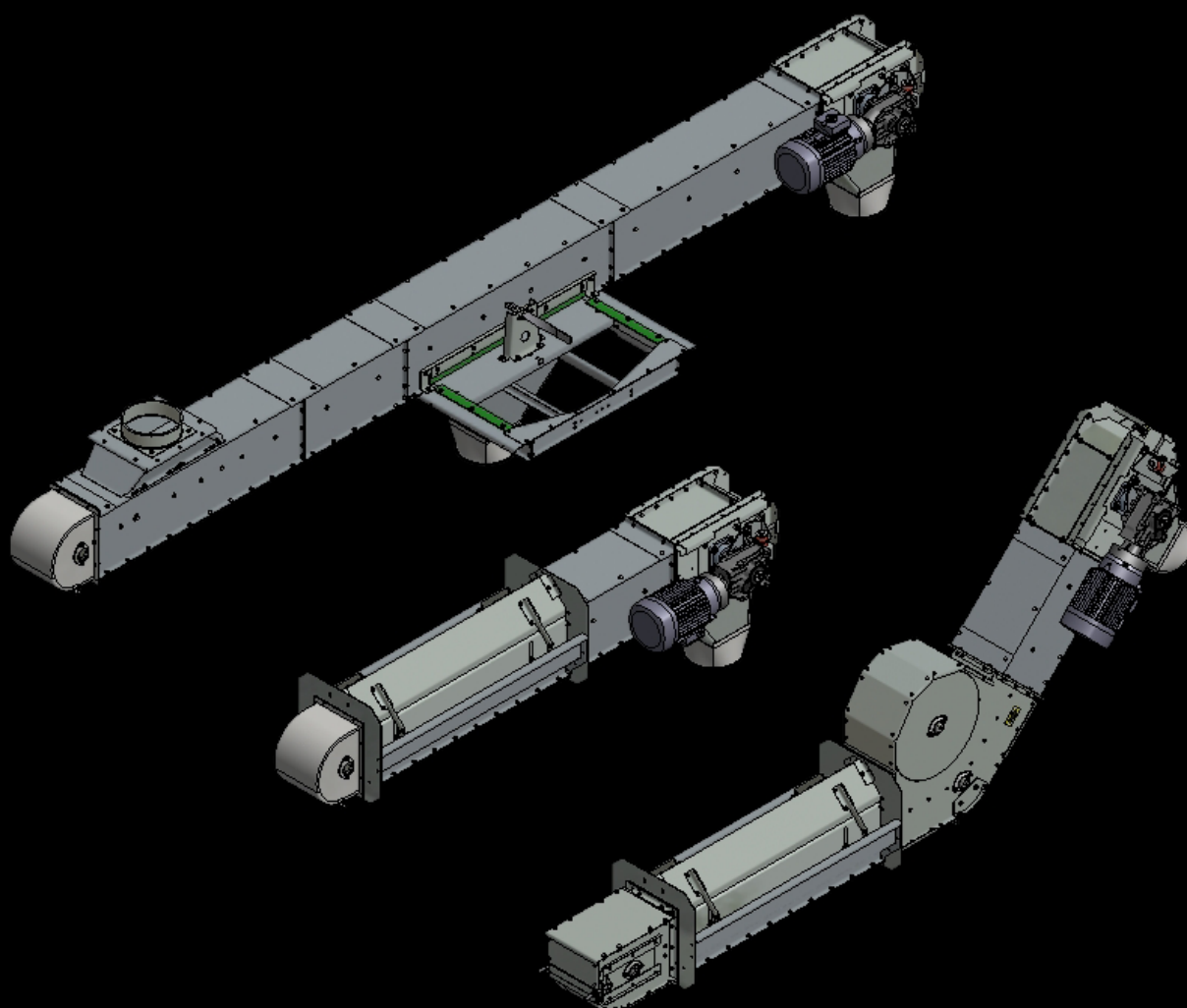


Manual Chain & flight conveyor T44/T45

Version 70502.2



Contents



Contents	2
Introduction	4
EU Declaration of conformity	5
Conditions for use.....	6
General information	7
Delivery	7
Storage.....	7
Noise level measuring.....	7
Type plate	8
Construction	8
Capacity	9
Technical specifications – power consumption	10
Drive station.....	11
Drive station outlet	11
Extensions	12
Inlet trough	13
Assembling plate	14
Tightening section	15
Elevator boot closed	15
Inlet.....	16
Intermediate outlet.....	16
Scale drawing T44/T45.....	17
Scale drawing T44/T45 grain pit.....	18
Upon receipt.....	19
Warning labels.....	19
Foundation	20
Lifting equipment	20
Lifting instructions	21
Weight table - individual components T44/T45.....	22
Weight table intake conveyor T44/T45	24
Weight table for chain conveyor horizontal T44/T45.....	24
Weight table for chain conveyor with 45° bend T44.....	25
Weight table for chain conveyor with 45° bend T45.....	25
Assembly	26
Assembly of the chain conveyor.....	26
Sealing	28



Guards.....	29
The chain.....	30
Installation of inlet.....	31
Gear motor assembly.....	32
Fitting the motor and pulley drive	33
Assembly of intermediate outlet for mounting anywhere on the conveyor	34
Potential equalization	35
Attachment.....	36
Starting up.....	37
Conveyor stops - fault finding	37
Chain conveyor with intermediate outlet	38
Chain conveyor with inlet trough / 45° bend	38
Maintenance	39
Gear motor	39
Motor	39
Pulley kit.....	39
Chain.....	40
Rubber slats	40
Bearings	40
Lubrication of bearings	40
Closed bottom section and tension section	41
Drive station	41
Leaks.....	41
Nose and vibrations	41
Disposal.....	42
Options/accessories	43
Shutter	43
Hopper	44
Bend 45°	44
Intermediate outlet.....	45
Wire suspension	49
Cover for drive station	50
Drypit.....	51
Tipping hopper	51
Parts T44/T44	52
Parts list T44/T44	54
Maintenance T44/T44	58

Introduction

JJEMA AGRO A/S is a modern factory, which specializes in producing and delivering equipment for transport systems for raw or cleaned grain, seeds and granulates.

Our current product range is the result of more than 50 years experience in machine development especially for the agriculture in close collaboration with our customers – and our company is highly regarded in the industry due to the quality and versatility of our products.

JJEMA AGRO A/S conveyors and transport systems are compatible with ALL types of dryer- and silo systems.

Important!

Please read these instructions carefully before assembly and use.

EU Declaration of conformity



The manufacturer: JEMA AGRO A/S
Kløservejen 2, Sahl
DK-8850 Bjerringbro
Tlf. +45 86 68 16 55

Hereby declares that:

Product: Chain & flight conveyor
Type: T44/T45
Year of production: 2014

- Conforms to the Machine directive 2006/42/EF with special reference to the directive appendix 1 regarding major health- and safety regulations regarding construction and production of the machines.

The following standards have been applied:

EN ISO 12100-1:2005 Basic terminology and methodology
EN ISO 12100-2:2005 Technical principles
EN 1050:1997 Principles for risk assessment

- is in accordance with EMC-directive 04/108/EF of 15th December 2004 regarding electro-magnetic compatibility.

Director Jens-Peter Pedersen

Title Name

03.11.2014

Date Signature

A handwritten signature in black ink, appearing to be "Jens-Peter Pedersen", written over a horizontal line.

Conditions of use

JEMA AGRO A/S chain & flight conveyors T44/T45 have been constructed for transport of grain, granular materials and seed mix.

- The chain & flight conveyors T44/T45 must only be used for the product(s) specified in the contract.
- The electrical connections must be done by a qualified electrician.
- The chain & flight conveyors T44/T45 must be potential adjusted in accordance with the current local regulations
- The chain & flight conveyor has been thoroughly controlled regarding maintenance, and a checklist has been drawn up containing regular cleaning- and maintenance intervals. If these intervals are not observed, the JEMA AGRO conditions for a trouble-free operation cease to exist and the warranty will be invalid.
- During installation, maintenance or repair the electric supply to the chain & flight conveyors must be disconnected and secured against accidental reconnection.
- The user manual must be kept / be available in close proximity to the chain & flight conveyor T44/T45

General information

Delivery

The chain & flight conveyor is disassembled for shipment. Standard packing (pallet/wooden boxes, grid boxes, etc.) Regarding the actual transport there are no specific requirements apart from normal consideration.

The shipment includes the parts stated in the order confirmation.

Please read this manual carefully before installation and use.

Storage

There are no precautions regarding long-time storage.

After delivery the components must be kept in a suitable, dry storage area before installation.

Noise level

A noise level test was conducted for the chain & flight conveyor. The level has been measured in a distance of 1 m from the conveyor surface and at a height of 1.6 m from the floor level. During the test the chain & flight conveyor was running unloaded, which is the operational state of maximum noise level.

The measured noise level is below 70 dB

Type Plate

The type plated is fitted on the drive station.



Construction

The chain & flight conveyor type T44/T45 is constructed by standard elements, which can be combined and easily integrated into all grain conveyor systems. It is characterized by a high capacity and compact dimensions. The chain & flight conveyor is available in two versions:

- Model A, closed transport chain system
- Model B adjustable inlet trough

The chain & flight conveyor is made of galvanized steel, which makes it perfectly suited for outdoor use. Furthermore it is fitted with a high quality roller chain with riveted rubber slats.

The chain & flight conveyor can be fitted with one or several inlets, facing right or left according to the individual requirements. The outlet can be operated by manually, or operated by a motor.

The drive station is fitted with a tension mechanism, the chain & flight conveyor can be operated by drive pulleys (1000 rpm) or a pinion gear motor, which can be fitted on the right or left hand side of the drive station.

The chain & flight conveyor consists of:

- Drive station
- Closed bottom section or tension section
- Chain with rubber slats
- Extensions from 0.125 m to 2.0 m.
- Intermediate outlet
- Inlet trough
- Side inlet
- Outlet
- Motor.

Capacity

The table below shows the various density capacities:

Density	T44 (40 m ³ /h)	T45 (80 m ³ /h)
650 kg. pr. m ³	26 t/h	52 t/h
700 kg. pr. m ³	28 t/h	56 t/h
750 kg. pr. m³ (wheat)	30 t/h	60 t/h

Measured in cleaned, storable material at a power supply of 50 Hz

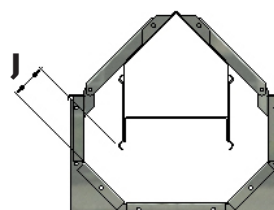
The capacity varies according to the nature of the material

T44	J In opening	Capacity t/h	T45	J In opening	Capacity t/h
Pulley drive with motor 1.500 rpm	15	5	Pulley drive with motor 1.500 o/m	15	25
	25	11		25	31
Gear motor 280 rpm	35	18	Gear motor 280 rpm	35	38
	45	25		45	45
Pulley drive with motor 1.000 rpm	20	10	Pulley drive with motor 1.000 rpm	20	30
	35	16		35	40
Gear motor 180 rpm	50	23	Gear motor 180 rpm	50	50
	65	30		65	60

The capacity is measured at a density of 750 kg/m³.

Important! – The J dimension in the sketch is just for guidance.

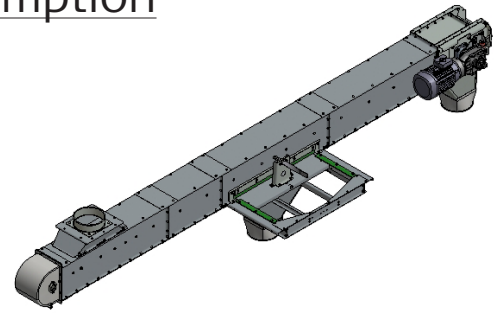
Important! - Remember to adjust the inlet plates before starting.



Technical specifications – power consumption

Conveyor T44 - power consumption in kW:

Type	0-16m	17-23m	24-30m	31-41m
T44	2,2 kW	3,0 kW	4,0 kW	5,5 kW



Conveyor T45 - power consumption in kW:

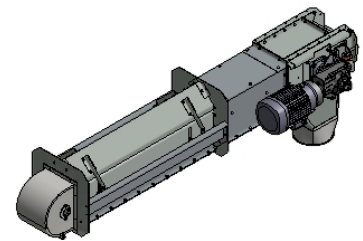
Type	0-11m	12-15m	16-21m	22-29m	30-41m
T45	2,2 kW	3,0 kW	4,0 kW	5,5 kW	2 x 4,0 kW

Intake conveyor T44 - power consumption in kW:

Type	0-14m	15-20m	21m
T44	2,2 kW	3,0 kW	4,0 kW

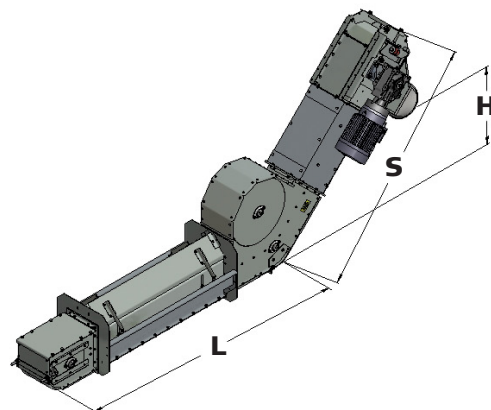
Intake conveyor T45 - power consumption in kW:

Type	0-6m	7-10m	11-13m	14-18m	19-21m
T45	2,2 kW	3,0 kW	4,0 kW	5,5 kW	2 x 4,0 kW



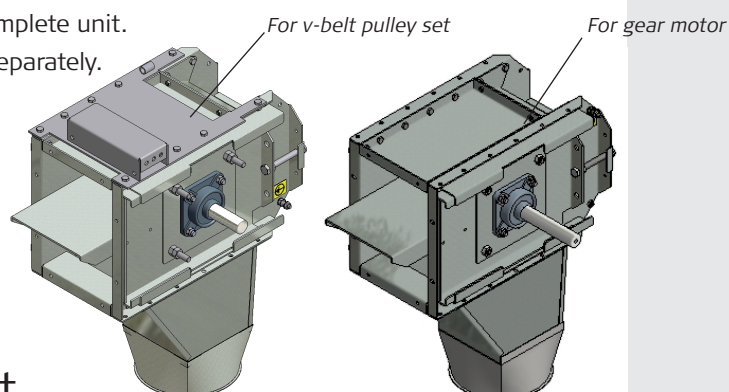
Conveyor T44/T45 with 45° bend:

L Length, metres	H S Height / Inclination 1,09m. / 2,20m	
	T44 kW	T45 kW
2,87	2,2	2,2
3,87	2,2	3,0
4,87	2,2	3,0
5,87	2,2	4,0
6,87	2,2	4,0
7,87	2,2	5,5
8,87	3,0	5,5
9,87	3,0	5,5
10,87	3,0	5,5



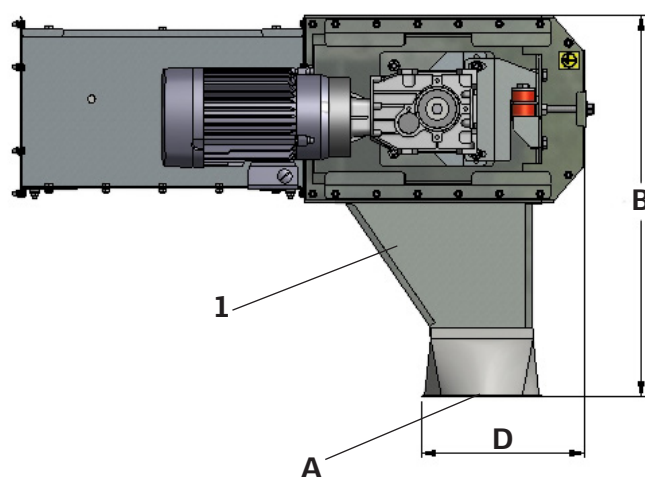
Drive station

The drive station is delivered as a complete unit.
The outlet and motor are delivered separately.



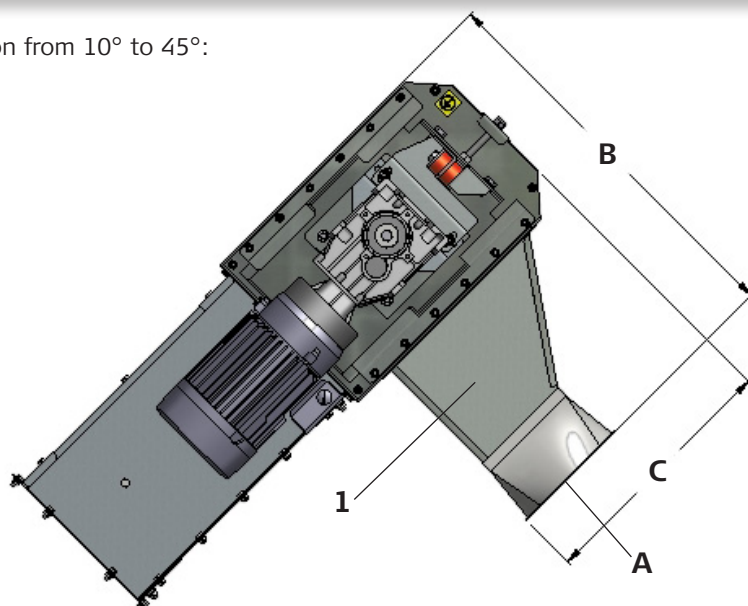
Drive station outlet

Inclination from 0° to 10°:



Pos.	Description	T20	Kg.	T40	Kg.
1	Outlet hopper for drive-/tension section 90°	44247	4,500	45247	5,000

Inclination from 10° to 45°:



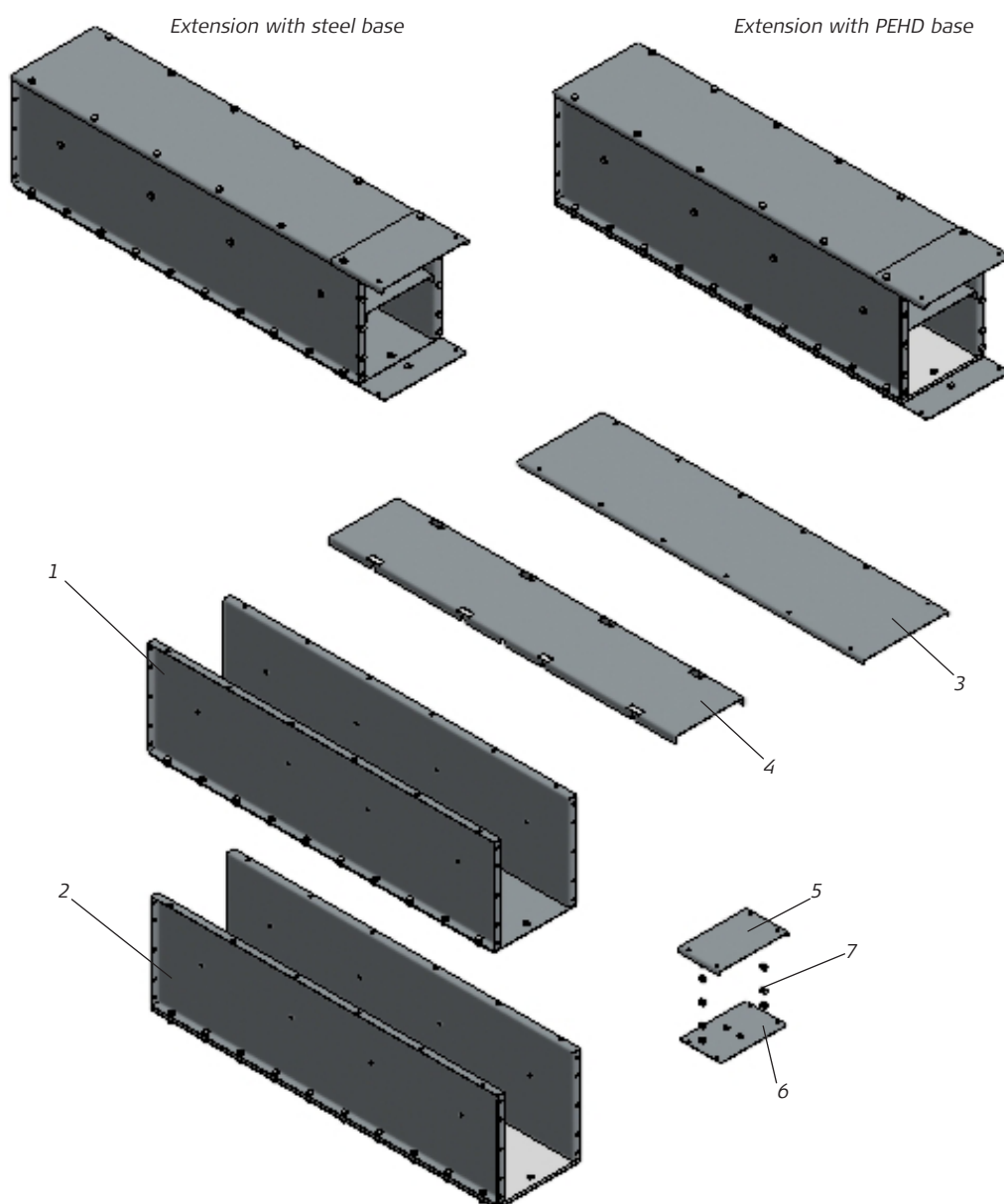
Pos.	T20	T40
A	Ø200	Ø200
B	650	650
C	440	440
D	330	330

Extensions

Extensions are available in the lengths: 2.0m. – 1.0m. – 0.5m. – 0.25m.

They are available with a 2 mm steel base or 8 mm PEHD base.

Comes assembled with bottom plates and side plates. Intermediate plate, cover, assembly plates and bolt bag are included detached.



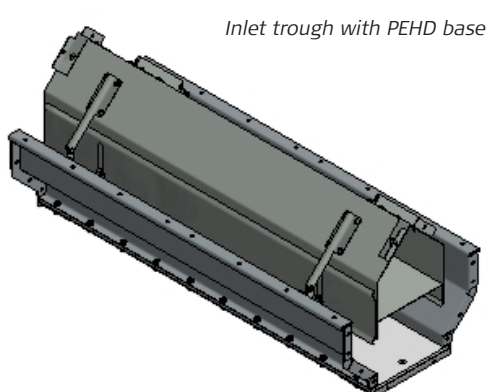
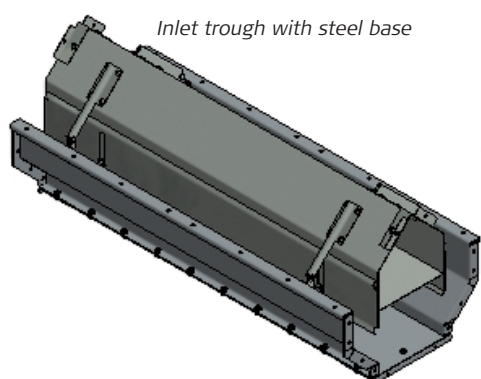
Pos.	Description	T44	Kg.	T45	Kg.
1	Extension 0.25m. with steel base without cover and intermediate plate	51188-1	2,82	52188-1	3,95
1	Extension 0.5m. with steel base without cover and intermediate plate	51187-1	5,41	52187-1	7,55
1	Extension 1.0m. with steel base without cover and intermediate plate	51186-1	10,59	52186-1	14,80
1	Extension 2.0m. with steel base without cover and intermediate plate	51185-1	20,96	52185-1	29,30
2	Extension 0.25m. with PEHD base without cover and intermediate plate	51188-3	3,23	52188-3	4,47
2	Extension 0.5m. with PEHD base without cover and intermediate plate	51187-3	6,18	52187-3	8,57
2	Extension 1.0m. with PEHD base without cover and intermediate plate	51186-3	12,10	52186-3	16,90
2	Extension 2.0m. with PEHD base without cover and intermediate plate	51185-3	23,93	52185-3	33,29
3	Cover for 0.25m extension	51098	0,58	52098	0,77
3	Cover for 0.5m extension	51094	1,16	52094	1,55
3	Cover for 1.0m extension	51090	2,33	52090	3,09
3	Cover for 2.0m extension	51086	4,66	52086	6,19
4	Intermediate plate for 0.25m extension	51099	0,46	52099	0,65
4	Intermediate plate for 0.5m extension	51095	0,96	52095	1,34
4	Intermediate plate for 1.0m extension	51091	1,91	52091	2,67
4	Intermediate plate for 2.0m extension	51087	3,89	52087	5,41
5	Assembly plate for cover for extension	51122	0,36	52122	0,48
6	Assembly plate for base for extension	51121	0,41	52121	0,56
7	Bolt bag for assembly plates for extensions	52200-1	0,16	52200-1	0,16

Inlet trough

Inlet trough is available in the lengths: 2.0m. – 1.0m. – 0.5m.

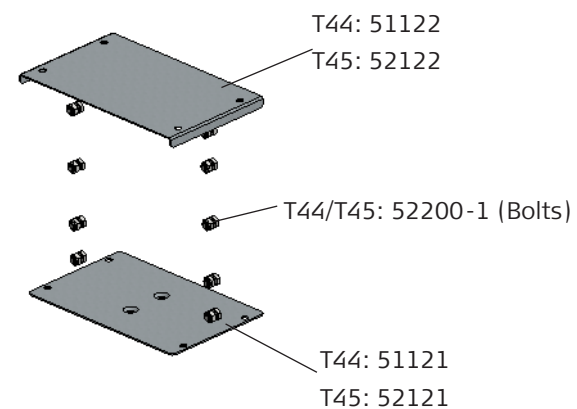
They are available with a 2mm steel base or 8mm PEHD base.

Comes completely assembled.

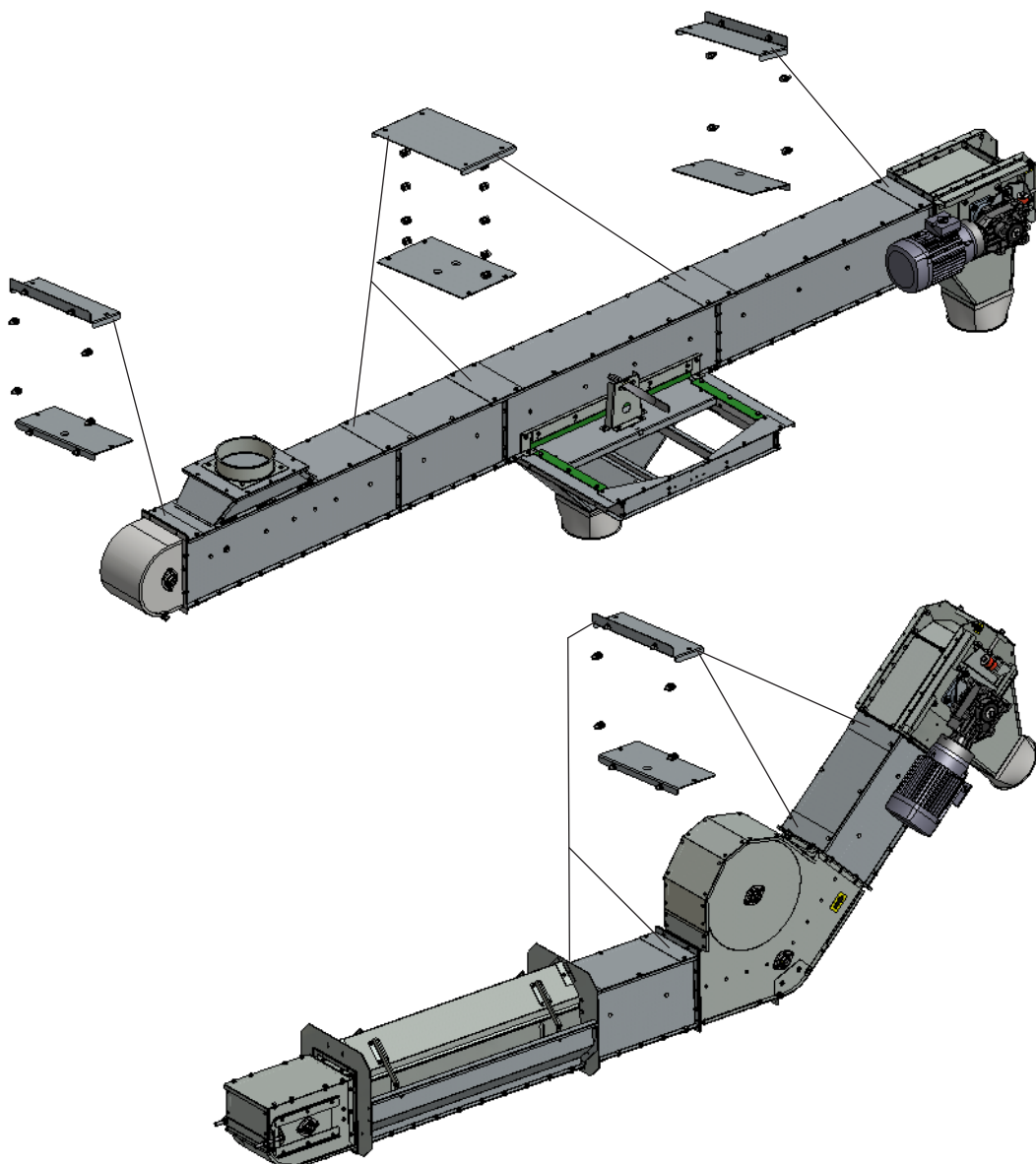
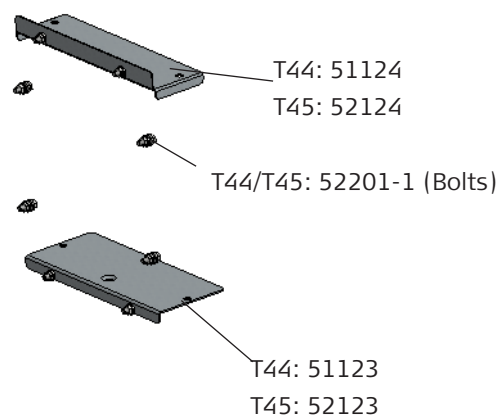


Assembly plates

Assembly plates for extensions.

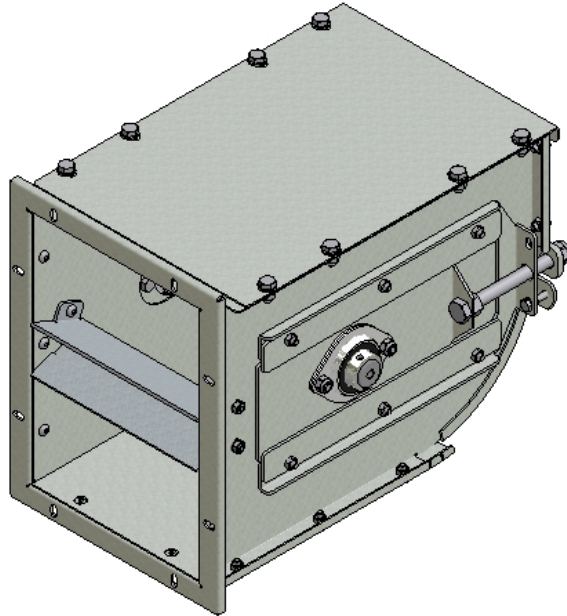


Assembly plates for connector to drive station, tension section, bend and inlet trough.



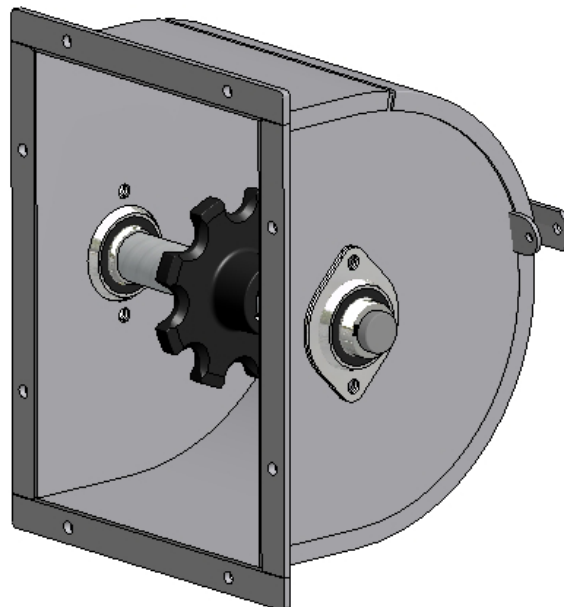
Tightening section

The tightening section is delivered as a complete unit. Used for lengths over 15m.



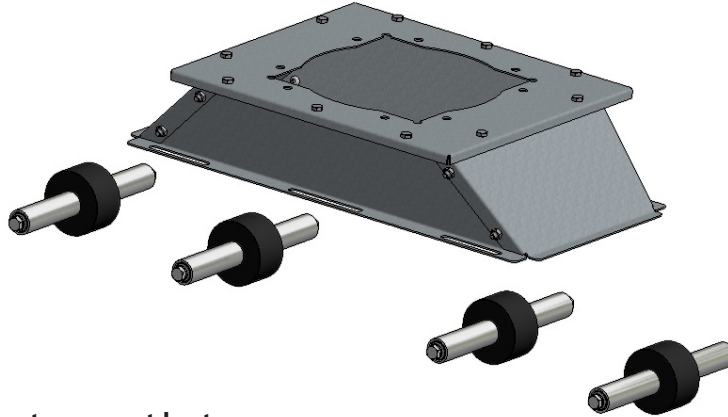
Elevator boot closed

The elevator boot of the chain conveyor is closed. Used for lengths under 15m.



Inlet

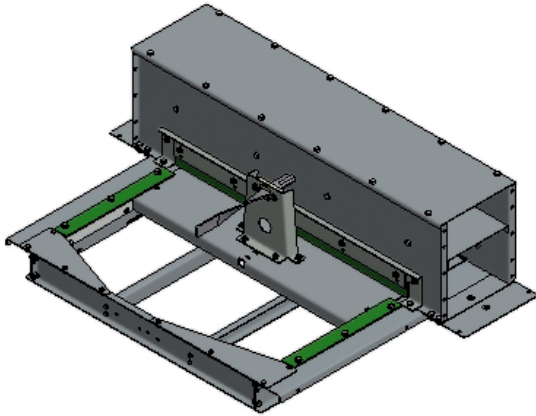
The inlet is delivered with 4 sets of lifting idlers. See page 31 for assembly of the inlet.



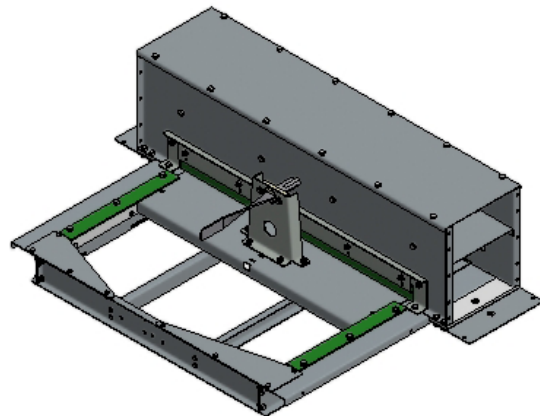
Intermediate outlet

The intermediate outlet is available in 3 versions as shown below. See page 45-48 for extra equipment for the intermediate outlet.

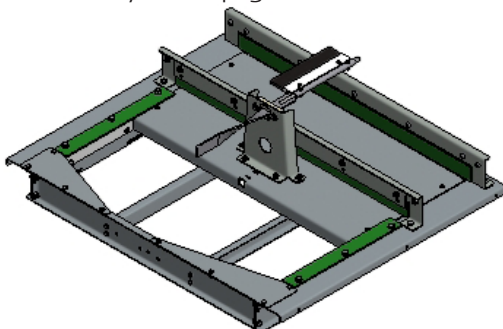
Intermediate outlet with 1,0m. extension for conveyor with steel base.



Intermediate outlet with 1,0m. extension for conveyor with PEHD base.



Intermediate outlet without extension for mounting anywhere on the conveyor. See page 34 for installation on extension.

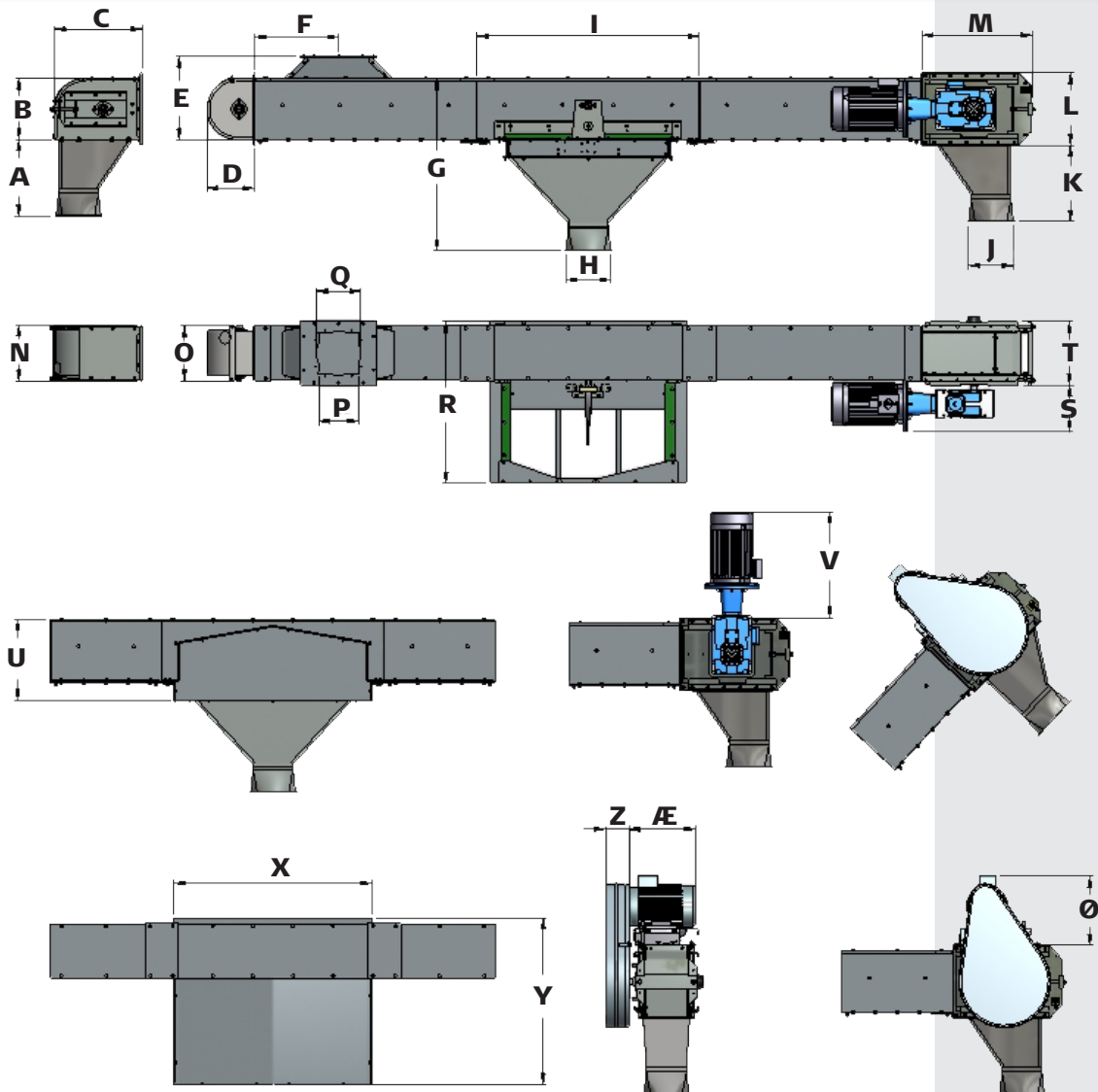


Scale drawing T44/T45

	A	B	C	D	E	F	G	H	I
T44	342	300	430	215	380	378	780	Ø200	1000
T45	342	300	430	215	380	378	780	Ø200	1000

	J	K	L	M	N	O	P	Q	R
T44	Ø200	342	328	500	192	189	180x180	Ø200	670
T45	Ø200	342	328	500	252	249	180x180	Ø200	730

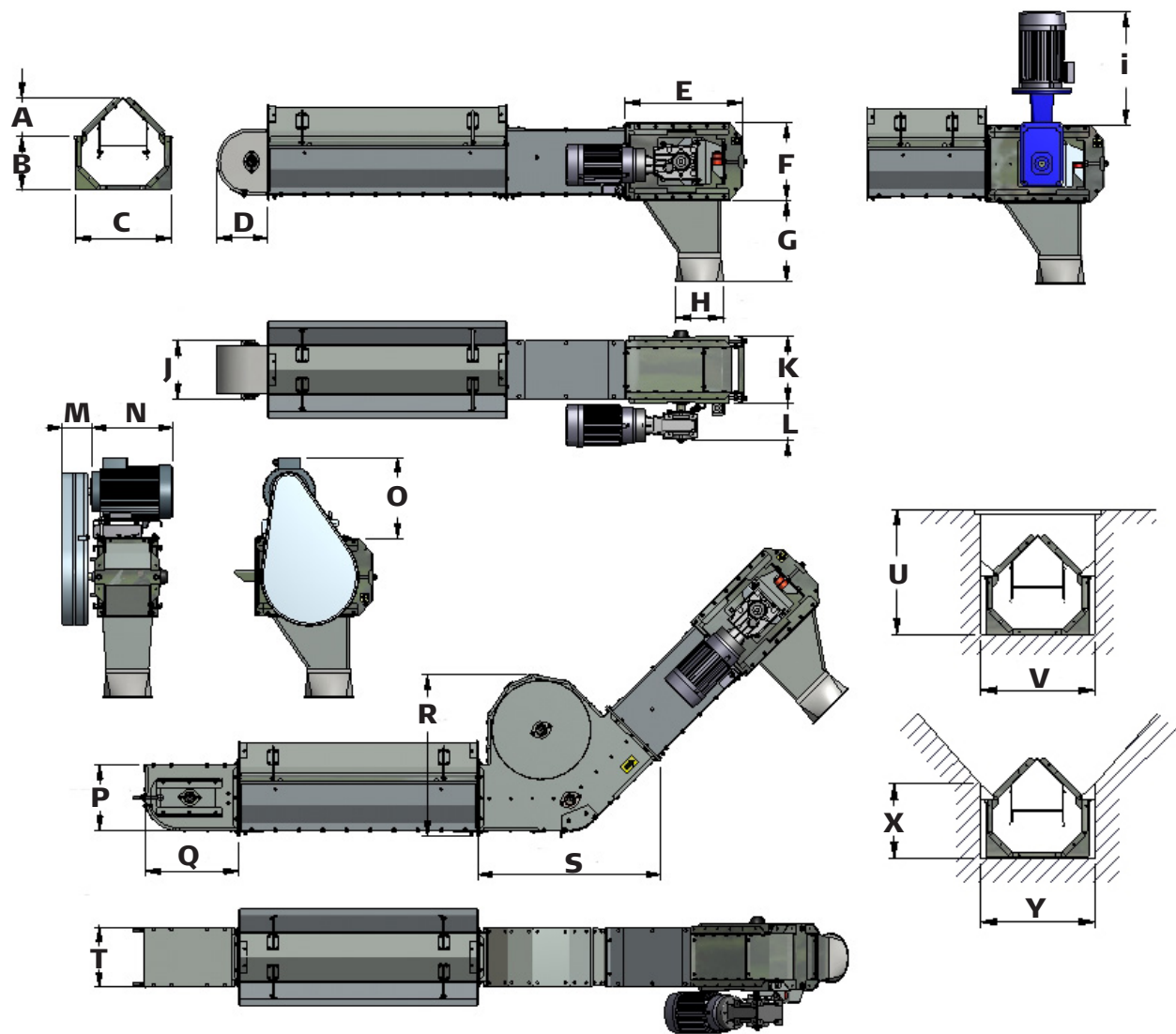
	S	T	U	V	X	Y	Z	Æ	Ø
T44	210	226	365	580	890	690	100	420	405
T45	210	286	365	580	890	750	100	420	405



Scale drawing T44/T45 – grain pit

	A	B	C	D	E	F	G	H	I	J	K	L
T44	150	230	355	215	500	328	342	Ø200	580	189	226	210
T45	165	230	415	215	500	328	342	Ø200	580	249	286	210

	M	N	O	P	Q	R	S	T	U	V	X	Y
T44	100	420	405	300	430	690	775	192	430	400	300	400
T45	100	420	405	300	430	690	775	252	470	460	300	460



Upon receipt

Please check that all parts and components are included in the shipment and check for possible transport damages.

NB: Make sure that the relevant supplier documentation is attached. In case of missing documentation, please contact JEMA AGRO A/S – remember to state the order no.

Remember all necessary safety equipment before installation.

Please read this manual carefully before assembly or installation work begins.

Warning labels

The chain & flight conveyor is fitted with warning labels.

Warning!

The covers and shields must never be opened or removed, when the machine is working.

Warning!

Always keep hands away from rotating augers/propellers.



Foundation

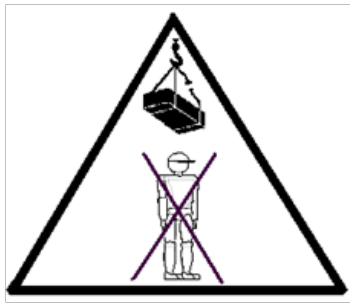
The chain & flight conveyor should be placed on a sufficiently hard, level surface that is able to carry the load in question.

Lifting equipment

Make sure to have the required SWL-approved lifting equipment/crane, required for the actual job.

The lifting equipment must be approved to carry the load in question. The load capacity for the individual components can be found in "Parts list T44/T45" in this manual.

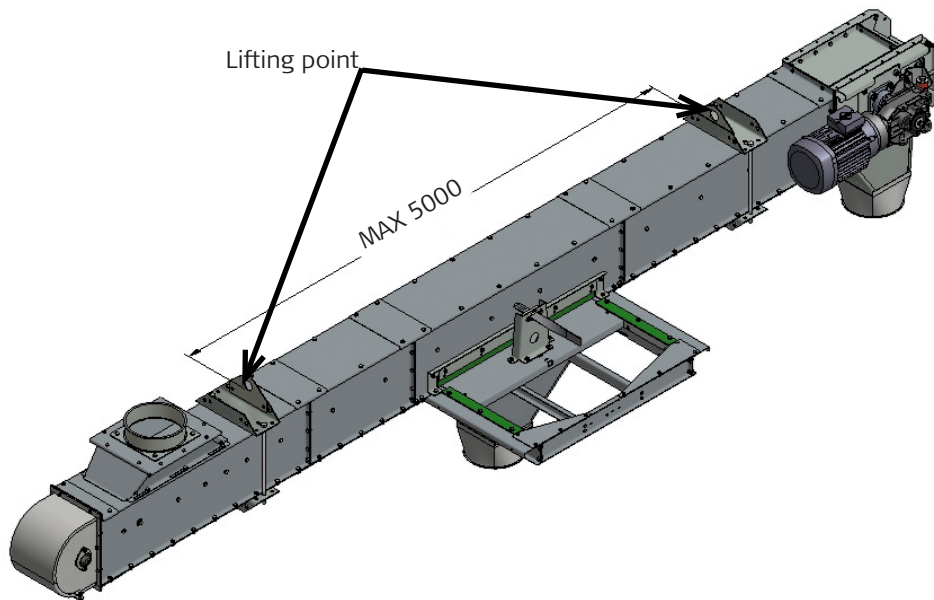
The total weight of machines is stated in the section "Weight table - chain and flight conveyor T44/T45".



NB: Always make sure that nobody is standing under a suspended load.

Lifting instructions

The drawing below shows how to lift the chain & flight conveyor using the attached brackets.



Weight table – individual components T44/45

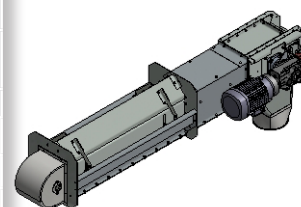
	Description	T44 Part no.	Weight	T45 Part no.	Weight
	Drive station for V-belt pulley drive	51577	36	52116	39
	Drive station right for conical wheel geared motor	51583	36	52483	39
	Drive station left for conical wheel geared motor	51585	36	52485	39
	Torque arm compl. for conical wheel geared motor TF90B/TF63B	81319	5,0	81319	5,0
	Tightening section	44095	12,61	45095	13,77
	Elevator boot closed	51231	6,6	52231	7,3
	Extension 2.0m. with assembly plates	51185	31,1	52185	36,4
	Extension 1.0m. with assembly plates	51186	16,2	52186	19
	Extension 0.5m. with assembly plates	51187	8,7	52187	10,3
	Extension 0.25m. with assembly plates	51188	5,1	52188	6,0
	Extension 2.0m. with bottom PEHD base and assembly plates	51185-P	34	52185-P	40,4
	Extension 1.0m. with bottom PEHD base and assembly plates	51186-P	17,7	52186-P	21,0
	Extension 0.5m. with bottom PEHD base and assembly plates	51187-P	8,0	52187-P	11,3
	Extension 0.25m. with bottom PEHD base and assembly plates	51188-P	5,5	52188-P	6,5
	Assembly plates for connector to drive/tension section, bend and trough with bolts	51191	0,64	52201	0,85

	Description	T44 Part no.	Weight	T45 Part no.	Weight
	Inlet for extension 180x180 / Ø200 with rollers	51130	5,00	52130	5,70
	Transition piece SK200 / 220x220	45087	0,82	45087	0,82
	Chain running metre compl.	20028	2	40028	4
	Hopper for trough with steel/PEHD base 0,5m	44038	12	45038	13
	Bend 45°	44060	30,5	45060	33,7
	Bend 45° with PEHD bottom	44060-P	31,9	45060-P	36,7
	Intermediate outlet with 1,0m. extension	51189	36,8	52189	40,6
	Intermediate outlet with 1,0m. extension and PEHD	51189-P	37,0	52189-P	40,8
	Intermediate outlet without extension	44100	23,96	45100	25,82
	Outlethopper SK200 for intermediate outlet	44102	6,60	45102	7,08

Weight table intake conveyor T44/T45

Complete with motor and inlet trough.

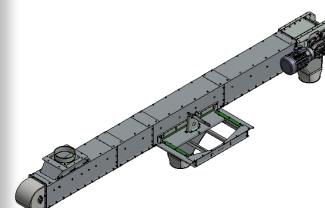
Length, metres	T44	T45
	Conical wheel geared motor 180 rpm	Conical wheel geared motor 180 rpm
	V-belt pulley set 71/355 Motor 1500 rpm	V-belt pulley set 71/355 Motor 1500 rpm
	Kg.	Kg.
3,0	151,5	176
4,0	179,5	210
5,0	207,5	244
6,0	235,5	278
7,0	263,5	318
8,0	291,5	352
9,0	319,5	386
10,0	347,5	420
11,0	375,5	454
12,0	403,5	488
13,0	431,5	522
14,0	459,5	562
15,0	487,5	596
16,0	515,5	630
17,0	543,5	664
18,0	571,5	698
19,0	599,5	732
20,0	627,5	766
21,0	655,5	800



Weight table chain conveyor horizontal T44/T45

Complete with motor, intermediate outlet and inlet.

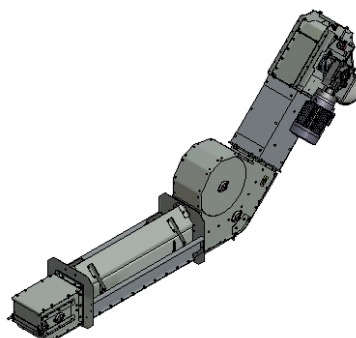
Length, metres	T44	T45
	Conical wheel geared motor 180 rpm	Conical wheel geared motor 180 rpm
	V-belt pulley set 71/355 Motor 1500 rpm	V-belt pulley set 71/355 Motor 1500 rpm
	Kg.	Kg.
4,0	159,6	182
5,0	177,6	206
6,0	195,6	230
7,0	213,6	260
8,0	231,6	284
9,0	249,6	308
10,0	267,6	332
15,0	363,6	457
20,0	453,6	577
25,0	548,6	708
30,0	638,6	828
35,0	739,6	941
41,0	847,6	1063



Weight table chain conveyor with 45° bend T44

Complete with motor, 45° bend and inlet trough.

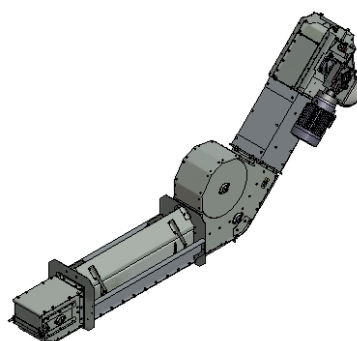
Length, metres	Height / Inclination
	1,09. / 2,20m.
	Conical wheel geared motor 180 rpm
	V-belt pulley set 71/355 Motor 1500 rpm
	Kg.
2,86	215
3,86	243
4,86	271
5,86	299
6,86	327
7,86	355
8,86	383
9,86	411
10,86	439



Weight table chain conveyor with 45° bend T45

Complete with motor, 45° bend and inlet trough.

Length, metres	Height / Inclination
	1,09m. / 2,20m.
	Conical wheel geared motor 180 rpm
	V-belt pulley set 71/355 Motor 1500 rpm
	Kg.
2,86	260
3,86	294
4,86	334
5,86	368
6,86	402
7,86	436
8,86	470
9,86	504
10,86	538



Assembly

Please check the foundation and the travel direction (location of inlet and outlet) before starting the assembly.

It is important to read these instructions carefully before starting the assembly.

Check that there is sufficient space available.

Attention!

Before starting the assembly work, check that the required safety equipment is at disposal, e.g. work gloves, safety footwear, helmet, safety glasses and a lifeline, if necessary. This equipment is not included as standard.

Assembly of the chain conveyor

The procedure for the assembly of the conveyor is illustrated on the next page.

For assembly of the chain conveyor, correct and approved SWL-lifting equipment must be used.

Please read the section "Upon receipt", before starting assembly of chain conveyor.

The easiest method of assembling the chain conveyor is to assemble the conveyor on the floor at full length or split up as needed provided there is space. The chain conveyor must continuously be fastened during assembly, see the section "attachment". For correct lifting of the chain conveyor, see the section "lifting instructions".

The extensions without intermediate plate and without covers are bolted together with the included assembly plates. After this, fit the drive/tension section, and place the chain in the conveyor. Then fit the intermediate plates and assemble the chain with the included chain connectors - then bolt the covers on. After this, mount any inlets or outlets.

When assembling conveyors with troughs or bends, the chain must be mounted last, and therefore a rope must be pulled through all extensions/troughs in both the forward flow and back flow channels for insertion of the chain.

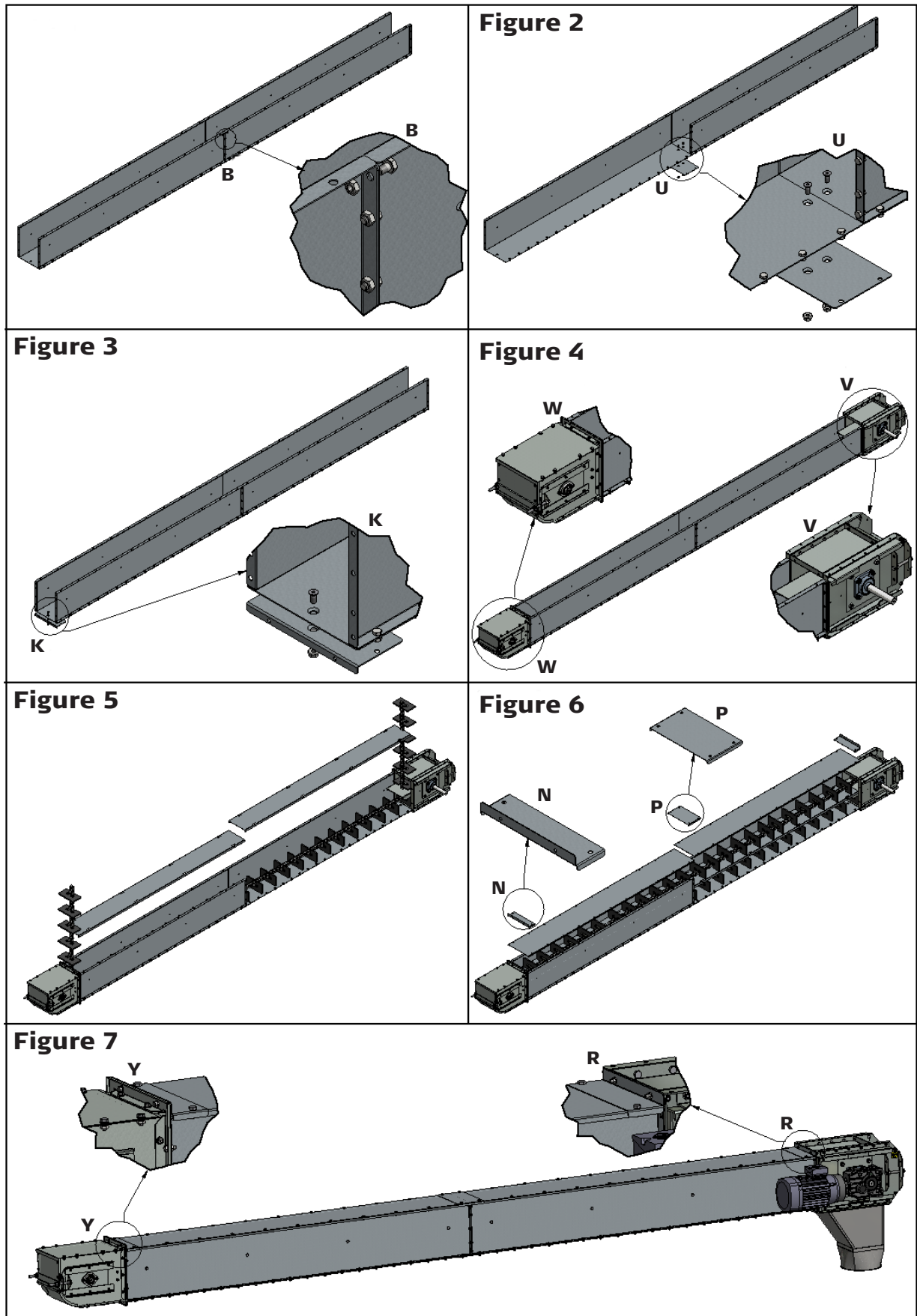
Mount the bevel gear motor or the V-belt pulley set on the drive station. The bevel gear motor can be mounted in line or across as needed.

The chain is tightened via the tension bolts on the drive station.

The chain must be tightened so that the rubber slats are vertical in the full length of the chain conveyor.

Important!

Remember to remount all the inspection doors after assembling.

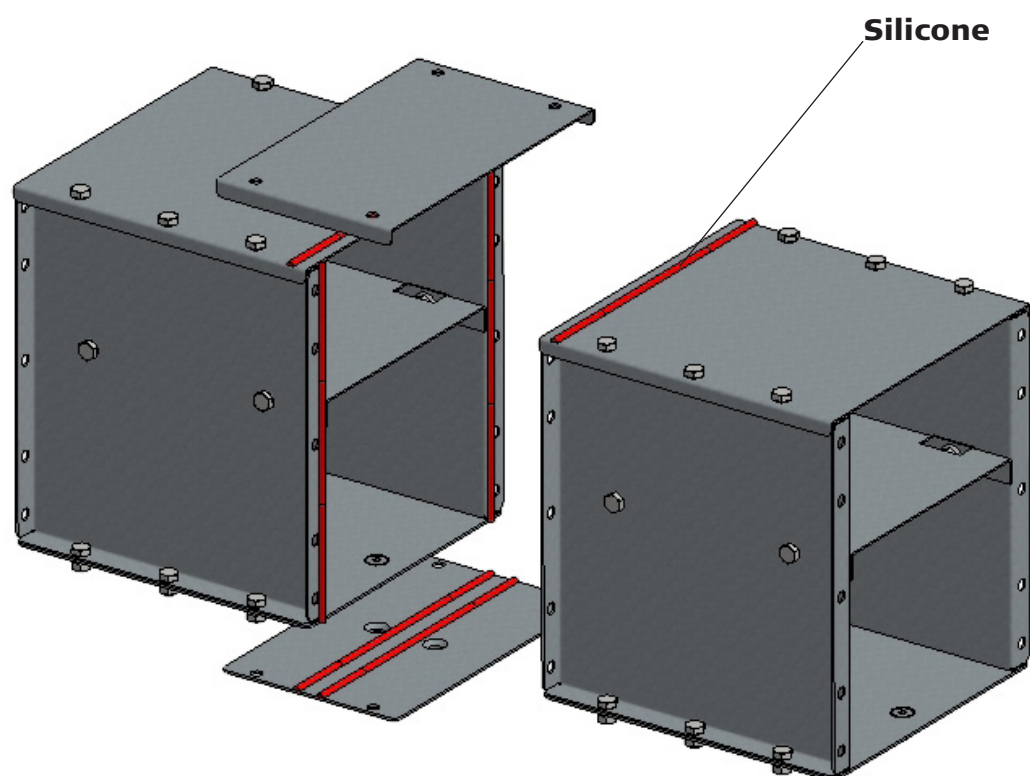


Sealing

It is important that all the joints are sealed with a sealing compound to prevent dust and moisture from entering near the flange joints.

The sealant must be placed as shown in the drawing.

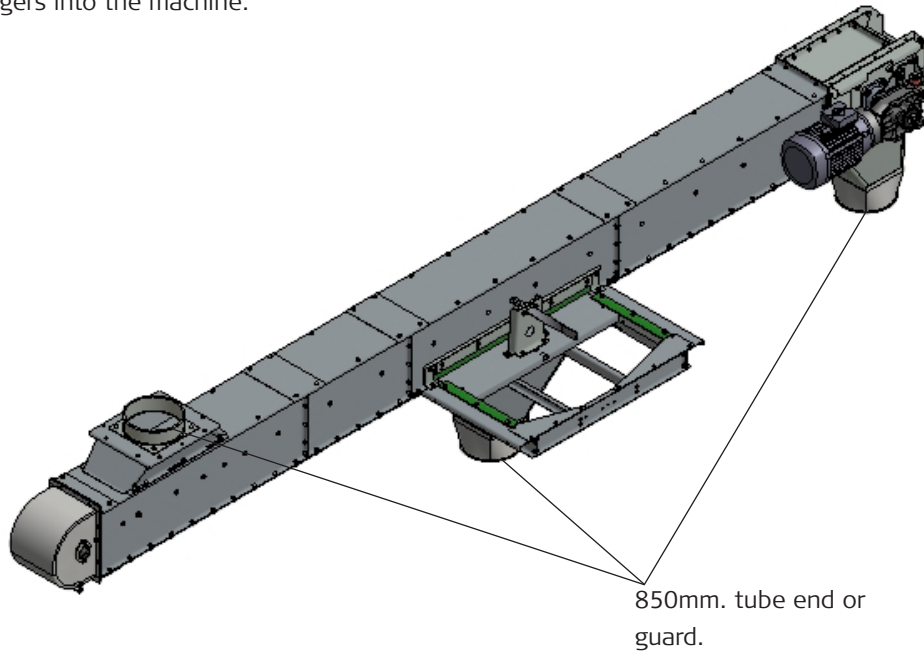
After sealing, the joints are bolted together.



Guards

Important!

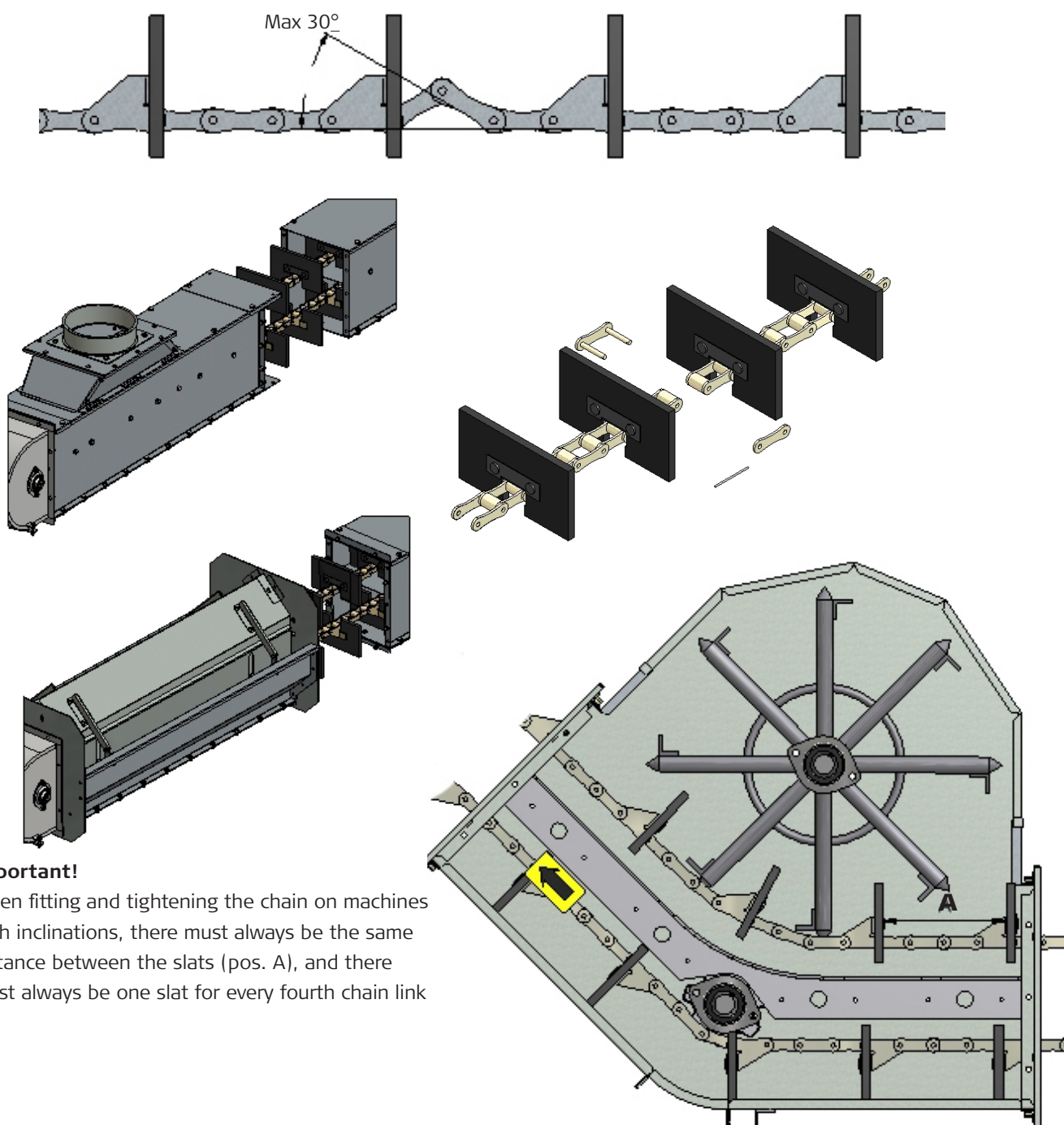
It is important to fit a tube of min. 850 mm or another type of guard near the inlet and outlet to prevent entry of hands or fingers into the machine.



The chain

The conveyor chain is equipped with rubber slats and is delivered in 10m. pieces. The chain must be assembled with the included chain connectors. The length of the chain must be checked (the tension bolts on the drive station must be loosened). If the chain is to be shortened, it can be separated using a thin chisel. Then assemble the chain - use only new splits in the connections. Tighten the chain with the tension bolts on the drive station, so that a chain link may only bend a max. of 30° as shown below. After 30 minutes of operation, the chain must be re-tightened.

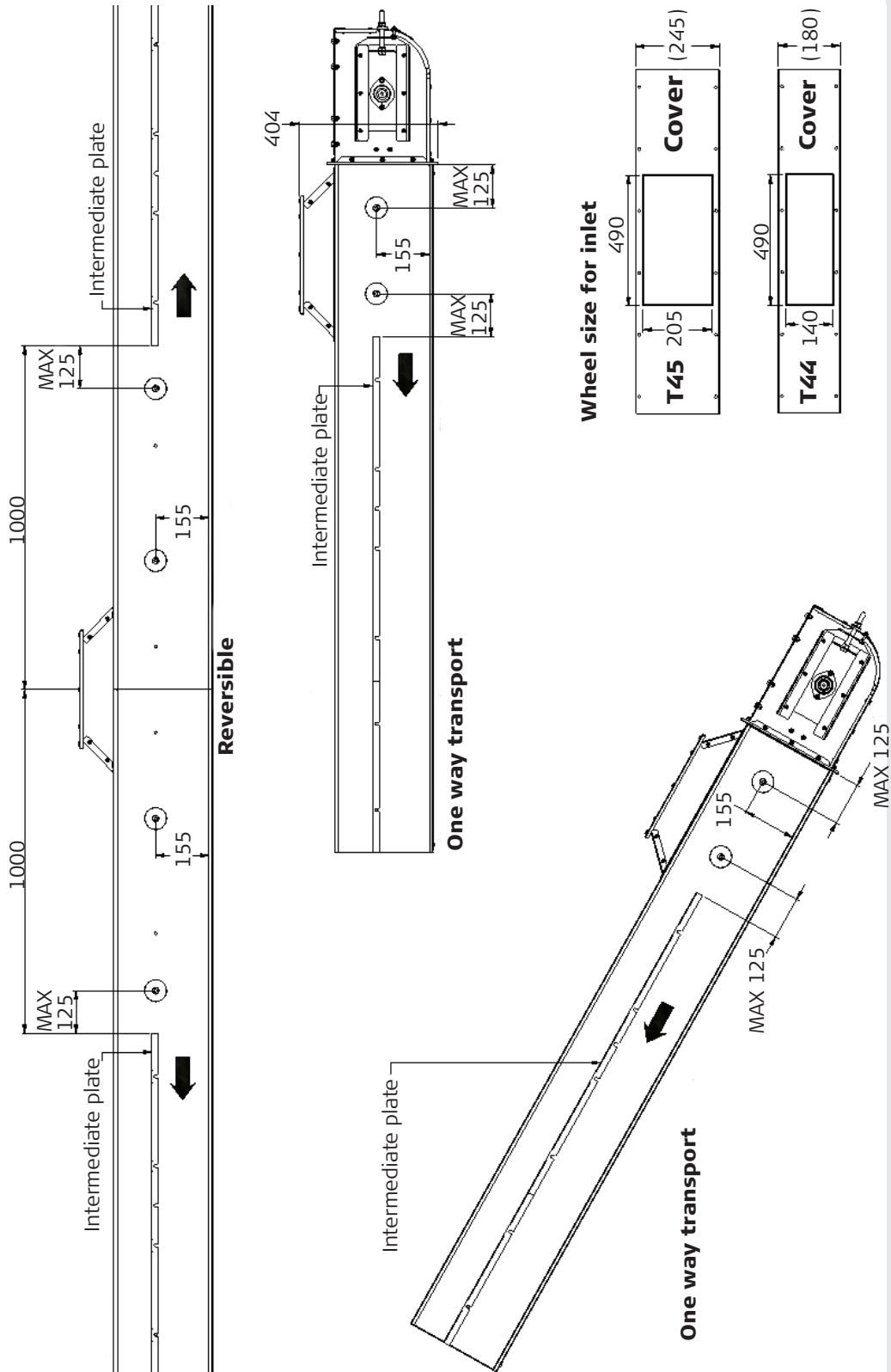
Important: When tightening the chain, remember to loosen the torque arm.



Important!

When fitting and tightening the chain on machines with inclinations, there must always be the same distance between the slats (pos. A), and there must always be one slat for every fourth chain link

Installation of inlet



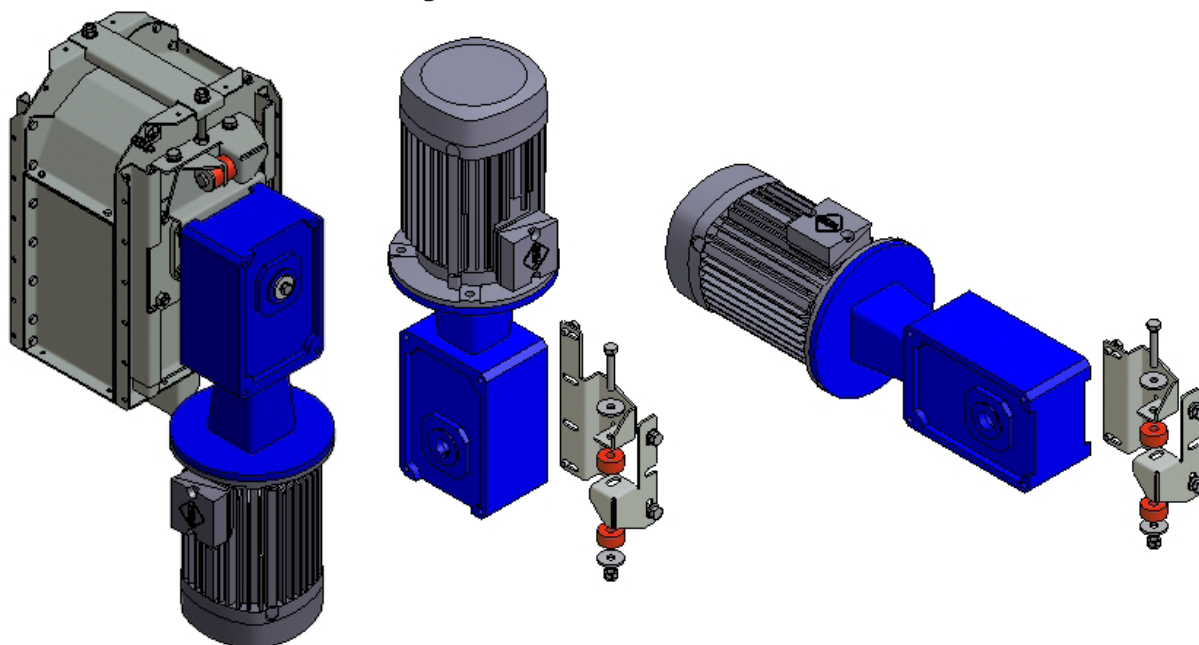
Gear motor assembly

Fit the motor and gear on the drive shaft (see below drawing). The engine can be fitted in parallel or transversely on the machine.

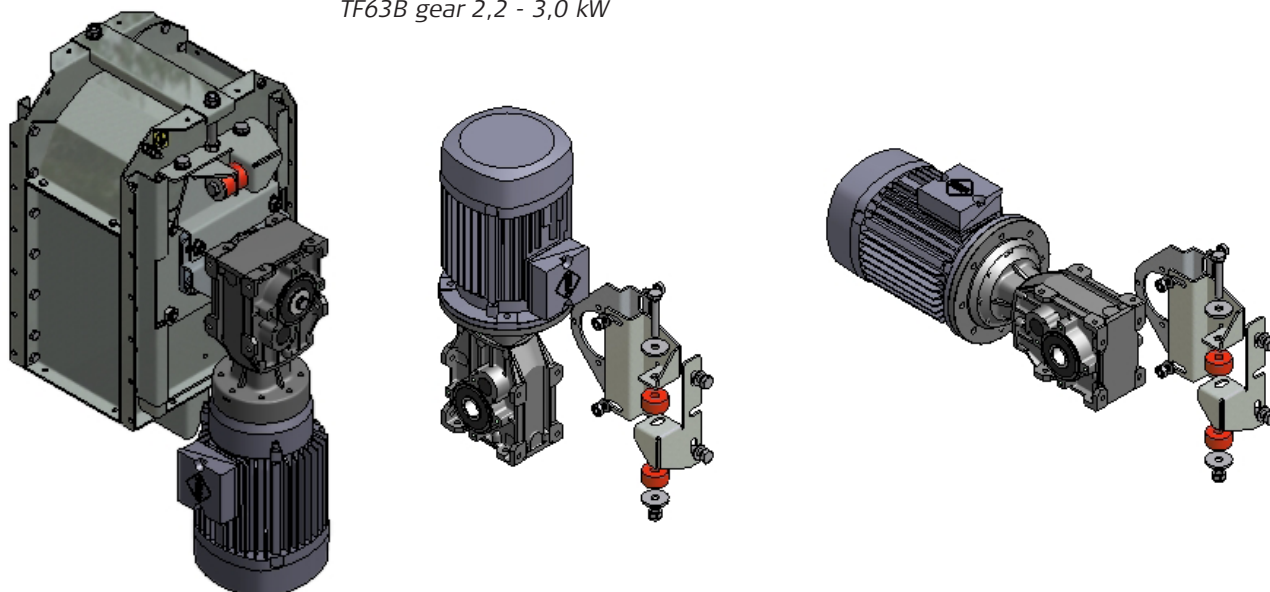
Important!

The bleed screw on the gear must always be fitted in the top position.

TF90B gear 4,0 - 5,5 kW



TF63B gear 2,2 - 3,0 kW

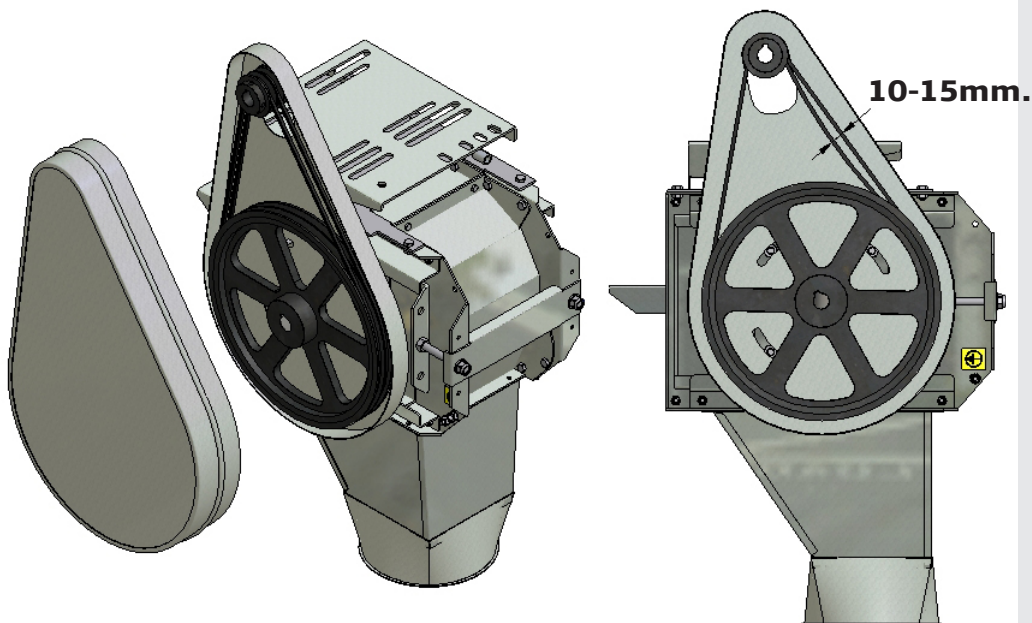


For maintenance of motor and gear: please see the attached supplier documentation.

Fitting the motor and pulley drive

- Start by screwing on the motor stand and then fit the internal pulley guard
- Fit the small pulley on the motor shaft and tighten with a screw.
- Fit the engine loosely on the stand with 4 bolts without tightening it, screw the clip bolt and tension bolt on the motor stand, and then fit the large pulley on the drive station shaft and tighten it with a screw (remember the Woodruff wedge).
- Offset the motor in the slotted holes of the support, until the pulley sheaves are parallel. Tighten the motor bolts.
- Move the motor stand towards the conveyor by loosening the tension bolt, and fit the pulleys. Tighten with the tension bolt and the clip bolt.
- Finally fit the external pulley guard.

The belt tensioning is correct when the belt deflection is 10-15 mm (see drawing).



Important!

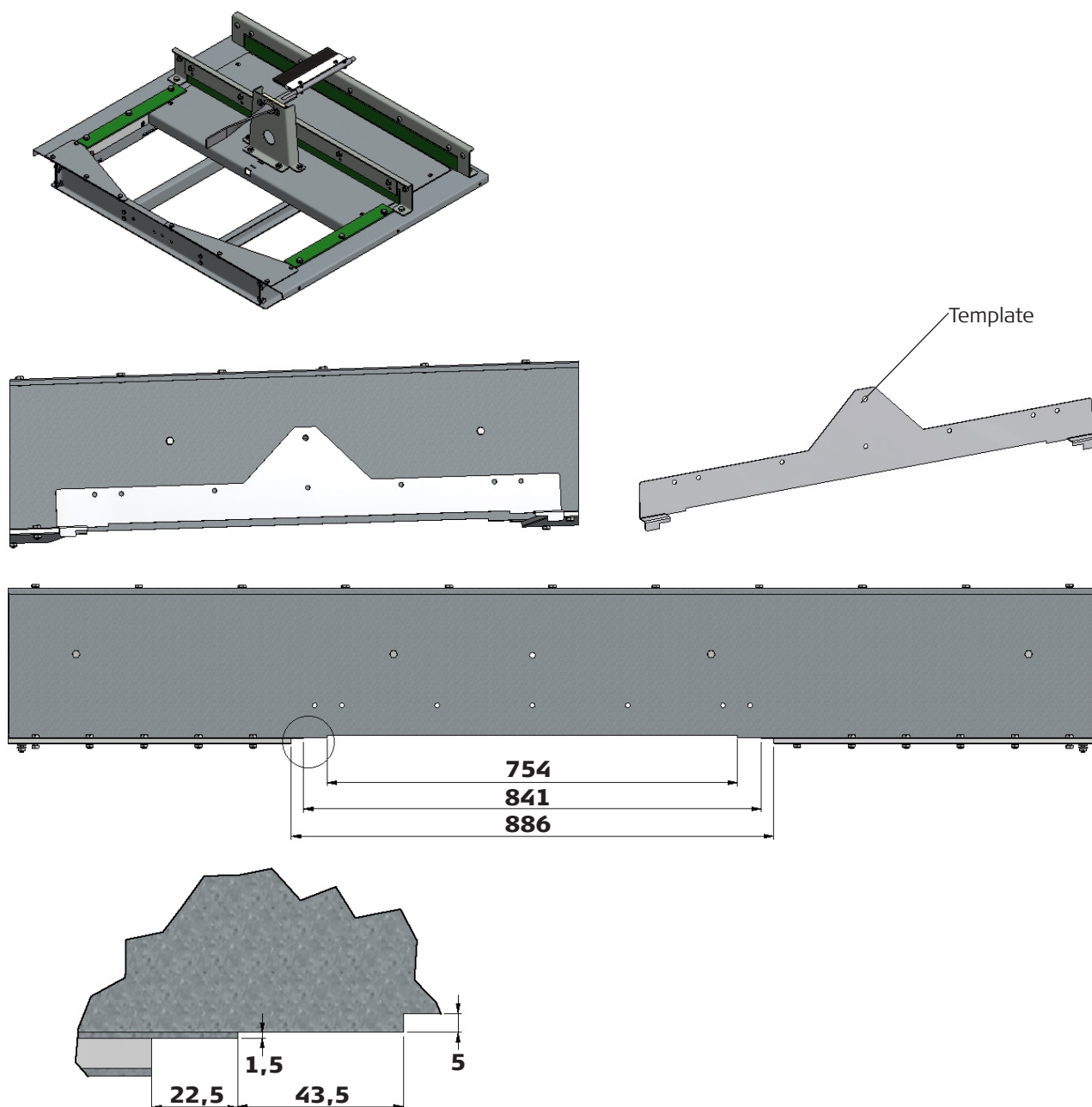
The belt needs retightening after the first 24 hours, and then according to the maintenance schedule.

NOTE!

Do not use tools to force the pulleys onto the sheaves.

Assembly of intermediate outlet for mounting anywhere on the conveyor

Using the supplied template, carefully cut off the base of the extension and drill the 8 holes on both sides from the template. Then fit the intermediate outlet on the extension.



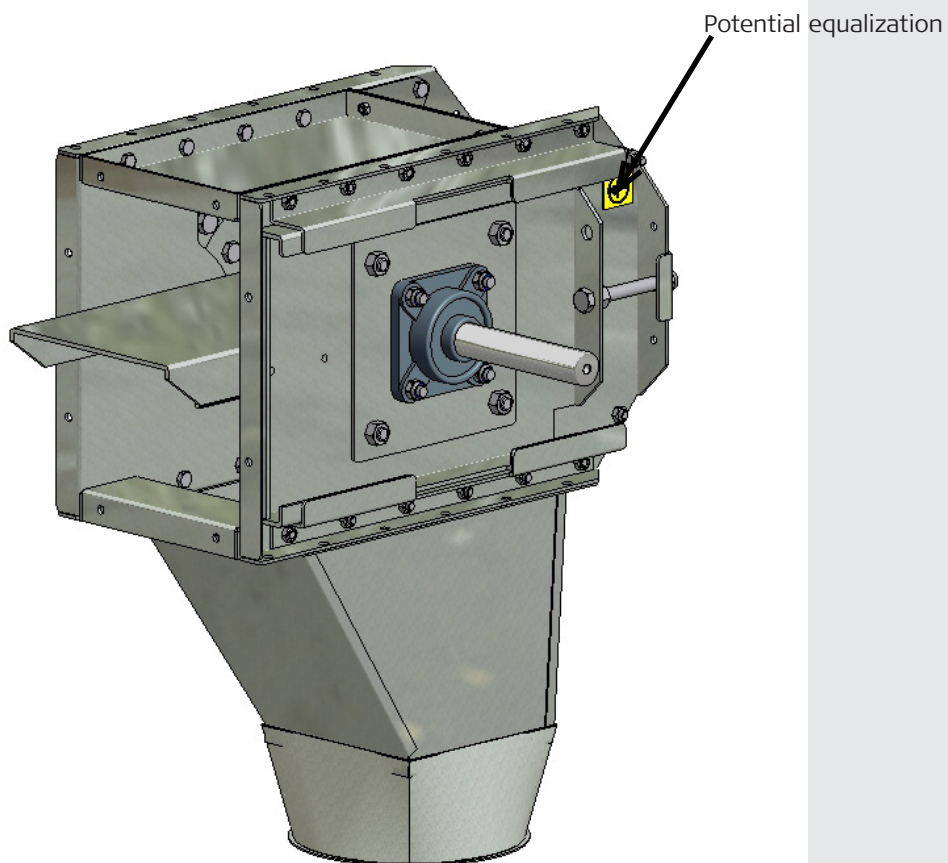
Dimensions are the same for extensions with steel and PEHD bases.

Potential equalization

The potential equalization must be carried out according to the current regulations.

A label on the drive station indicates the point of the belt conveyor potential equalization.

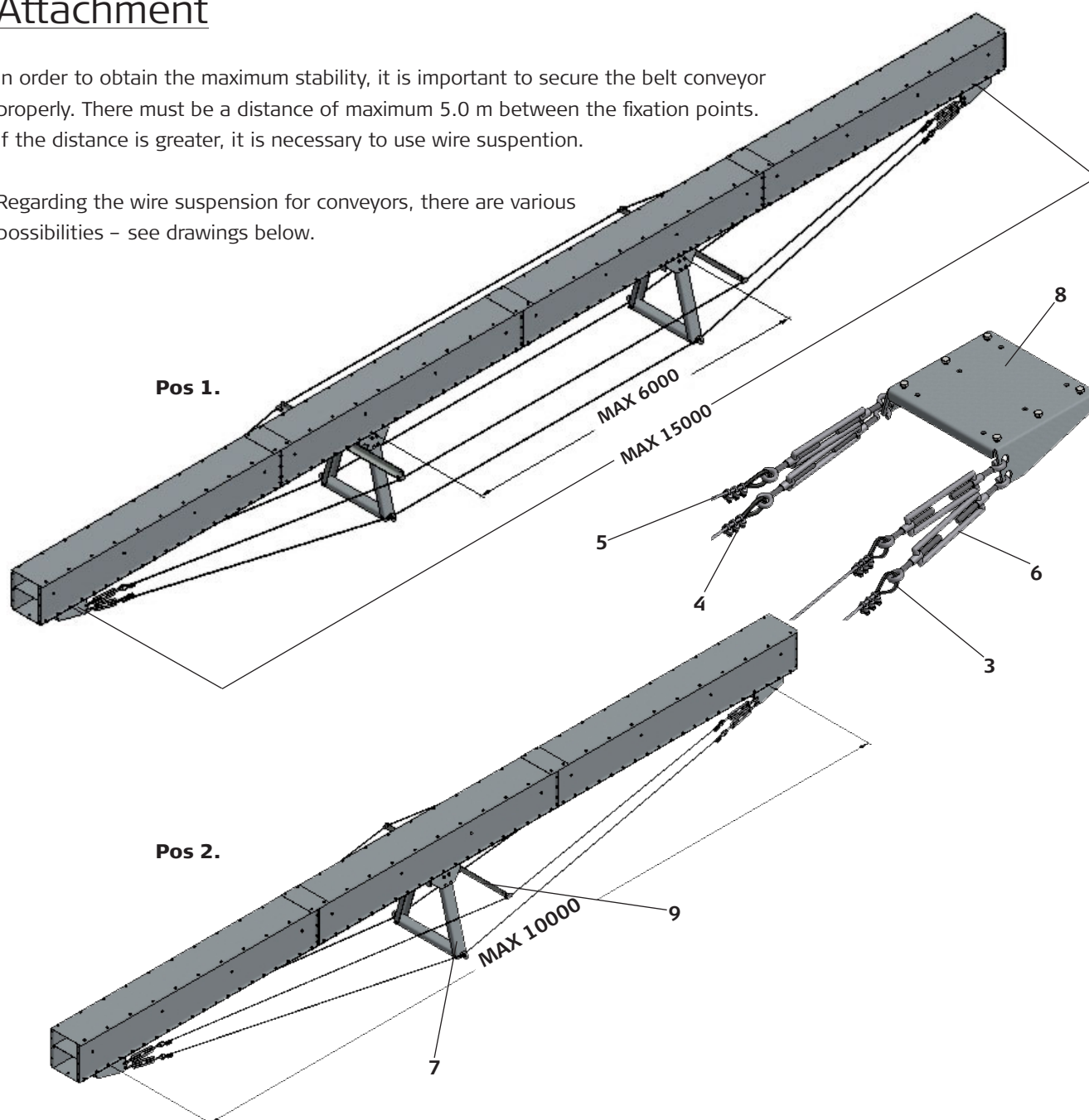
The label indicates the potential equalization point for the belt conveyor.



Attachment

In order to obtain the maximum stability, it is important to secure the belt conveyor properly. There must be a distance of maximum 5.0 m between the fixation points. If the distance is greater, it is necessary to use wire suspension.

Regarding the wire suspension for conveyors, there are various possibilities – see drawings below.



Pos.	Description	T44	Kg.	T45	Kg.
1	Double set for stays with side wires	00049	43,0	00049	43,0
2	Single set for stays with side wires	00048	38,0	00048	38,0
3	Wireprotection for 5mm wire	92107	0,03	92107	0,03
4	Wirelock for 5mm wire	92105	0,03	92105	0,03
5	Wire dia. 5mm running meter	92006	0,14	92006	0,14
6	Wire tensioner for 5mm wire	92106	0,40	92106	0,40
7	Radius rod for stays	45040	11,10	45040	11,10
8	Fitting for wire for stays	45039	3,10	45039	3,10
9	Side extension for stays	00050	2,50	00050	2,50

Starting up

Before starting to work with the chain & flight conveyor, please check that:

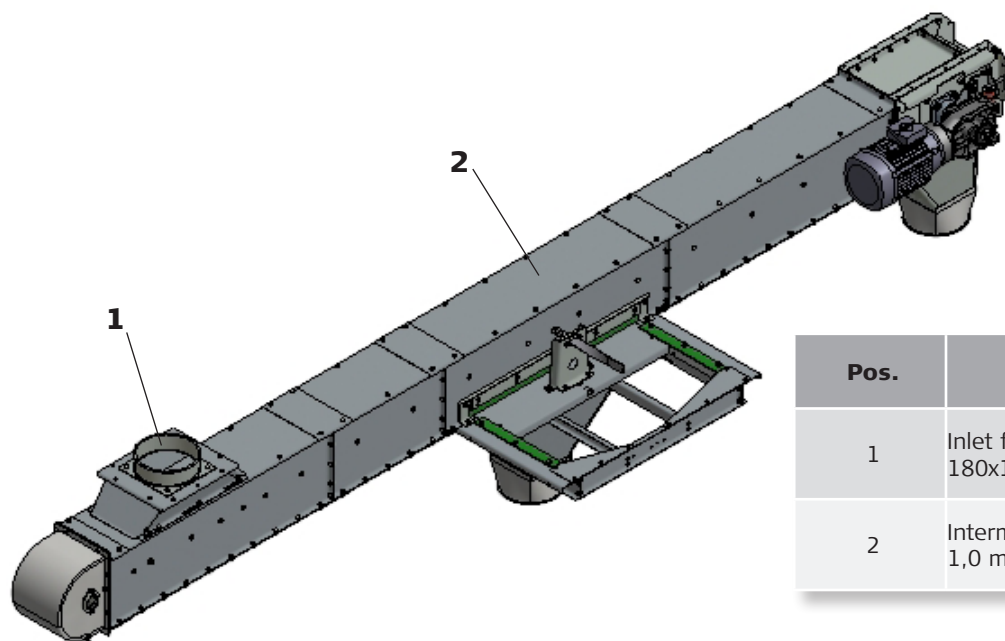
- All inspection doors are fitted
- No work is carried out on/near the machine.
- The motor rotation direction is correct.
- All conveyor bolts are correctly fitted and tightened.
- The chain is correctly fitted and adjusted.
- The attachment and stability of the conveyor is correct.
- Check after start that no joints are leaking.
- If fitted, check for correct tension of the pulley.

Conveyor stops – fault finding

In case of stops, check first whether the conveyor is able to start again, when the relay has gone cold. If yes, the fault is either caused by low adjustment of the relay or lack of motor capacity.

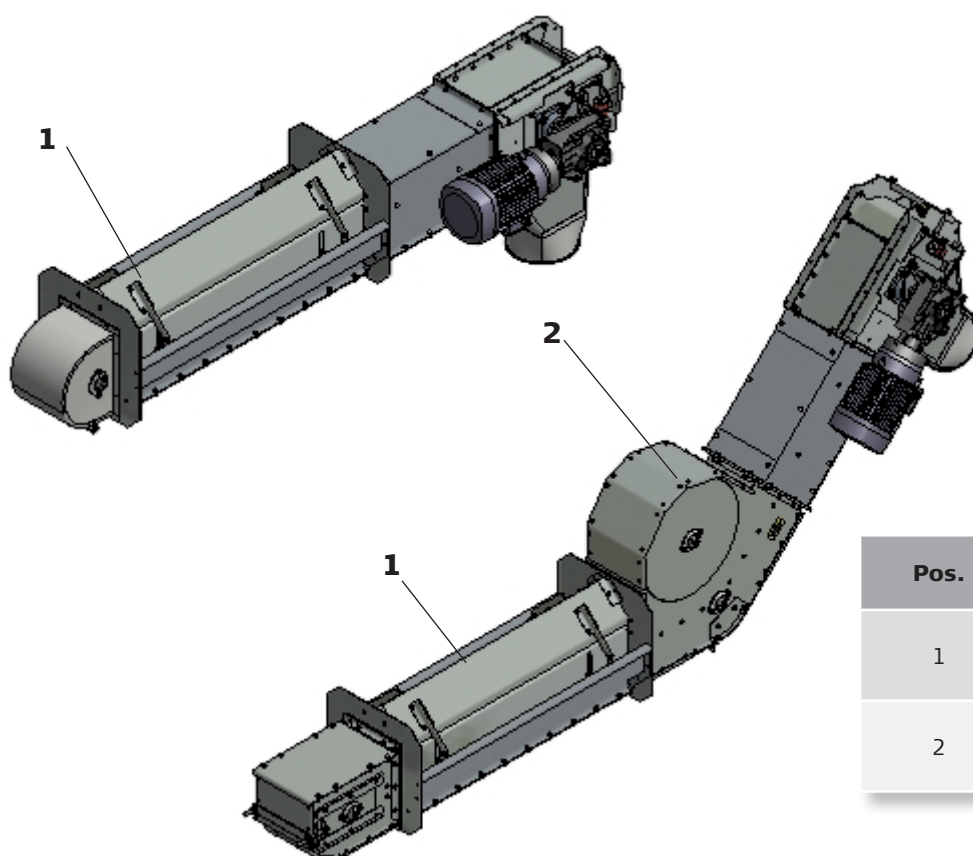
If the conveyor is still not able to start without being emptied of material, it must be checked whether the return tube (downward passage) on the conveyor is filled with material in the first section (open the inspection door). In this case the fault is due to blockage of the conveyor drain (drain tubes too small or insufficient slope) or caused by stops further along in the transport system.

Chain conveyor with intermediate outlet and inlet



Pos.	Description
1	Inlet for extension 180x180 / Ø200 with rollers
2	Intermediate outlet with extension 1,0 m

Chain conveyor with inlet trough / 45° bend



Pos.	Description
1	Inlet trough with return section
2	Bend 45°

Please see the maintenance summary and the attached supplier documentation for cleaning- and maintenance intervals.

Warning!

- During cleaning and maintenance work, the electric supply for the chain & flight conveyor must be disconnected and secured against accidental reconnection.
- After repair and maintenance the inspection doors and shields must be refitted before the work is continued.

Use original parts only

In case parts that original parts are not used, the warranty becomes void, and JEMA AGRO A/S can no longer be held liable for the EU Declaration of conformity.

Gear motor

Check the gear as described in the attached supplier documentation.

Important!

Check that the bleed screw is fitted in the top position on the gear.

Motor

Bearing noise from the motor: please see the attached supplier documentation.

Motor inspection: please see the attached supplier documentation.

Retorque the motor as indicated in the maintenance summary. Please see the assembly guidance for instructions.

Pulley kit

Check the belt tension intervals as indicated in the maintenance summary.

Check for cracks in the side of the belts. Replace if necessary.

Note!

Do not mix old and new belts.

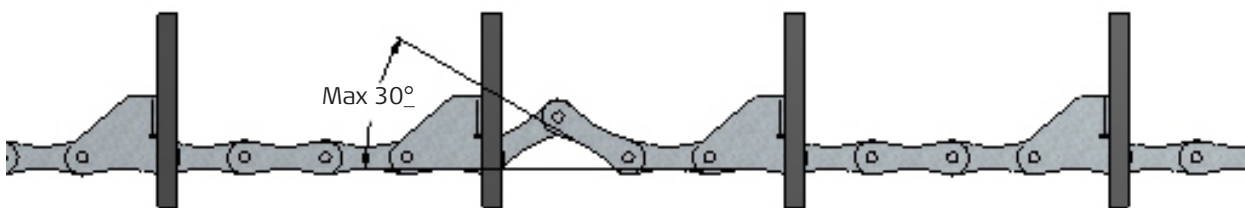
Chain

Check that the chain tension is correct.

See drawing for correct procedure.

IMPORTANT! When tightening the chain, loosen the torque arm.

See inspection intervals in the maintenance summary.



Rubber slats

Defective or worn rubber slats must be replaced.

See the maintenance summary.

Bearings

Check the bearings for wear/play, and lubricate as described in the maintenance summary.

Check for wear/play by lifting up the shaft and control manually.

Make sure that there is no water in the pit, as this will damage the bearings in the drive station/bottom section.

Lubrication of bearings

Important!

It is extremely important to use the correct amount of grease, as too much will damage the sealing of the bearing, which will result in leaks and subsequent overheating of the bearing.

Check the amount of grease per grease gun stroke.

Closed bottom section and tension section

Lubricate and exchange the bearings as described in the maintenance summary.

Drive station

Lubricate and change the two drive station bearings as described in the maintenance summary.

Leaks

All leaks must be repaired immediately.

Nose and vibrations

Stop the chain & flight conveyor immediately and identify the problem.

Disposal

The methods of disposal must comply with the current local regulations.

Warning!

The electric supply to the motor must be disconnected during the disassembly.

Disassemble the conveyor on the floor, if space allows, following the reverse order of the assembly procedure.

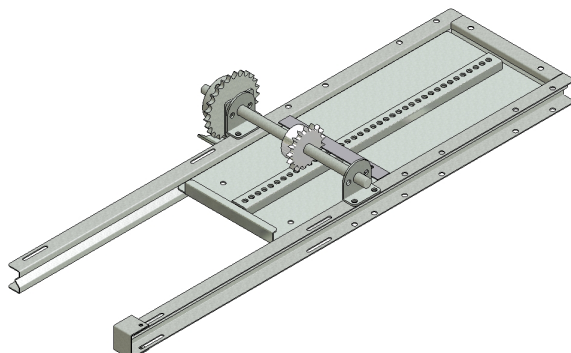
If the chain & flight conveyor is disassembled at the premises, start by detaching the motor. For conveyors with pulley drive, the pulley must be removed first, then motor, the large pulley sheave and finally the guard.

The easiest way to remove the chain is to dismantle the joint at the bottom of the conveyor and then pull out the chain through the bottom inspection door. Finally remove all extensions.

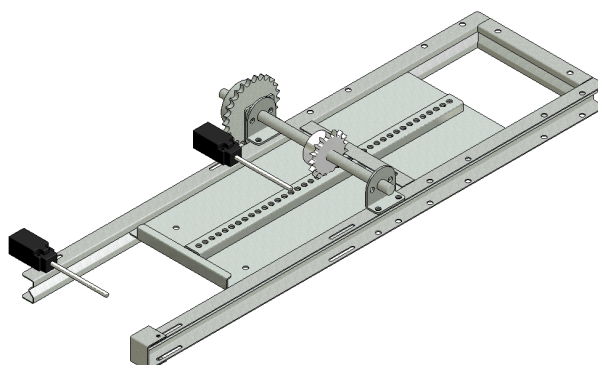
The chain & flight conveyor contains various materials that can be reused. All metal parts should be delivered to a recycle industry.

Shutter

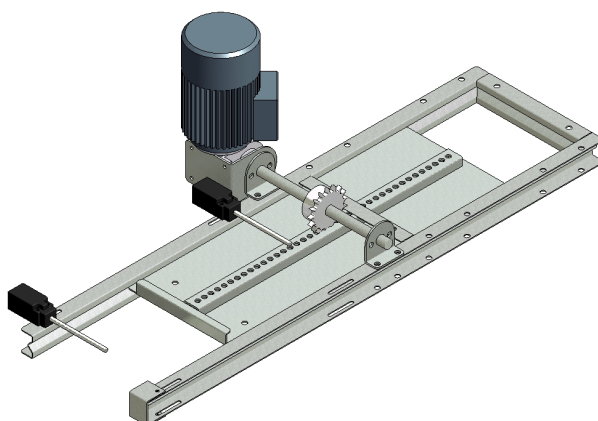
1. Shutter for drive/tightening section



2. Shutter with 2 limit stop for drive/tightening section



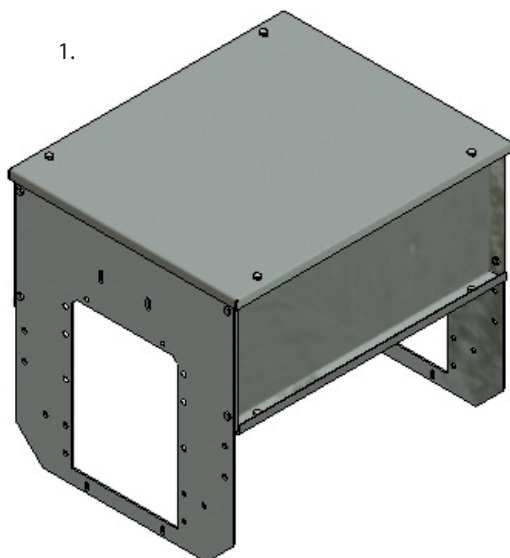
3. Shutter for drive/tightening section with motor and 2 limit stop.



Pos.	Description	T44	Kg.	T45	Kg.
1	Shutter for drive/tightening section	44026	7,0	45026	8,3
2	Schutter with 2 limit stop for drive/tightening section	44098	7,2	45098	8,5
3	Schutter for drive/tightening section with motor and 2 limit stop	44044	17,9	45030	19,2

Hopper

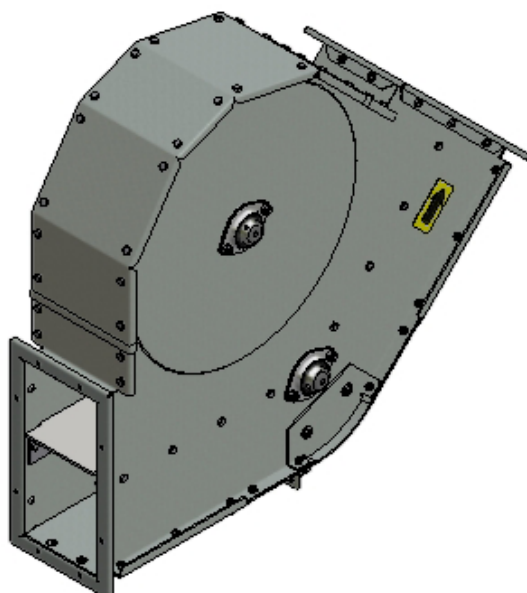
1.



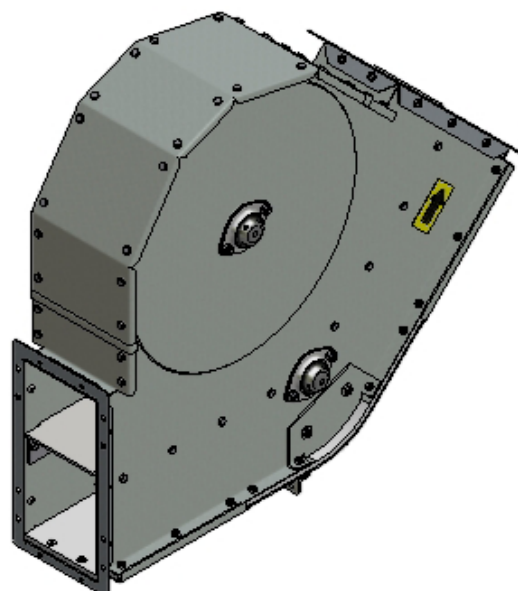
Pos.	Description	T44	Kg.	T45	Kg.
1	Hopper for trough with steel/PEHD base 0,5m	44038	12	45038	13

Bend 45°

1.



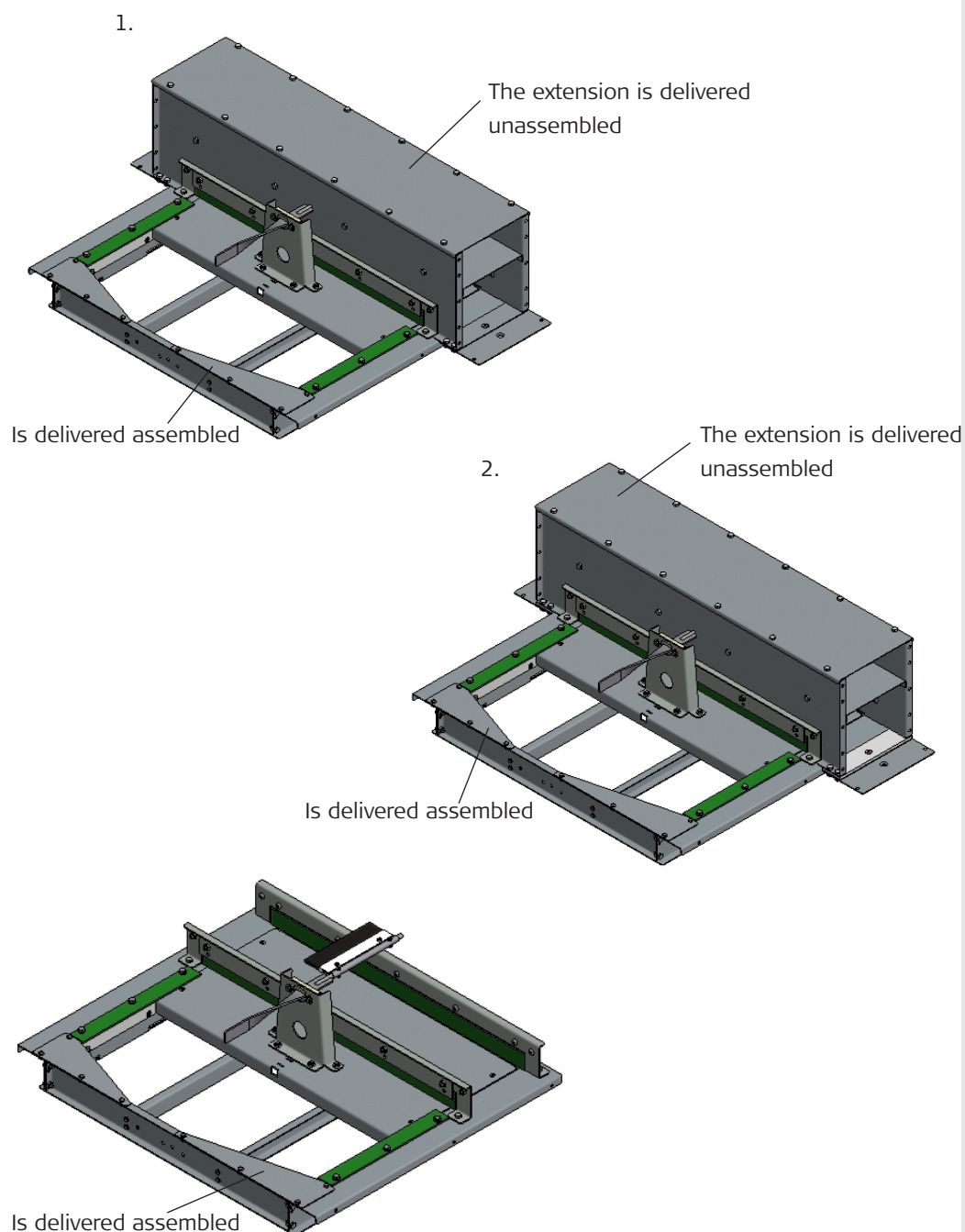
2.



Pos.	Description	T44	Kg.	T45	Kg.
1	Bend 45°	44060	30,5	45060	33,7
2	Bend 45° with PEHD bottom	44060-P	31,9	45060-P	36,7

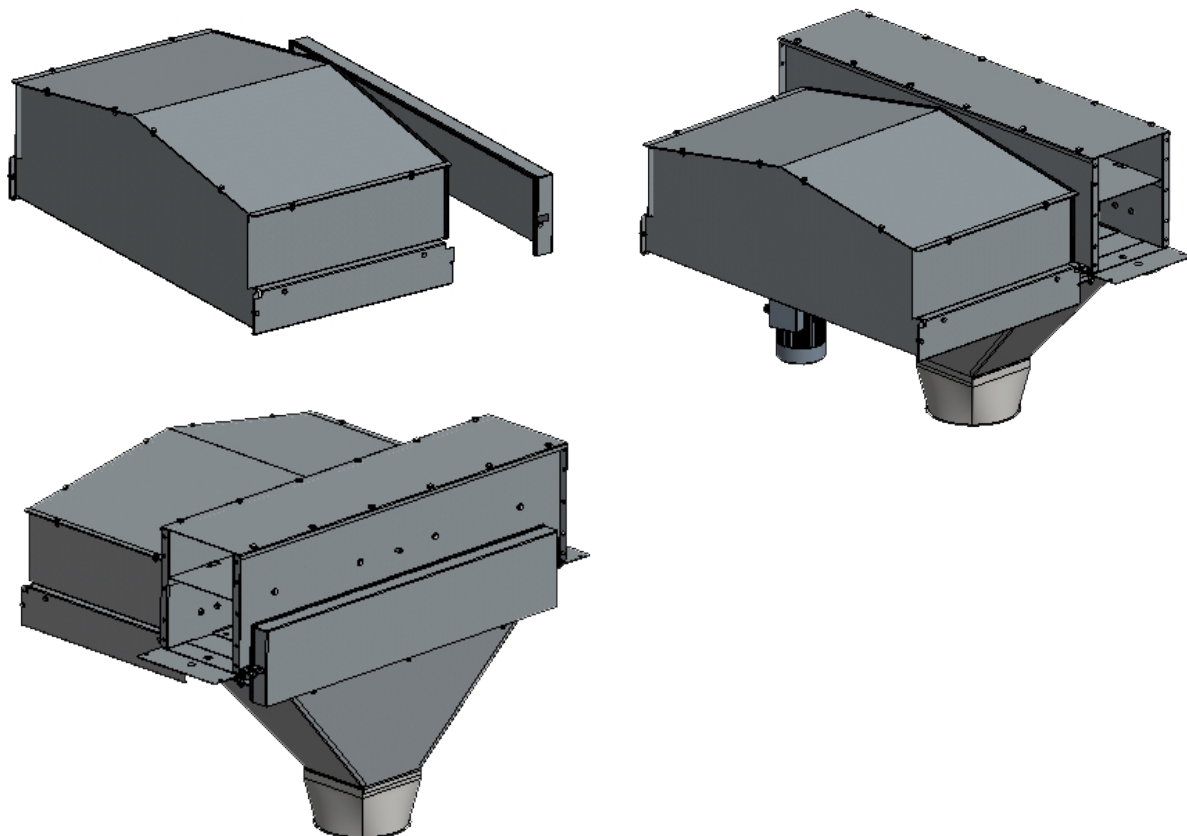
Intermediate outlet

The intermediate outlet is available in 3 versions as shown below.

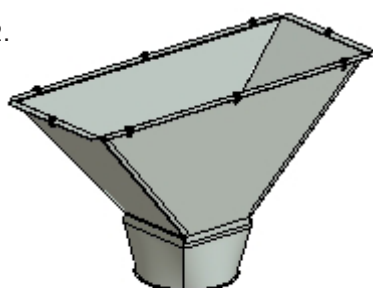


Pos.	Description	T44	Kg.	T45	Kg.
1	Intermediate outlet with 1,0m. extension	51189	36,8	52189	40,6
2	Intermediate outlet with 1,0m. extension and PEHD	51189-P	37,0	52189-P	40,8
3	Intermediate outlet without extension	44100	23,96	45100	25,82

1.

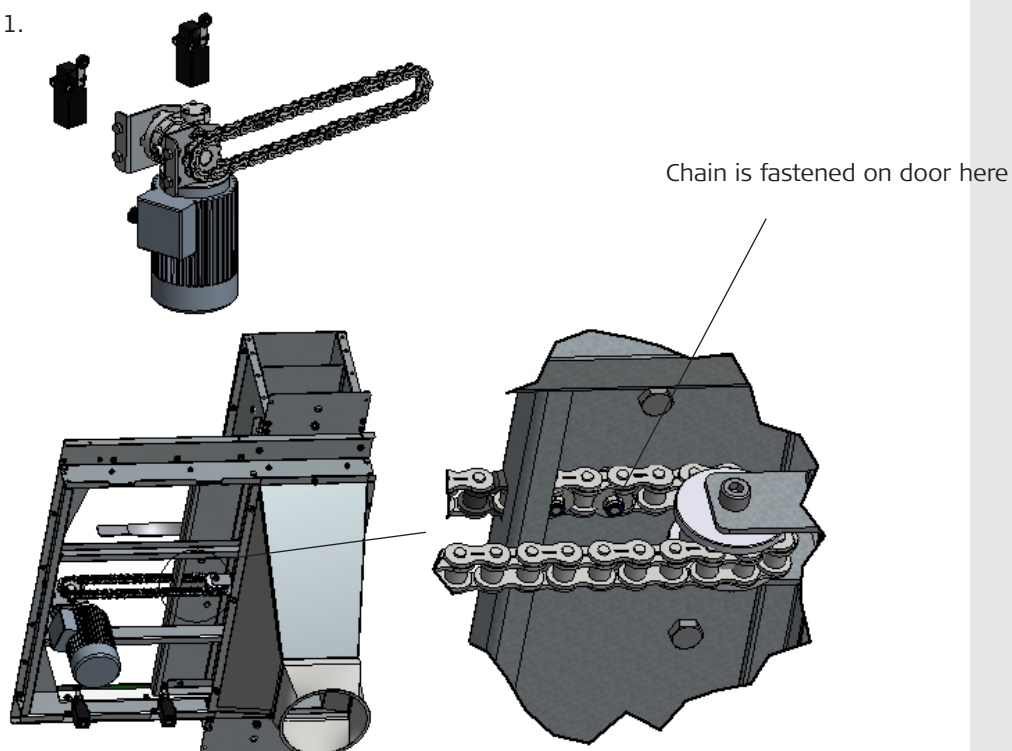


2.

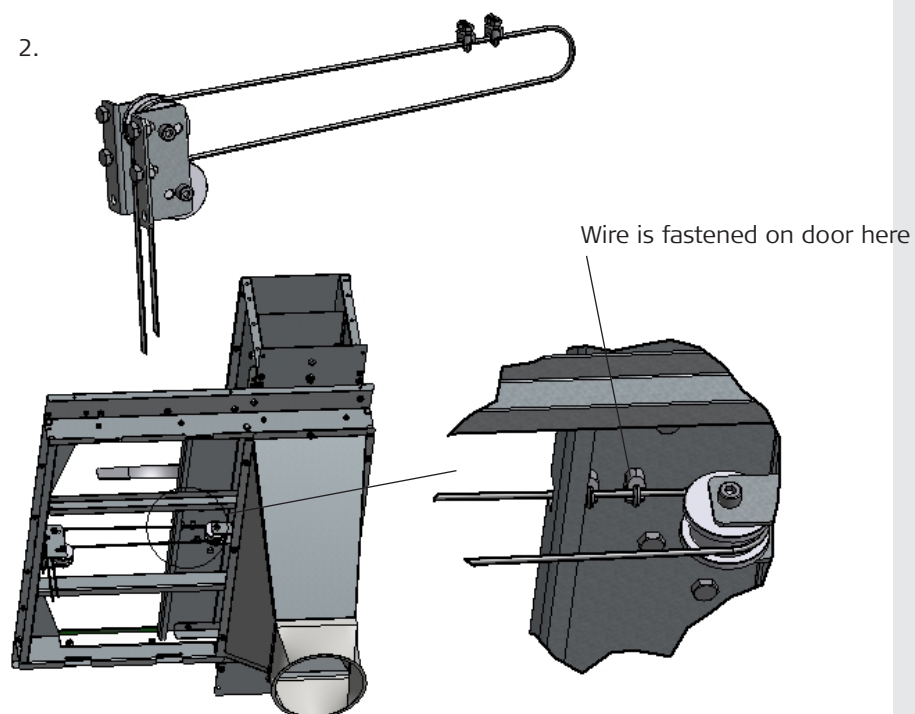


Pos.	Description	T44	Kg.	T45	Kg.
1	Cover for intermediate outlet	45103	15,60	45103	15,60
2	Outlethopper SK200 for intermediate outlet	44102	6,60	45102	7,08

1.

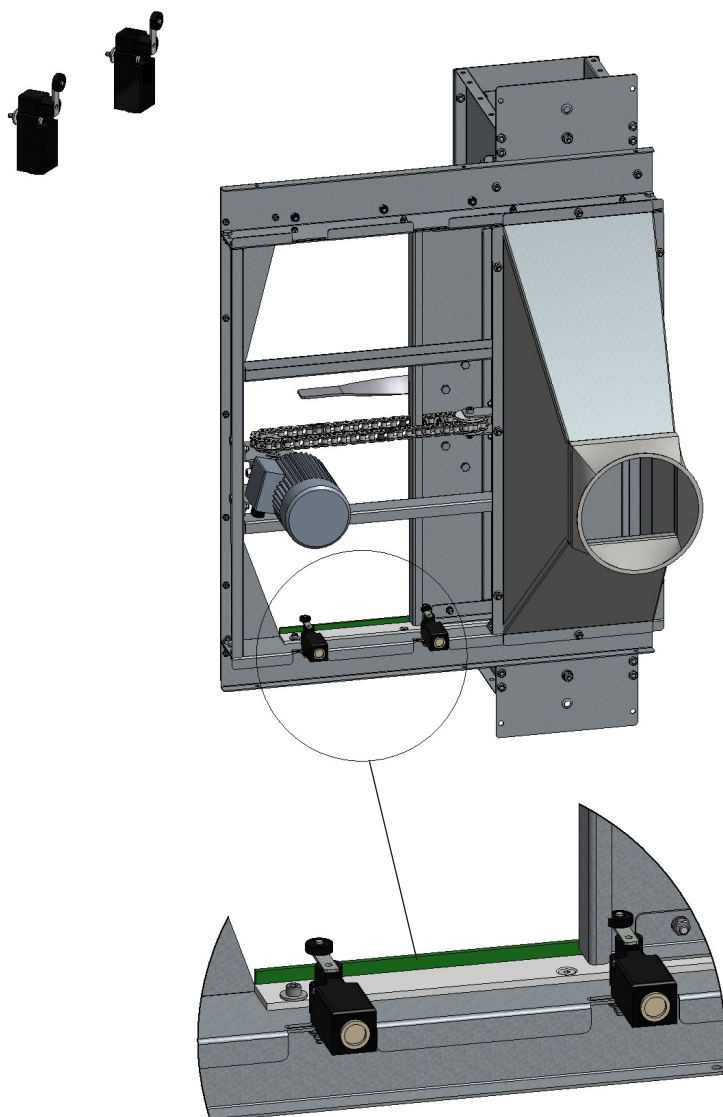


2.



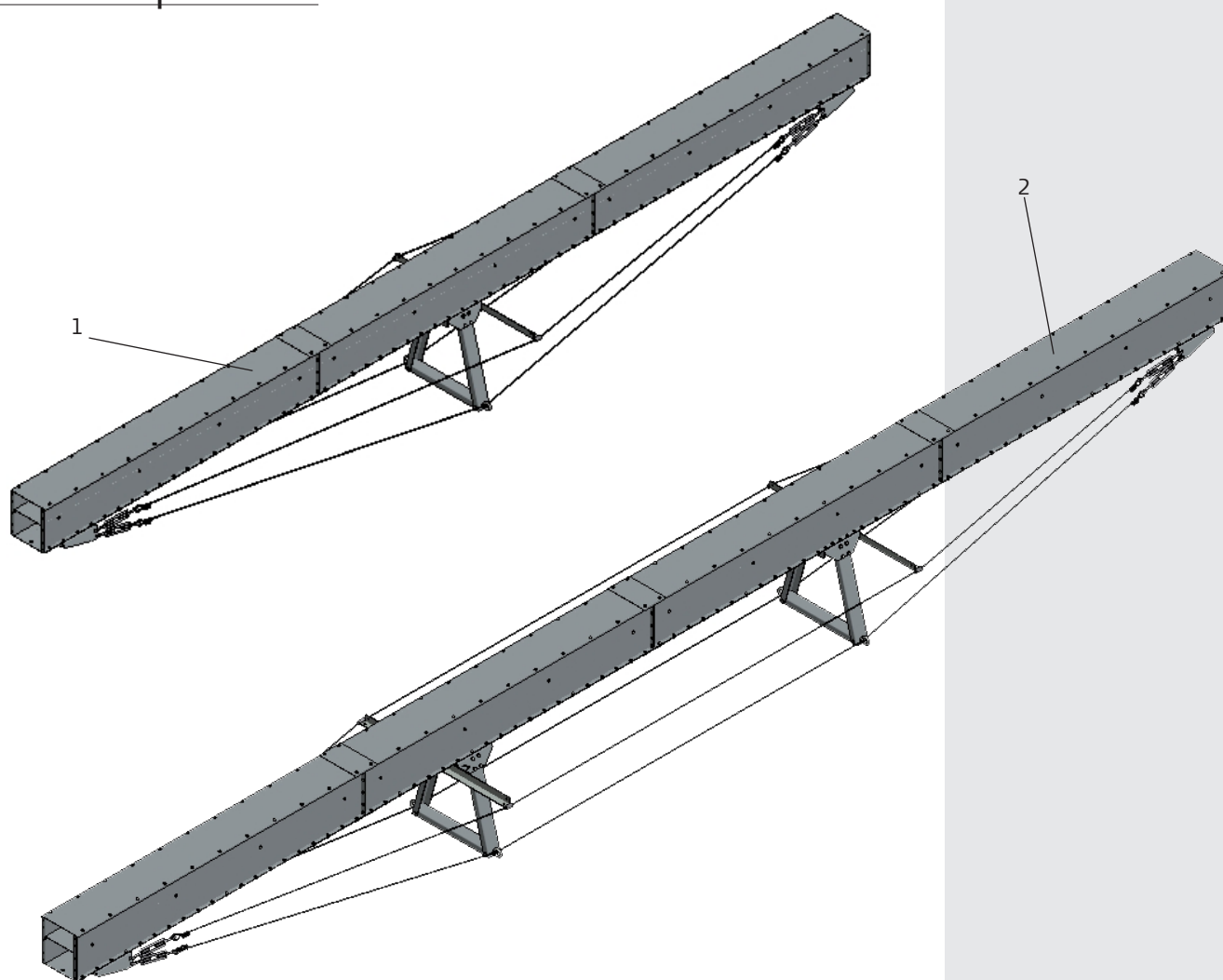
Pos.	Description	T44	Kg.	T45	Kg.
1	Motor 0,12 kW with limit stop for intermediate outlet	45104	6,60	45104	6,60
2	Manual pull for intermediate outlet	45105	6,00	45105	6,00

1.



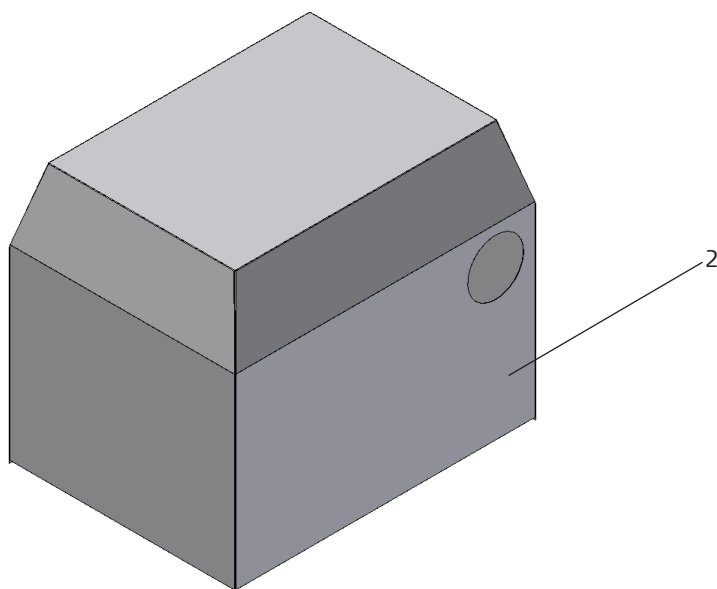
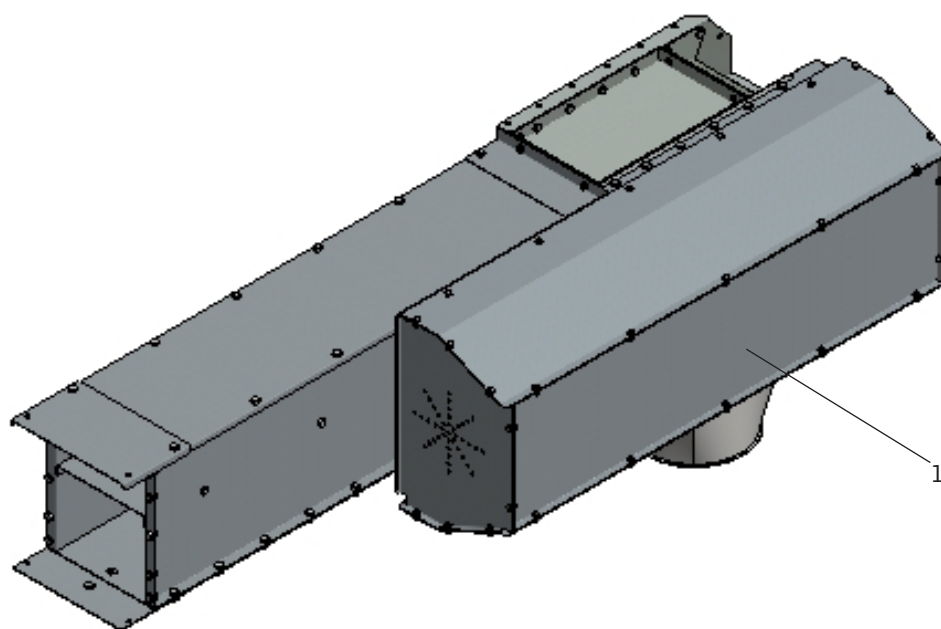
Pos.	Description	T44	Kg.	T45	Kg.
1	2 limit stop for intermediate outlet	88115	0,16	88115	0,16

Wire suspension



Pos.	Description	T44	Kg.	T45	Kg.
1	Wire suspension set single with side guides for 10m. free tension	00048	38,0	00048	38,0
2	Wire suspension set double with side guides for 15m. free tension	00049	43,0	00049	43,0

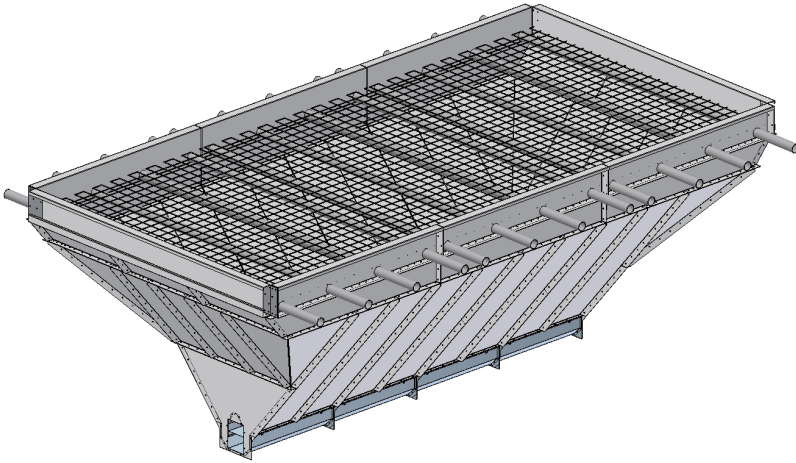
Cover for drive station



Pos.	Description	T44	Kg.	T45	Kg.
1	Cover for gearmotor	52080	14,0	52080	14,0
2	Tarpaulin cover for head with V-belt pulley drive	51105	3,0	51105	3,0
2	Tarpaulin cover for head with conical wheel geared motor	51106	3,0	51106	3,0

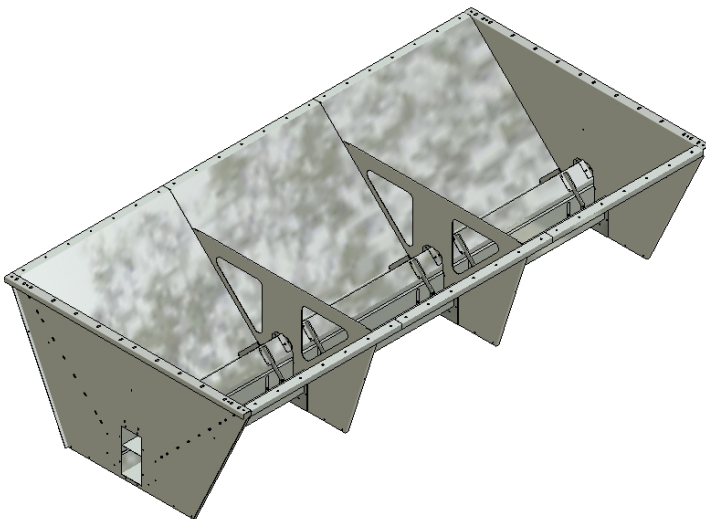
DryPit

Separate fitting instructions attached.

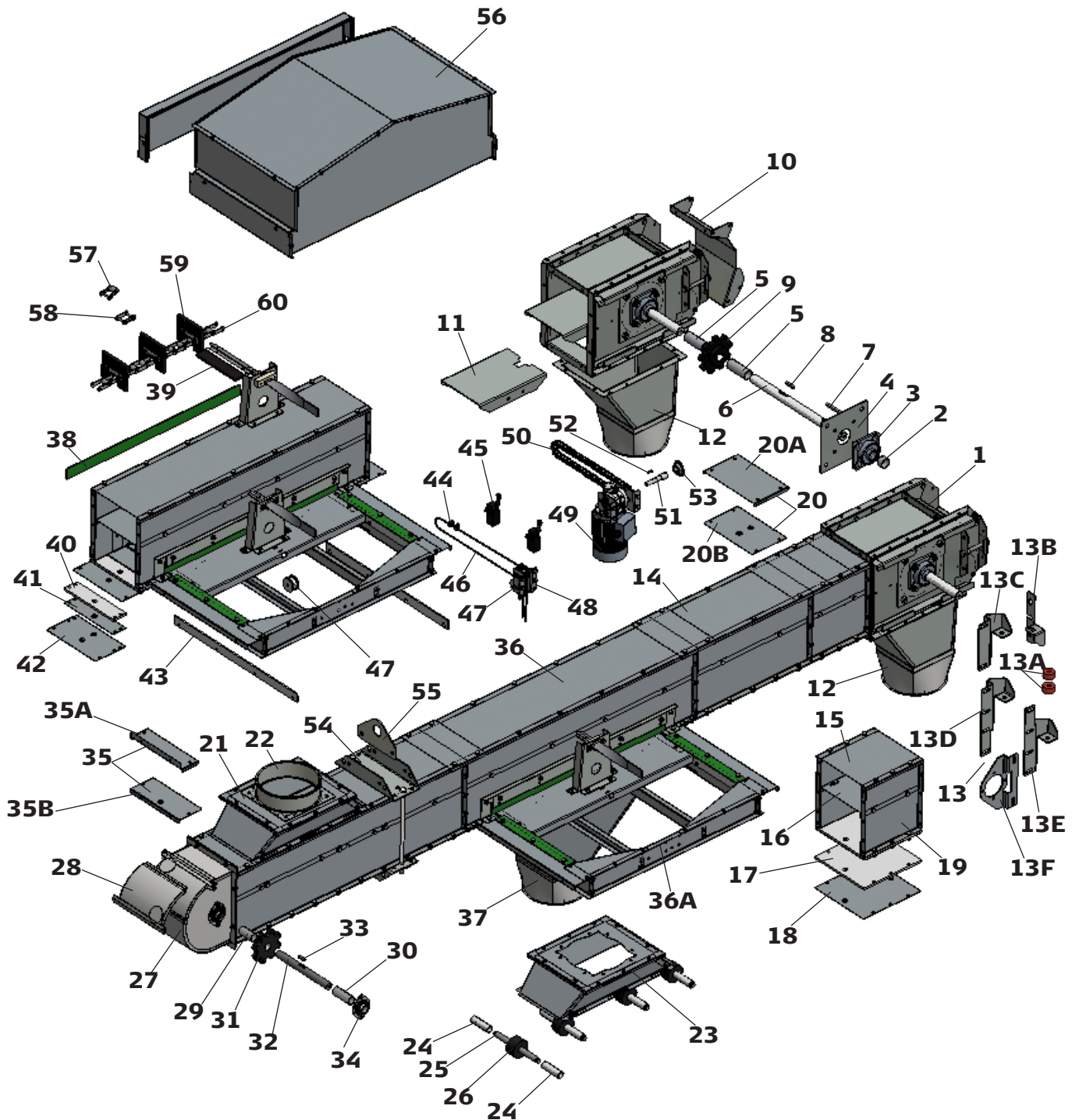


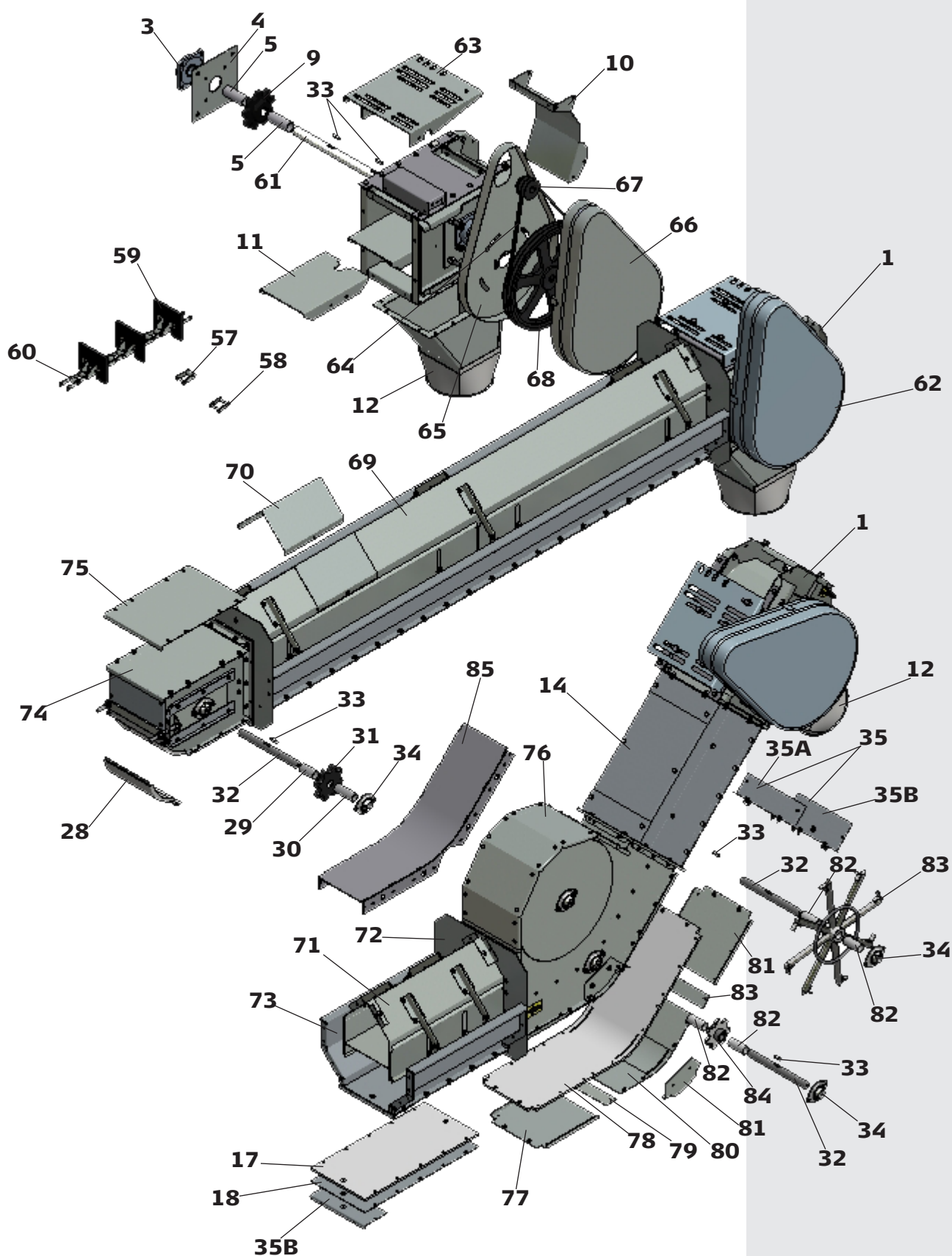
Tipping hopper

Separate fitting instructions attached.



Parts T44/T45





Parts list T44/T45

Pos.	Description	T44	Kg.	T45	Kg.
1	Drive station right without chain, for conical wheel geared motor 2,2-5,5 kW	51583	36,00	52483	39,00
	Drive station left without chain, for conical wheel geared motor 2,2-5,5 kW	51585	36,00	52485	39,00
	Drive station for V-belt pulley drive without chain	51577	36,00	52116	39,00
2	Distance bush Ø30 for drive station with conical wheel geared motor	51581	0,03	51581	0,03
3	Bearing UCF 206, 30 mm	85130	1,20	85130	1,20
4	Base plate for elevator head	51066	0,80	51066	0,80
5	Distance bush for elevator head	20017	0,08	40017	0,13
6	Shaft dØ30 for elevator head with conical wheel geared motor	51580	2,00	52120	2,40
7	Key 8x7x80mm	87066	0,04	87066	0,04
8	Key 8x7x40mm	87065	0,07	87065	0,07
9	Sprocket wheel 9 Z for elevator head Ø30	83026	1,80	83026	1,80
10	Cover for elevatorhead	51564	1,70	52105	2,25
11	Adjustable intermediate plate for elevator head	51570	1,70	52108	2,20
12	Outlet hopper 90° for drive/tightening section SK200	44247	4,50	45247	5,00
13	Torque arm compl. conical wheel geared motor TF90B/TF63B	81319	5,0	81319	5,0
13A	Rubber bush for torque arm Ø40/14 x 20 for conical wheel geared motor	91520	0,03	91520	0,03
13B	Torque arm, part for tightening plate	81326	0,50	81326	0,50
13C	Torque arm, part for conical wheel geared motor	81327	0,70	81327	0,70
13D	Torque arm, part for conical wheel geared motor 90° right	81321-1	0,85	81321-1	0,85
13E	Torque arm, part for conical wheel geared motor 90° left	81321	0,85	81321	0,85
13F	Bracket for Torque arm, TF63B	81330	0,54	81330	0,54
14	Extension 2,0m. with assembly plates	51185	31,1	52185	36,4
	Extension 1,0m. with assembly plates	51186	16,2	52186	19
	Extension 0,5m. with assembly plates	51187	8,7	52187	10,3
	Extension 0,25m. with assembly plates	51188	5,1	52188	6,0
	Extension 2,0m. with bottom PEHD base and assembly plates	51185-P	34	52185-P	40,4
	Extension 1,0m. with bottom PEHD base and assembly plates	51186-P	17,7	52186-P	21,0
	Extension 0,5m. with bottom PEHD base and assembly plates	51187-P	8,0	52187-P	11,3
	Extension 0,25m. with bottom PEHD base and assembly plates	51188-P	5,5	52188-P	6,5
15	Cover plate for 2,0m. extension	51086	4,66	52086	6,19
	Cover plate for 1,0m. extension	51090	2,33	52090	3,09
	Cover plate for 0,5m. extension	51094	1,16	52094	1,55
	Cover plate for 0,25m. extension	51098	0,58	52098	0,77
16	Intermediate plate for 2,0m. extension	51087	3,89	52087	5,41
	Intermediate plate for 1,0m. extension	51091	1,91	52091	2,67
	Intermediate plate for 0,5m. extension	51095	0,96	52095	1,34
	Intermediate plate for 0,25m. extension	51099	0,46	52099	0,65
17	PEHD base 2,0m. extension	51131	2,82	52131	2,92
	PEHD base 1,0m. extension	51132	1,41	52132	1,46
	PEHD base 0,5m. extension	51133	0,71	52133	0,73
	PEHD base 0,25m. extension	51134	0,35	52134	0,37
18	Base plate for 2,0m. extension	51085	5,42	52085	7,46
	Base plate for 1,0m. extension	51089	2,71	52089	3,73
	Base plate for 0,5m. extension	51093	1,36	52093	1,86
	Base plate for 0,25m. extension	51097	0,68	52097	0,93

Pos.	Description	T44	Kg.	T45	Kg.
19	Side plate for 2,0m. extension	52084	7,44	52084	7,44
	Side plate for 1,0m. extension	52088	3,78	52088	3,78
	Side plate for 0,5m. extension	52092	1,94	52092	1,94
	Side plate for 0,25m. extension	52096	1,03	52096	1,03
20	Assembly plates for extensions, with bolts (kit)	51190	0,93	52200	1,20
20A	Assembly plate for cover for extension	51122	0,36	52122	0,48
20B	Assembly plate for base for extension	51121	0,41	52121	0,56
21	Inlet for extension 180x180 / Ø200 with rollers	51130	5,0	52130	5,70
22	Inlet for extension SK200 / 220x220	45087	0,82	45087	0,82
23	Inlet for extension 180x180 / Ø200	51130-5	3,15	52130-5	3,20
24	Distance bush Ø25/21x80mm / Ø25/21x47,5mm	51083	0,02	52083	0,03
25	Shaft for returning wheel	51081	0,28	52081	0,42
26	Returning wheel	52082	0,12	52082	0,12
27	Elevator boot closed without chain	51231	6,60	52231	7,30
28	Inspection cover for elevator head and tightening section	20005	0,53	40005	0,74
29	Bush for elevator boot, short Ø26 x 25/Ø26 x 58	20038	0,02	40038	0,06
30	Bush for elevator boot, long Ø26 x 48/Ø26 x 78	20039	0,05	40039	0,08
31	Sprocket wheel 8 Z for elevator boot Ø25	20036	1,10	20036	1,10
32	Shaft for tightening section/bend	20230	0,70	40230	1,00
33	Key 8x7x30mm	87079	0,02	87079	0,02
34	Bearing with flange UCF/PFL 205, 25mm	85100	0,30	85100	0,30
35	Assembling plates for drive-/tightening section, bend and trough with bolts	51191	0,64	52201	0,85
35A	Assembly plate for cover for drive and tension	51124	0,22	52124	0,30
35B	Assembly plate for base for drive and tension	51123	0,30	52123	0,45
36	Intermediate outlet with 1,0m. extension	51189	36,8	52189	40,6
	Intermediate outlet with 1,0m. extension and PEHD	51189-P	37,0	52189-P	40,8
36A	Intermediate outlet without extension	44100	23,96	45100	25,82
37	Outlethopper SK200 for intermediate outlet	44102	6,60	45102	7,08
38	Non fric wear rail for intermediate outlet	91503	0,14	91503	0,14
39	Brush for intermediate outlet	44128	0,05	45128	0,07
40	PEHD base for intermediate outlet	51135	0,08	52135	0,09
41	Base plate for intermediate outlet	51126	0,15	52126	0,21
42	Assembly plate for base to intermediate outlet	51127	0,35	52127	0,49
43	Slide rail for intermediate outlet, PEHD1000	44100-8	0,03	45100-8	0,03
44	Wirelock for 5 mm wire	91205	0,02	91205	0,02
45	Switch with roller FR 531-M2	88004	0,08	88004	0,08
46	Wire for intermediate outlet	45105-2	0,20	45105-2	0,20
47	Roller for pull, intermediate outlet	45100-10	0,03	45100-10	0,03
48	Bracket for manual pull, intermediate outlet	45105-1	0,15	45105-1	0,15
49	Worm geared motor RMI 28	81189	5,86	81189	5,86
50	Chain for intermediate outlet 833 mm	45104-3	0,15	45104-3	0,15
51	Drive shaft for intermediate outlet	45104-2	0,12	45104-2	0,12
52	Key 5x5x20mm	87061	0,01	87061	0,01
53	Sprocket wheel 12 Z 1/2" Ø20	37014	0,04	37014	0,04
54	Support fittings compl.	00081	3,00	00081	3,00
55	Winch hook fittings for support fittings	00083	1,00	00083	1,00
56	Cover for intermediate outlet	45103	15,60	45103	15,60

Pos.	Description	T44	Kg.	T45	Kg.
57	Connecting link for chain kranked S55	87103	0,10	87103	0,10
58	Connecting link for chain straight S55	87102	0,10	87102	0,10
59	Rubber carriers with washer plate and bolt	20171	0,10	40171	0,10
60	Chain running metre compl.	20028	2,00	40028	4,00
61	Shaft for elevator head Ø30	20016	1,70	40016	2,00
62	V-belt pulley drive 2-grooved Ø24	52111	18,0	52111	18,0
	V-belt pulley drive 2-grooved Ø28	52112	20,0	52112	20,0
	V-belt pulley drive 3-grooved Ø28	52113	25,0	52113	25,0
	V-belt pulley drive 4-grooved Ø38	52114	28,0	52114	28,0
63	Motorbracket	51068	3,50	51068	3,50
64	V-belt AX 54 - 1372mm	84254	0,15	84254	0,15
	V-belt AX 56 - 1452mm	84256	0,15	84256	0,15
65	Inside cover for elevator head	51069	2,00	51069	2,00
66	Outside cover for elevator head	51070	3,20	51070	3,20
67	V-belt pulley A71 2 grooved Ø24	82081	0,70	82081	0,70
	V-belt pulley A71 2 grooved Ø28	82113	0,60	82113	0,60
	V-belt pulley A71 3 grooved Ø28	82177	1,00	82177	1,00
	V-belt pulley A71 4 grooved Ø38	82179	1,00	82179	1,00
68	V-belt pulley A355 2 grooved Ø30	82131	8,50	82131	8,50
	V-belt pulley A355 3 grooved Ø30	82193	10,80	82193	10,80
	V-belt pulley A355 4 grooved Ø30	82235	15,00	82235	15,00
69	Inlet trough 2,0m.	44300	49,10	45300	54,60
	Inlet trough 1,0m.	44301	25,40	45301	28,30
	Inlet trough 0,5m.	44302	13,80	45302	15,40
	Inlet trough 2,0m. med PEHD bund	44300-P	52,40	45300-P	59,10
	Inlet trough 1,0m. med PEHD bund	44301-P	27,10	45301-P	30,50
	Inlet trough 0,5m. med PEHD bund	44302-P	14,70	45302-P	16,40
70	Inspection cover for return duct	44170	0,85	45070	1,15
71	Return duct 2,0m.	44169	18,00	45069	21,60
	Return duct 1,0m.	44167	9,00	45067	10,80
	Return duct 0,5m.	44168	4,50	45068	5,40
72	Connecting flange for inlet trough/extension	44304	2,62	45304	2,76
73	Side plate for 2,0m. trough	45300-1	7,10	45300-1	7,10
	Side plate for 1,0m. trough	45301-1	3,60	45301-1	3,60
	Side plate for 0,5m. trough	45302-1	1,82	45302-1	1,82
74	Tightening section	44095	12,61	45095	13,77
75	Cover plate for tightening section	44088	1,14	45088	1,53
76	Bend 45°	44060	30,50	45060	33,70
	Bend 45° with PEHD bottom	44060-P	31,90	45060-P	36,70
77	Gable plate for 45° bend	44060-2	1,12	45060-2	1,50
78	PEHD base for 45° bend	51136	9,26	52136	12,79
79	Assembling plate for 45° bend	51060-9	0,13	52060-9	0,20
80	Wearing plate for front 45° bend	44060-4	1,47	45060-4	2,03
81	Wearing plate for side 45° bend	44060-3	0,28	44060-3	0,28
82	Distance bush Ø30x32,5 / Ø30x66	44060-6	0,03	40008	0,07
83	Return wheel for 45° bend	83006	5,00	83006	5,00
84	Sprocket wheel 7 Z Ø25	20034	0,73	20034	0,73

Pos.	Description	T44	Kg.	T45	Kg.
85	Intermediate section welded for 45° bend	44032	5,60	45032	7,10

Please state the conveyor type (T44/T45) and spare part number when ordering.

Maintenance T44/T45

Maintenance				Log	
Description	Daily	Every 200 hours	Yearly	Date	Initials
Check for unusual sounds	x				
Check for unusual vibrations	x				
Check for arisen leaks	x				
Check that the motor is not covered with dust	x				
Check the tensionning of the chain		x			
Check the chain for damages			x		
Retightening of flights			x		
Retightening of motoren			x		
Check motor bearings for noise	x				
Check v-belt			x		
Check oil level			x		
Change of gear oil			x		
Greasing of bearings		x			

* Life time lubricated bearings has to be replaced after 8000 hours.

Only original spare parts must be used.

Usage of not original parts leads to a loss of warranty as well as JEMA's responsibility regarding the CE marking.

JEMA AGRO A/S

Kløservejen 2, Sahl, DK-8850 Bjerringbro, Denmark

Tel.: +45 8668 1655, Fax: +45 8668 0074

www.jema.as

