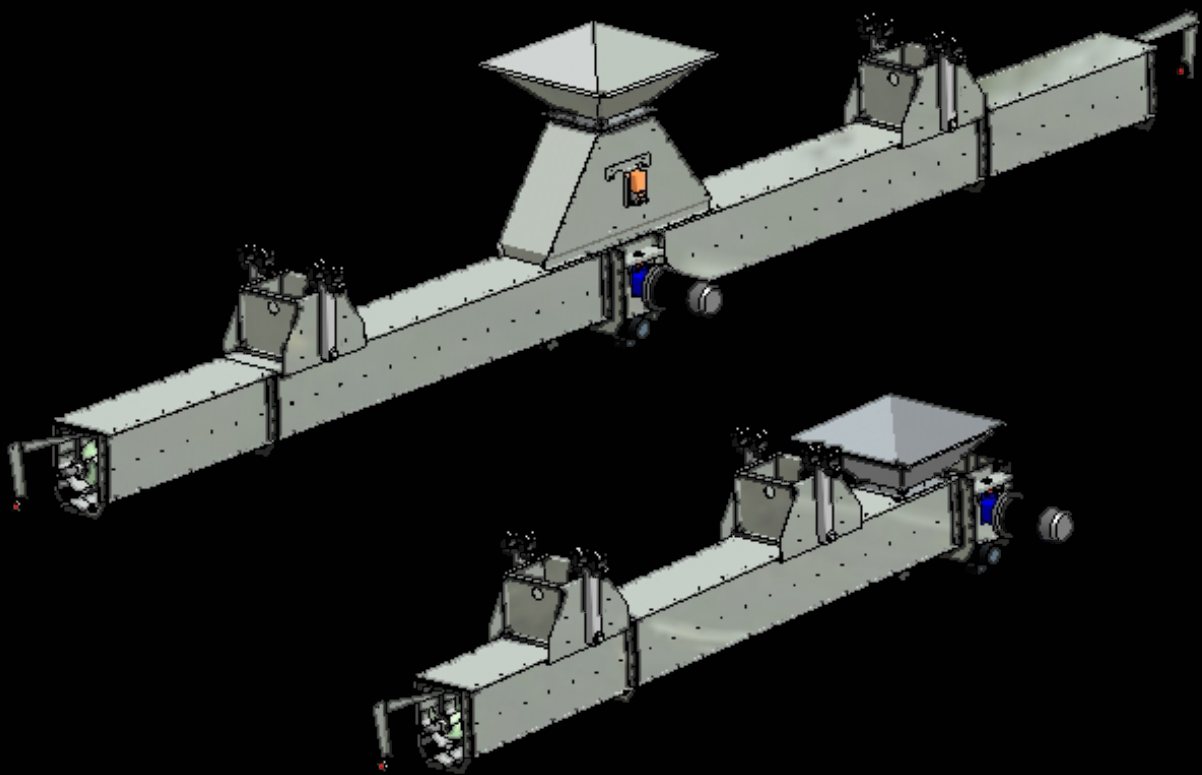


# Manual Distribution auger T56

Version 70515.1



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# Foreword

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JEMA AGRO A/S is a modern factory, which manufactures and supplies equipment for transport of grain, seeds and fertilisers.

JEMA AGRO A/S' current product portfolio is the result of more than 60 years of experience in the development of agricultural machinery, in close cooperation with our customers, which, through quality and flexibility helps keep us on the cutting edge.

JEMA AGRO A/S' conveyors and transport systems are suitable for multiple assembly with ALL brands of drying and silo systems.

## **Important!**

It is important to read this manual before assembly and commissioning.

# EU declaration of conformity

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

## Hereby declares that

**Machine:** Distribution auger  
**Type:** T56  
**Manufacturing year:** 2006

- is in accordance with the Machinery Directive 2006/42/EC, with special direction to appendix 1 concerning essential health and safety requirements in connection with the design and manufacture of machinery:

**EN ISO 12100-1:2005** Basic Terminology and methodology.  
**EN ISO 12100-2:2005** Technical principles.  
**EN 1050:1997** principles for risk assessment

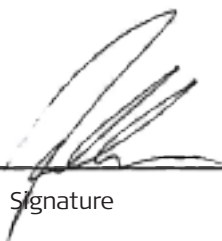
- are in conformity with EMC Directive 04/108/EC of 15. December 2004 concerning electromagnetic compatibility.

Director Jens-Peter Pedersen

Title Name

11.01.2011

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' distribution auger T56 is designed for transport of grain and seed mixtures.

- Distribution Auger T56 must only be used for the contract agreed product(s).
- Electrical connection should only be performed by a certified electrician.
- Distribution auger T56 must be earthed in accordance with existing national regulations.
- During assembly, maintenance, or repair, the electrical supply to the distribution auger shall be disconnected and locked out.
- Operating instructions must be placed / available in the vicinity of distribution auger T56.

# General information

---

## Delivery

The distribution auger is packed in a disassembled state. For shipping, standard packaging is used (pallets/wooden boxes and lattice boxes, etc.). There are no special considerations necessary with regard to the actual transport other than normal care.

Delivery includes the parts described in the order confirmation.

Before assembly and commissioning this manual must be read carefully.

## Storage

No measures have been taken for long term storage.

After receipt, the parts should be kept in a suitable, dry room until assembly.

## Noise measurement

A noise test has been performed for the distribution auger. The sound level is measured at a distance of 1 m from the distribution auger's surface at a height of 1.6 m from the floor. During measurement the distribution auger ran without products, which is the operating mode where the distribution auger makes the most noise.

The measured noise level is below 70 dB.

---

## Type plate

The plate is fastened to the distribution auger.



## Construction

The distribution auger T56 is built in standard elements, which in combination, can readily be incorporated into any grain transport system.

T56 distribution auger can be used for 1-way and 2-way transport.

The major part of distribution auger is made in galvanised steel.

The distribution auger T56 consists of:

- Drive station
- Extensions
- Runners
- Auger right/left
- Inlet hopper
- Distribution box
- Blockits sensor
- Motor



## Capacity

The table below shows the capacity:

Density	T56 (60 m <sup>3</sup> /h)	T56 (140 m <sup>3</sup> /h)	T56 (200 m <sup>3</sup> /h)
650 kg. pr. m <sup>3</sup>	39 t/h	91 t/h	130 t/h
700 kg. pr. m <sup>3</sup>	42 t/h	98 t/h	140 t/h
750 kg. pr. m <sup>3</sup> ( <b>wheat</b> )	45 t/h	105 t/h	150 t/h

*Measured in cleaned, storable material at a power supply of 50 Hz  
The capacity varies according to the nature of the material*

# Technical specifications - power requirements

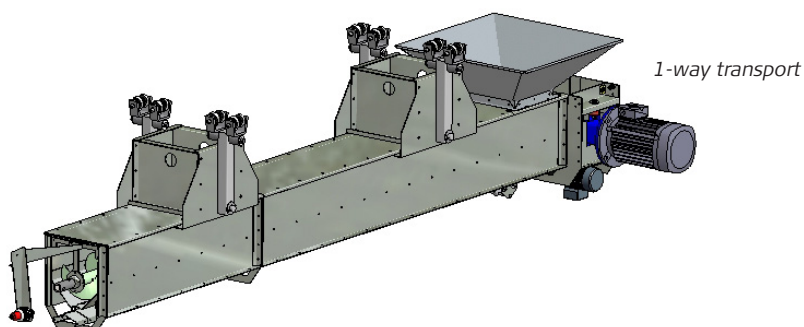
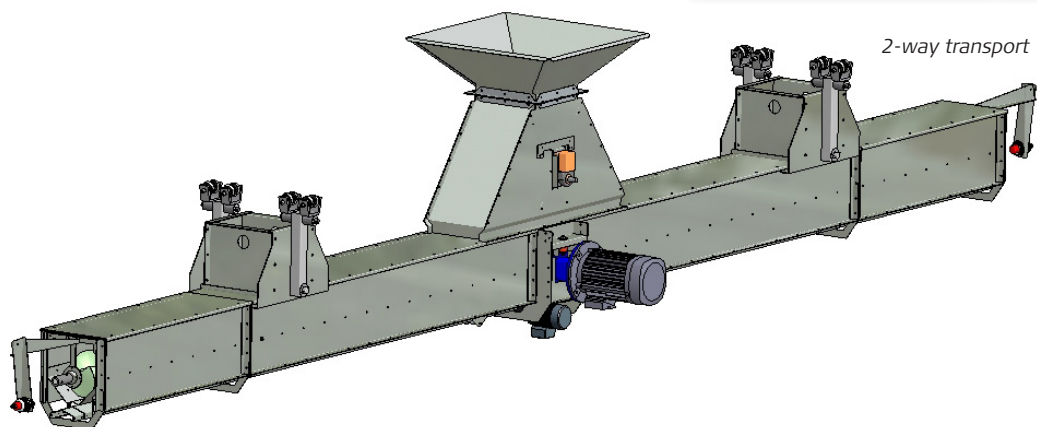
Distribution auger T56 power usage, kW:

1-way transport

Length	45 t/h	105t/h	150t/h
	kW 180 rpm	kW 280 rpm	kW 440 rpm
6,0	2,2	4,0	5,5
7,0	2,2	4,0	5,5
8,0	2,2	4,0	5,5
9,0	3,0	4,0	5,5
10,0	3,0	4,0	5,5
11,0	3,0	4,0	5,5
12,0	3,0	5,5	5,5
13,0	4,0	5,5	5,5
14,0	4,0	5,5	5,5
15,0	4,0	5,5	5,5
16,0	4,0	5,5	5,5

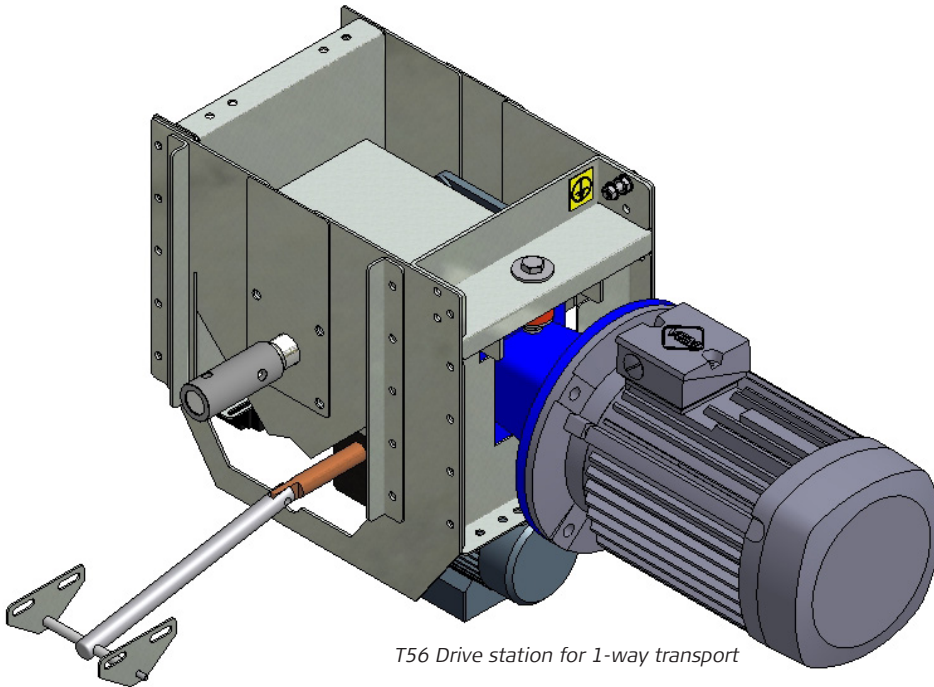
2 - way transport

Length	45t/h	105t/h	150t/h
	kW 180 rpm	kW 280 rpm	kW 440 rpm
6,0	2,2	3,0	4,0
7,0	2,2	3,0	4,0
8,0	2,2	3,0	4,0
9,0	2,2	3,0	5,5
10,0	2,2	3,0	5,5
11,0	2,2	3,0	5,5
12,0	2,2	3,0	5,5
13,0	2,2	4,0	5,5
14,0	2,2	4,0	5,5
15,0	3,0	4,0	5,5
16,0	3,0	4,0	5,5
17,0	3,0	4,0	5,5
18,0	3,0	4,0	5,5
19,0	3,0	4,0	5,5
20,0	3,0	4,0	5,5
21,0	4,0	5,5	5,5
22,0	4,0	5,5	5,5
23,0	4,0	5,5	5,5
24,0	4,0	5,5	5,5



## Drive station 1-way

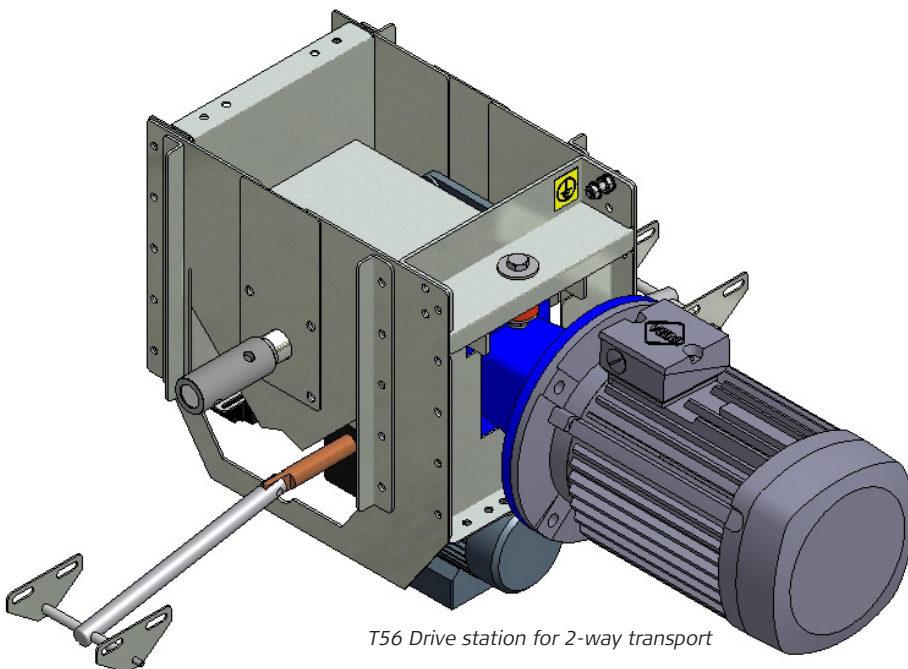
Drive station delivered as a complete unit.



*T56 Drive station for 1-way transport*

## Drive station 2-way

Drive station delivered as a complete unit.



*T56 Drive station for 2-way transport*

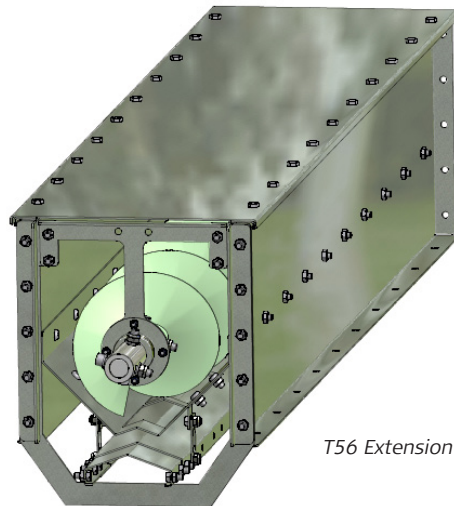
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## Extension

Extensions are available in the following lengths:

2.0 m - 1.5 m - 1.0 m

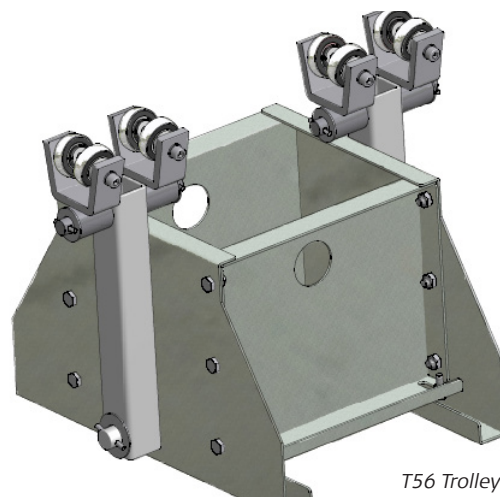
Extensions are provided as a single unit and are available in right and left hand models.



## Runner

The runner is used for suspension of T56 distribution auger.

The runner is supplied as a single unit.

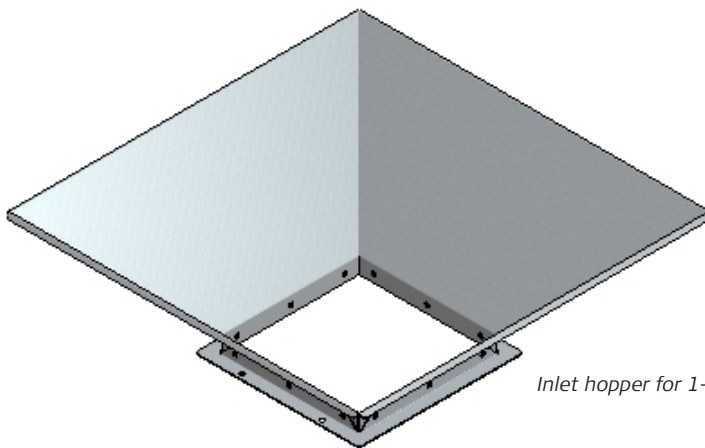


## Inlet hopper

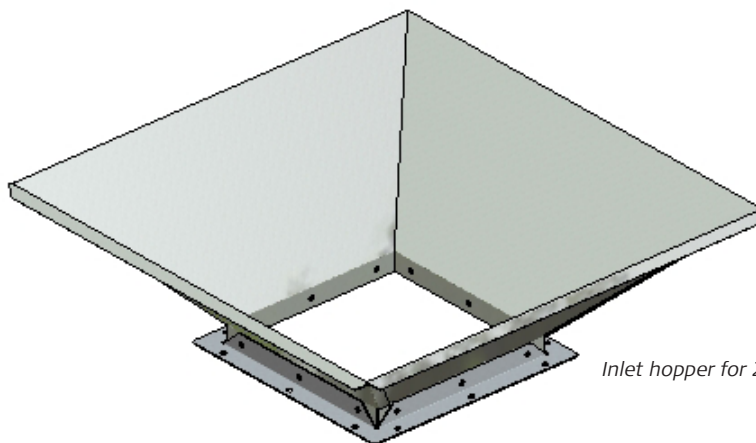
The inlet hopper for the T56 distribution auger is available in 2 models.

One model used for 1-way transport and one model used for 2-way transport.

The inlet hopper is supplied as a single unit.



*Inlet hopper for 1-way transport*



*Inlet hopper for 2-way transport*

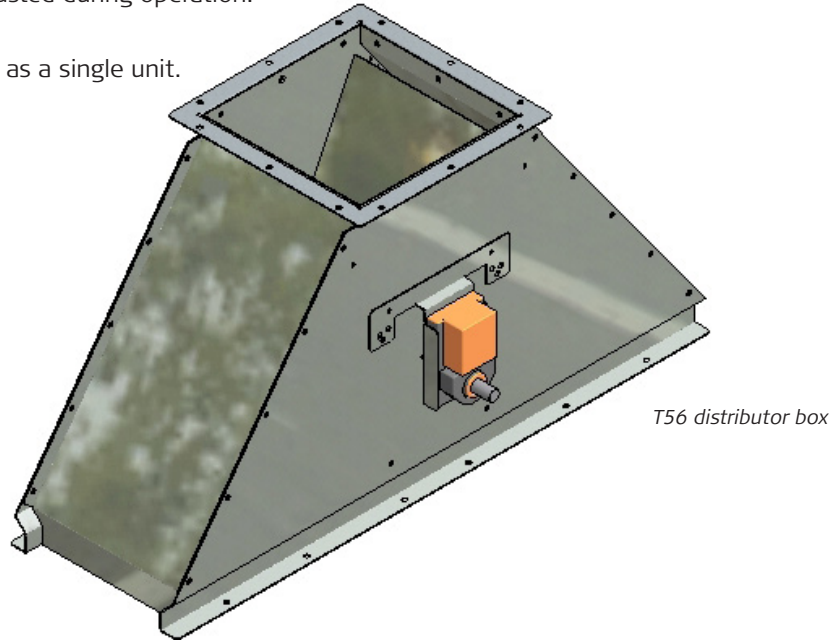
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## Distribution box

Distributor box for T56 distribution auger is remotely operated with a motor. The distributor box is only used for 2-way transport.

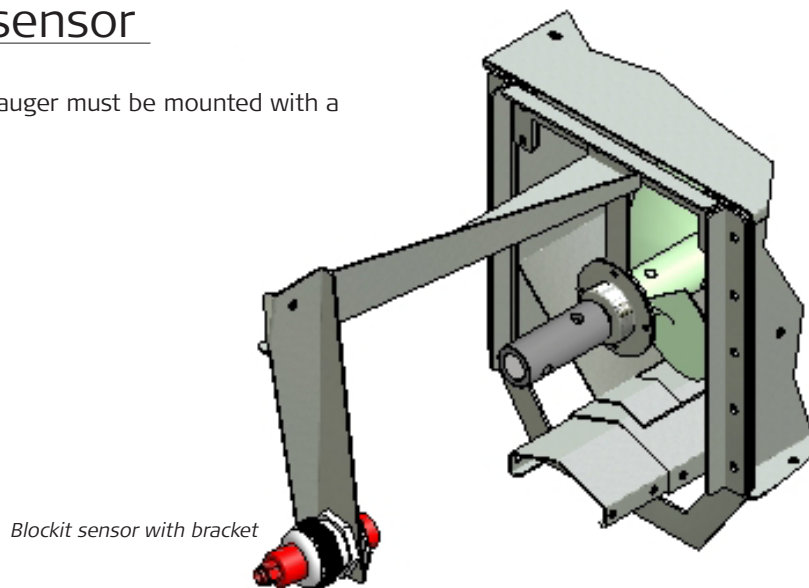
**Important** Cannot be adjusted during operation.

Distributor box is supplied as a single unit.



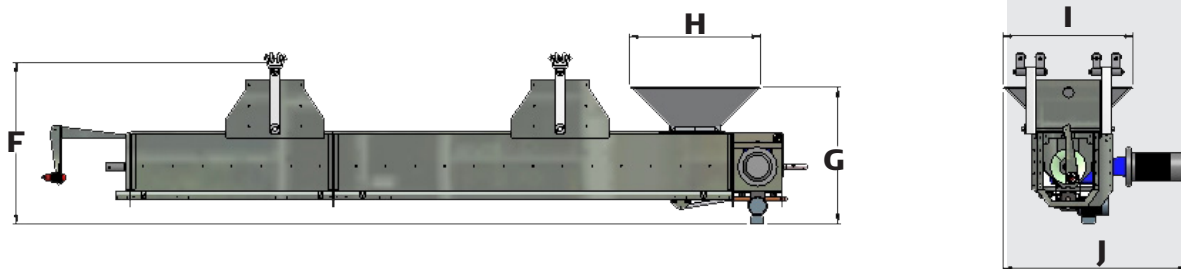
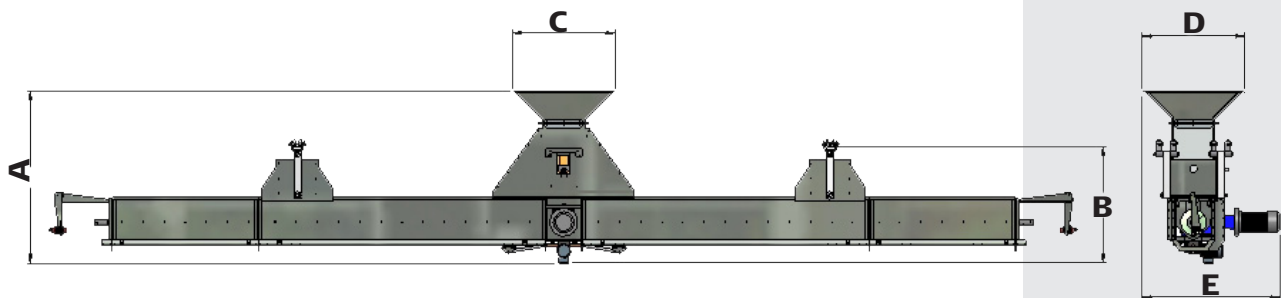
## Blockit sensor

T56 distributor auger must be mounted with a blockit sensor.



# Dimensional drawing

	A	B	C	D	E	F	G	H	I	J
T56	1230	820	730	730	1100	820	700	670	670	1050



---

## Upon receipt

At the time of the receipt, check that all parts and components are included and check for shipping damage.

Note! Check that supplier documentation is attached to the gear and the motor. If documentation is missing contact JEMA AGRO A/P. Please state order no.

Do not forget the necessary safety equipment before the start of assembly.

It is important to read the manual thoroughly before the beginning of assembly.

## Warning signs

Warning decals are fastened to the distribution auger, which indicate danger.

### **Warning!**

Inspection doors and shields must not be opened or removed while the machine is in operation.



### **Warning!**

Never reach into rotating auger/propeller.



## Supporting structure

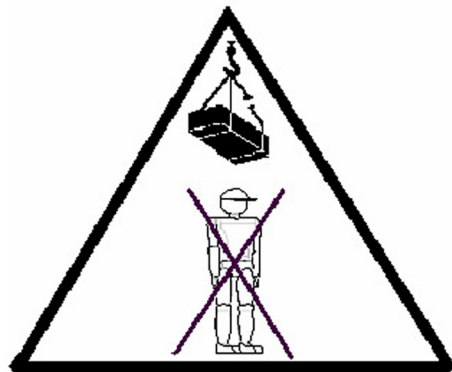
Suspend on building structure - see section "Measurement and weight sheet for T56 distribution auger".

## Lifting gear

Make sure to have the necessary SWL-marked lifting gear/crane which is required for the given situation.

The lifting gear must be approved for the current load. Weight of each part can be found under "Weight sheet for sub-assemblies" in this manual.

Machine weight is specified in the section "Measurement and weight load chart for T56 distribution auger".

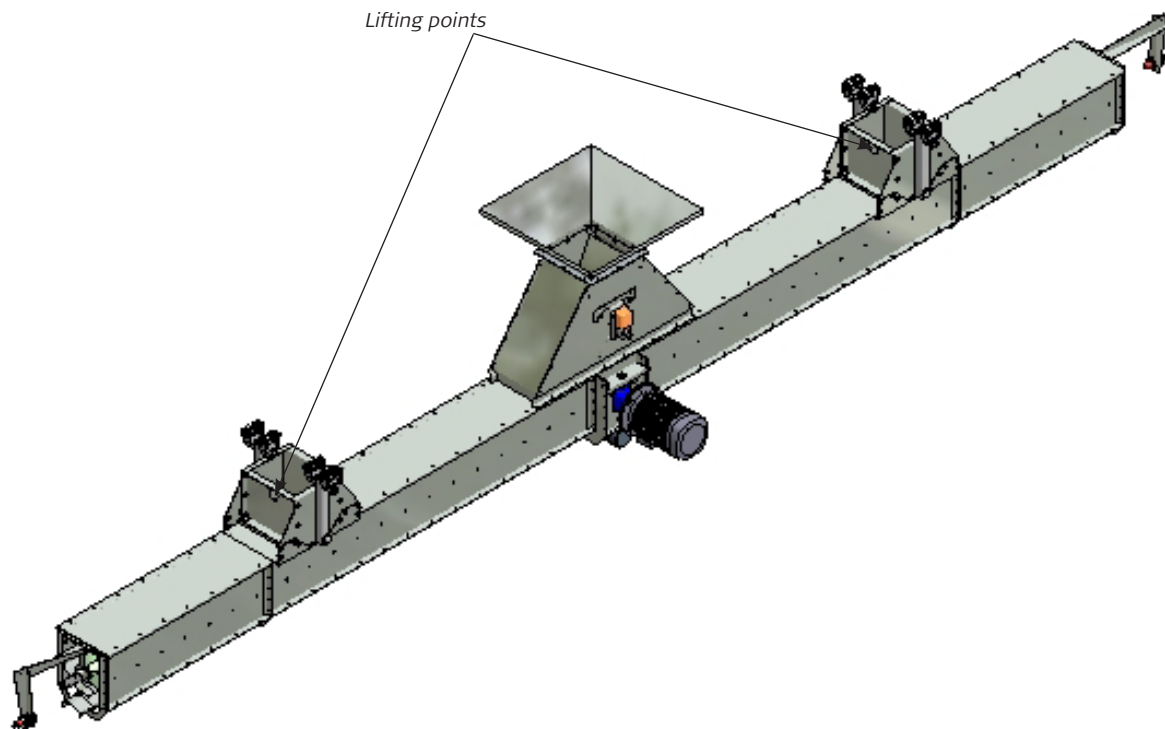


**Note!** - Standing under a suspended load is prohibited.

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## Lift requirements

T56 distribution auger is lifted in its mounted runner. See point "Measurement and weight load chart for T56 distribution auger" for correct installation of runners.

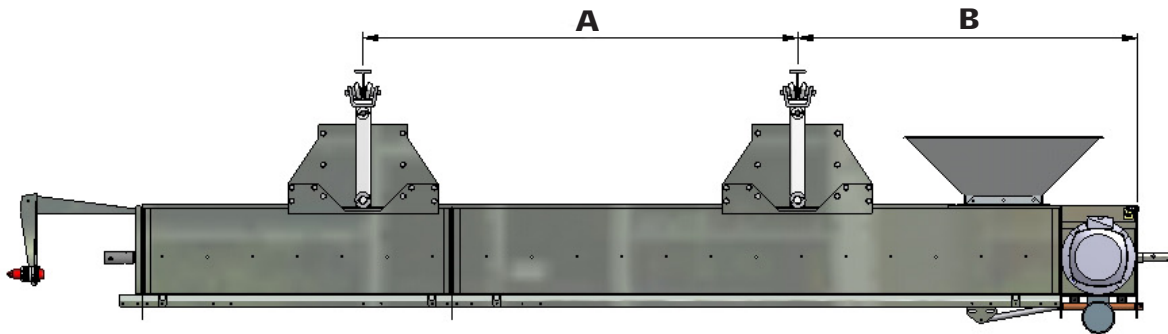


## Weight table – individual components

	Description	Product No	Weight
	Extension 1.0 m	56105 56106	39
	Extension 1.5 m	56103 56104	56
	Extension 2.0 m	56101 56102	75
	Extension 2.0 m for drive station	56148 56149	65,5
	Drive station for 2-way transport	56220	94
		56221	
		56222	
		56320	
		56321	
		56322	
		56420	
56421			
	Drive station for 1-way transport	56520	94
		56521	
		56522	
		56620	
		56621	
56720			
	Double runner	56108	20
	Distribution box	56120	30
	Inlet hopper	56007 56107	10

# Measurement and weight load chart for T56 distribution auger. 1-way transport

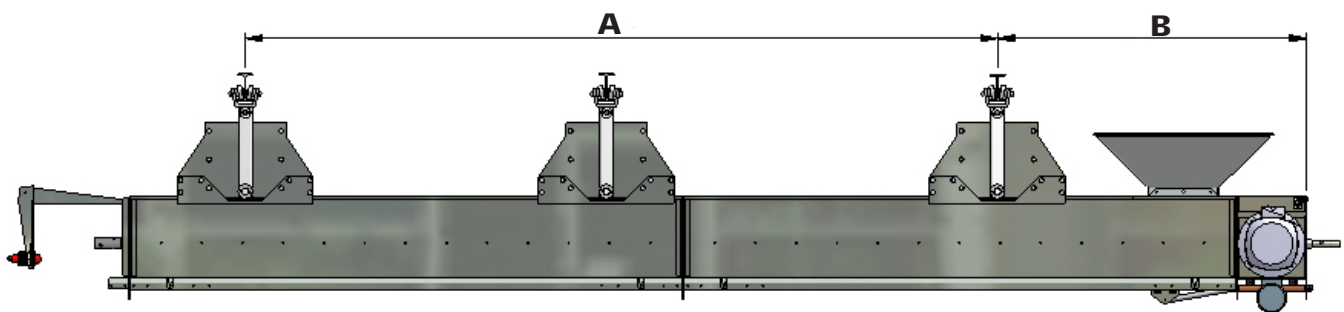
For 2 longitudinal rails



Length	Total kg	A MM	B MM
6,5	435	4000	1500
7,5	472	4500	1500
8,5	509	5000	1500
9,5	546	5500	1500
10,5	583	6000	1500
11,5	620	8000	1500
12,5	657	9000	1500

Weight without grain

For 3 longitudinal rails

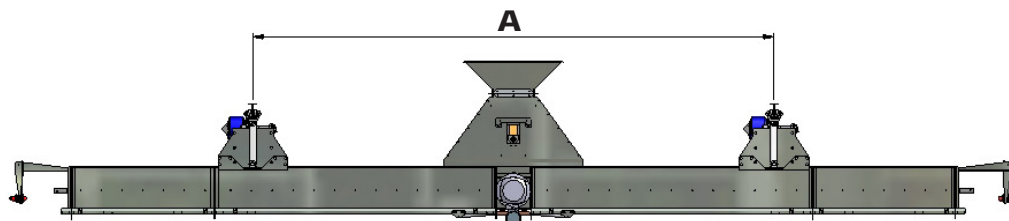


Length	Total kg	A MM	B MM
13,5	717	10000	1500
14,5	754	11000	1500
15,5	791	12000	1500
16,5	828	13000	1500

Weight without grain

# Measurement and weight load chart for T56 distribution auger. 2-way transport

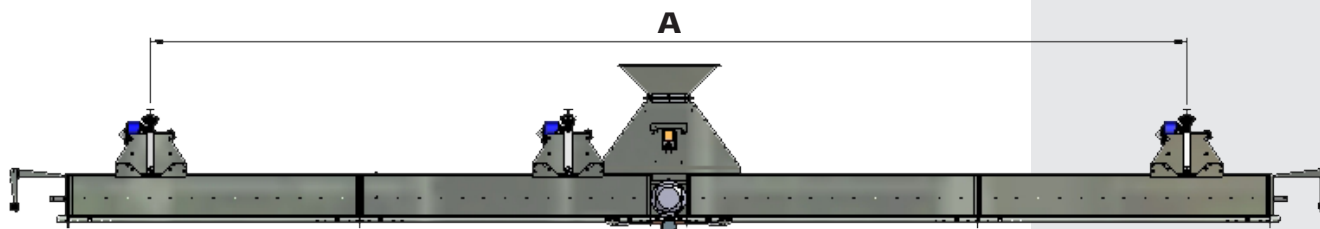
For 2 longitudinal rails



Length	Total kg	A MM
8,5	577	3895
9,5	614	4895
10,5	651	5960
11,5	688	6960
12,5	725	7960
13,5	762	8960
14,5	799	10030
15,5	836	11030

Weight without grain

For 3 longitudinal rails



Length	Total kg	A MM
16,5	896	12030
17,5	933	13030
18,5	970	14095
19,5	1007	15095
20,5	1044	16095
21,5	1081	17095
22,5	1118	18160
23,5	1155	19160
24,5	1192	20160

Weight without grain

# Assembly

---

Check supporting structure and transport direction at the beginning of assembly.

Make sure that site conditions are in order.

*It is important to read the whole manual thoroughly before installation/beginning assembly.*

Electrical connection must only be performed by a certified electrician.

**REMEMBER:**

Before starting installation, use necessary safety equipment for assembly such as gloves, safety shoes, helmet, glasses and necessary lifeline. None of these parts are standard delivery.

T56 distribution auger shall be installed according to plant drawings or this manual. Pages 20 -21.

## Assembling of distribution auger

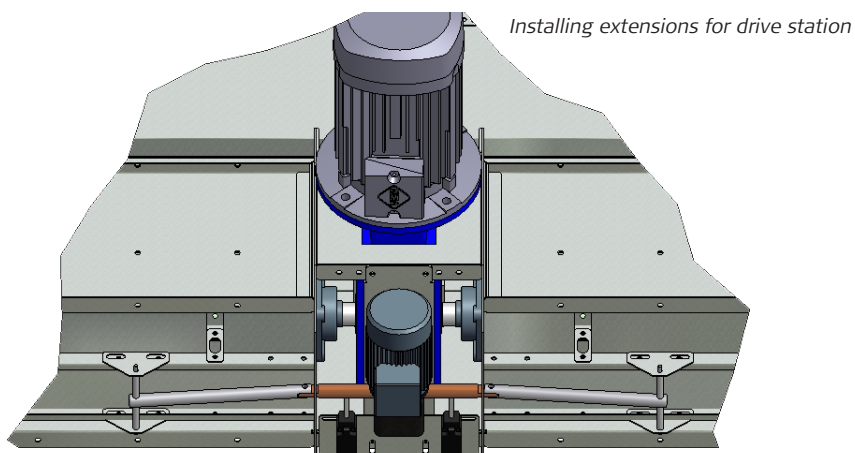
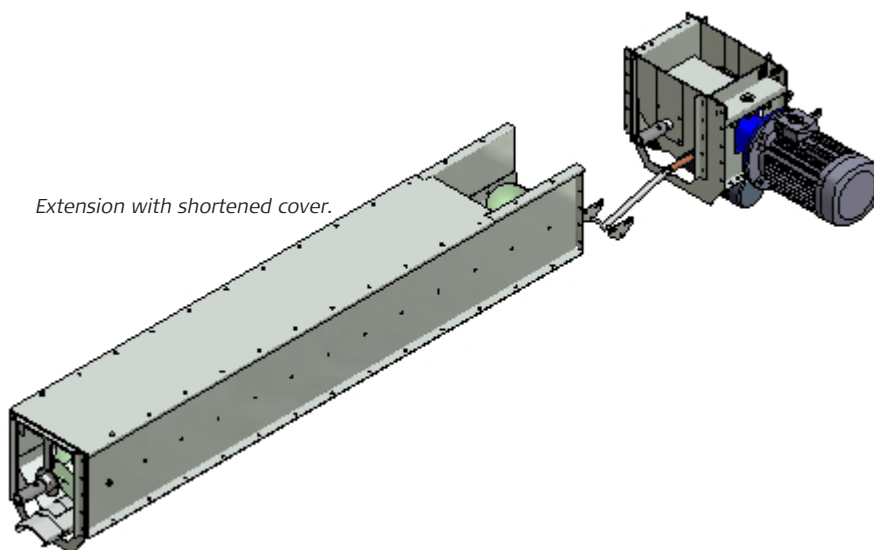
For assembly of distribution auger proper and approved SWL-lifting equipment shall be used. Please read carefully the section "Upon receipt", before starting assembly of distribution auger.

The distribution auger shall be assembled on the floor and then hung in the building's construction using the hanger bracket. See section "hanging and fastening".

Drive station, extension, distribution box (only used for 2 -way transport) and runner shall be installed in accordance with plant drawings.

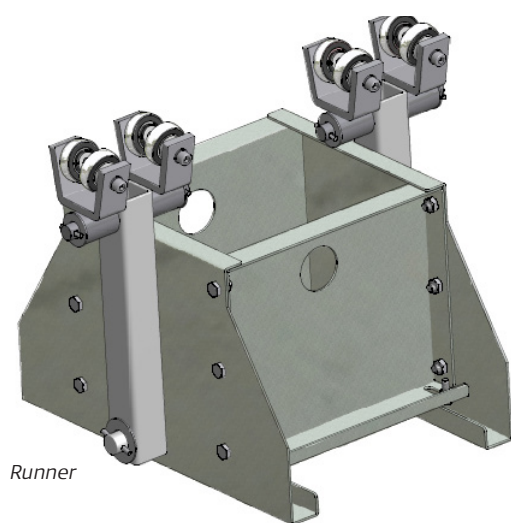
**Important: The extensions mounted to the drive station must be with shortened cover. (See drawing)**

**Remember! The extensions are available in right and left hand models.**



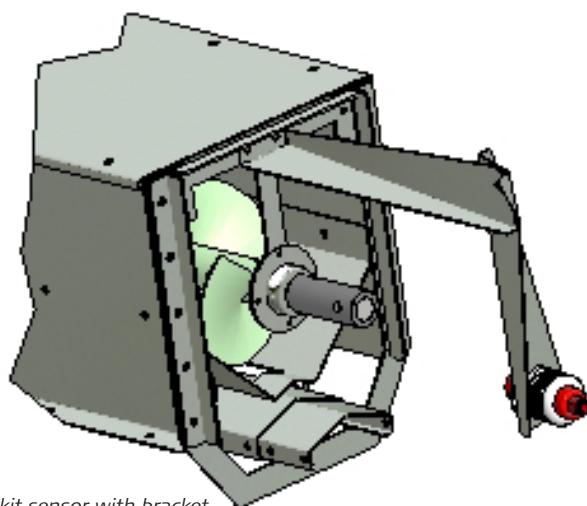
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Installing runners, see section "Measurement and weight load chart".



*Runner*

Installing blockit sensor (see diagram)



*Blockit sensor with bracket*

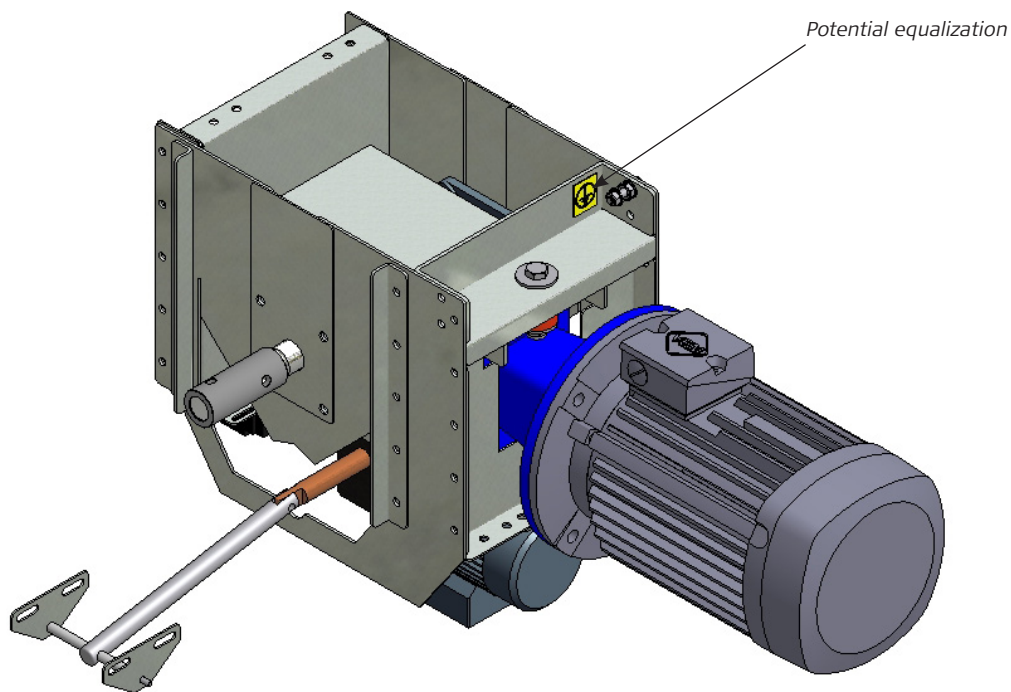


## Potential equalization

Potential equalization according to current rules.

A mark has been made on the drive station which indicates how distribution auger must be potential equalization. It is important that the machine be potential equalization to ensure that it's metallically connected.

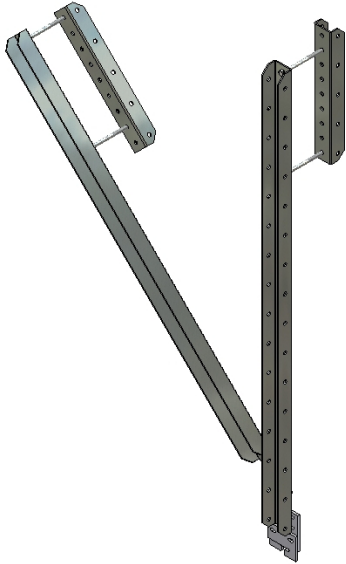
The mark shows where distribution auger must be potential equalization.



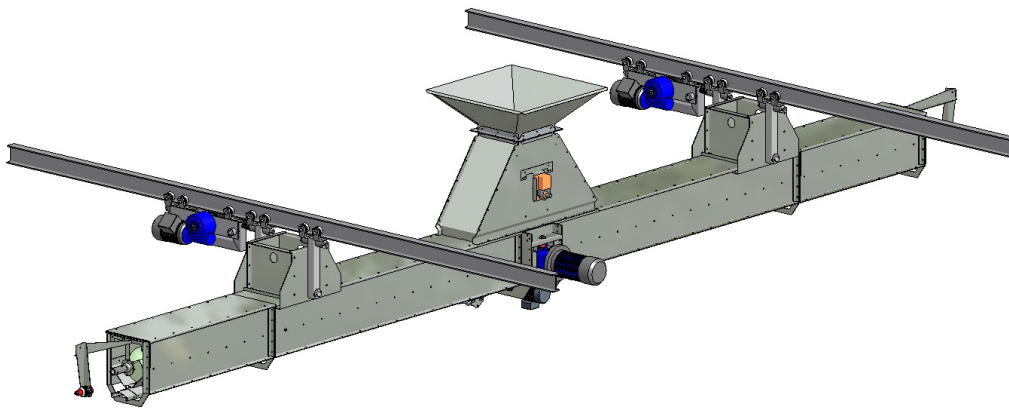
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## Suspension and fastening

T56 distribution auger shall be hung off the building structure using hanger brackets adapted to the building's construction. There must be max. 6.0 m between the suspension points.



The distribution auger T56 shall be suspended on a rail of INP 100. To do this, use special runners with ball bearings (see page 12).

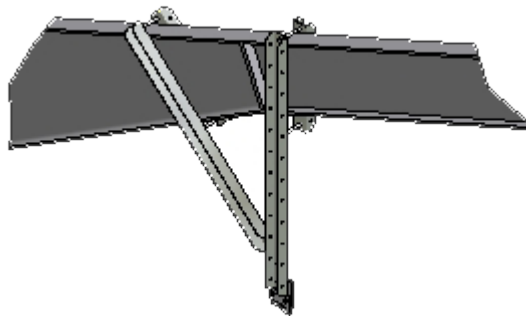


## Installation of guide rails INP 100

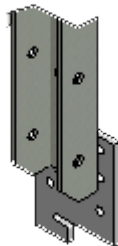
The distance between the longitudinal rails INP 100 must be as specified in the "measurement and weight load charts" (see pages 20 -21)

Start by installing V suspension fittings on the first and the last block, on one side of the warehouse.

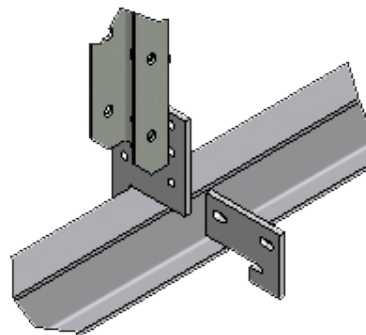
Stretch a rope tightly between these brackets and then install the intermediate bracket.



The long part of the "hanger bracket of INP 100" (00213) shall be mounted on all V suspension fittings.

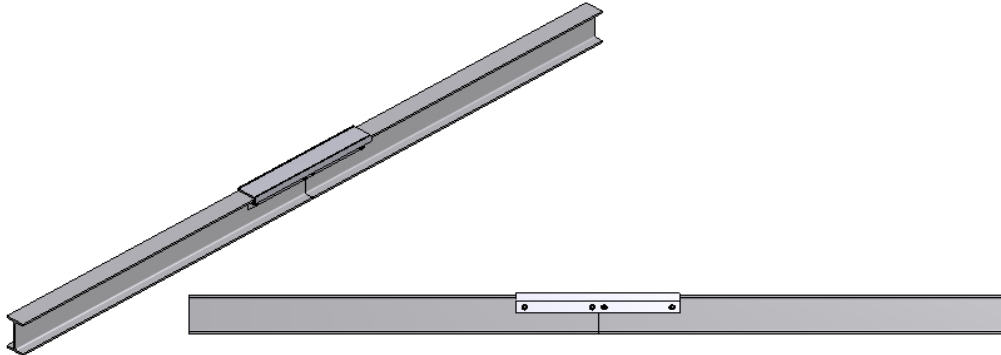


Then the INP 100 rail is placed in the long part of the "hanger bracket for INP 100" and is locked into place with the short part of the "hanger bracket of INP 100".



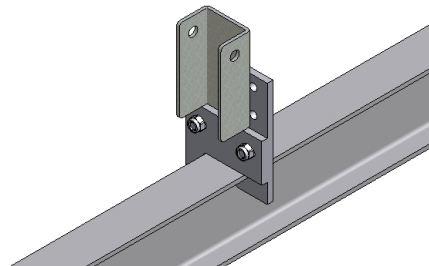
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A "connector for INP 100" (00212) is fitted on one end of the INP 100 rails as a link to the next piece INP rails. After assembly and alignment of all INP rails, weld all the joints and grind the welds smooth.

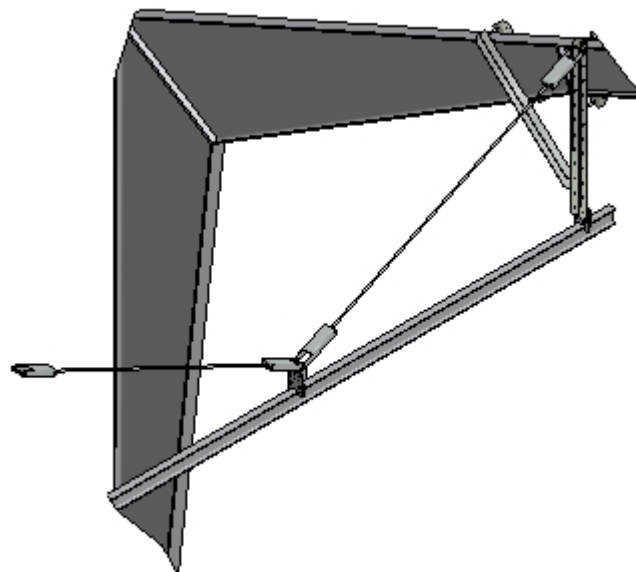


With a distance greater than 3.0 m between the suspension points, "relief columns with threaded rod and bolts" shall be installed (19191-19192 -19193)

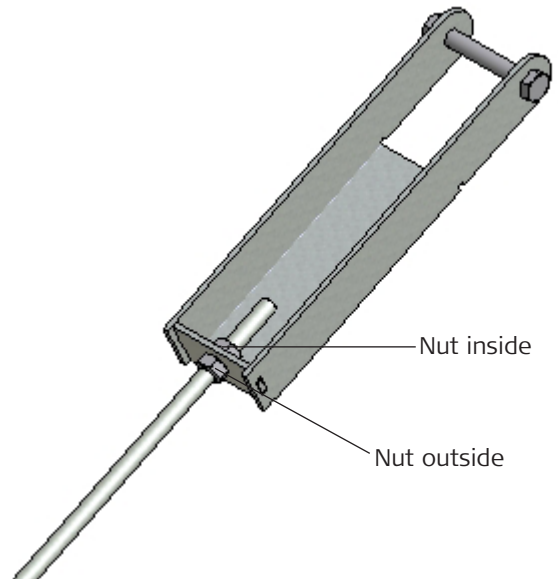
Midway between hitch points, a "hanger bracket of INP 100 (00213) shall be mounted, fitted with a "bracket for relief columns" (19182)



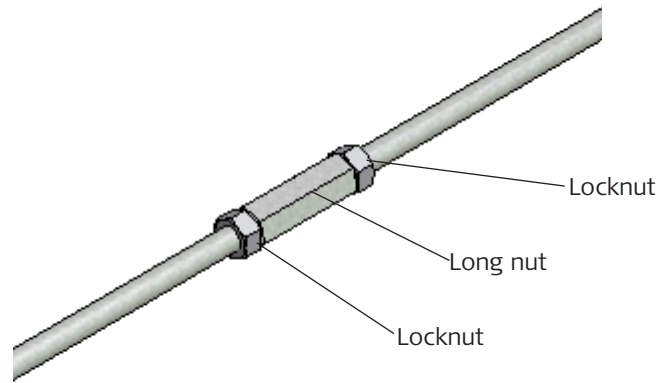
Between "between bracket for relief columns" and the V suspension bracket's top end, install "relief columns with threaded rod and bolt".



Threaded rods shall be adjusted so that the INP rail is equal, and then tighten the locknuts on the threaded rods.



Collection of threaded rods 3.0 m and 4.0 m.



---

## Start-up

Before starting distribution auger check the following:

- Ensure that all access doors are installed.
- Ensure that no one is working in/on/by the machine.
- Ensure that the rotation direction of the motor is correct.
- All the bolts are installed and tightened in the distribution auger.
- Check the attachment/stability of distribution auger.
- After start-up check that all assemblies are tight.

## Troubleshooting

With stop, first check whether distribution auger can be started up again after the relay has cooled. If it can, the fault is either a relay set too low, or a too small sized motor.

# Maintenance

Refer to the service guide, as well as the supplied documentation for the intervals for cleaning and maintenance.

## **Warning!**

- During cleaning, and maintenance work, the electrical supply to the distribution auger shall be disconnected and locked out.
- After repair and maintenance ensure inspection doors and shields are mounted before start-up.

## **Only original parts must be used.**

Use of non-original spare parts will void the warranty and basis and responsibility for CE marking will be removed from JEMA's side.

## Gear motor

Check the gear in accordance with the attached documentation.

### **Important!**

Check the bleed screw is mounted in the top position of the gear.

## Motor

Bearing noise from the motor. See attached supplier documentation.

Inspection of the motor; see attached supplier documentation.

The motor shall be torqued according to the maintenance schedule.  
For the procedure - see the assembly instructions.

## Bearings

The bearings shall be checked for wear/burring, and shall be lubricated according to the maintenance schedule.

---

## Lubrication of the bearings

### **Important!**

It is very important to lubricate with the correct amount of grease, since too much grease will break the bearing seal, and result in leaks, with subsequent overheating of the bearing

**Check how many grams of grease your gun provides per push.**

## Drive station

The two bearings in the drive station shall be checked and replaced according to the maintenance schedule.

## Runner

Bearings must be checked and replaced according to the maintenance schedule.

## Extension

Bearings must be checked and replaced according to the maintenance schedule.

## Leaks

Leaks shall be corrected immediately.

## Strange sounds and vibrations

Immediately stop distribution auger and identify the source.



# Disposal

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Disposal must be carried out in accordance with the relevant national rules.

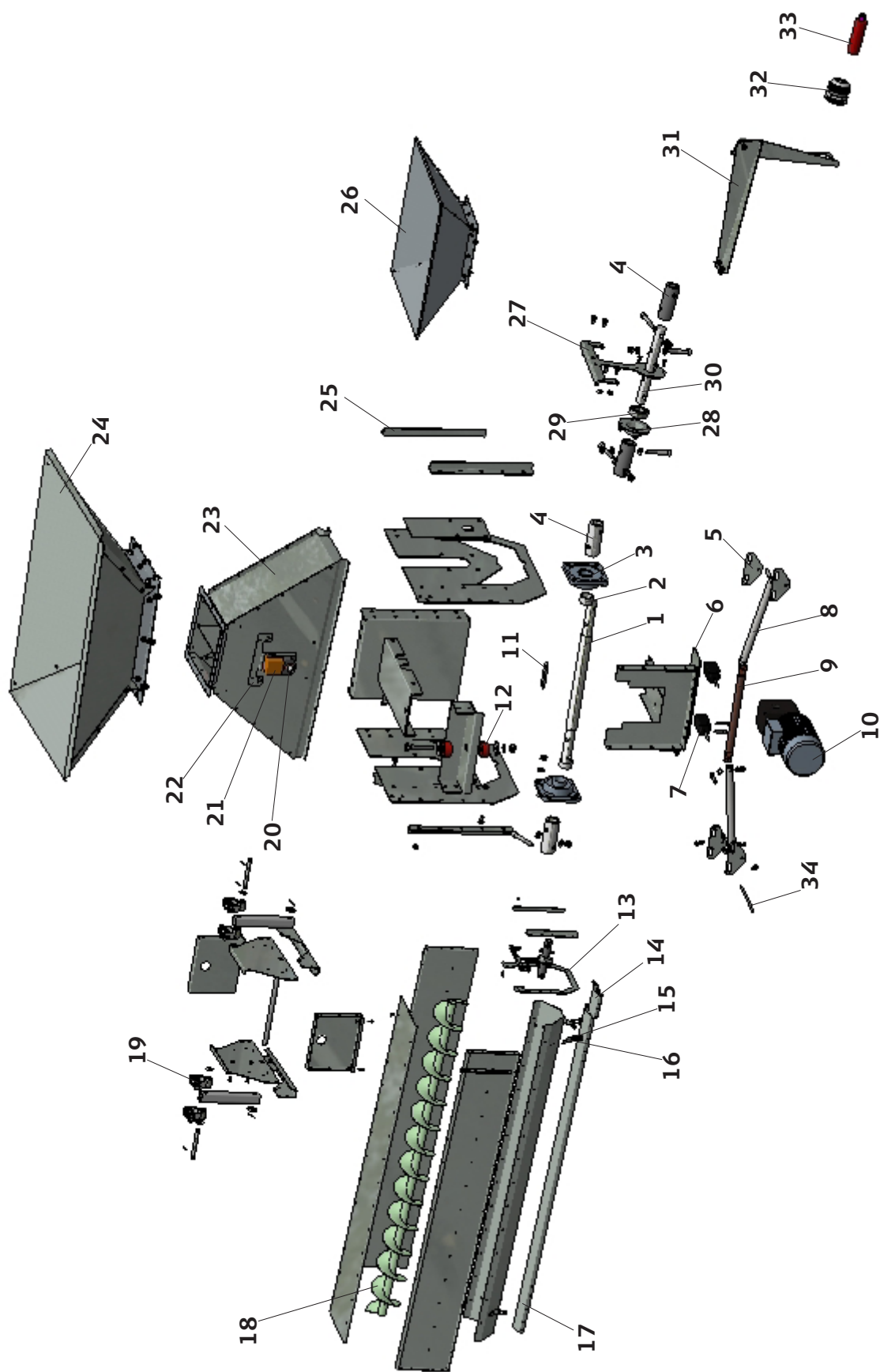
**Warning!**

Electrical supply to the motor must not be connected during disassembly.

If space allows, disassemble distribution auger on the floor in the reverse order that the assembly instructions describe it.

The distribution auger contains a number of materials, which can be recycled.  
All metal parts should be delivered to metal recycling plants.

# Parts T56



## Parts list T56

Pos.	Text	product no.	Kg.
1	Drive shaft Ø30	56113	2,36
2	Spacer for drive station	56100-6	0,01
3	Bearing UCF 206, 30mm etc. Flange	85130	1,20
4	Bushing for Shaft support bearing	32014	0,52
5	Bracket for drawbar for damper control T56	56118	0,05
6	Bracket for end stop	56146	0,30
7	Switch with whip FR 525 M2 1 NC+1NO	88001	0,10
8	Connection rod for regulations of outlet	56125	0,64
9	Threaded spindle	56112	0,08
10	Worm gear motor for threaded spindle	81182	6,90
11	Parallel key 8x7x 80 mm	87066	0,04
12	Rubber bushing to torque arm to helical bevel geared motor	91520	0,03
13	Assembly flange for extension and support bearing	56119	0,71
14	Connector for control damper	56137	0,41
15	Tilt bracket for damper	56117	0,02
16	Bracket for damper	56116	0,03
17	Damper 2.0 m. for extension	56136	6,11
	Damper 1.5 m. for extension	56134	4,60
	Damper 1.0 m. for extension	56132	3,10
18	Auger 2.0 m. Ø180 Left	94172	14,00
	Auger 1,5 m. Ø180 Left	94177	10,00
	Auger 1,0 m. Ø 180 Left	94171	5,50
	Auger 2.0 m. Ø180 Right	94170	14,00
	Auger 1,5 m. Ø180 Right	94169	10,00
	Auger 1,0 m. Ø180 Right	94168	5,50
19	Bearing CS 205 for Trolley . (Round) for double rails	85200	0,12
20	Contact switch S2A for belimo	81033	0,21
21	Belimo damper motor SM230A	81021	1,00
22	Bracket for Belimo motor	56147	0,50
23	Distribution box etc. flap coupling	56120	27,50
24	Inlet hopper 700 x 700	56107	11,57
25	Reinforcement flange for extension	56145	0,31
26	Inlet hopper for one way transport	56007	9,78
27	Holder for support bearing	56110-1	0,46
28	Open flange for ball bearing	10020	0,12
29	Bearing ball bearing	85104	0,13
30	Shaft for Support bearing	32013	0,82
31	Bracket for dust monitor	56109	0,87
32	PG. 36 for blockits sensor	88060	0,07
33	Blockit sensor	88072	0,29
	Blockit sensor	88071	0,29
34	Threaded rod M6x145 for inlet shutter	56121	0,03

When ordering spare parts please give part number.

**JEMA AGRO A/S**

Kløservejen 2, Sahl, 8850 Bjerringbro, Denmark

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

[www.jema.as](http://www.jema.as)

