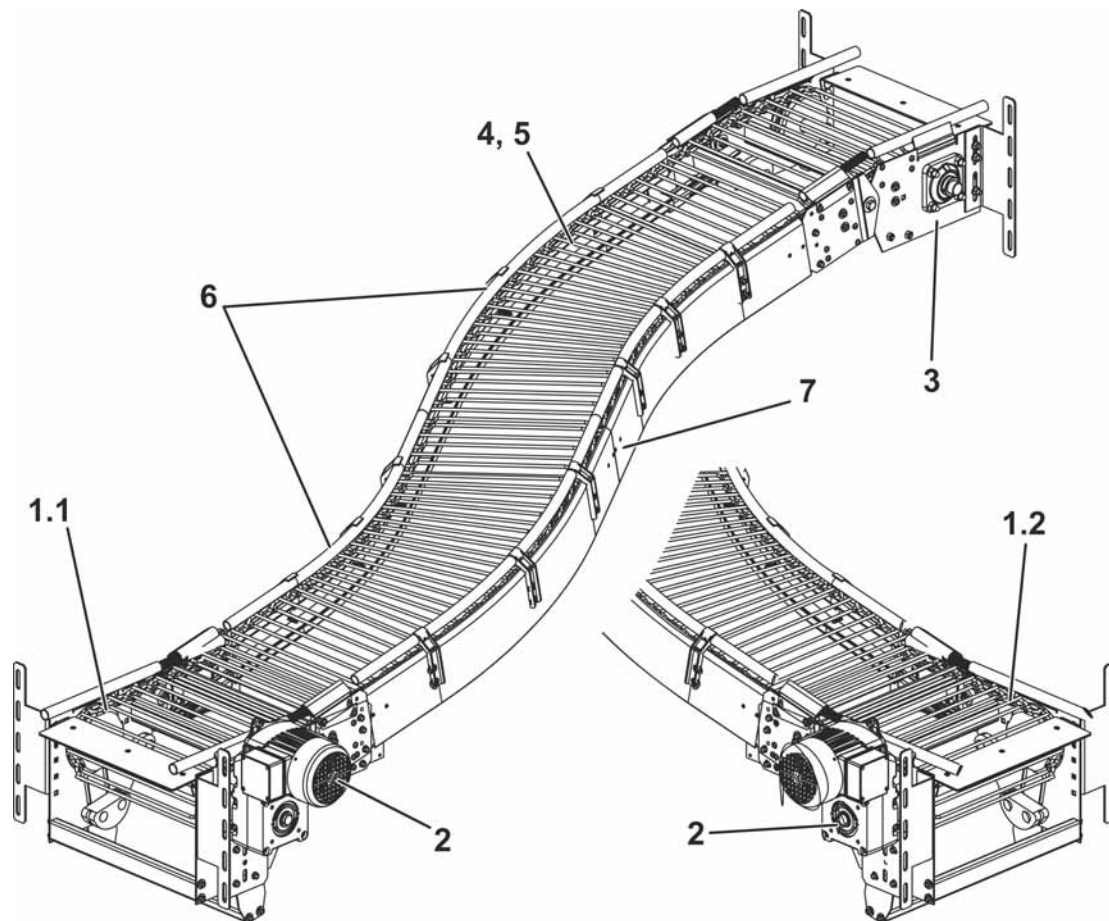
Curve conveyor 500

Pos.	Code no.	Description
	57-05-5000	Short conveyor 0.18kW lh 1x500x3500 straight to 28 degrees
	57-05-5001	Short conveyor 0.18kW rh 1x500x3500 straight to 28 degrees
1.1	57-05-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 500
1.2	57-05-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 500
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0.57A curve conveyor
3	57-05-0100	Idler with hinge curve conveyor 500/8107
4	57-05-3520	Connecting part closed 3000 curve conveyor 500/4808
5	57-05-3513	Conveyor chain 500/4822 28 degrees up/down curve conveyor 500
6	57-05-3518	Chain connector 500 with fuse element Curve conveyor 500/4824

5.2 Curve conveyor 1 tier s-curve

Conveying widths	1x 250; 1x 350; 1x 500	
Conveyor chain	standard up to 20°	
Gradient / slope	11° 200 mm/m	
Lateral offset	370 mm	
Conveying speed	5 m / min	
Max. length	15 m	





Curve conveyor 250

Pos.	Code no.	Description
	57-08-5020	Short conveyor unit 0.18kW lh 1x250 with s-curve
	57-08-5021	Short conveyor unit 0.18kW rh 1x250 with s-curve
1.1	57-08-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 250
1.2	57-08-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 250
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/ 0.57A curve conveyor
3	57-08-0011	Idler with hinge curve conveyor 250/486 005 07 00
4	57-08-3517	Conveyor chain 250/up to 20 degrees curve conveyor 250/4921
5	57-08-3518	Chain connector 350 with fuse element Curve conveyor 250/4924
6	57-08-3565	Bend 45 degrees curve conveyor 250/4913
7	57-05-3533	Retaining plate between bends curve conveyor all widths
8	57-08-3529	Connecting part closed 1000 curve conveyor 500/4837

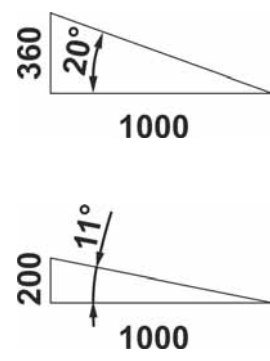
Curve conveyor 350

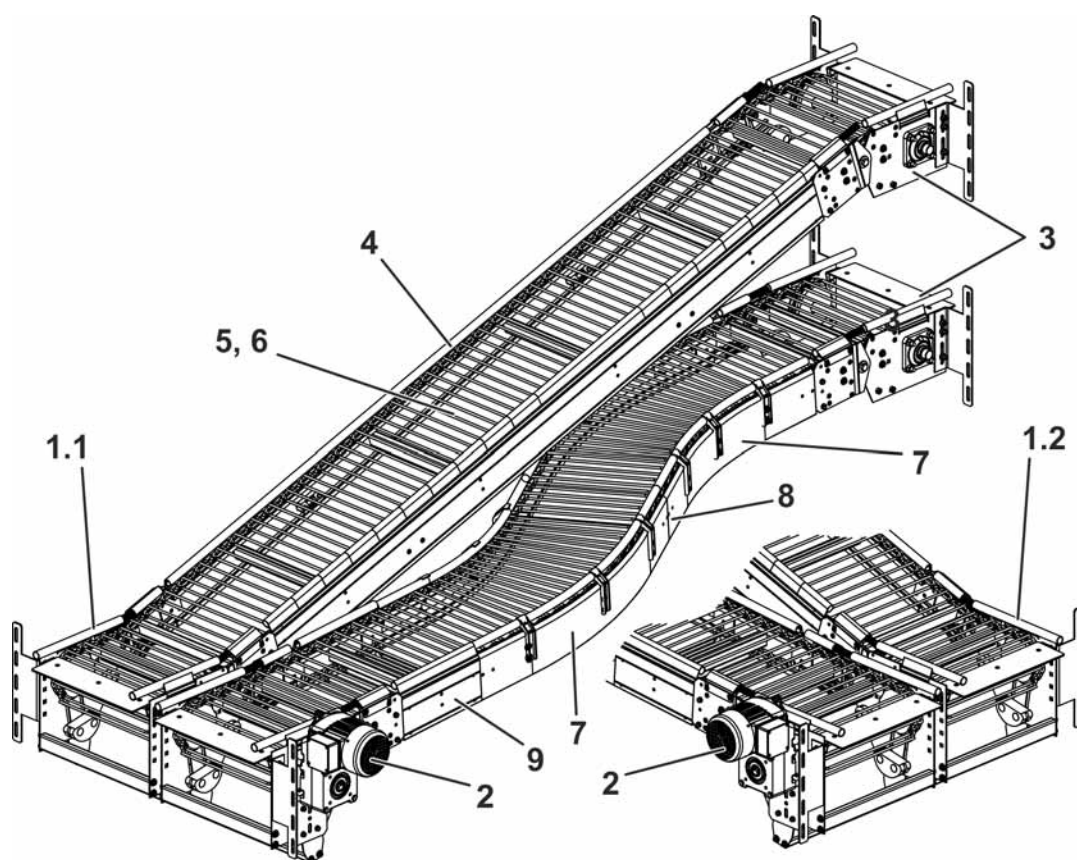
Pos.	Code no.	Description
	57-06-5020	Short conveyor unit 0.18kW lh 1x350 with s-curve
	57-06-5021	Short conveyor unit 0.18kW rh 1x350 with s-curve
1.1	57-06-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 350
1.2	57-06-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 350
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0.57A curve conveyor
3	57-06-0011	Idler with hinge curve conveyor 350/8147
4	57-06-3517	Conveyor chain 350/up to 20 degrees curve conveyor 350/4861
5	57-06-3518	Chain connector 350 with fuse element Curve conveyor 350/4864
6	57-06-3565	Bend 45 degrees curve conveyor 350/4852
7	57-05-3533	Retaining plate between bends curve conveyor all widths
8	57-06-3529	Connecting part closed 1000 curve conveyor 350/4843

Curve conveyor 500

Pos.	Code no.	Description
	57-05-5020	Short conveyor unit 0.18kW lh 1x500 with s-curve
	57-05-5021	Short conveyor unit 0.18kW rh 1x500 with s-curve
1.1	57-05-3521	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 500
1.2	57-05-3612	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 500
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0.57A curve conveyor
3	57-05-0100	Idler with hinge curve conveyor 500/8107
4	57-05-3517	Conveyor chain 500/up to 20 degrees curve conveyor 500/4821
5	57-05-3518	Chain connector 500 with fuse element Curve conveyor 500/4824
6	57-05-2040	Bend 40 degrees curve conveyor 500
7	57-05-3533	Retaining plate between bends curve conveyor all widths
8	57-05-3529	Connecting part closed 1000 curve conveyor 500/4837

5.3 Curve conveyor 2 tiers

Conveying widths	2x 250; 2x 350; 2x 500	
Conveyor chain	standard up to 20°	
Gradient / slope	straight 20° 360 mm/m s-curve 11° 200 mm/m	
Height difference	565 mm (distance nest - tier)	
Conveying speed	5 m / min	
Total length of both lines	15 m	



Curve conveyor 2x250

Pos.	Code no.	Description
	57-08-5220	Short conveyor unit 0.18kW lh 2x250 1x straight 1x s-curve
	57-08-5221	Short conveyor unit 0.18kW rh 2x250 1x straight 1x s-curve
1.1	57-08-3623	Short drive lh 0.18 kW double tensioner/joint without motor curve conveyor 250
1.2	57-08-3624	Short drive rh 0.18 kW double tensioner/joint without motor curve conveyor 250
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/ 0.57A curve conveyor

Pos.	Code no.	Description
3	57-08-0011	Idler with hinge curve conveyor 250/486 005 07 00
4	57-08-3520	Connecting part closed 3000 curve conveyor 250/4908
5	57-08-3517	Conveyor chain 250/up to 20 degrees curve conveyor 250/4921
6	57-08-3518	Chain connector 350 with fuse element Curve conveyor 250/4924
7	57-08-2027	Bend 27degrees curve conveyor 250
8	57-05-3533	Retaining plate between bends curve conveyor all widths

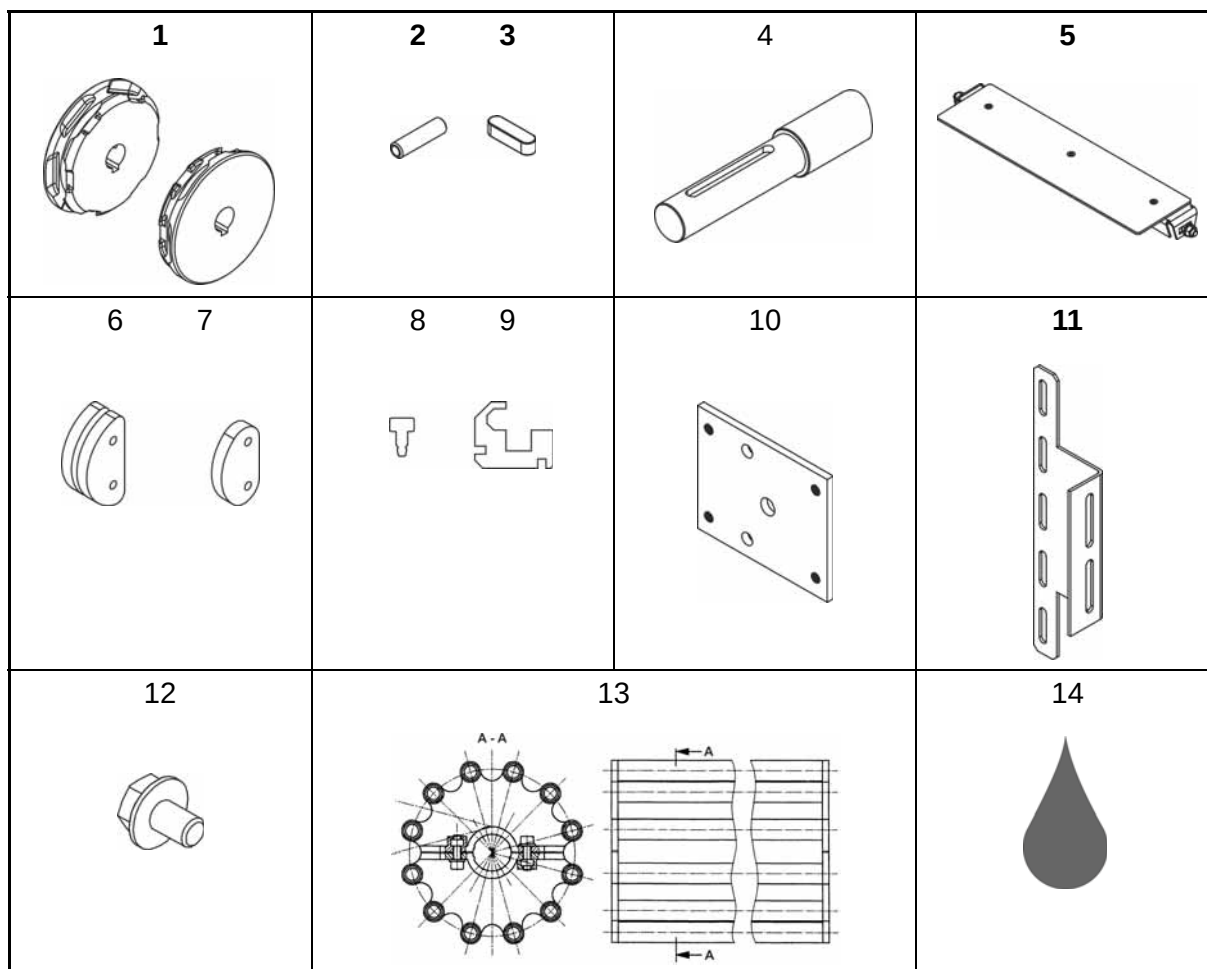
Curve conveyor 2x350

Pos.	Code no.	Description
	57-06-5220	Short conveyor unit 0.18kW lh 2x350 1x straight 1x s-curve
	57-06-5221	Short conveyor unit 0.18kW rh 2x350 1x straight 1x s-curve
1.1	57-06-3523	Short drive lh 0.18 kW tensioner/joint without motor curve conveyor 350
1.2	57-06-3623	Short drive rh 0.18 kW tensioner/joint without motor curve conveyor 350
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/ 0.57A curve conveyor
3	57-06-0011	Idler with hinge curve conveyor 350/8147
4	57-06-3520	Connecting part closed 3000 curve conveyor 350/4847
5	57-06-3517	Conveyor chain 350/up to 20 degrees curve conveyor 350/4861
6	57-06-3518	Chain connector 350 with fuse element Curve conveyor 350/4864
7	57-06-2029	Bend 29 degrees curve conveyor 350
8	57-05-3533	Retaining plate between bends curve conveyor all widths
9	57-06-3529	Connecting part closed 1000 curve conveyor 350/4843

Curve conveyor 2x500

Pos.	Code no.	Description
	57-05-5220	Short conveyor unit 0.18kW lh 2x500 1x straight 1x s-curve
	57-05-5221	Short conveyor unit 0.18kW rh 2x500 1x straight 1x s-curve
1.1	57-05-3623	Short drive lh 0.18 kW double tensioner/joint without motor curve conveyor 500
1.2	57-05-3628	Short drive rh 0.18 kW double tensioner/joint without motor curve conveyor 500
2	57-05-3682	G-Mot 0.18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/ 0.57A curve conveyor
3	57-05-0100	Idler with hinge curve conveyor 500/8107
4	57-05-3520	Connecting part closed 3000 curve conveyor 500/4808
5	57-05-3517	Conveyor chain 500/up to 20 degrees curve conveyor 500/4821
6	57-05-3518	Chain connector 500 with fuse element Curve conveyor 500/4824
7	57-05-3572	Bend 30 degrees curve conveyor 500/4825
8	57-05-3533	Retaining plate between bends curve conveyor all widths
9	57-05-3529	Connecting part closed 1000 curve conveyor 500/4837

5.4 Spare parts for all widths

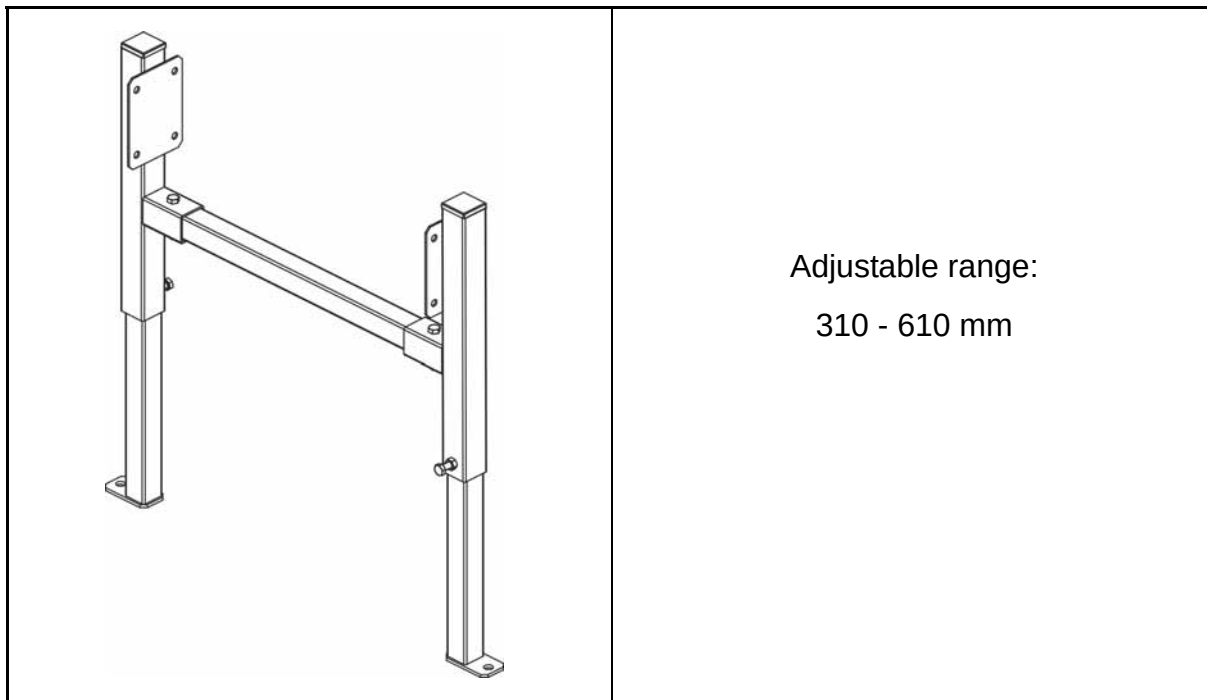


Pos.	Code no.	Description
1	57-05-0096	Drive chain wheel cpl. (1 pair) dia 25 short drive 0.18kW curve conveyor; also includes hex socket set screw (pos.2) and key (pos. 3)
2	57-05-0078	Hex socket set screw 8x30 DIN 916-45H
3	57-05-0079	Key 8x7x28 DIN6885
4	57-08-3111	Drive shaft 25/20x 460 short conveyor 0.18kW 1x250 lh/rh
	57-18-3111	Drive shaft 25/20x 796 short conveyor 0.18kW 2x250 lh/rh
	57-06-3111	Drive shaft 25/20x 560 short conveyor 0.18kW 1x350 lh/rh
	57-16-3111	Drive shaft 25/20x 996 short conveyor 0.18kW 2x350 lh/rh
	57-05-3111	Drive shaft 25/20x 710 short conveyor 0.18kW 1x500 lh/rh
	57-15-3111	Drive shaft 25/20x 1296 short conveyor 0.18kW 2x500 lh/rh
5	57-08-3580	Transfer unit cpl. bracket with PVC plate curve conveyor 250
	57-06-3580	Transfer unit cpl. bracket with PVC plate curve conveyor 350
	57-05-3577	Transfer unit cpl. bracket with PVC plate curve conveyor 500
6	83-04-3833	Idle segment no. 1 chain tensioner short conveyor all widths
7	83-07-1397	Idle segment no. 2 chain tensioner short conveyor all widths
8	57-05-3637	Sliding profile T-form 1000mm curve conveyor all widths
	57-05-0032	Sliding profile T-form 2000mm curve conveyor all widths

Pos.	Code no.	Description
	57-05-0033	Sliding profile T-form 3000mm curve conveyor all widths
9	83-04-3702	Sliding rail runn. m. all bends curve conveyor
10	57-05-0006	Connection plate for curve conveyor L 185 525 06 00
11	57-05-0072	Connecting angle lh/rh short drive curve conveyor all widths
12	99-10-1102	Hexagon flange bolt M 6x 8 DIN 6921 galv.
13	57-08-0056	Discharge wheel cpl. dia 25 short conveyor 250/0.18kW
	57-06-0056	Discharge wheel cpl. dia 25 short conveyor 350/0.18kW
	57-05-0156	Discharge wheel cpl. dia 25 short conveyor 500/0.18kW
14	38-75-9803	Oil for drip-oiler can à 1L
	57-05-3595	Oil for drip oiler can à 5L

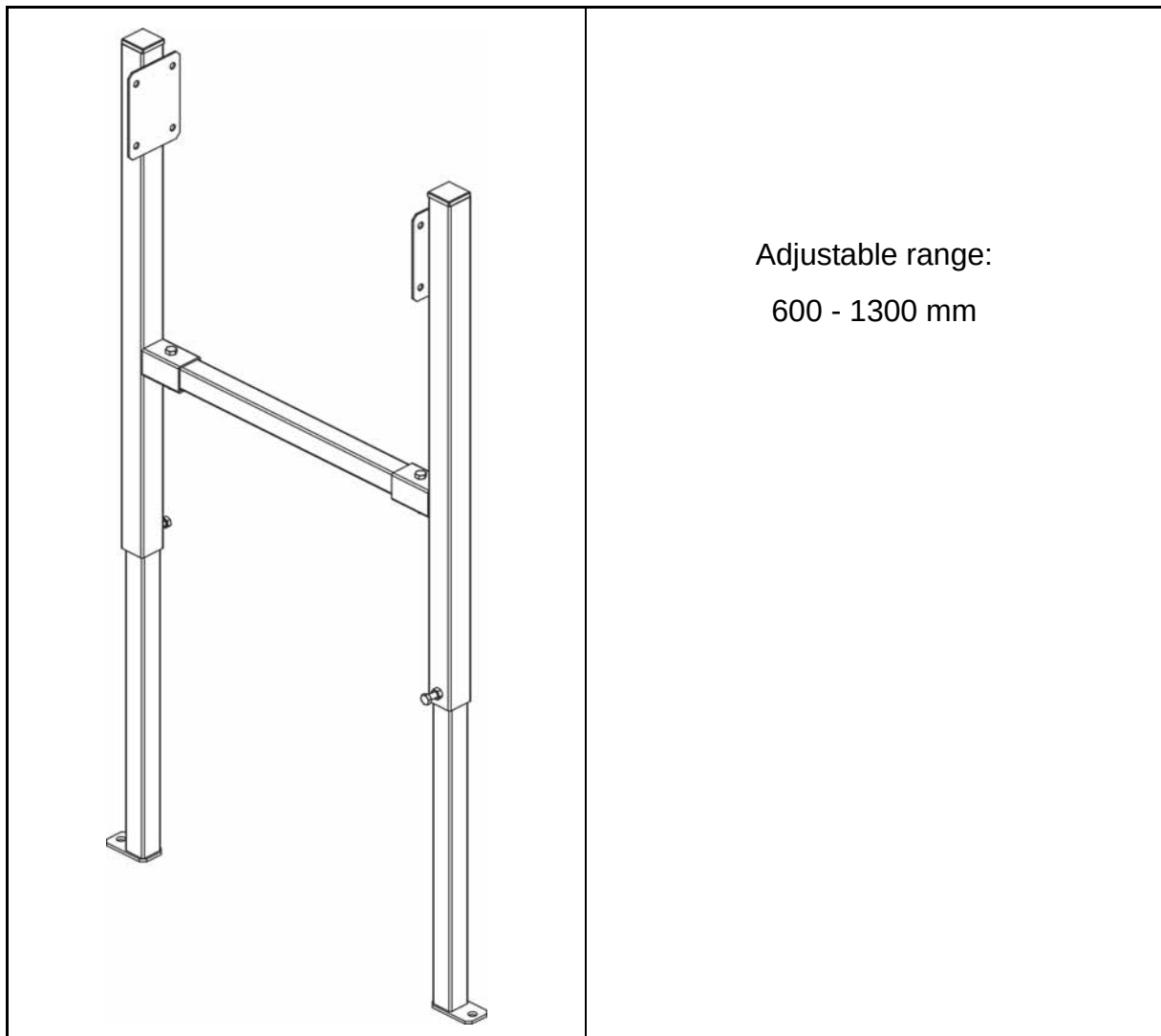


5.5 Floor support medium



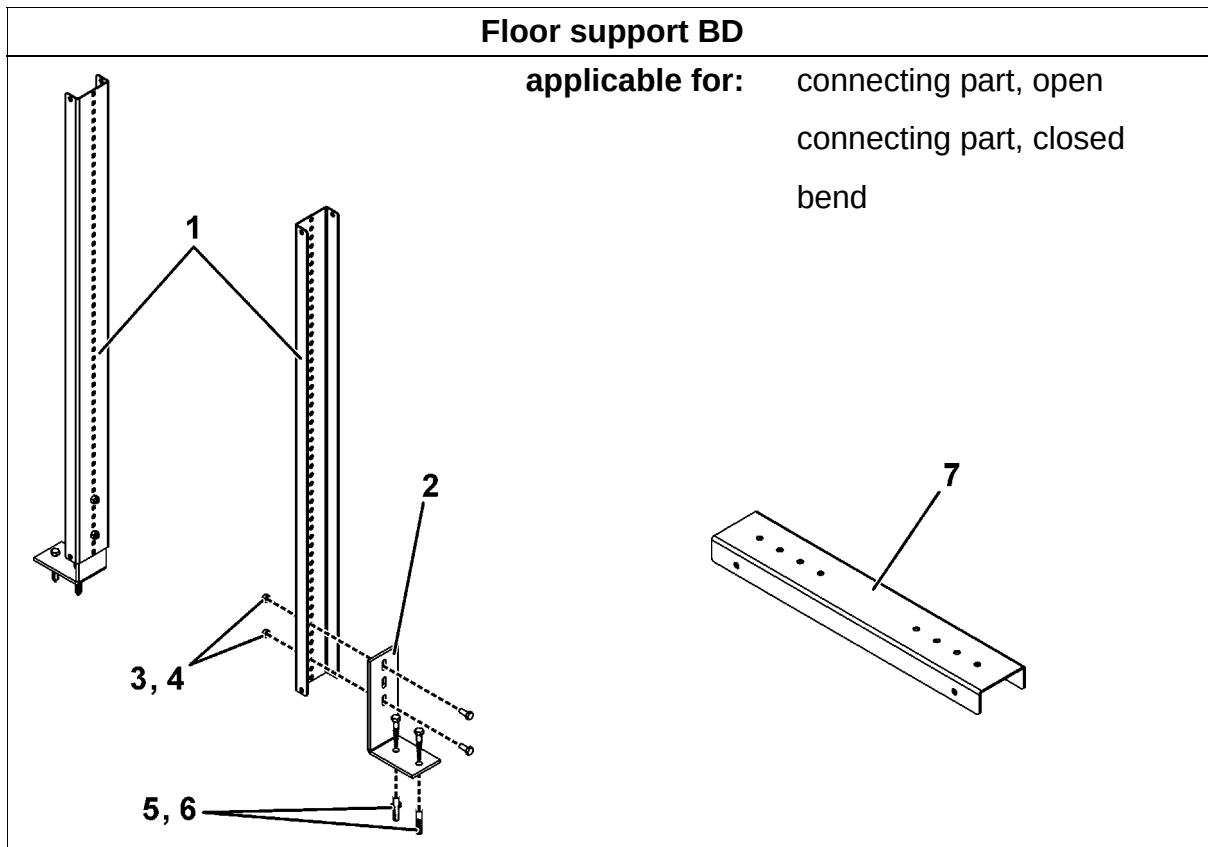
Pos.	Code no.	Description
	57-09-3541	Floor support 310-610 curve conveyor 200/4956
	57-08-3541	Floor support 310-610 curve conveyor 250/4916
	57-06-3541	Floor support 310-610 curve conveyor 350/4855
	57-05-3541	Floor support 310-610 curve conveyor 500/4816

5.6 Floor support long



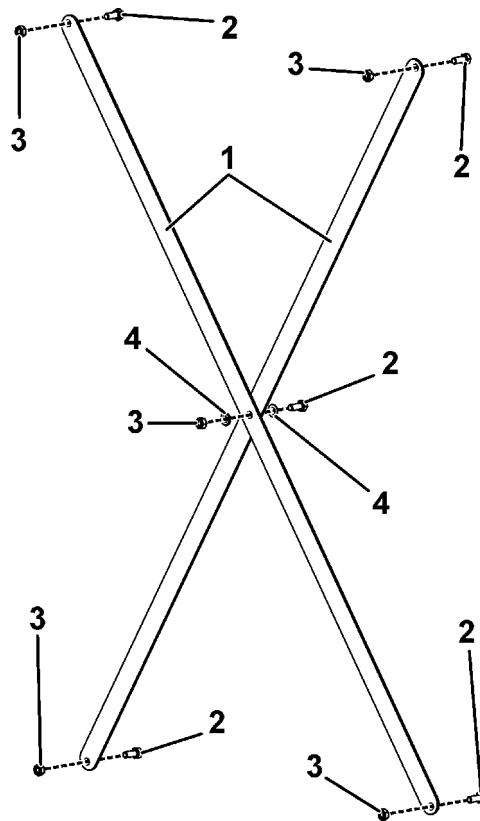
Pos.	Code no.	Description
	57-09-3542	Floor support 600-1300 curve conveyor 200/4957
	57-08-3542	Floor support 600-1300 curve conveyor 250/4917
	57-06-3542	Floor support 600-1300 curve conveyor 350/4856
	57-05-3542	Floor support 600-1300 curve conveyor 500/4817

5.7 Floor support BD



Pos.	Qty.	Description	Code no.
		Floor support BD 1000 cpl curve conveyor all widths	57-05-5710
		Floor support BD 1500 cpl curve conveyor all widths	57-05-5715
		Floor support BD 2000 cpl curve conveyor all widths	57-05-5720
		Floor support BD 2500 cpl curve conveyor all widths	57-05-5725
		includes :	
1	2	U-profile 1000x80 galv in floor support curve conveyor	83-04-6447
		U-profile 1500x80 galv in floor support curve conveyor	83-06-8281
		U-profile 2000x80 galv in floor support curve conveyor	83-04-6448
		U-profile 2500x80 galv in floor support curve conveyor	83-04-6449
2	2	U-profile 2500x80 galv in floor support curve conveyor	83-06-8224
3	4	Hexagon head screw M 8x 20 DIN 933 8.8 galv	99-10-1038
4	4	Hexagon nut M 8 galv DIN 934-8	99-10-1040
5	4	Hexagon head wood screw 8x 60 DIN 571 galv	99-10-3733
6	4	Dowel universal UX 10x60 wo/collar	99-98-3784

Pos.	Qty.	Description	Code no.
7		Coupler 500x80 galv for floor support curve conveyor	83-06-8290

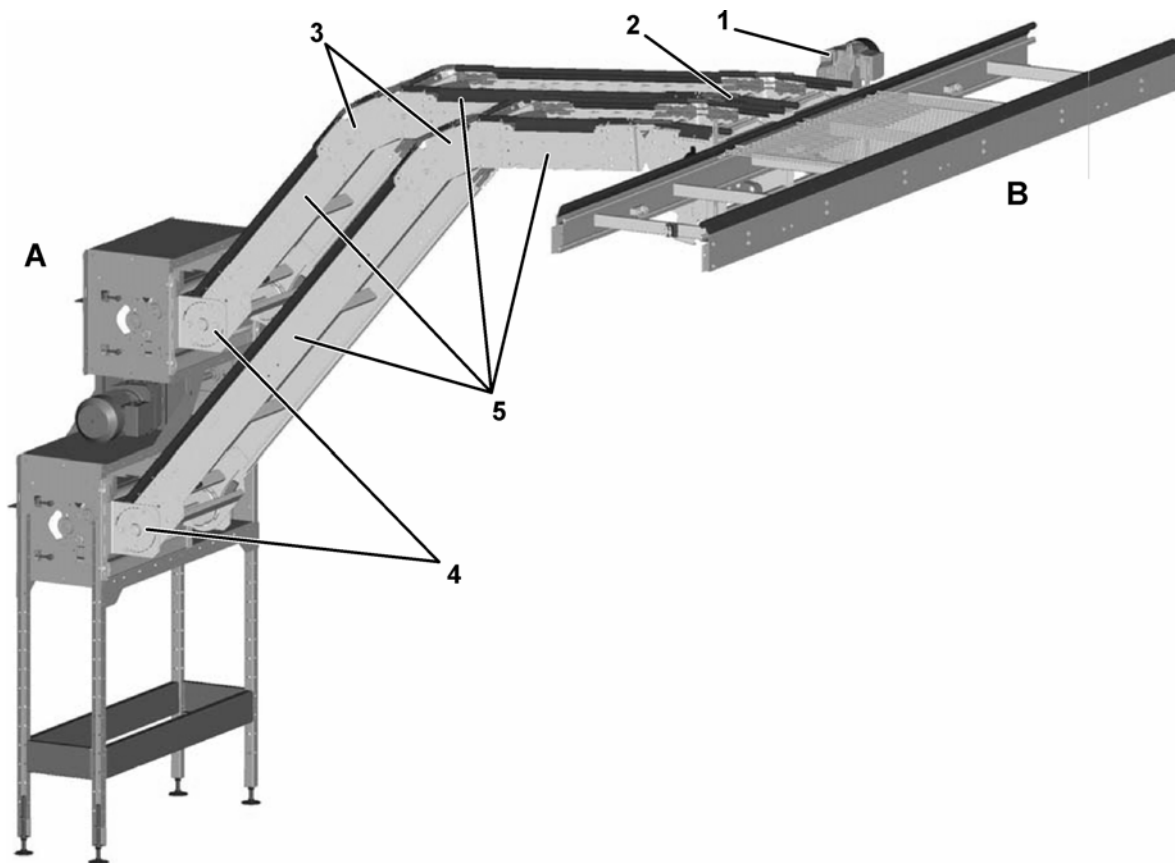


Pos.	Qty.	Description	Code no.
		Diagonal bracing BD cpl/curve conveyor all widths includes:	57-05-5750
1	2	Floor support BD 1500 cpl curve conveyor all widths	83-06-9023
2	5	Hexagon head screw M 8x 20 DIN 933 8.8 galv	99-10-1038
3	5	Hexagon nut M 8 galv DIN 934-8	99-10-1040
4	2	Washer A 8.4 DIN 125 galv	99-20-1026



6 Steep conveyor direct & Dirt plates

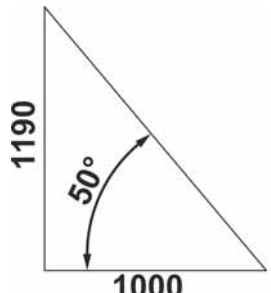
6.1 Steep conveyor direct

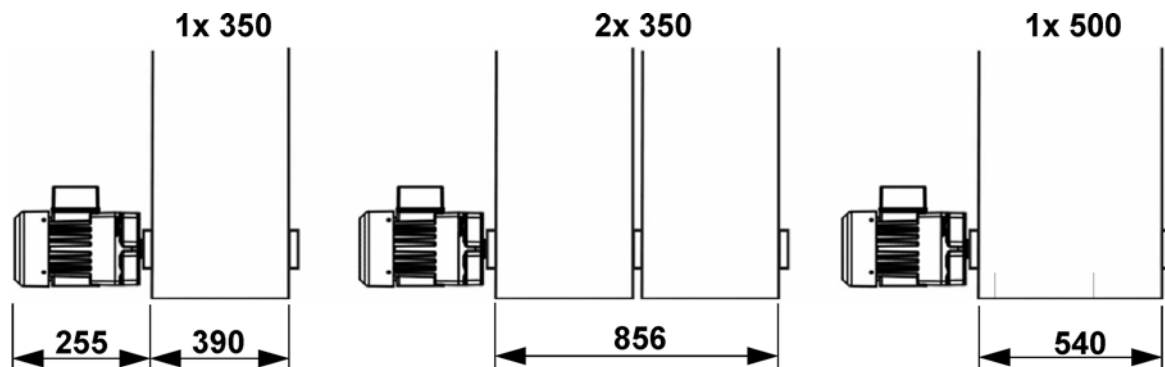


Example: Steep conveyor direct 2 x 350 in front of drive LB Natura-Nova and cross collection

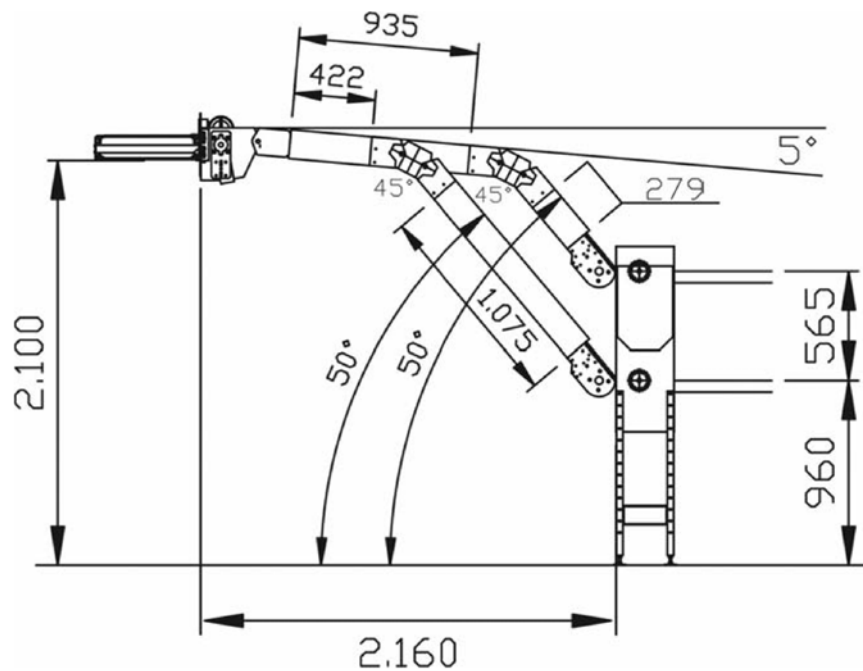
Pos.	Description
A	Drive unit LB Natura-Nova
B	Cross collection with curve conveyor or cross belt channel
1	Gear motor 0.18kW
2	Short drive double tightener with joint
3	Pivoting unit
4	Idler for direct egg input (exact adaptation to BD longitudinal belt drives)
5	Steep conveyor-section (central piece with steep conveyor chain)

6.1.1 Planning Aid

Conveying widths	250; 350; 500	
Conveyor chain	Steep conveyor chain with tab element (16 p./m)	
Gradient / slope	50° 1190 mm/m	
Conveying speed	5 m / min	
Total length of both lines	15 m	



Widths of variants

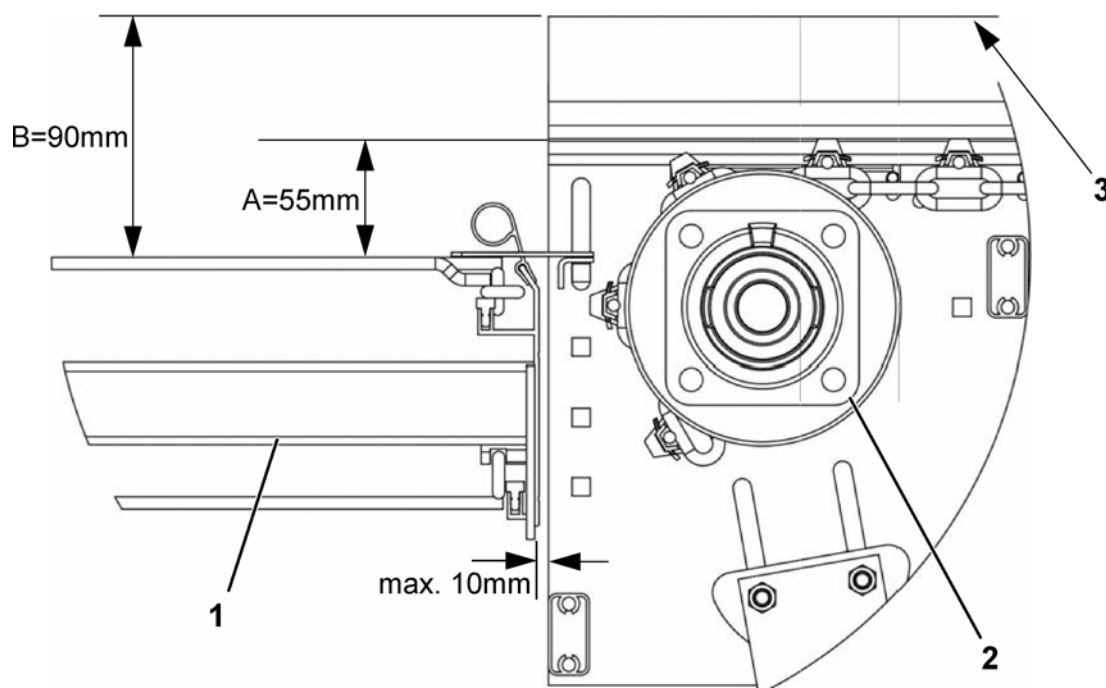


Example dimensions: Steep conveyor directly between drive LB Natura-Nova and cross collection



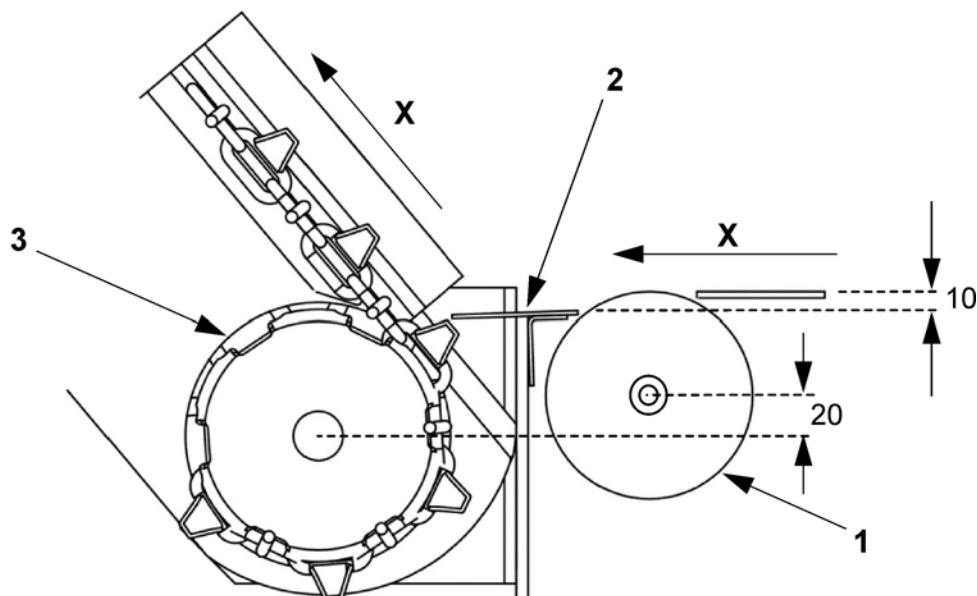
Technical data	
Maximum length of all lines	15 m
Conveying speed at 50Hz	5.0 m/min
Frequency range (only with 3 phases)	10 - 90 Hz
Gear motor 1 or 3 phases	0.18 kW; hollow shaft 20 1/0.57A
Minimum level difference between egg belt in the nest and cross collection	400 mm

6.1.2 Mounting



Cut egg transfer with cross collection curve conveyor or cross belt channel

Pos.	Description
A	Dimension upper edge steep conveyor chain to upper edge chain resp. cross collection
B	Dimension upper edge red capping steep conveyor to upper edge chain resp. cross collection
1	Cross collection with curve conveyor
2	Short drive double with tightener for chain and pivoting unit
3	Red capping



Cut egg input drive roller egg belt and idler steep conveyor

Pos.	Description
1	Drive roller egg belt
2	Transfer plate
3	Idler roller steep conveyor
X	Conveying direction

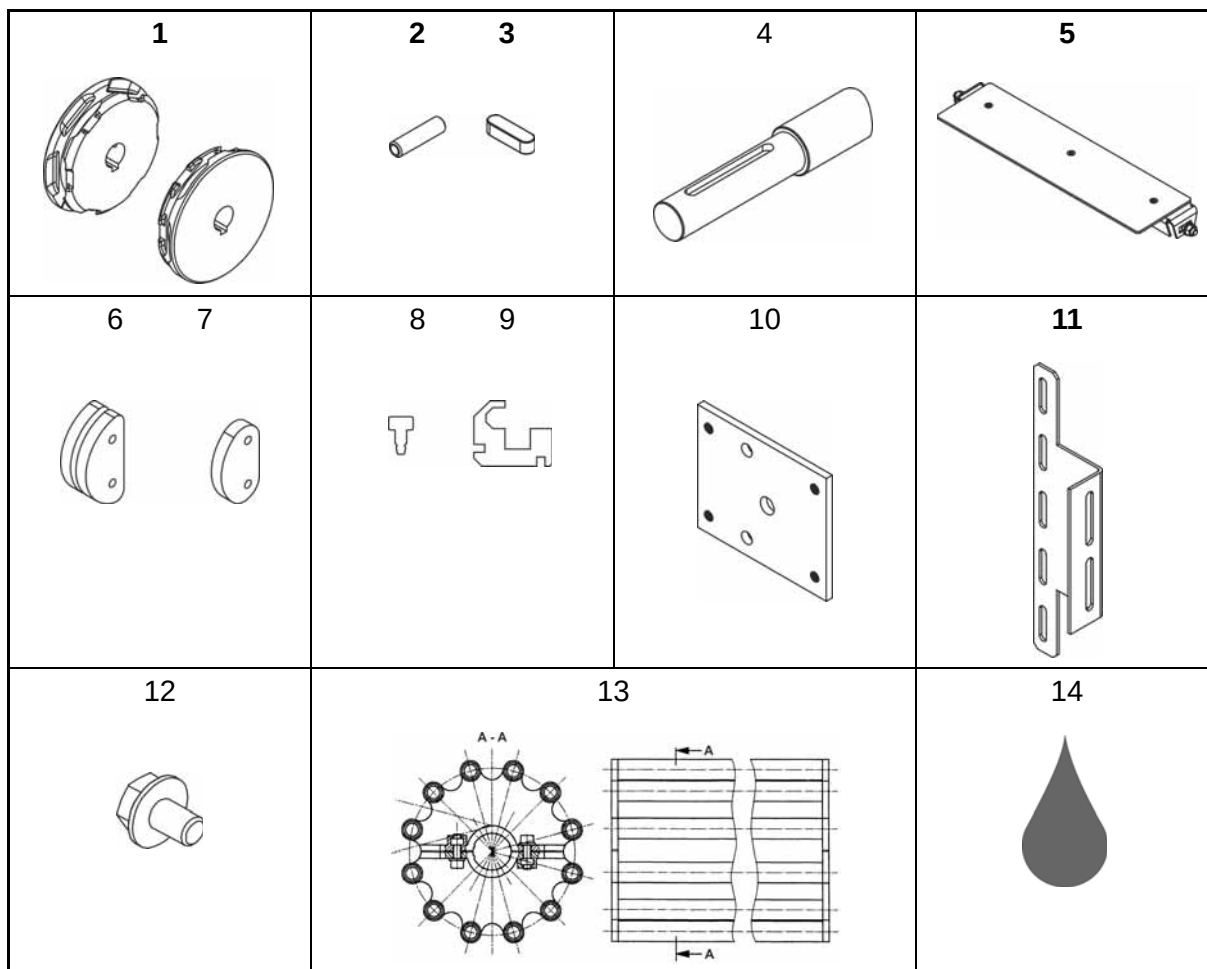
6.1.3 Parts lists:

Qty.	Unit	Code no.	Description
		58-06-3620	Steep conveyor unit DIRECT 0.18kW 1x350
includes:			
1	pc	58-06-3534	Short drive 0.18kW w/tension jack & joint wo/motor steep conveyor 350/8046-0
1	pc	57-05-3682	G-Mot 0,18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0,57A curve conveyor
1	pc	58-06-3519	Idler for increase up to +50° bag conv. DIRECT 350/8051
1	pc	58-06-3530	Pivoting-unit adjust. 0-50deg Steep conveyor 350/8054
1	pc	58-06-3522	Conveyor chain 350 upto 45deg wo/tab element steep conveyor 350/8061-1
7	m	58-06-3517	Conveyor chain 350/upto 50deg incl. tab element Steep conveyor 350/8061
2	pc	58-06-3518	Chain connector Steep conveyor 350/8064
4	pc	57-05-0006	Connection plate for curve conveyor
8	pc	58-06-3511	Tab element 350 Steep conveyor 350/8065

Qty.	Unit	Code no.	Description
		58-06-3625	Steep conveyor unit DIRECT 0.18kW 2x350
includes:			
1	pc	58-06-3723	Short drive 0.18kWdouble tightener/joint without motor steep conveyor 350
1	pc	57-05-3682	G-Mot 0,18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0,57A curve conveyor
2	pc	58-06-3519	Idler for increase up to +50° bag conv. DIRECT 350/8051
2	pc	58-06-3530	Pivoting-unit adjust. 0-50deg Steep conveyor 350/8054
2	pc	58-06-3529	Pivoting-unit adjust. 0-50deg Steep conveyor 350/8054
1	pc	58-06-3522	Conveyor chain 350 upto 45deg wo/tab element steep conveyor 350/8061-1
15	m	58-06-3517	Conveyor chain 350/upto 50deg incl. tab element Steep conveyor 350/8061
4	pc	58-06-3518	Chain connector Steep conveyor 350/8064
8	pc	57-05-0006	Connection plate for curve conveyor
10	pc	58-06-3511	Tab element 350 Steep conveyor 350/8065

Qty.	Unit	Code no.	Description
		58-05-3620	Steep conveyor unit DIRECT 0.18kW 1x500
includes:			
1	pc	58-05-3534	Short drive 0.18kW w/tension jack & joint wo/motor steep conveyor 500/8006-0
1	pc	57-05-3682	G-Mot 0,18 230/400/50 14U FGA 103/4DB63A hollow shaft 20 1/0,57A curve conveyor
1	pc	58-05-3519	Idler for increase up to +50° bag conv. DIRECT 500/8011
1	pc	58-05-3530	Pivoting-unit adjust. 0-50deg Steep conveyor 500/8014
1	pc	58-05-3522	Conveyor chain 500 upto 45deg wo/tab element steep conveyor 350/8021-1
7	m	58-05-3517	Conveyor chain 500/upto 50deg incl. tab elementSteep conveyor 500/8021
2	pc	58-05-3518	Chain connector Steep conveyor 500/8024
4	pc	57-05-0006	Connection plate for curve conveyor
8	pc	58-05-3511	Tab element 500 Steep conveyor 500/8025

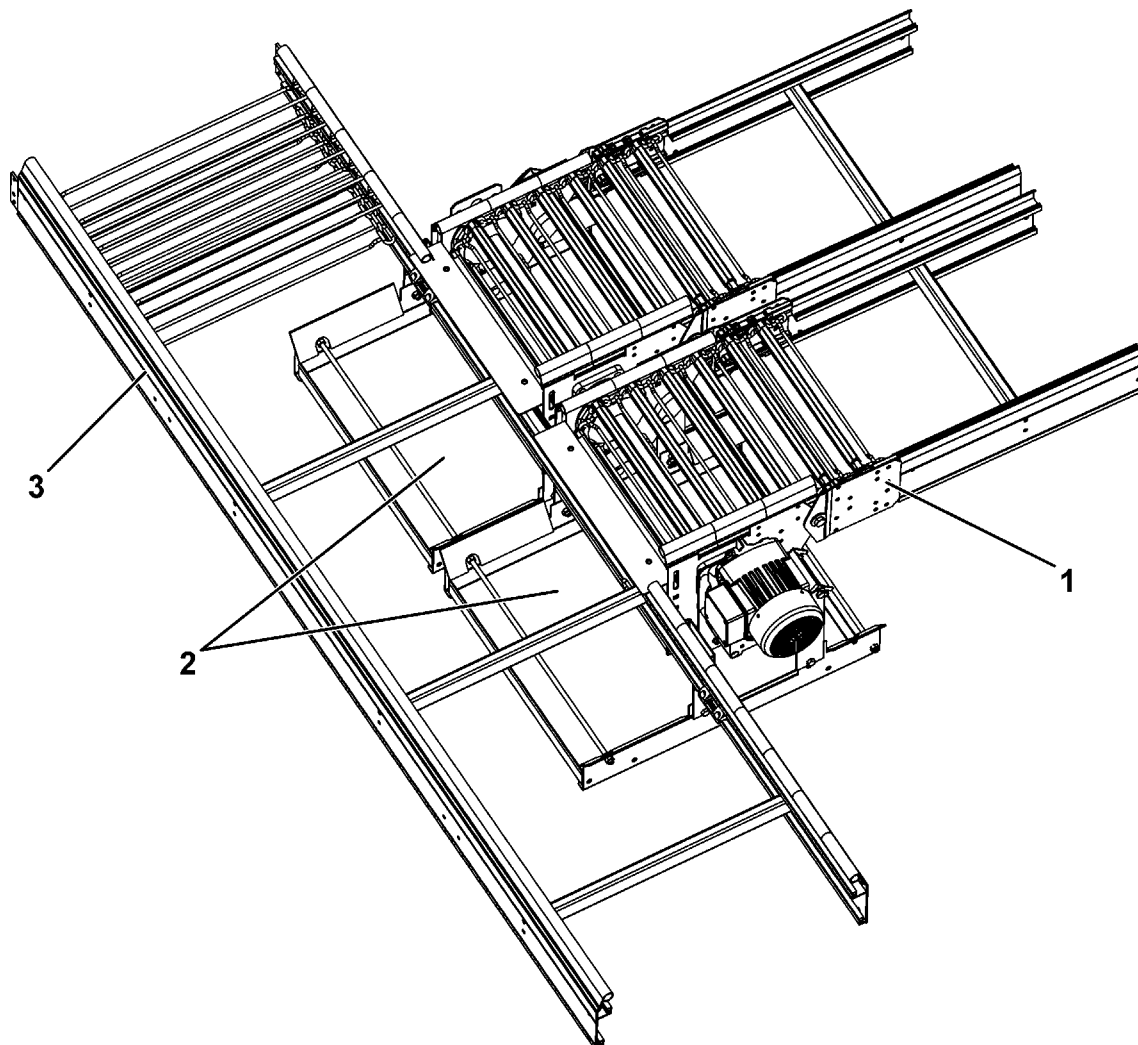
6.1.4 Spare parts for all widths



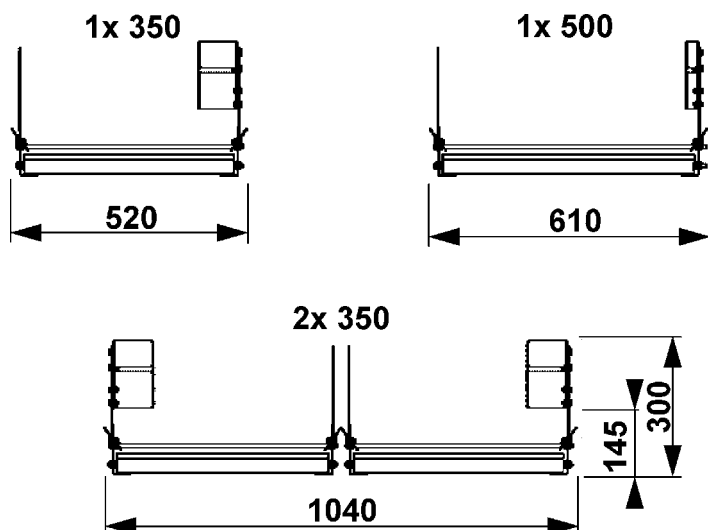
Pos.	Code no.	Description
1	57-05-0096	Drive chain wheel cpl. (1 pair) dia 25 short drive 0.18kW curve conveyor; also includes hex socket set screw (pos.2) and key (pos. 3)
2	57-05-0078	Hex socket set screw 8x30 DIN 916-45H
3	57-05-0079	Key 8x7x28 DIN6885
4	57-08-3111	Drive shaft 25/20x 460 short conveyor 0.18kW 1x250 lh/rh
	57-18-3111	Drive shaft 25/20x 796 short conveyor 0.18kW 2x250 lh/rh
	57-06-3111	Drive shaft 25/20x 560 short conveyor 0.18kW 1x350 lh/rh
	57-16-3111	Drive shaft 25/20x 996 short conveyor 0.18kW 2x350 lh/rh
	57-05-3111	Drive shaft 25/20x 710 short conveyor 0.18kW 1x500 lh/rh
	57-15-3111	Drive shaft 25/20x 1296 short conveyor 0.18kW 2x500 lh/rh
5	57-08-3580	Transfer unit cpl. bracket with PVC plate curve conveyor 250
	57-06-3580	Transfer unit cpl. bracket with PVC plate curve conveyor 350
	57-05-3577	Transfer unit cpl. bracket with PVC plate curve conveyor 500
6	83-04-3833	Idler segment no. 1 chain tensioner short conveyor all widths
7	83-07-1397	Idler segment no. 2 chain tensioner short conveyor all widths
8	57-05-3637	Sliding profile T-form 1000mm curve conveyor all widths
	57-05-0032	Sliding profile T-form 2000mm curve conveyor all widths

Pos.	Code no.	Description
	57-05-0033	Sliding profile T-form 3000mm curve conveyor all widths
9	83-04-3702	Sliding rail runn. m. all bends curve conveyor
10	57-05-0006	Connection plate for curve conveyor L 185 525 06 00
11	57-05-0072	Connecting angle lh/rh short drive curve conveyor all widths
12	99-10-1102	Hexagon flange bolt M 6x 8 DIN 6921 galv.
13	57-08-0056	Discharge wheel cpl. dia 25 short conveyor 250/0.18kW
	57-06-0056	Discharge wheel cpl. dia 25 short conveyor 350/0.18kW
	57-05-0156	Discharge wheel cpl. dia 25 short conveyor 500/0.18kW
14	38-75-9803	Oil for drip-oiler can à 1L
	57-05-3595	Oil for drip oiler can à 5L

6.2 Collecting box for dirt



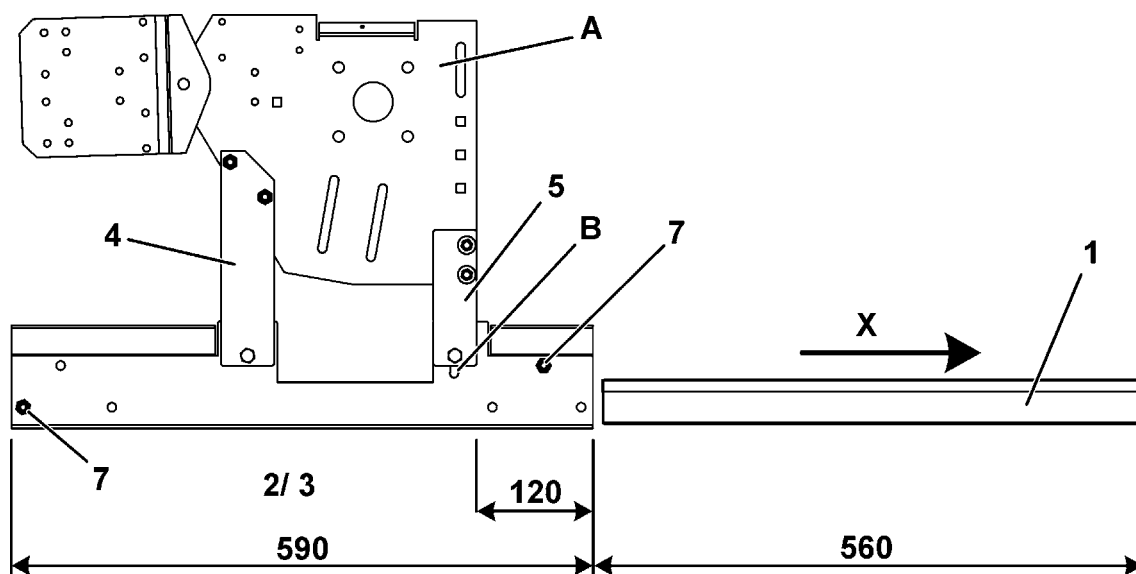
Pos.	Description
1	Short drive steep conveyor (here: 2x 350)
2	Collecting box for dirt inox
3	Curve conveyor (here: type 500)



The collecting box for dirt can be shifted in or out in two directions, depending on the space. To this end, both angles left/right and the rod threaded are mounted accordingly. The boxes can be adjusted via long holes by ± 5 deg.

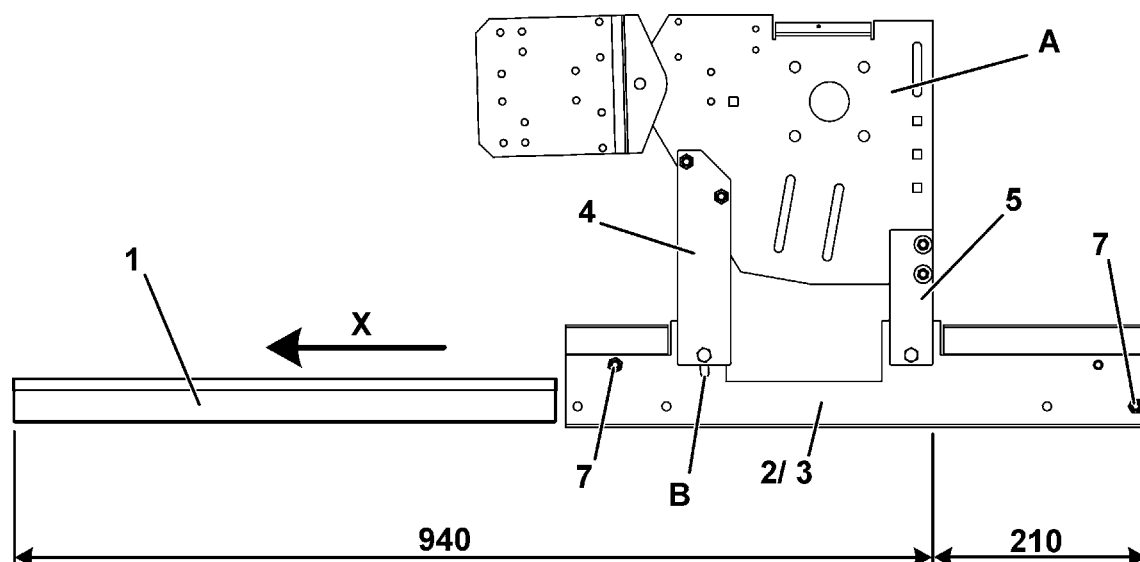


Keep enough space free in order to pull out the boxes!



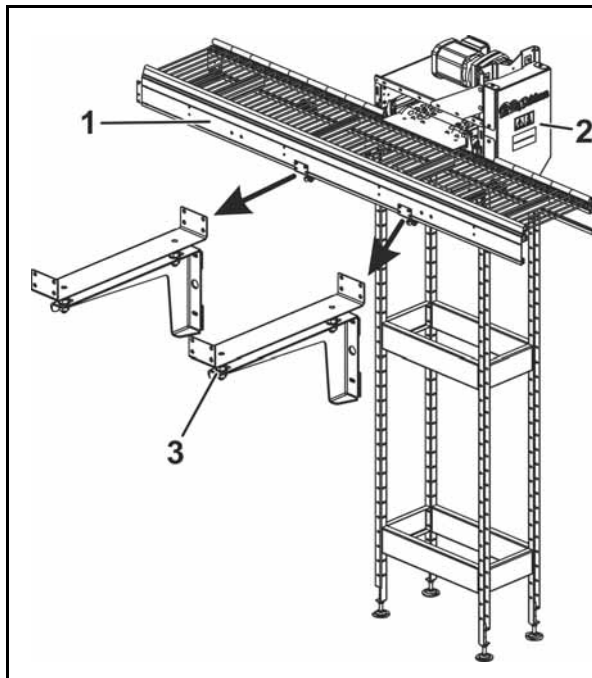
(position numbers: see next page)





Pos.	Qty.			Code no.	Description
	1 x 350	2 x 350		58-06-3640	Collecting box for dirt SST cpl short drive curve conveyor 1x350 leak proof, with holder and screws
				58-06-3641	Collecting box for dirt SST cpl short drive curve conveyor 2x350 leak proof, with holder and screws
		1 x 500		58-05-3640	Collecting box for dirt SST cpl short drive curve conveyor 1x500 leak proof, with holder and screws
1	1	2	1	83-06-7197	Collecting box for dirt SST 550x460x45 leak proof
2	1	2	1	83-07-1244	Retainer rh collecting box for dirt short drive steep conveyor all widths
3	1	2	1	83-07-1245	Retainer lh collection box for dirt short drive steep conveyors all widths
4	2	4	2	83-07-1246	Retaining plate no. 1 collecting box for dirt short drive steep conveyor all widths
5	2	4	2	83-07-1247	Retaining plate no. 2 collecting box for dirt short drive steep conveyor all widths
6	2	4		83-07-1249	Spacing profile collecting box for dirt short drive steep conveyor 350
			2	83-07-3085	Spacing profile collecting box for dirt short drive steep conveyor 500
7	1	2	2	99-10-3708	Rod threaded M 8x1000 DIN 976 galv
8	2	4	2	99-10-1067	Hexagon head screw M 6x 16 DIN 933 8.8 galv
9	2	4	2	99-10-1045	Hexagon nut M 6 galv DIN 934-8
10	4	8	4	99-50-1147	Washer B 6.4 DIN 125 galv
11	6	12	6	99-10-1046	Hexagon head screw M 8x 16 DIN 933 8.8 galv
12	14	28	14	99-10-1040	Hexagon nut M 8 galv DIN 934-8
13	2	4	2	99-20-1026	Washer A 8.4 DIN 125 galv
A					Short drive steep conveyor direct
B					Long hole for adjustment -5° ... +5°
X					Pull-out direction

7 Drive LB directly in front of cross collection



The supports are always installed in pairs and are available for curve conveyors 200 mm and 500 mm.

Pos.	Code no.	Description
1		Curve conveyor
2		Drive for longitudinal belt
3	83-04-3765	Support cpl. for curve conveyor 200 p/tier drive LB245/350/500
	83-08-3691	Support cpl. for curve conveyor 250 p/tier drive LB245/350/500
	83-05-8642	Support cpl. for curve conveyor 350 p/tier drive LB245/350/500
	83-06-6585	Support cpl. for curve conveyor 500 p/tier drive LB245/350/500



8 Maintenance Instructions

The following maintenance work is necessary to ensure trouble-free operation and long working life:

- All bearing-mounted components are to be permanently lubricated.
- The sliding profiles, which are made of high-strength, abrading-resistance plastic, should be visually examined every 500 operating hours.
- Special attention must be given to the heart of the system, namely the conveyor chain. The bearing areas of the chain are subject to high levels of stress when they are not traveling in a straight line and a lubricating film is essential to reduce wear at these points to a minimum and to keep the chain running easily. A significant reduction in friction between chain and running strip is achieved in the same way. For these reasons depending on the level of use the conveyor chain should be oiled from time to time as well as the driving chain from the gear motor to the drive shaft.
- The gear motor is maintenance-free.
- The system should be thoroughly cleaned at intervals depending on the amount of accumulated dirt and dust.
- If the conveyor is taken out of operation for a relatively long period of time, it is advisable to wash it with a high-pressure hose and hot water. It must then be dried, lubricated and briefly run in order that the oil film is evenly spread over all sliding and articulating surfaces etc.