

SKALS

- we'll sort it out!

INSTRUCTION MANUAL

Box tipper Type KT160/ KT180



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1.0 To the users !

You have made a good choice by purchasing a static box rotator.
Due to its unique construction the machine requires minimum maintenance.

Store this manual carefully, so that it can always be consulted. In the unlikely event of difficulties or if you should still have any questions after reading this manual, it is best to consult your dealer. He will be happy to be at your service.

2.0 Aim of use

The static box rotator are solely suitable for backward rotating of boxes, providing the total weight of the box and its load does not exceed 1500 kg.

3.0 Guarantee and liability.

We guarantee the good quality of the articles supplied by us with respect to the material and/or construction errors. However, in all cases this guarantee is limited to the free replacement or repair of the defect article or component. We cannot be held responsible for any type of damage, resulting from an inferior delivery and/or articles supplied by us becoming defect within the term of guarantee. The term of guarantee is one year.

All persons who use this machine and/or work on it (adjustment, maintenance, etc.) must read this manual to prevent from dangerous situations and follow the instructions. Furthermore, the machine may only be used for the purposes mentioned in the manual. This also includes the following:

- 1) It is only allowed to work in accordance with the instructions and within the functional definitions (e.g. max. hydraulic operating pressure), as laid down in the assembly, operational, maintenance and repair instructions, including the applicable errata and Supplements. Work should be carried out thoroughly and with good equipment.
- 2) Electric/electronic devices including accessories (e.g. cables, etc.) must be treated in accordance with the general rules of use for non-waterproof portable electric and electronic devices. This means, amongst other things:
 - *Storing and keeping in a clean, dry environment and keeping it away from rodents, etc.
 - *Protect the equipment against hard, uncushioned shocks and against getting wet (rain).
- 3) Only components, additional components and lubricants which are original or of equivalent quality may be used and mounted in accordance with the instructions (e.g. the indicated tightening moments). A component (or lubricant) is considered to be of equivalent quality if it has been approved explicitly by SKALS or if it can be demonstrated that it possesses the required qualities for the function(s) in question.
- 4) The instructions applicable on the spot with respect to the prevention of accidents, safety, traffic and transport must be followed.
- 5) Only persons who know the machine and have been informed about possible dangers may work with and/or on the machine.
- 6) Changes to the machine that have not explicitly been approved by SKALS rule out all liability of SKALS concerning possible damage.

Not observing the aforementioned rules is considered to be gross non-phasant, as a result of which every liability of SKALS for all resultant consequences expires: in this case the risk lies entirely and exclusively with the user.

4.0 Installation instructions

(The part numbers below refer to the picture of the components)

1. Move the machine by first shoving the transportation profiles on the mainframe (nr. 1). The transportation profiles can be found on the mainframe. Place the forks of the forklift truck on the right width so that you can drive the forks in the transportation profiles. Drive carefully and take the width and height of the machine into account.
2. Shove, eventually with the forklift truck, the upper box support tube on the right box height namely 2 cm (+- 0.8 inches) higher than the total box height. Tighten the box support tube with the bolts (nr. 6) and secure them with the check nut.
3. The opening trough, which the contents of the box will stream out, is adjustable in two ways. First is it possible to adjust the angle between the box and the Slide valve (nr. 10) with the help of Tapbolt (nr. 13). The second possibility to adjust the opening is by shoving out the Slide valve (nr. 10) the Slide valve can be secured by Tapbolt (nr. 13).

Connect the hydraulic hoses only to a proper hydraulic installation with a maximum output of 10 litres/min. and a maximum pressure of 15 Mpa (150 bar).

4. Rotate once first to see if the static box rotator can rotate unobstructed.

Use only reliable boxes for rotating activities. Load the box in such a way that the load can't fall off unexpectedly or will be damaged by the upper clamp.

5.0 Operating instructions and safety measures

Take care that everybody stays at all times away from the operating area of the static box rotator. Never stand under a box and stay out of the rotating range of the box rotator; always bear in mind that products may fall out of the box. Take care that there is always a sufficient view of the activities from the operating place.

Keep a safe distance from the machine.

Take Care that the hydraulic hoses and, if relevant, electricity cables cannot become entangled and the static box rotator can rotate free.

ATTENTION:

Adjusting the maximum pressure provided by the aggregate is done on own risk! Besides expires the guarantee and SKALS cannot be held responsible for any type of damage.

The oil-level has to be checked regularly, that oil temperature may not exceed the 80.C.

6.0 Maintenance and failures

Prevent unintentional rotating and/or lifting of the box rotator during maintenance work. Additional measures can be taken by disconnecting the hydraulic hoses.

Maintenance:

After the first 8 operational hours:

- Check connections and swivels of the hydraulic hoses.
- Check bolts.
-

After every 10 operational hours:

- Lubricate the points of sliding via the lubricating nipples (for bolt nr. 7).

After every 40 operational hours:

- Regularly check the hydraulic part with respect to leakage. NEVER try to search a leak with your hand or even stop it! A fluid under high pressure easily squirts through the skin and clothes and causes serious injuries.

If the hydraulic hoses have been damaged, replace these hoses immediately in order to prevent hose rupture and resultant accidents.

- Regularly check the oil level of the hydraulics.

Failures:

If there are other problems, it is best to contact with your dealer. He will be pleased to be at your service.

7.0 Cleaning

With reference to the Danish Plant Directorate's Order No. 965 of 13 December 1993 (p. 6).

- 2.3.3 Seed potato growers with contained propagation must clean and disinfect all sorting and ancillary equipment after each new variety. Disinfecting should be carried out using a product approved by The Danish Institute of Plant and Soil Science.
- 2.3.4 Companies authorised to sort potatoes and who also have the authorisation to propagate potatoes, must clean and disinfect sorting machinery etc. which is under the control of The Danish Plant Directorate before the sorting of own propagation is commenced. Disinfecting should be carried out using a product approved by The Danish Institute of Plant and Soil Science.
- 2.3.5 Premises and machinery etc. must be cleaned and disinfected each year before 30 June. Disinfecting must be carried out using a product approved by The Danish Institute of Plant and Soil Science.

In other countries, customers must conform to relevant, local food and hygiene regulations.

When cleaning with high pressure equipment, the following parts must be securely covered: Motor, and all bearings.

In order to maintain effective production and keep maintenance costs at a minimum, regular lubrication, maintenance and cleaning are very important.

8.0 Packing and transport information

Packing:

All machine types are shrink wrapped when despatched from the factory.

Number of units:

The machine is normally packed complete as one unit.

9.0 Technical data

Type: KT60

Maximum capacity:	1500 kg (box + contents)
Rotating angle:	140 gr.
Operating pressure hydraulics:	max. 15 Mpa (150bar)
Weight:	350 kg

Hydraulic aggregate:

Volume:	10 l.
Type hydraulic oil:	AF 46 of HLP ISO- VG 32 or equivalent quality
Operating pressure:	max. 15 Mpa (150 bar)

10.0 Spare parts

When ordering spares, state machine type, serial no. And, if possible, position no.

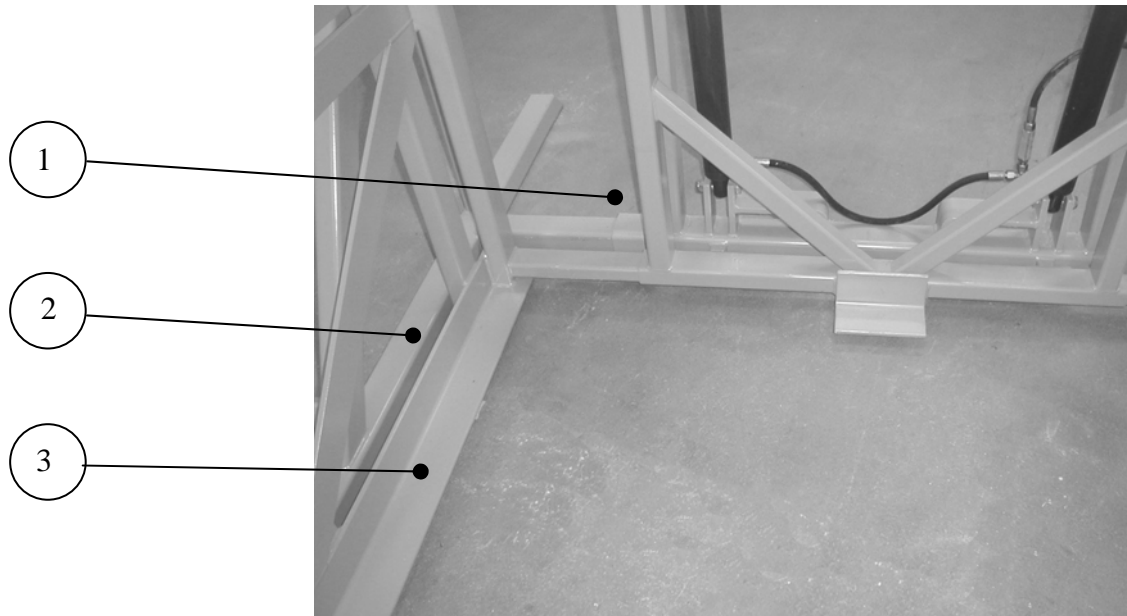


Fig. 1

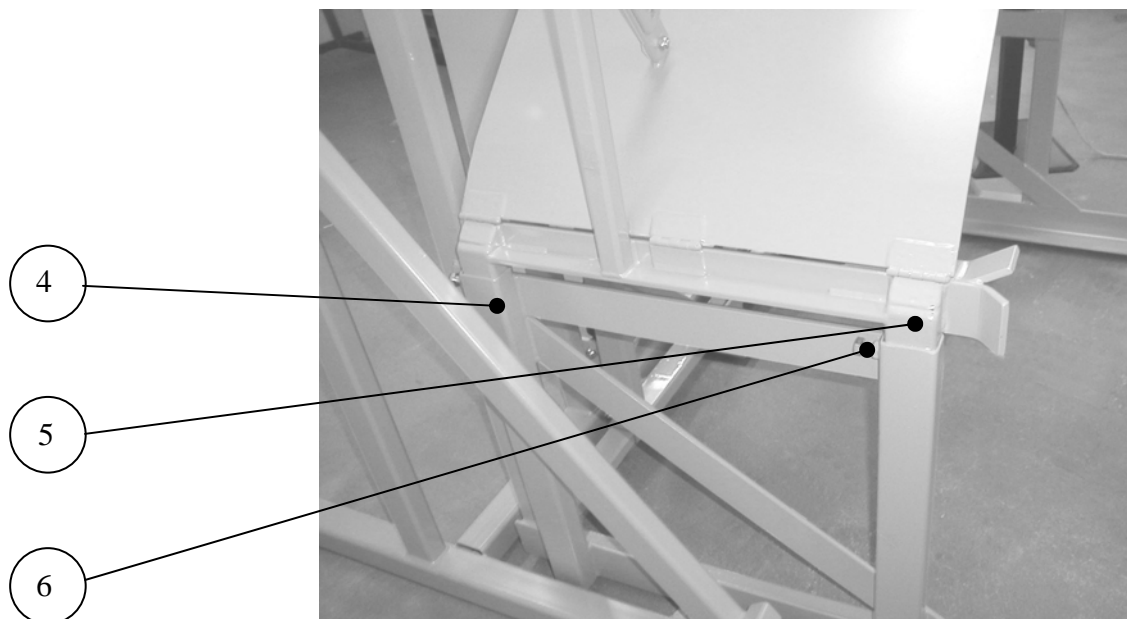


Fig. 2

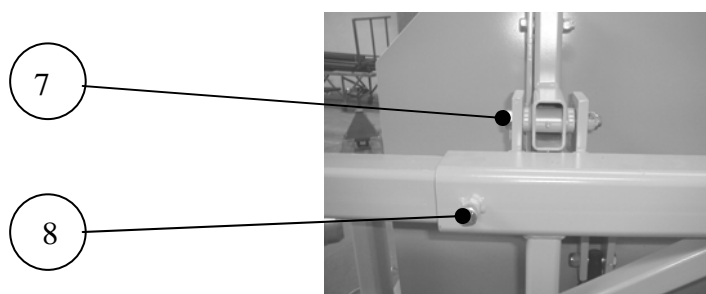


Fig. 3

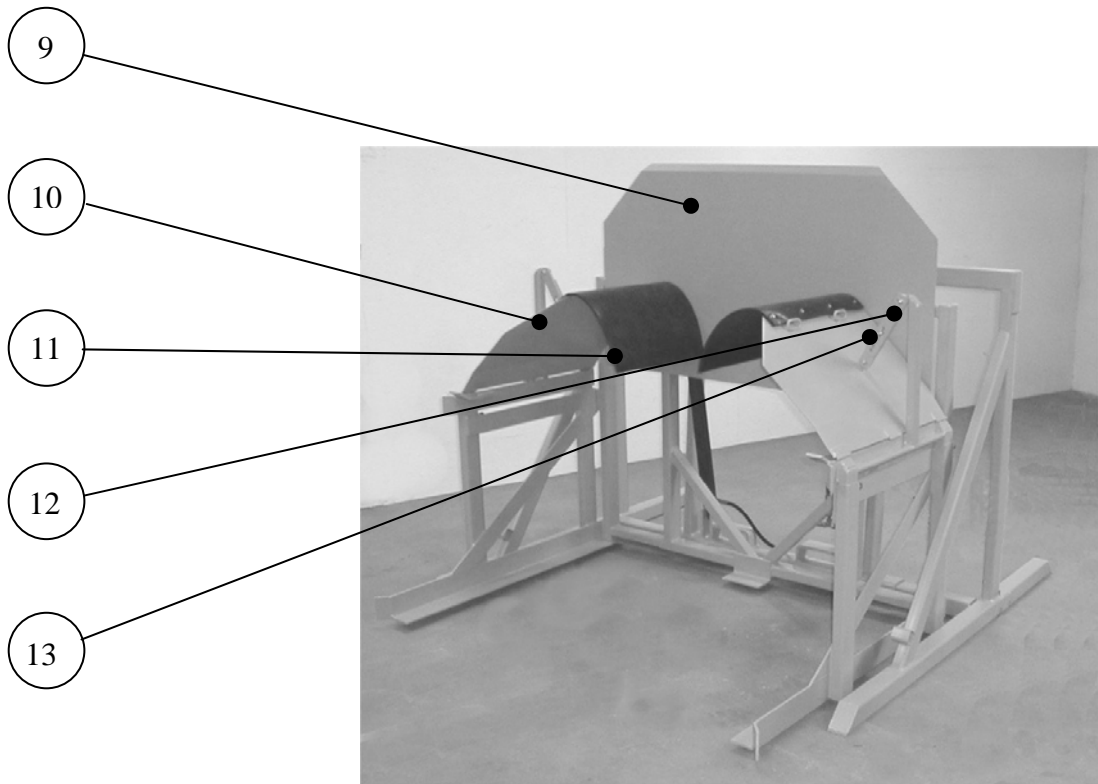


Fig. 4

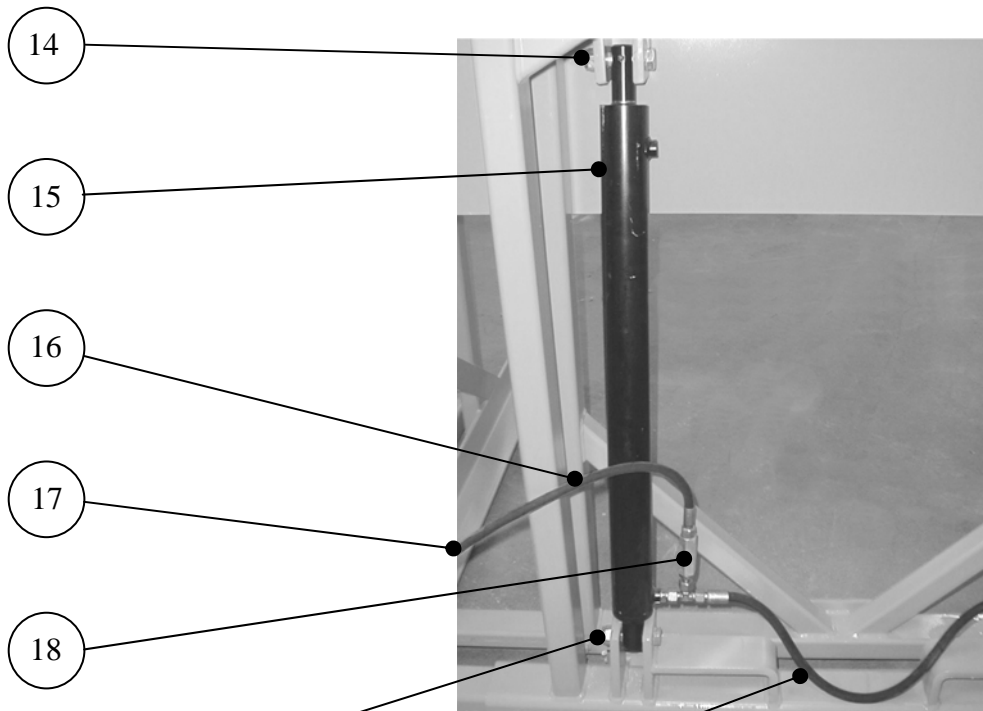


Fig. 5

Page	Fig. nr.	Pos. Nr.	Betegnelsen
6	1	1	Main frame
6	1	2	Foot
6	1	3	Rotation frame
6	2	4	Lower box support tube
6	2	5	Upper box support tube
6	2	6	Bolt
6	3	7	Bolt
6	3	8	Bolt
7	4	9	Hind stopping plate
7	4	10	Slide-valve
7	4	11	Rubber flap
7	4	12	Shore
7	4	13	Bolt
7	5	14	Bolt
7	5	15	Tipping Cylinder DW 60-35-700
7	5	16	Hydraulic hose RS 7000
7	5	17	Easy quick hydraulic plug
7	5	18	Easy quick hydraulic plug
7	5	19	Bolt
7	5	20	Hydraulic hose RS 700

11.0 Declaration of conformity with EU.



Manufacturer	
Firm:	A/S Skals Maskinfabrik
Address:	Hovedgaden 56 8832 Skals, Denmark
Telephone:	87 25 62 00

declares herewith, that

Machine:	Box Rotator Type KT60-160/180
Brand:	
Type, serial no., year:	

Is manufactured in accordance with the decisions of the Councils Directives:

- 1 Machinery Safety – Directive 98/37/EC
- 2 Low Voltage Equipment Directive (LVD) 2006/95/EEC
- 3 Electromagnetic Compatibility (EMC) Directive 89/336/EEC and 93/68/EEC as amended.

Title:	Productions Manager
Name:	Søren Lund Madsen
Firm:	A/S Skals Maskinfabrik

Date: _____

Signed:  _____