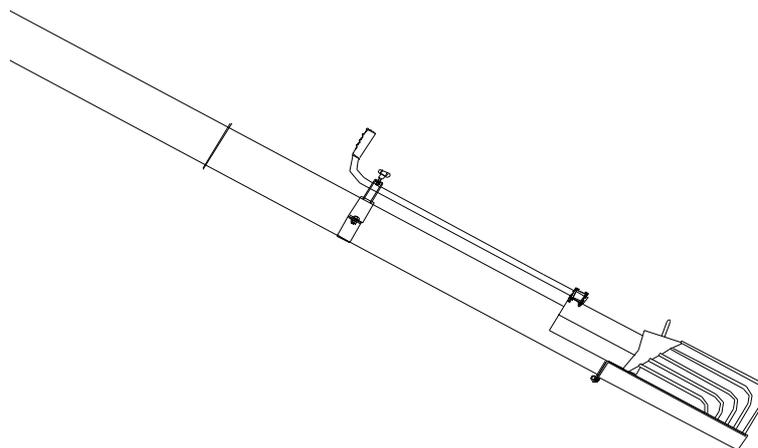


DESIGN GUIDE

SVEA-ALLROUND grain auger 152mm



Contents

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SVEAVERKEN AGRI AB reserves the right to make changes without prior notice

List of components

Drive units, extensions, end bearings, hoppers

2568110	<i>Direct drive</i> Direct drive for ordinary or gear motor.	
2568020	<i>Single reduction drive</i> V-belt drive, ratio 1:2,0.	
2568205 2568210 2568220 2568230	<i>Standard extensions</i> 0,5m extension. 1,0m extension. 2,0m extension. 3,0m extension.	
2568311 2568331	<i>Standard outlet extensions</i> 1,0m outlet extension OK200. 3,0m outlet extension OK200.	
2568351* 2568344 2568368 2568394	<i>Standard inlet extensions with half pitch</i> 0,5m inlet protection with 0,5m helix. 1,0m inlet extension OK200. 3,0m inlet extension with hopper 45°. 1,0m inlet extension with 8435 flange	
2568350* 2568343 2568367 2568393	<i>Inlet extensions full pitch</i> 0,5m inlet protection with 0,5m helix. 1,0m inlet extension OK200. 3,0m inlet extension with hopper 45°. 1,0m inlet extension with 8435 flange.	
2568470 2568471	<i>End bearings</i> Bearing for inlet protection 2568350 and 2568351. End plate with bearing.	
2548437 2548447	<i>Hopper, feeder (se also 2568367 och -68)</i> Hopper for Auger box. Inlett 2xOK160 45°+90°.	

* End bearing 2568370 and intake regulator 2568462 fits 2568350 and -51.

List of components, continued

Inlet- and outlet accessories, motor protections, star-delta switches

2548419 250481 2548420 2548421 2548422 2548423 2548425	<i>In- and outlet accessories</i> Flexible tube Ø170, per meter. Clamp 150-180, for 2548419 Floor controlled outlet Ø160mm. 0,25m Flexible tube Ø170 with clamps. Flexible tube Ø160 with bayonet joint for 2548420. Telescope tube Ø160, 1,35-3,41m. Intermediate section 2548422-OK160. Tension clip included.	
2548627	<i>Suspension details</i> Suspension band, "Patent band", per metre.	
2548452 2568462 2568464	<i>Various accessories</i> Transport wheels for 2568020. Intake regulator for 2568350 and 2568351. Intake regulator for 2568367 and 2568368.	
5022010006 5022010007 5022010008 5022010010 5022010011	<i>Tubes OK160</i> Tube OK160, 2,0m Tube OK160, 1,0m Tube OK160, 0,6m Tube OK160, 0,3m Tube OK160, 0,06m	
5022020096 5022020103 5022020108 5022020113 5022020118 5022022008	<i>Bends OK160</i> Bend OK160, 90° Bend OK160, 60° Bend OK160, 45° Bend OK160, 30° Bend OK160, 15° Bend OKD160, 45°	
5022000659 5022000000 5022050110 5024000014 5021000367	<i>Various OK160</i> Tension clip OK160 Bolt coupling OK160 Bolt coupling OK200 2-way outlet OK160, 45°-45° Intermediate section OK160/OK200	
60003 60004 60005 60203 60204 60205	<i>Motor protectors</i> Motor prot. 2,5 - 4,0A for motor 90002, 90003, 90010, 90011, 90051, 90052 Motor protector 4,0 - 6,3A for motor 90004, 90012, 90053 Motor protector 6,3 - 10,0A for motor 90005, 90013, 90054 Contactor motor protector 2,5 - 4,0A for motors as 60003 Contactor motor prot. 4,0 - 6,3A for motor 90004, 90012, 90053 Contactor motor prot. 6,3 - 10,0A for motor 90005, 90013, 90054	
60030 60031 60032	<i>Star-delta switches</i> Star-delta switch for motor 90006, 90014 Star-delta switch for motor 90007, 90008, 90015, 90016 Star-delta switch for motor 90017	

List of components, continued

Elektric accessories

60304	Automatic level control. Ambient temp. -25 - +70 °C.	
60015	Undervoltage release 230V. Can be used as overfilling protection together with 60304 and 60003/4/5.	
60308	Emergency stop button.	
610514	Safety switch, 3-pole 16A.	
44330	MP3, disconnection device for emergency stop.	

The articles listed above are only a selection of the electric accessories. For a complete list of motors, motor protection etc. refer to the "Electric equipment" pricelist. See also pricelist for Svea-Allround 102mm and design guide 1679. Please contact Sveaverken Agri AB for further information.

The choice of motor / capacity

Crushed oats

The table shows the capacity of a horizontal and an inclining auger at different speeds.

<i>Drive unit / speed</i>	<i>Horizontal</i>	<i>45° inclination</i>
2568110 / 125	3,0 tons/h	2,0 tons/h
2568110 / 300	7,5 tons/h	5,5 tons/h
2568020 / 450	11 tons/h	8,0 tons/h
2568020 / 700	17 tons/h	12,5 tons/h

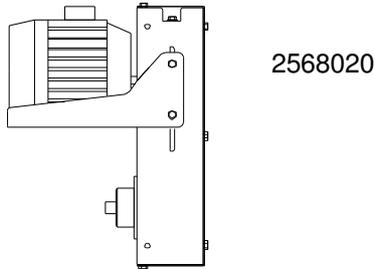
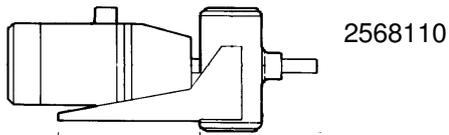
Grain transport

Applies for 700r/m auger speedl, i.e.. 2568020 with 1400rpm motor.

<i>Capacity at different angles</i>		<i>Motorrekommendationer</i>
Horizontal	60m ³ /h (49 tons/h)	2,2kW up to 3m length
30°	50m ³ /h (41 tons/h)	3,0kW up to 5m length
45°	45m ³ /h (37 tons/h)	4,0kW up to 7m length
60°	40m ³ /h (33 tons/h)	5,5kW up to 9m length
75°	35m ³ /h (29 tons/h)	7,5kW up to 12m length
Vertical	22m ³ /h (18 tons/h)	

The main components of a plant

Drive units, extensions



Drive package (motor and drive unit)

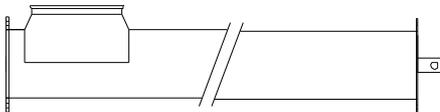
For speeds up to 315rpm a motor with direct drive (2568110) is recommended. For higher speeds, reduction drives with 900 or 1400rpm motors are recommended.

The drive package can be placed either at the inlet or outlet end of the auger. It can be mounted vertical or horizontal or in an arbitrary angle.

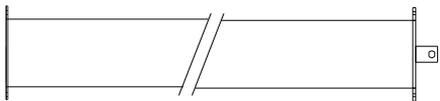
Motor protections

Motor protections and contactor motor protections are available for all motor sizes. For a complete list of available motor protections, see pricelist "Electric equipment".

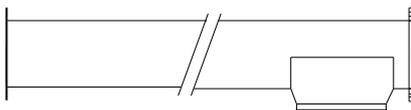
Inlet extension



Ordinary extension



Outlet extension



Extensions

Standard extensions are available in 3 different designs: Inlet extensions, outlet extensions and ordinary extensions. Always use one inlet extension at the inlet and one outlet extension at the outlet. Ordinary extensions are used in between. The exceptions are the inlet protections 2568350 and 2568351 because they have built-in inlet extensions.

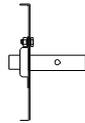
In- and outlet extensions can not be placed anywhere else than at the end inlet and end outlet, respectively.

In cases where intermediate outlets are desired, use a tube for an in/outlet extension and a helix for a ordinary extension.

The standard for inlet extensions is half pitch in the inlet to prevent overfilling.

The main components of a plant (cont'd)

End bearing, hoppers, suspension band, wheels

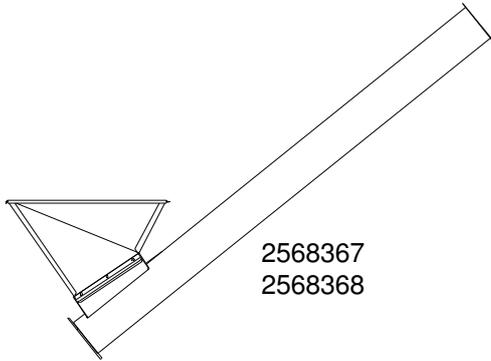


2568471

End bearing

The end plate with bearing (2568471) is used to bear the auger at the end of the auger that is not driven.

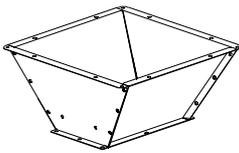
Use bearing 2548470 with inlet protections 2568350 and 2568351.



2568367
2568368

Inlet extension with hopper 45°

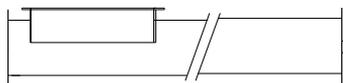
This 3m long inlet extension is delivered with a hopper, that is angled 45°. For transport of feed, choose 2568368 with half pitch spiral. Inlet protection is included.



2548437

Hopper 2548437

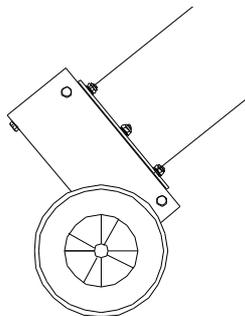
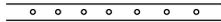
The hopper 2548437 can for example be used as a simple inlet under a crusher. The hopper is connected directly to the inlet extension 2568393, 94. Inlet protection are included.



2568393
2568394

Suspension band 2548627

2548627 is a strong, galvanized suspension band. Ordered per meter.



Transport wheels

The transport wheels 2548452 fits to the drive unit 2548020. The wheels are used when inlet extension 2568367 or -68 has been attached to the drive unit to make a simple, moveable auger.

Safety standards

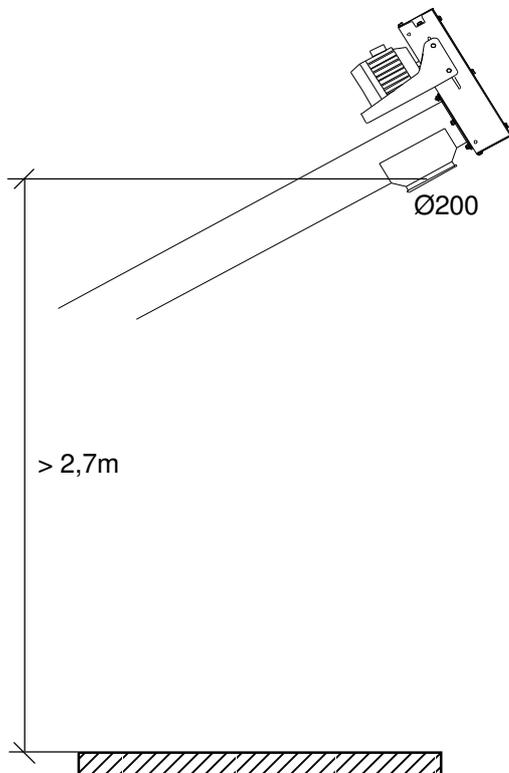
Safety switch and emergency stop

The electrical installation shall be done according to EN 60204-1. This means that a safety switch shall be included for every motor and that the system must have an emergency stop.

60308 is a red red emergency stop button.

44330 (MP3) is a device for disconnection of the current when emergency stop is used. MP3 can disconnect two independent three-phase loads, max 5A; or up to 8 control circuits.

610514 is a 3-pole safety switch, which shall be connected before each motor. It shall prevent the auger from starting when repairs are made on the auger.



Safety around in- and outlets

In order to meet EN294, an OK 200 outlet that is open must always be placed over 2,7m from the ground.

Outlets with a diameter less than 120mm shall be provided with a 850mm drop tube (at least). Outlets with a diameter more than 120mm can never be open, they shall always end up in a feedstation (or similar) or be placed higher than 2,7m.

Drop tubes shall always be mounted on the outlet with bolt coupling 5022050110(OK200). All connections that are under the safety distance shall be mounted with a bolt coupling.

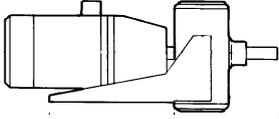
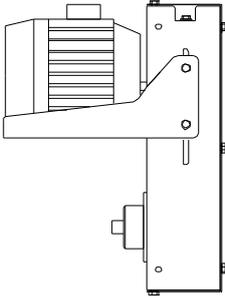
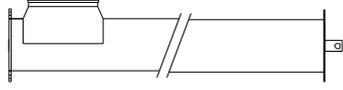
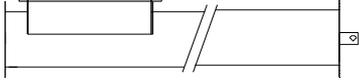
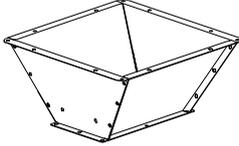
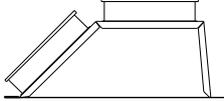
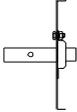
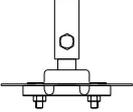
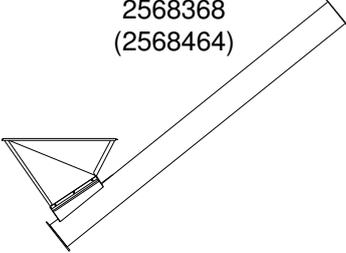
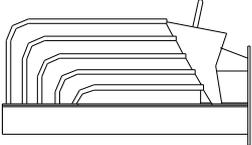
Inlet hoppers shall be provided with an intake guard. Homemade silos must be made so that rotating parts can not be reached during operation.

Layout guide

1. Driveunits / end bearings

2. Inlet ext. with accessories

3. Extensions

<p>2568110</p>  <p>256820</p> 	<p>2568343 2568344</p>  <p>2568393 2568394</p>  <p>2548437</p>  <p>(2548447)</p> 	<p>2568210 2568220 2568230</p> 
<p>2568471</p> 	<p>2568470</p>  <p>2568367 2568368 (2568464)</p> 	
	<p>2568350 2568351 (2568462)</p> 	

4. Suspension details

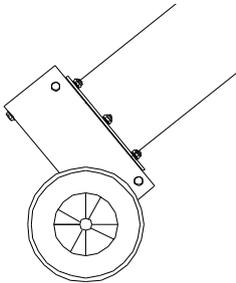
5. Outlet extensions

6. End bearings / drive units

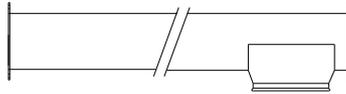
2548627



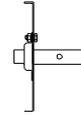
(2548452)



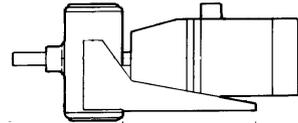
2568311
2568331



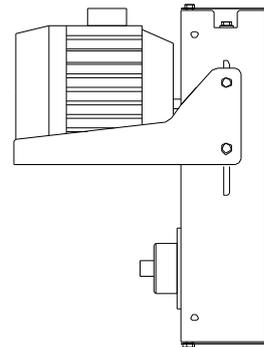
2568471



2568110



2568020



How to use the layout guide

The layout guide is made out of six columns, and usually one detail out of every column should be included in the plant. Article numbers that are shown in parenthesis are not necessary in every plant. Tubes, hoses, two-way outlets and OK160/OK200 accessories are not included in the layout guide. See page 3.

You start by deciding what kind of drive unit and motor should be used. See table on page 4. Note that motors not are included in the drive units. The motor is chosen from either the "Svea Allround" pricelist or the "Electrical equipment" pricelist. Then you decide if the auger should have a pulling or pushing drive.

Pulling drive - choose end bearing from column 1 and drive unit from column 6.

Pushing drive - choose drive unit from column 1 and end bearing from column 6.

Continue by choosing one inlet extension and inlet accessories from column 2, extensions from column 3 and suspension details from column 4. Finally decide wich outlet extension and end outlet to use from column 5.

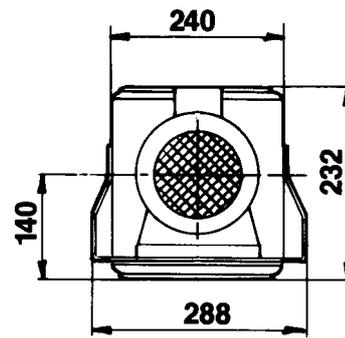
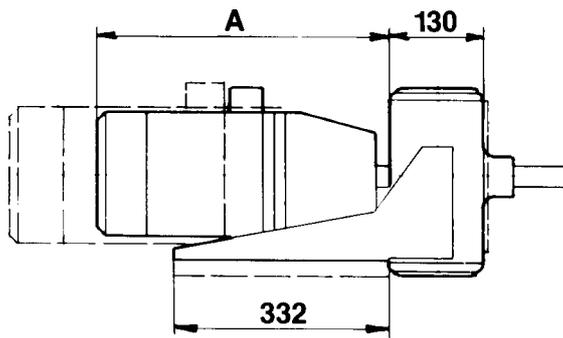
Recommendations

- Svea Allround is only designed to transport grain or animal feed (rolled corn, pellets or crushed feed). Use special extensions for vertical augers and chip augers.
- An auger must always have one and only one inlet extension and one and only one outlet extension. The inlets 2568350 and 2568351 have built-in inlet extensions.
- Always use an intake regulator and an end bearing when using an inlet extension with full pitch.
- Inlets shall have hopper with protection. Protection is included in the all hoppers.
- The auger system must be designed according to EN292-1, EN292-2, EN294 and EN60204-1. Safety switch and emergency stop must be included and set up as explained on page 10.

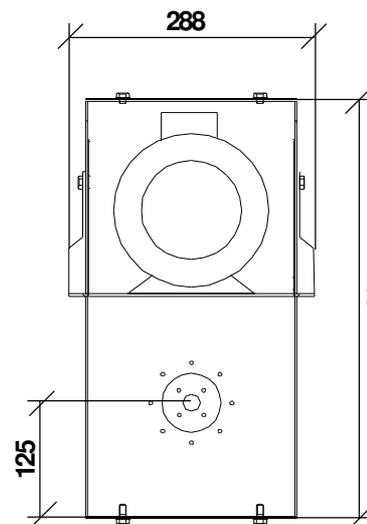
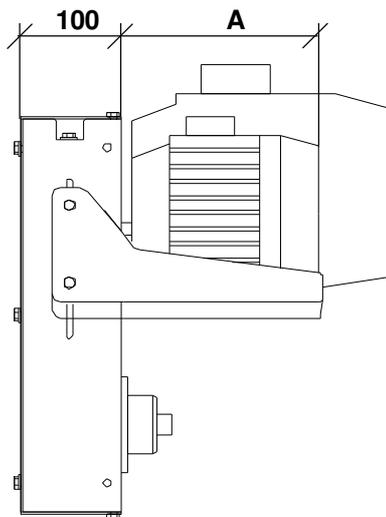
Dimensions

Measurements i mm, if not else specified.

Drive units, inlet protection



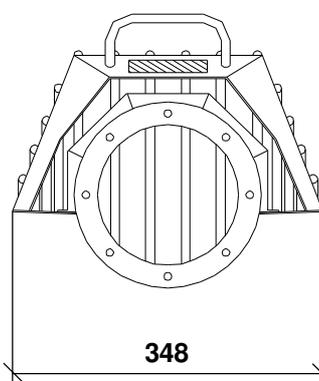
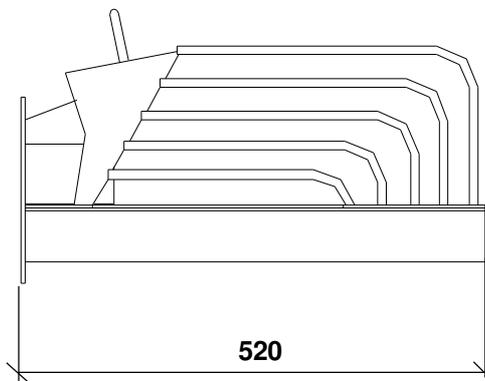
2568110



2568020

The table gives A-measure for different motor sizes.

Motor	1,1	1,5	2,2	3	4	5,5	7,5 kW
125 r/m	407	409	499	528	-	-	-
900 r/m	-	-	305	397	416	422	-
1400 r/m	-	-	280	306	340	397	422



2568350
2568351

0,5m auger included

Dimensions (cont'd)

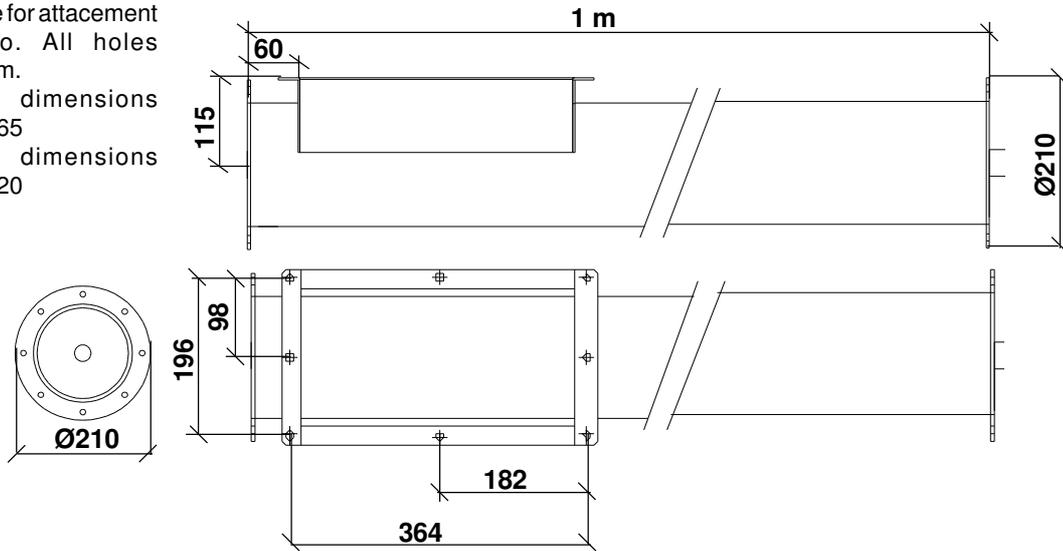
Extensions

256839 / 2568393

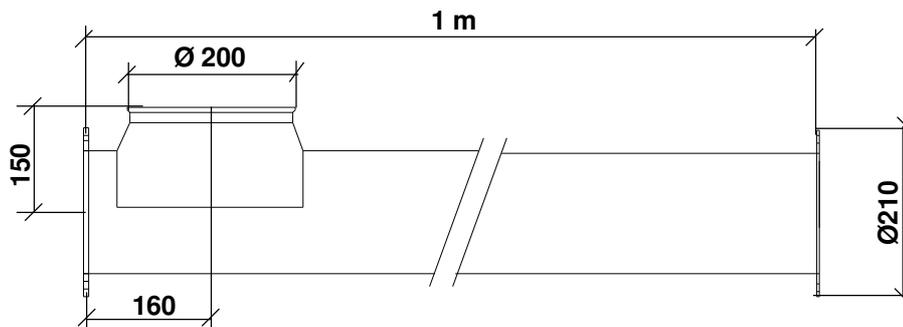
Flange for attachment to silo. All holes $\text{\O}10\text{mm}$.

Inner dimensions 334x165

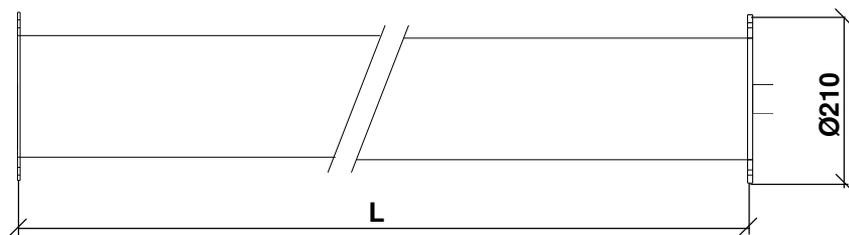
Outer dimensions 388x220



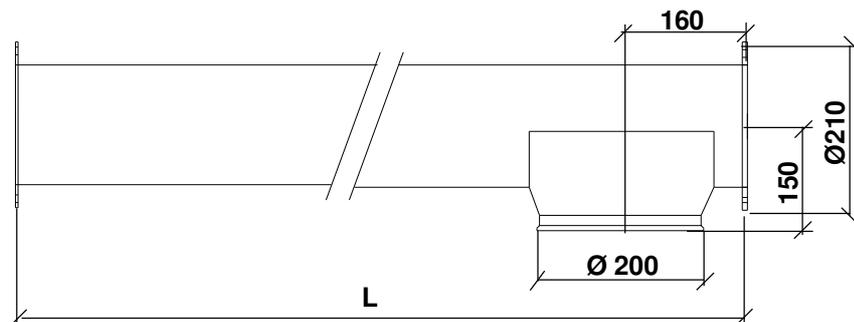
2568344 2568343



2568210 L=1000 2568220 L=2000 2568230 L=3000



2568311 L=1000 2568331 L=3000



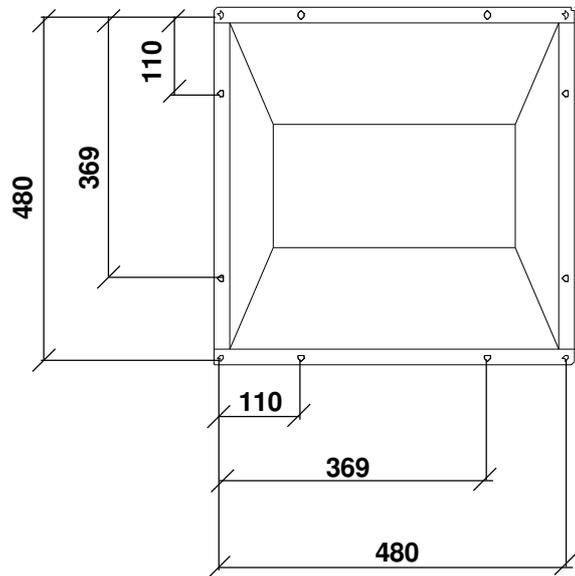
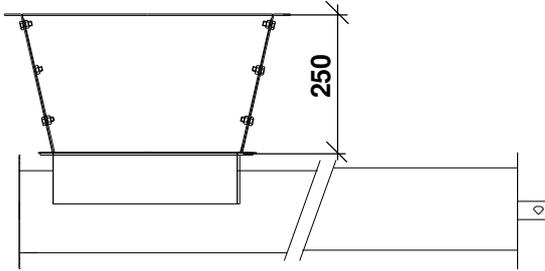
Dimensions (cont'd)

Hopper, floor controlled outlet, tube, end bearing

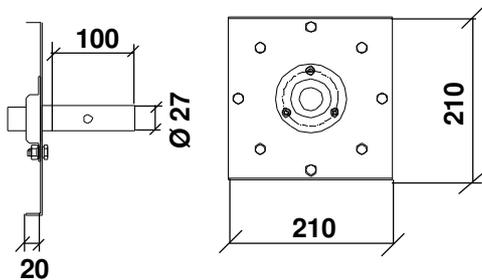
2548437

All holes $\text{\O}10\text{mm}$.

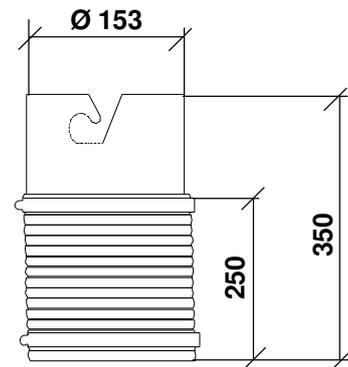
Outer dimensions 510x510



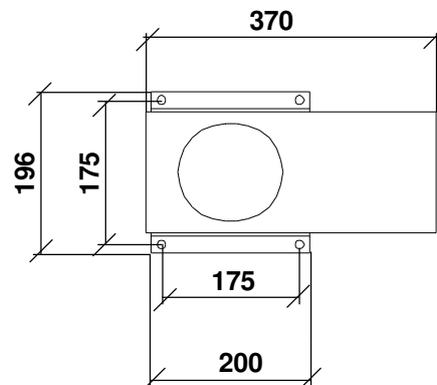
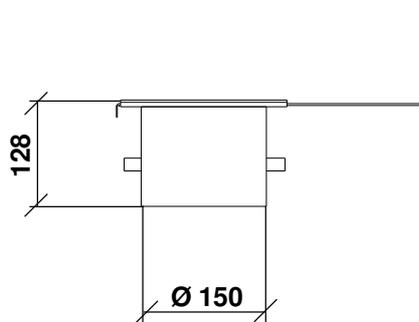
2568471



2548422

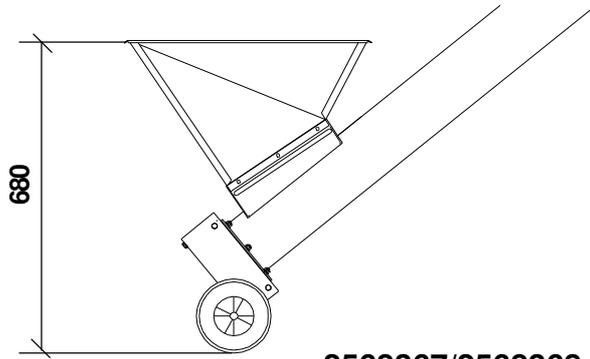


2548420

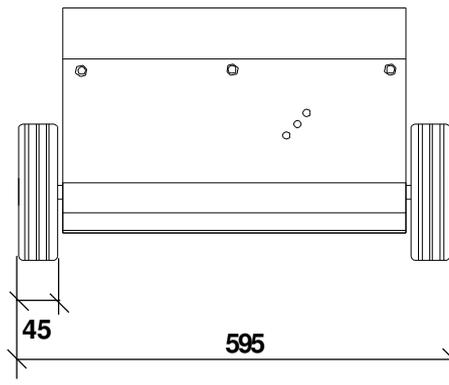
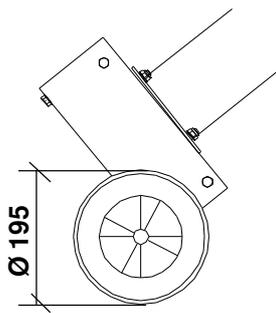
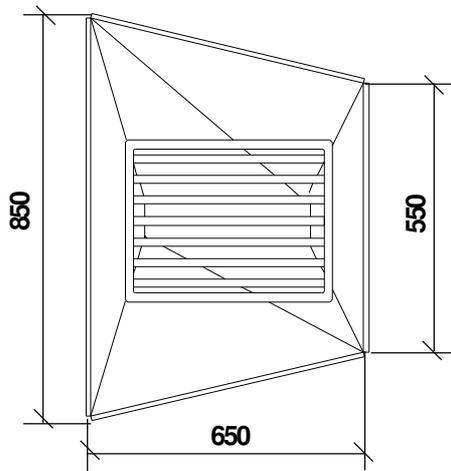


Dimensions (cont'd)

45° hopper, wheels, feeder for vertical auger



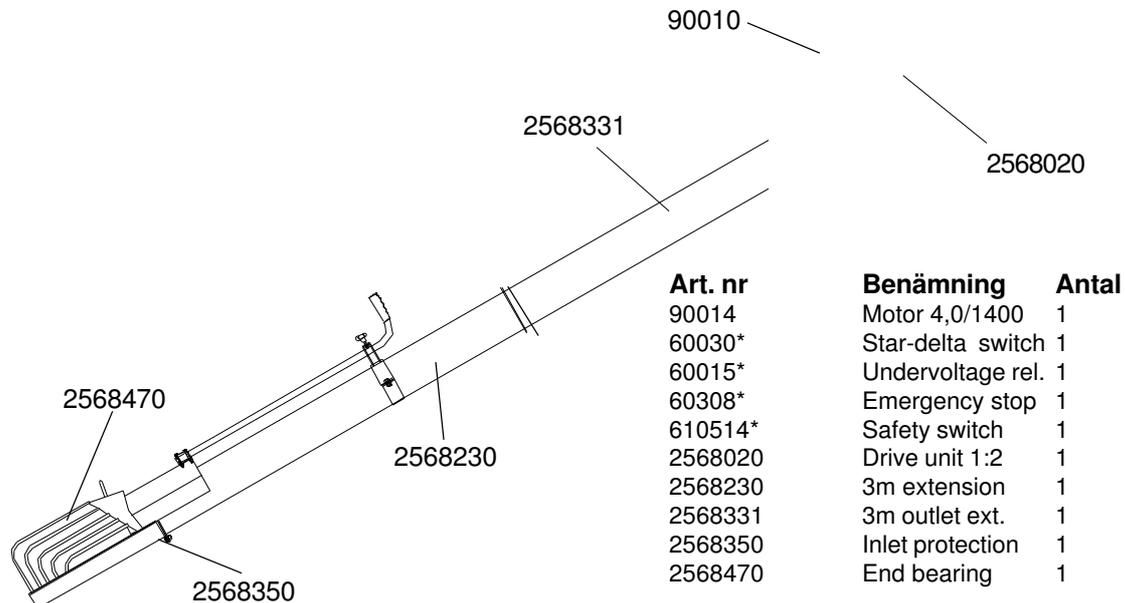
2568367/2568368 + 2568020 + 2548452



2548452

Examples of layout

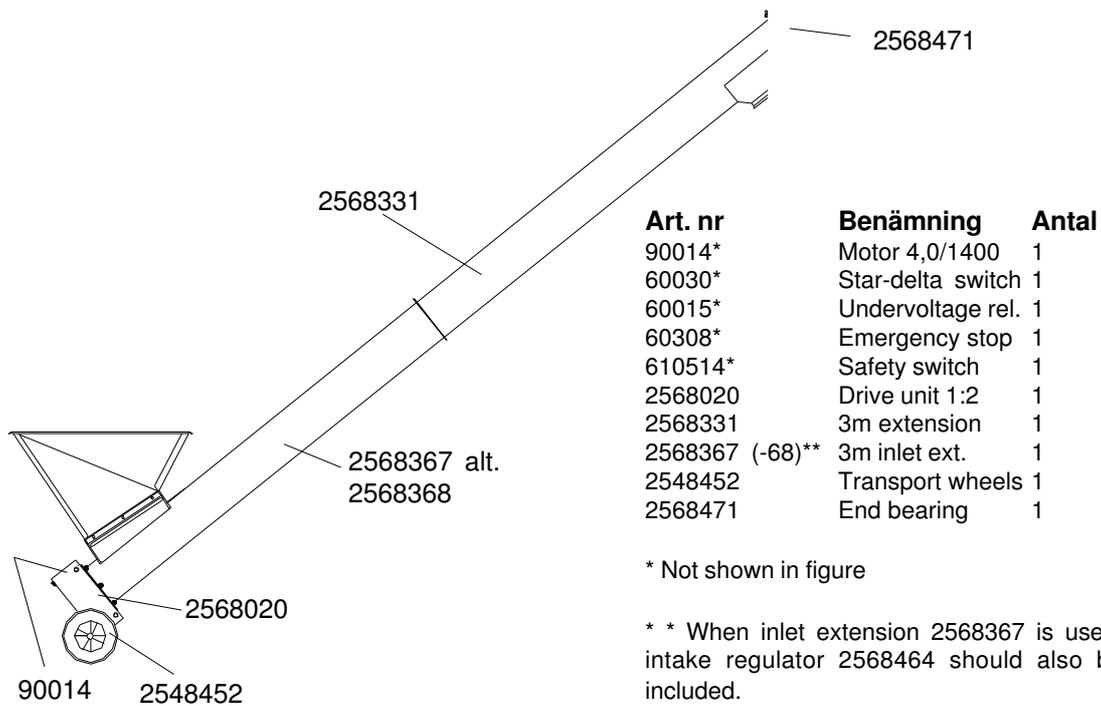
Example 1: Grain auger, length 6m, 700rpm auger speed, inlet with full pitch. Capacity approx. 45m³/h at 45° inclination.



In addition there will usually be suspension details and outlet accessories.

* Not shown in figure

Example 2: Moveable grain auger, length 6m, 1050rpm auger speed.



* Not shown in figure

** When inlet extension 2568367 is used, intake regulator 2568464 should also be included.