Meijer Holland
bale handling systems

Jumbo KK1 and KK2

Manual

Bale grab

Meijer Holland | bale handling systems | Duinkerkenstraat 11 | NL-9723 BN Groningen | The Netherlands
T +31 (0)50 3126448 | F +31 (0)50 3138018 | info@meijerholland.com | www.meijerholland.com

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Content

1. Introduction

The bale grab Jumbo KK of Meijer Holland is designed to be attached to a telescopic handler, front loader, wheel loader or forklift (hereinafter referred to as ‘vehicle’) in order to grab and transport wrapped bales over a short distance. The bale grab is equipped with a hydraulic circuit that is to be connected to the hydraulic system of the vehicle to which the bale grab is mounted.

It is important to read the manual carefully before using the machine. Should this not be the case, there can be the risk of serious injury or death for the user and damages to the environment. Moreover, there is the risk of damage to the materials or to the machine. Therefore it is essential that you follow the instructions of this manual.

2. Technical specifications

Features	Jumbo KK1	Jumbo KK
Height	155 cm	175 cm
Width	120 cm	155 cm
Weight	255 kg	480 kg
Arm length	110 cm	125 cm
Clamping range	110–190 cm	70-–210 cm
Volume hydraulic circuit	2 litres	4 litres
Max. load	▪ Weight max. 500 kg ▪ One big rectangular, wrapped bale *or* ▪ One firm round bale	▪ Weight max. 1000 kg in total ▪ Two big rectangular, wrapped bales *or* ▪ Two firm round bales
Max. pressure hydraulic circuit	180 bar	250 bar

⚠ When using a vehicle with a pressure higher than 180 (KK1) or 250 bar (KK2), it is strongly recommended to use a pressure relief valve.
This is available at Meijer Holland.

CE-marking
This machine is certified with the CE-marking. This means that the machine meets the requirements of the applicable EC directives on safety and health. These directives are specified in the attached declaration of conformity.

⚠
- The non-observance of the rules and instructions stated in this manual is to be considered as serious negligence which leads to the extinguishment of any liability on the part of Meijer Holland concerning the resulting consequences. In this case, the risk lies exclusively with the user.
- Meijer Holland is constantly busy with the improvement of its products. Therefore it also reserves the right to make any changes that are considered necessary. There is no obligation to apply these changes to earlier delivered machines.

3. Safety precautions

The following precautions are important to prevent injuries and damages.

1. Read the manual before use.
2. Only experts should (dis)mount the bale grab.
3. Only experts should operate the bale grab.
4. Use the bale grab only for bales.
5. Check whether the hydraulic system is working well after having mounted the bale grab.
6. Follow the instructions for use (chapter 6).
7. The working area of the machine is 5 metres:
   - no persons are allowed within that range!
8. Operate the bale grab exclusively from the cabin of the vehicle.
9. Mind the rules for max. load (chapter 2).
10. Be aware of oil leakage:
    - check the hydraulic hoses and cylinders at least once per day.
11. Replace damaged or worn wires and cylinders immediately.
12. Follow the instructions for maintenance (chapter 7).
13. When driving longer distances or driving on a public road:
    - no bales are permitted in the bale grab!
14. Drive straight backwards after having moved the bales.
    - make sure that there are no people behind the vehicle.

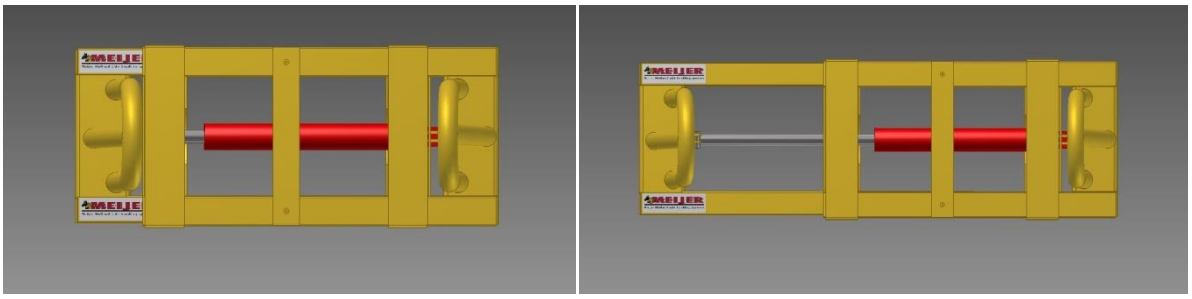
Build the stack of straw and hay bales in a stable way so that it cannot fall over. The driver must be aware of the rules that apply to the lifting and hoisting of heavy loads.

4. The functioning of the bale grab

Mount the bale grab to a vehicle with a hydraulic system. The bale grab only works when it is attached correctly to the hydraulic system of the vehicle.

One movement is possible with the bale grab:

- The clamping of wrapped bales takes place with clamping arms that are powered by one (KK1) or two (KK2) hydraulic cylinders. This movement can be seen in the figure below.



Movement clamping arm Jumbo KK**1**

Movement clamping arm Jumbo KK**2**

5. Installation, starting up, adjustment

> ⚠ Check if the bale grab is undamaged and in good condition on delivery. Please contact Meijer Holland if you notice any damages. Only use the bale grab if it is found to be in good order and after this manual has been read.

5.1 After delivery

- Place the bale grab on a solid and even ground.

5.2 Before moving the bales

1. Drive the vehicle in such a way to the bale grab that the mounting surface falls against the mounting point of the bale grab.
2. Attach the bale grab to the vehicle.
3. Check the hydraulic couplings for dirt. Only attach clean couplings to prevent dirt from entering the system.
4. Connect the two correct hydraulic hoses of the vehicle to the two quick release couplings above the mounting point of the bale grab. The upper hose is for clamping the bales and the lower one is for releasing them.
5. Check for leakage.
6. Check the correct control of the cylinder from the hydraulic system.
7. Put the hydraulic system under pressure and test the bale grab by opening and closing the hooks.

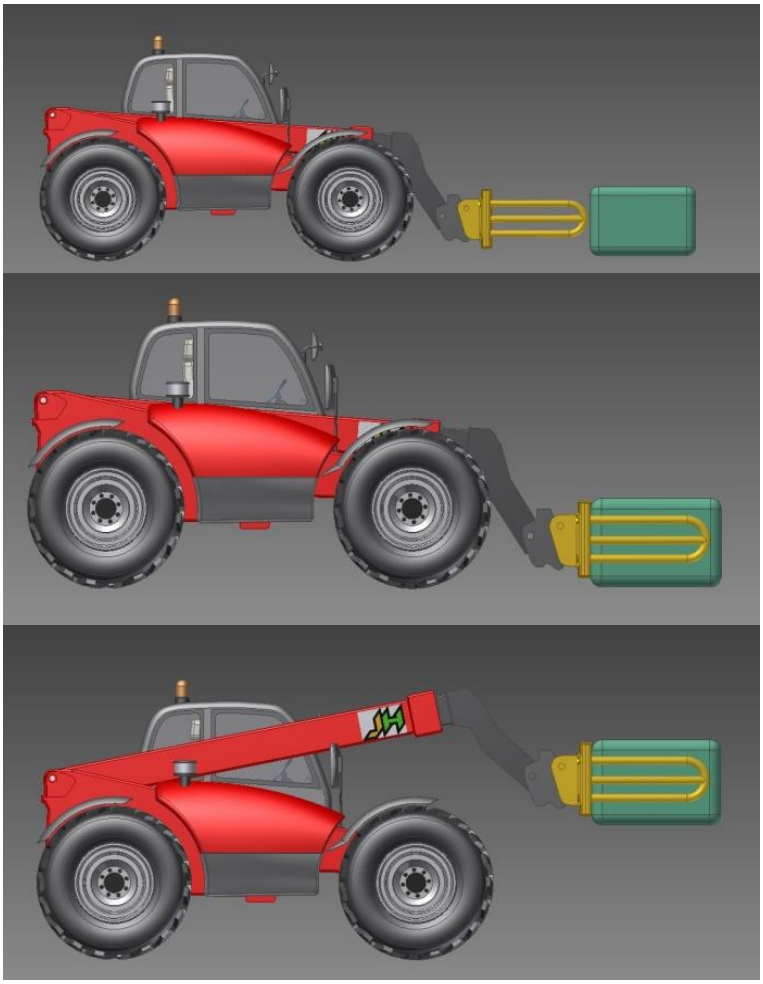
5.3 After moving the bales

1. Place the bale grab with the vehicle on a solid and even ground.
2. Check whether the bale grab stands steady.
3. Disconnect the hydraulic hoses and check them for leakage.
4. Dismount the junction of the vehicle from the bale grab and drive away in reverse.

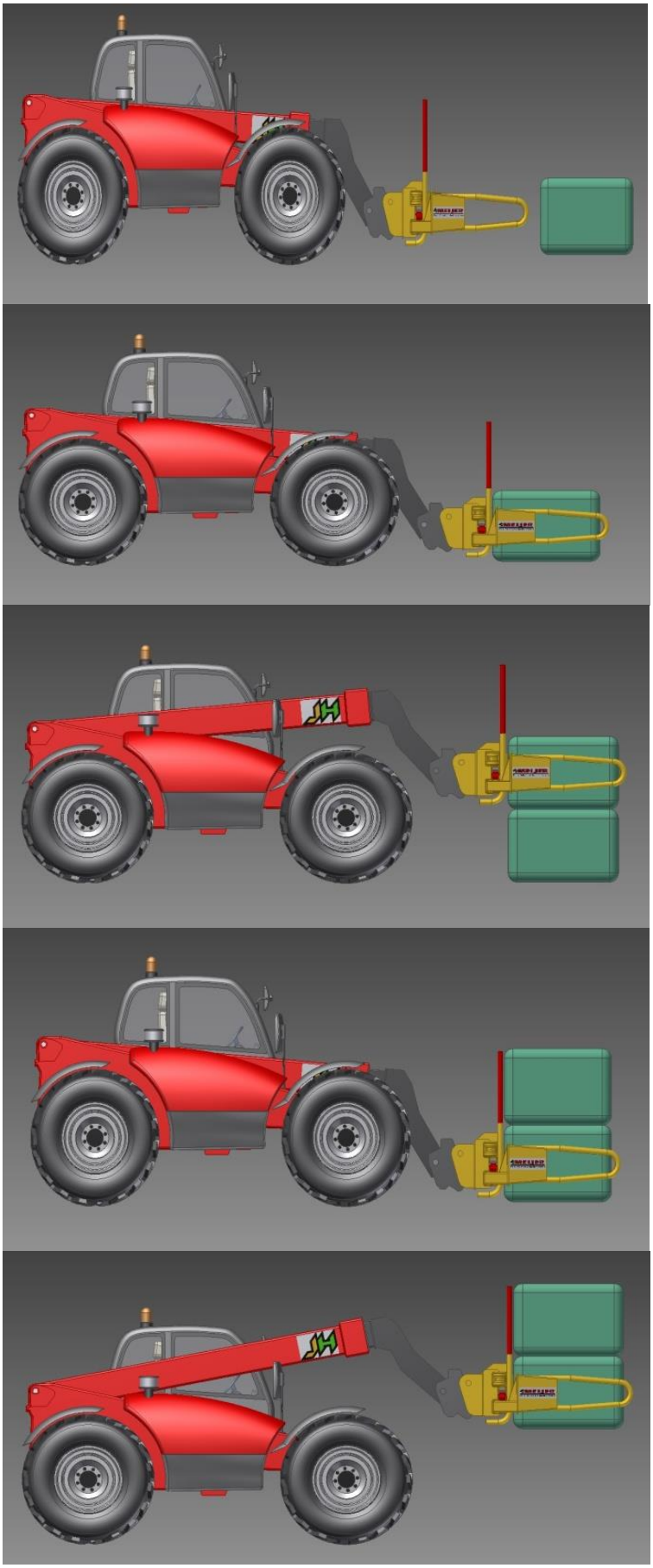
> ⚠ Store the grab in a dry and clean environment until the next use.

6. Operation and use

1. Drive the vehicle to the bale and open the clamp arms by operating the hydraulic system.
2. Keep driving until the bale is located between the two clamp arms.
3. When the frame pushes against the bale, the hydraulic can be operated.
4. Once the bale is clamped, put the hydraulic system back into ‘neutral’.
5. Lift the bale and drive the vehicle to the place of destination or to the next bale.
6. For the second bale: Drive again in such a way to the bale that the clamped bale hangs above the bale that still needs to be grabbed.
7. Let the bale grab sink in such a way that the bales are stacked on top of each other.
8. Operate the hydraulic system and let the clamp arm sink, so that the lower bale is located right between the clamp arms and so that the upper bale is supported by the two red support bars.
9. The clamp arms can now be closed again. Lift both bales and drive to the place of destination.
10. Let the bale (bales) sink to the loading floor and put the hydraulic system in ‘return’. By doing so, the clamping arms open and the bales are released.
11. Drive the vehicle away from the bales in reverse.
12. The bale grab is ready to grab another series of bales.



Use Jumbo KK**1**



Use Jumbo KK**2**

7. Maintenance

Regular maintenance extends the life span. The bale grab needs relatively few maintenance.

Maintenance schedule

Before every use	Check the bale grab for damages and wear. Replace damaged or worn parts immediately.
	Check the hydraulic couplings, hoses and cylinders for leakage, wear and damages. Let problems be fixed immediately by a competent mechanic.
At least once per week	Clean the bale grab of caked dirt and dust. When using a high pressure washer, avoid the electrical parts.
	Put grease on the grease nipples. At extensive use: after every 8 working hours add a bit of grease (0,86 gram per grease nipple).
	Check the clamp arms for damages to prevent damages of the wrapped bales.

8. Problems and solutions

The bale grab has relatively few moveable parts and damages are unlikely to occur when used properly. Repair or replace damaged and worn parts immediately. Spare parts are available at Meijer Holland.

- Turn off the engine of the vehicle while you are fixing one of the below-mentioned problems.
- Turn off the power supply during welding.
- Hydraulic fluid is a poisonous liquid that is harmful to the environment. Never try to shut a leak with your hand. Fluid under high pressure easily penetrates through skin and clothing and can cause serious injuries.

Problem	Possible cause	Solution
The clamp arm is not moving.	The hydraulic circuit of the bale grab is not attached to the hydraulic system of the vehicle.	Attach the two hoses.
	The hydraulic circuit of the bale grab is not attached correctly.	Exchange the wrongly attached hydraulic hoses.
	Malfunction in the hydraulic system of the vehicle.	Consult the manual of the vehicle.
	The clamp arm is blocked.	Look for the blockade and remove it.

9. Environment and disposal

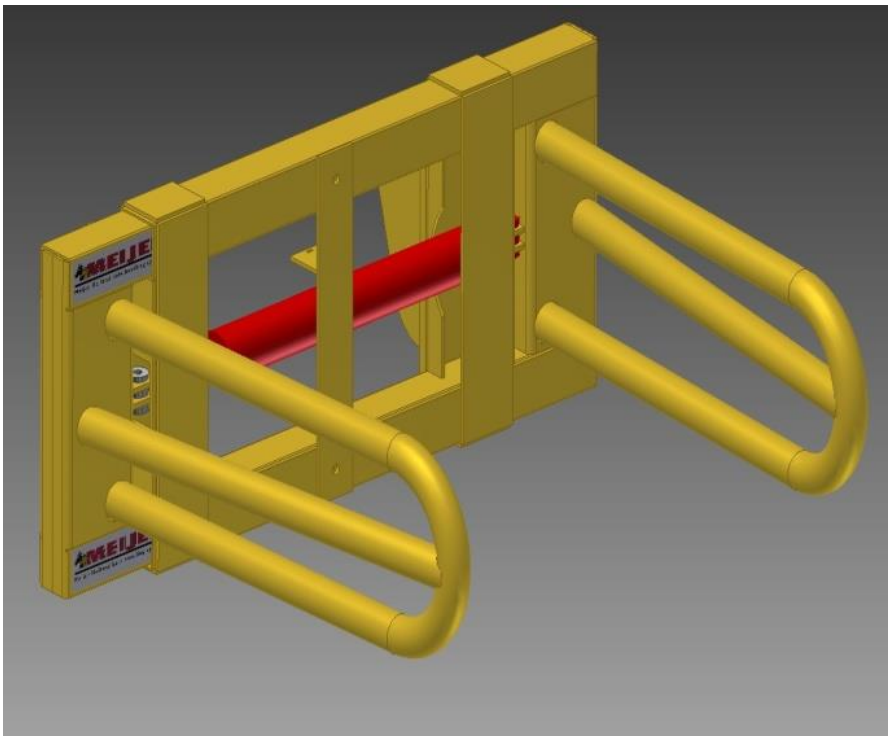
The bale grab has a hydraulic circuit that contains hydraulic fluid, a poisonous liquid that is harmful to the environment. Regularly check the bale grab for leakage and replace damaged or worn parts immediately.

9.1 Disposal of the bale grab

- Drain the hydraulic system and let the fluid be disposed be an authorised company.
- The rest of the bale grab is made of coated steel and can be disposed of as crap.

10. Assembly drawings

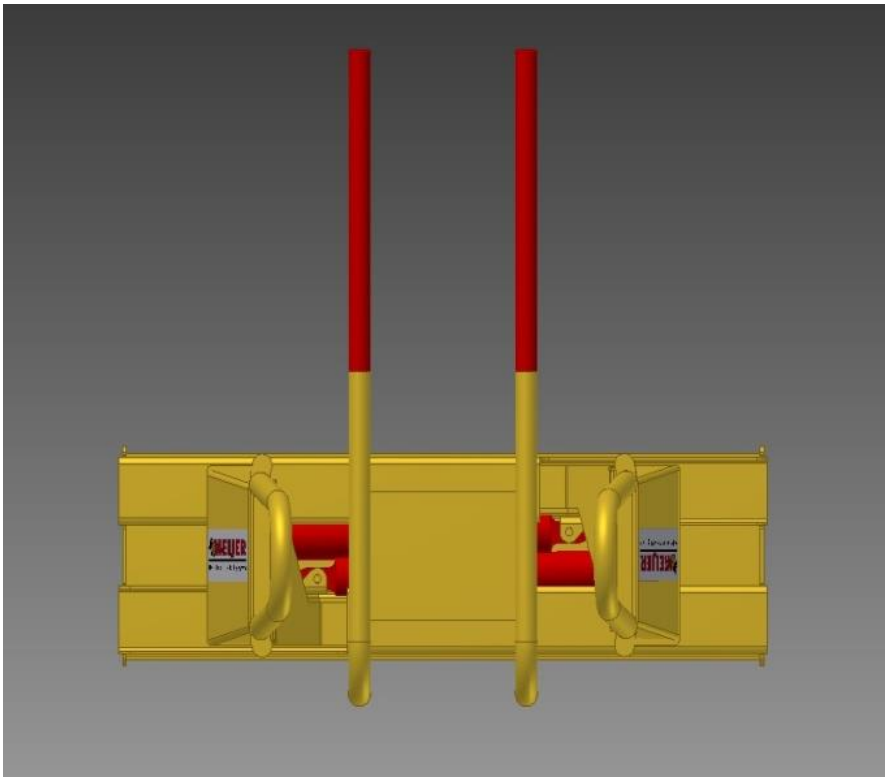
Jumbo KK1



Isometric view

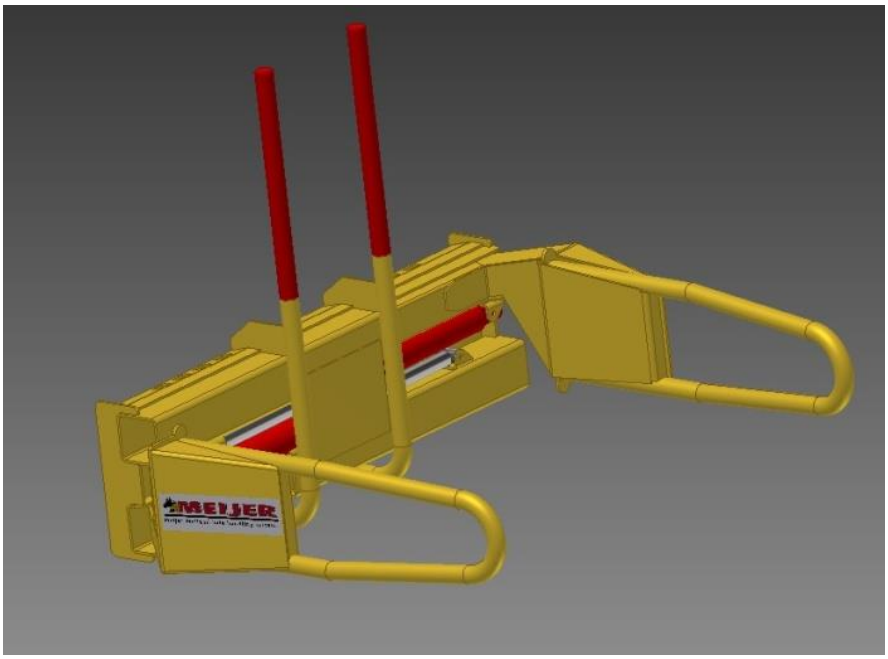
Top view

Jumbo KK2



Front view KK2

Top view KK2



Isometric view KK2

Meijer Holland
bale handling systems

CE-Declaration of conformity

We, Meijer Holland
Bale handling systems
Duinkerkenstraat 11
NL-9723 BN GRONINGEN
The Netherlands
Tel: +31 (0)50 - 312 64 48
Fax: +31 (0)50 - 313 80 18

declare under our sole responsibility that:

1. **we are the manufacturer of:**
   MH Jumbo KK1 (model MHKK01)
   MH Jumbo KK2 removable brackets (model MHKK02DEM)
   MH Jumbo KK2 euro brackets (model MHKK02EURO)

2. **the machine complies with the following applicable directives:**
   Machinery directive 2006/42/EG

3. **The machine is designed and constructed according to European standards, including:**

- EN 349:1993+A1:2008
- EN-ISO 4413:2010
- EN-ISO 12100:2010

The electrics and the control section are the responsibility of the customer.

Groningen, 6 July 2016

J.F. Lommerts, *director*