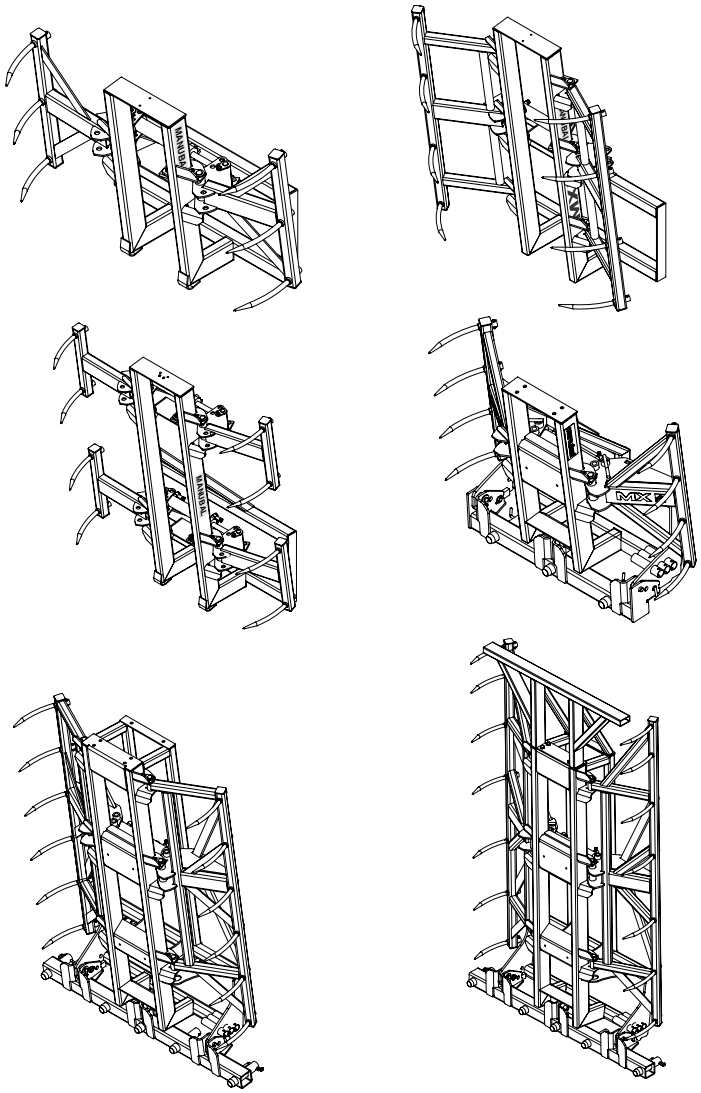


MANUBAL

V40
V500
W500
V400HD
V5000HD
V7000HD

User Manual

Read carefully before operating the Manubal

EN 364188 AL - 0925
Translation of the original manual

Dear user,

We thank you for placing your trust in our product and hope you will find your MX MANUBAL bale grab satisfactory in every way.

Taking a few minutes to read this manual will enable you to use the capabilities of your MX MANUBAL to the full, to prolong its service life and to ensure safe operation.

The MANUBAL user manual in your hands is an important document; please retain it in order to be able to refer to it if required. Make it available to any other users and hand it over it to any new owner in the event of your MX MANUBAL being sold on.

The illustrations and technical data appearing in this document may not match your MX MANUBAL model exactly, but the conditions of use will nevertheless remain the same.

TABLE OF CONTENTS

1. SAFETY INSTRUCTIONS

The tractor/loader or telescopic handler/MANUBAL combination must only be operated by trained and experienced personnel.

— **To ensure the safety of yourself and others, you must comply fully with the MANUBAL hitching and unhitching procedure (chapter 5 of this manual).**

— Only control the MANUBAL bale grab from the driver's seat. Maintain control of the controls until all movements have finished.

— Do not leave the driver's seat without stopping all control movements.

— All persons must be kept away from the area in which the loader/telescopic handler - MANUBAL combination is being operated.

— **Never pass under a raised bale.**Never use the MANUBAL for pushing bales.

— **Using the MANUBAL to lift or transport people is prohibited.** Never stand or pass under the load.

— Before any operation, users must ensure that the MANUBAL is in proper working order and can be used in complete safety. Check and ensure the stability of the tractor-loader-MANUBAL combination, fitting a counterweight to the rear of the tractor as required. This should ensure that 20% of gross weight remains on the rear axle of the tractor for optimum safety while travelling and working.

— When travelling on the road it is imperative that the regulations governing use on the public highway be observed (size, implement markings, etc.). Protruding items such as tine ends must be protected or stowed (grab closed, lower tine kit retracted).

— Take great care when operating at height in order to avoid catching any items (electric power or telephone lines, guttering, roof trusses, etc.).

— When stopping for any period of time the engine of the tractor or telescopic handler must be shut down and the MANUBAL lowered.

— When not in use, protruding items such as tine ends must be protected or stowed (grab closed, lower tine kit retracted).

— Check periodically to ensure that safety clips and bolts are in place. Do not replace them with any other items such as nails, wire, etc.

— Any adjustment to the MANUBAL (ram position, tines in fixed or floating position, etc.) must be made after lowering the MANUBAL to the ground and shutting down the tractor or telescopic handler engine.

— Any fault tracing (diagnostic) work and/or removal of parts may only be undertaken by a skilled technician, who will start by ensuring that the work can be carried out in complete safety for both him/herself and his/her surroundings.

Caution

— Check the length of hoses and their routing in all configurations (fully crowded, fully dumped, etc.) before first use.

— The MANUBAL is designed to operate at a maximum pressure of 210 bar. If the pressure is higher, the MANUBAL must be fitted with a pressure limiter.

— Any MANUBAL set-up which contravenes the recommendations in the MX price list in force on the date of purchase will void the MX warranty on the whole provision.

— Any modification to any part of the MX provision (rams, grab, tines, crank, etc.) or use of components installed on the MANUBAL which have not originated from MX will void the MX warranty on the whole provision.

— Use only genuine MX spare parts. Do not modify your MANUBAL yourself, or have it modified by anyone else, without obtaining prior written authorisation from MX. Failure to comply with these instructions may make your MANUBAL dangerous. In the event of damage or injury, MX shall not be held responsible in any way.

— Failure to observe the standards and instructions for use and maintenance of the MANUBAL, as set out in the user manual, will result in the immediate cancellation of the warranty.

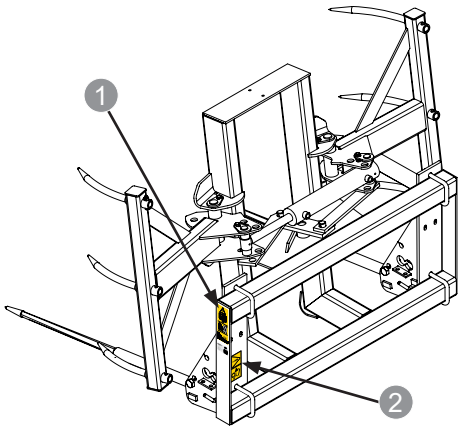
THE INSTALLER SHALL BE FULLY LIABLE FOR ANY FITTING ON A LOADER OTHER THAN MX OR A TELESCOPIC HANDLER WHICH HAS NOT BEEN RECOMMENDED BY MX.

2. SAFETY STICKERS

Ensure the labels are clean and legible; replace them if damaged.

1. Location: MANUBAL frame carrier

— Before using or working on the loader, familiarise yourself with the safety instructions in the user manual.



2. Location: Lower tine kit carrier (optional) or on V400HD, V5000HD, V7000HD frame.

— Before using or working on the loader, familiarise yourself with the safety instructions in the user manual.

MX implements are designed to offer the operator of the telescopic handler to which they are fitted optimum angles for crowding at ground level and dumping.
Before handing over to the operator, the installer must check that there is no possibility of interference occurring between the implement which has been fitted and other components of the machine (tyres, mudguards, etc.), as a result of the maximum travel of the implement installed, when the machine arm positions the implement closest to the telescopic handler.
In the event of the aggregation of positional conditions of the implement and the arm leading to interference, the installer must notify the operator and provide him/her with instructions on how to prevent such interference. **It is generally necessary to work with the boom extended by at least 0.5 m.**

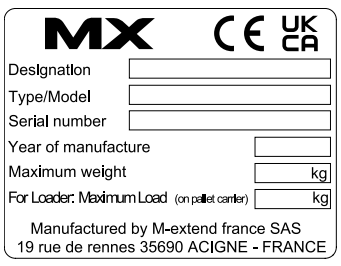
MX will not be held liable for any damage or accidents resulting from such interference.

3. IDENTIFICATION PLATE

Identification details are to be passed on to your dealer with any request for spare parts or service work. Its location is depicted below.

3. Location: MANUBAL frame carrier

— MANUBAL identification data plate


MX CE UK CA

Designation

Type/Model

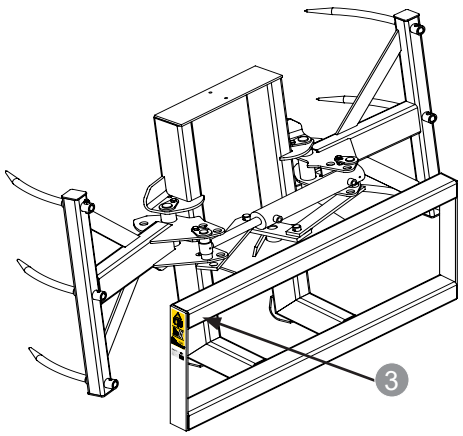
Serial number

Year of manufacture

Maximum weight kg

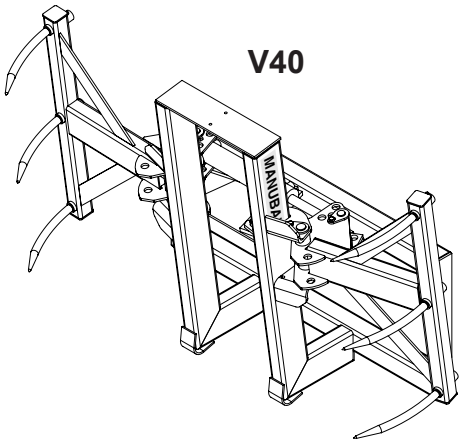
For Loader: Maximum Load (on pallet carrier) kg

Manufactured by M-extend france SAS
19 rue de rennes 35690 ACIGNE - FRANCE



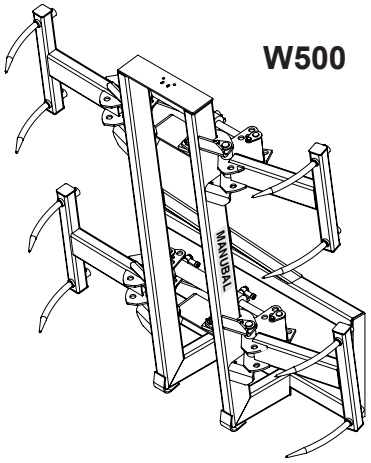
4. DESCRIPTION

V40

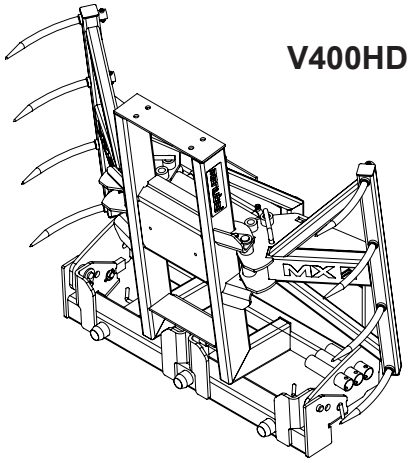


V500

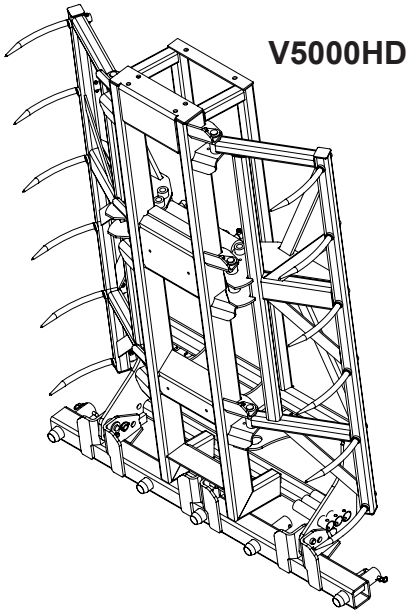
W500



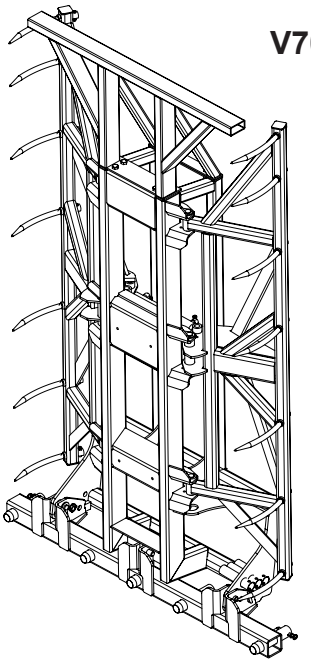
V400HD

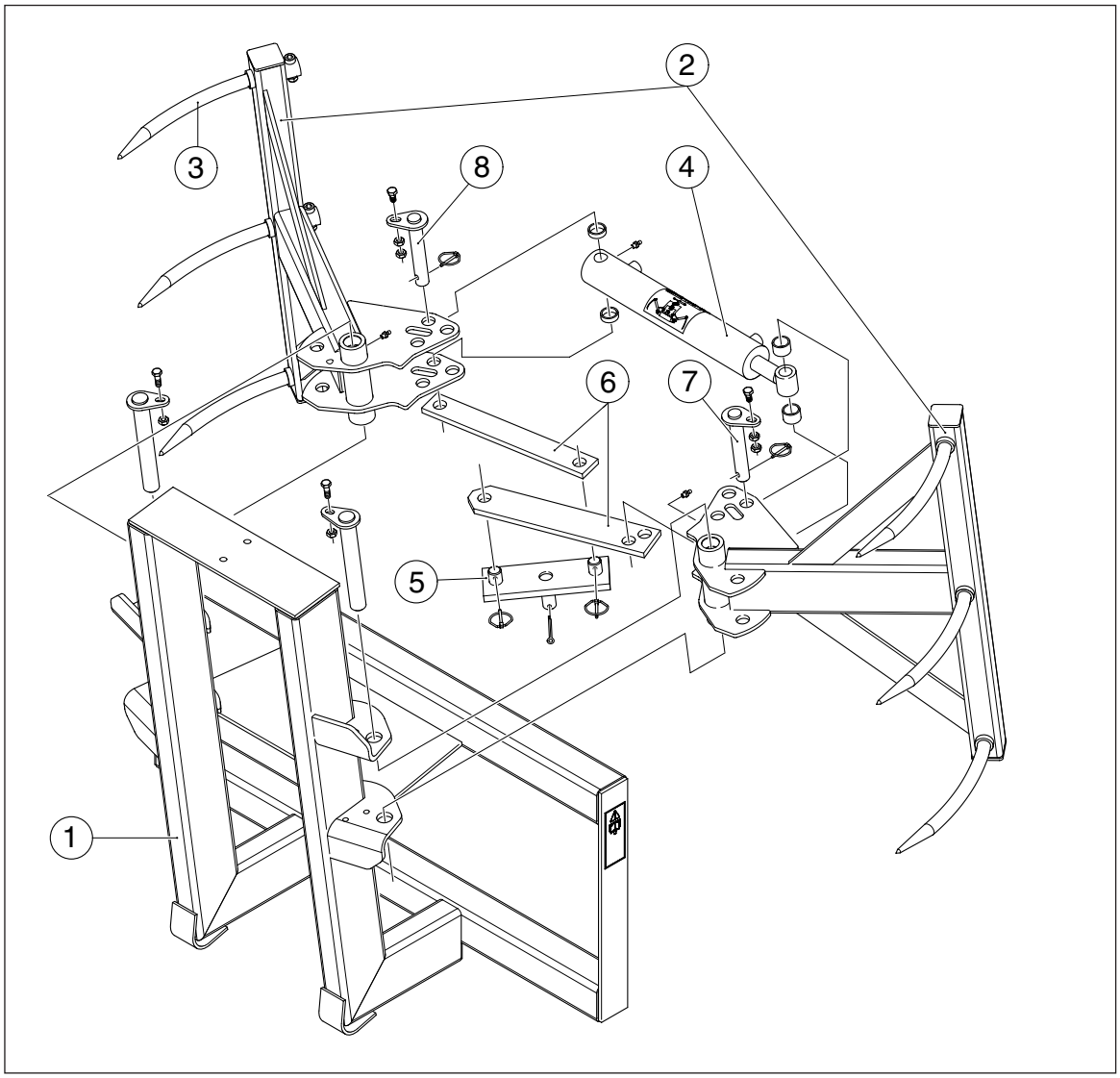


V5000HD



V7000HD





1. Vertical mast

2. Grab

3. Tine

4. Ram

5. Synchronising crank

6. Synchronising link

7. Rod-end ram pin

8. Base-end ram pin

5. HITCHING/UNHITCHING THE MANUBAL

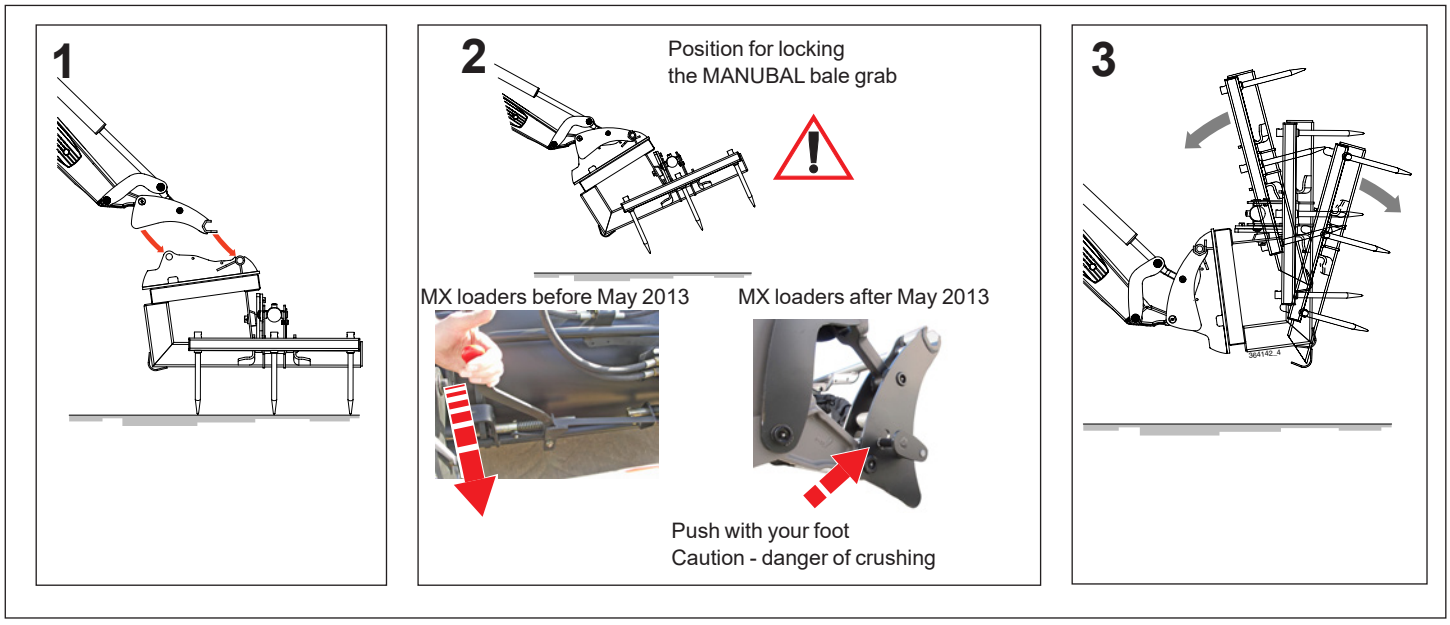
5.1 HITCHING THE MANUBAL

5.1.1 Hook the self-centering V notches onto the MANUBAL hitching bar Fig. 1 (for telescopic handlers, refer to the manufacturer's instructions for use).

5.1.2 Position yourself on the right-hand side and lock manually Fig. 2.

5.1.3 Crowd to check that the MANUBAL is being correctly held Fig. 3.

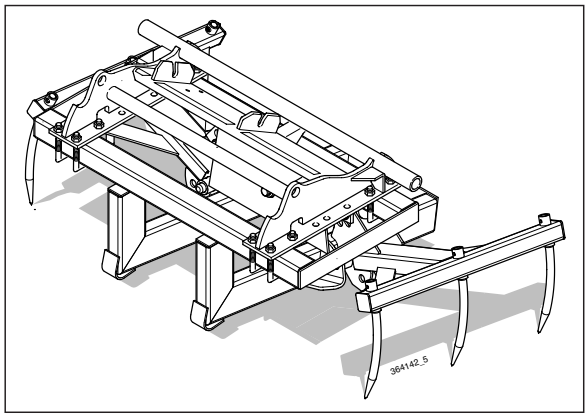
5.1.4 Operate each moving component to its fullest extent in each direction to check the hydraulic system is free from leaks and the hoses are routed correctly.



5.2 UNHITCHING THE MANUBAL

5.2.1 Set the MANUBAL down with the grab open (ram rod retracted).

5.2.2 Release the hydraulic pressure and unhitch.



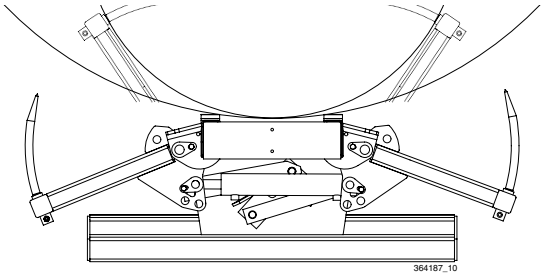
CAUTION: for MANUBALs fitted with lower tines, these should be in the park position (see chapters 8 and 10)

6. GRAB OPENING/CLOSING ADJUSTMENT

The extent of opening and closing of the grab can be adjusted to match the type of bale being handled.

6.1 ROUND BALE

This range adjustment allows bales of 0.90 m to 1.80 m diameter to be picked up.



6.1.1 Position the MANUBAL upright.

6.1.2 Open the grab halfway. Lower the MANUBAL to the ground. Turn off the engine.

6.1.3 Remove the clip from the rod-end ram pin and remove the pin. ***Note:***the screw on the pin flat prevents rotation and need not be removed.

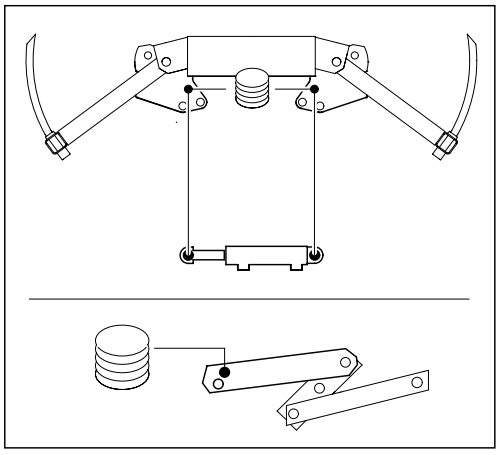
6.1.4 Position the ram opposite the hole for the round bale setting. See table below.

6.1.5 Insert the pin as well as the synchronising link in the appropriate hole.

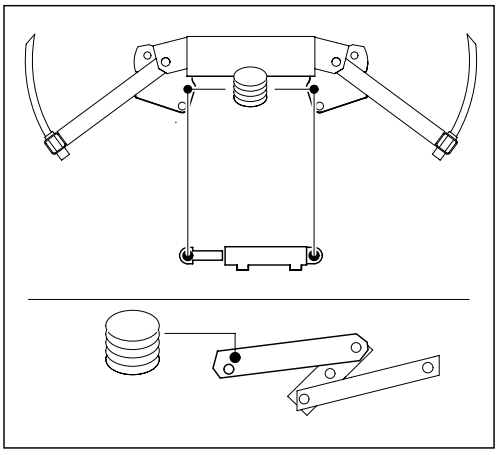
6.1.6 Refit the clip.

6.1.7 Repeat operations 6.1.3 to 6.1.6 for the base-end ram pin.

MANUBAL V40 - W500

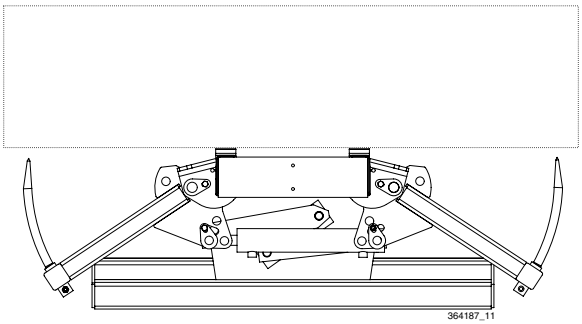


MANUBAL V500
V400HD - V5000HD - V7000HD



6.2 RECTANGULAR BALE

With the grab open, the tines do not extend beyond thevertical mast. Rectangular bale pick-up is more effective.



6.2.1 Position the MANUBAL upright.

6.2.2 Open the grab halfway. Lower the MANUBAL to the ground. Turn off the engine.

6.2.3 Remove the clip from the rod-end ram pin and remove the pin. ***Note:*** the screw on the pin flat prevents rotation. It does not need to be removed.

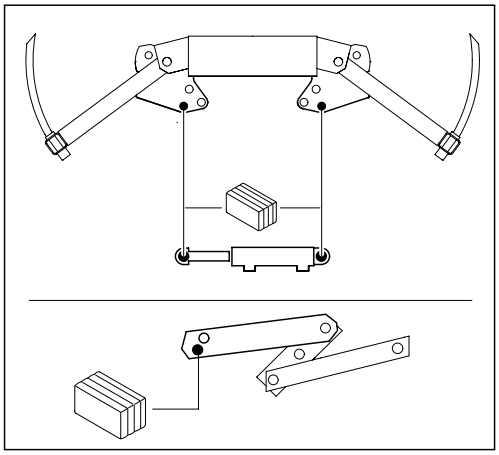
6.2.4 Position the ram opposite the hole for the rectangular bale setting. See table below.

6.2.5 Insert the pin as well as the synchronising link in the appropriate hole.

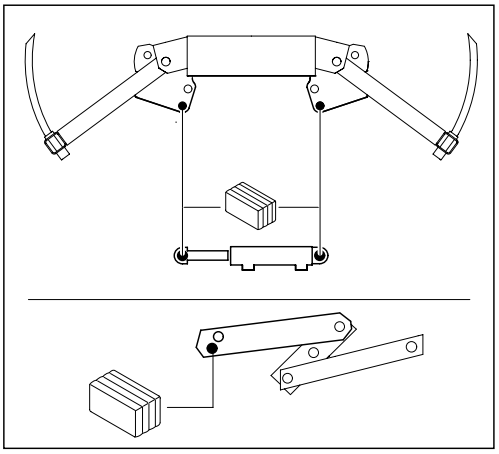
6.2.6 Refit the clip.

6.2.7 Repeat operations 6.2.3 to 6.2.6 for the base-end ram pin.

MANUBAL V40 - W500



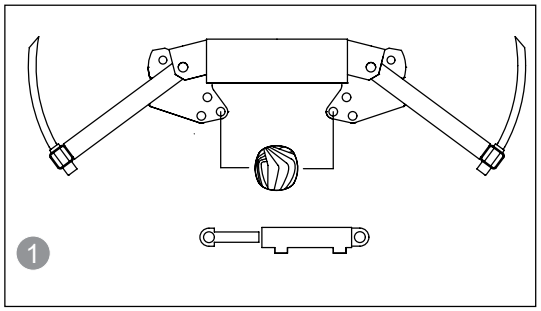
MANUBAL V500
V400HD - V5000HD - V7000HD

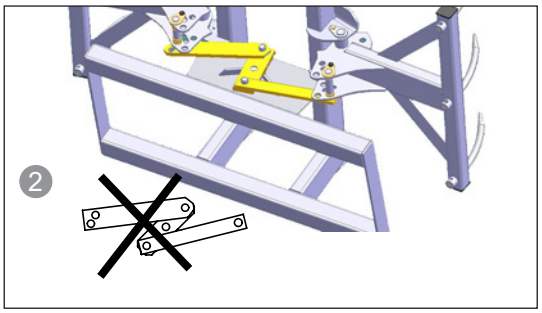


7. WRAPPED BALE KIT

This kit converts your MANUBAL into a round wrapped bale grab*. The conversion is very simple and is accomplished in just a few seconds.

CAUTION: when using the MANUBAL grab for wrapped bales, the synchronising links must be removed (see point 7.5).





Wrapped-bale grab opening/closing adjustment

The adjustment is carried out using the holes provided for round wrapped bales.

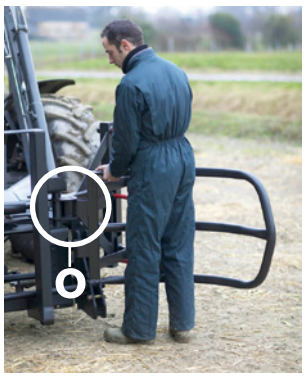
7.1 Position the MANUBAL upright.

7.2 Open the grab halfway. Lower the MANUBAL to the ground. Turn off the engine.

7.3 Remove the clip from the rod-end ram pin and remove the pin. ***Note****:* the screw on the pin flat prevents rotation. It does not need to be removed.

7.4 Position the ram opposite the hole for the wrapped bale setting. See drawing 1 .

7.5 Remove the synchronising links by using the clips. See drawing 2



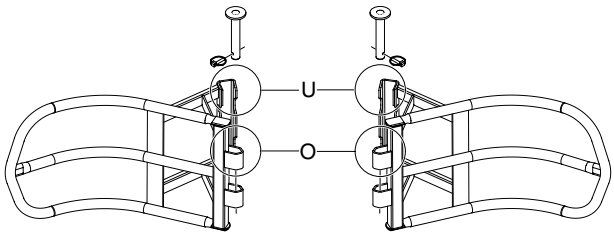
7.6 Insert the pin into the corresponding hole.

7.7 Refit the clip.

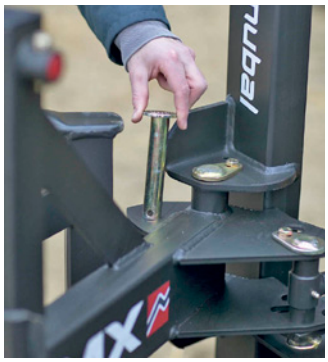
7.8 Repeat operations 7.3 to 7.7 for the base-end ram pin.

7.9 Position the first side of the wrapped-bale grab kit (U-section) against the grab tine carrier.

7.10 Position the other side of the wrapped-bale grab kit (O-section) opposite the hole provided for this purpose on the MANUBAL grab.



7.11 Insert the pin and the clip supplied in the kit.



7.12 Repeat operations 7.9 to 7.11 for the other kit.
Note: The kit can be mounted either way round. It is identical for both left- and right-hand sides.

With the grab in wrapped-bale mode, the two arms float, which increases the safety and efficiency of bale stacking.

* Option available on MANUBAL V40, V60, W500.

8. LOWER TINE KIT

The lower tine kit* is recommended for handling rectangular bales. It makes your MANUBAL even more effective when picking up round or rectangular bales in the field.

8.1 The three lower tine kit configurations

8.1.1 Configuration 1: fixed tines.
Traditional configuration.

8.1.2 Configuration 2: floating tines.
Several benefits:
- It eases withdrawal of the tines when setting a bale down. You simply need to tilt the MANUBAL to push the bale with the vertical mast and the tines will withdraw.
- This prevents unnecessary pressure from being exerted on bales during stacking and also prevents the loader from abruptly descending once the tines are clear.
- Its 2 independently floating tines mean effective stacking, even on sloping ground.
- It reduces dragging on the ground and hence wear.

8.1.3 Configuration 3: folding tines for road use (on MX loaders only).
This configuration enables the benefits of configuration 2 (floating tines) to be enjoyed at the same time as being able to fold up the tines when travelling on the road.
All this requires is to crowd the MANUBAL bale grab back and to raise the loader. The tines fold up automatically.

CAUTION:
Check that the height of the assembly allows safe travelling. Do not close the grab while the MANUBAL is tilted.

* Option available on MANUBAL V40, V500, W500

8.2 Park position

When the lower tine kit is not being used the tines can be stowed in the MANUBAL without affecting its operation.

8.2.1 Place the MANUBAL bale grab on the ground with the grab closed and stop the engine.

8.2.2 Remove the clip then the pin from the tine.

8.2.3 Remove the tine from its location and slide it into the carrier.

8.2.4 Refit the pin and the clip.

8.2.5 Use the same procedure for the 2nd tine.

CAUTION: bumping into the ends of the grab tines may result in injury. For increased safety, this procedure should be carried out with the grab closed.

8.3 Adjusting the tine spacings

The spacing between tines can be adjusted according to bale size.

8.3.1 Slacken off the nuts on the tine carrier clamp.

8.3.2 Slide the carrier along the frame.

8.3.3 Retighten the clamp, observing the correct tightening torque (174 Nm).

Additional lower tine on the MANUBAL V500, a 3rd tine is available as an option.

9. MANUBAL W500: Adjusting the 2nd bale sensor

The MANUBAL W500 has 2 grabs that operate alternately. Picking up 2 bales is achieved without any repeat action.

9.1 Operating principle

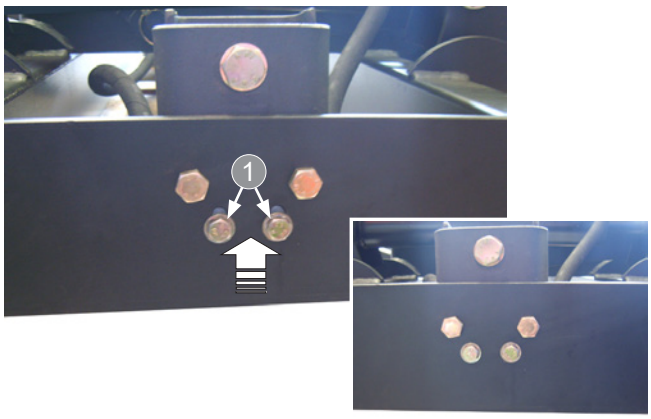
9..1 Pick up the first bale with the lower grab. (1)

9..2 Move forward to the second bale.
Lower the loader so that the probe is in contact with the bale (2).

9..3 Without releasing the first bale, pick up the second bale by closing the upper grab (3).

9.2 Adjusting the detector

The sensitivity of the 2nd bale sensor can be adjusted.



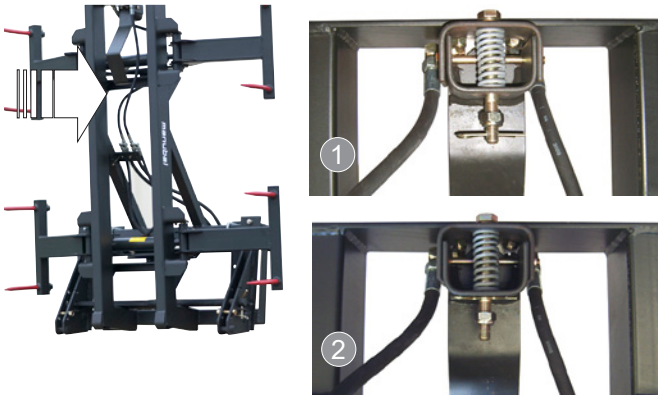
— Slacken off the 2 screws (1).

— Adjust the hydraulic block by altering its position.

— Retighten the 2 screws.

9.3 Overriding the sensor

The 2 grabs can be operated in a synchronised manner. To do this the sensor needs to be overridden.



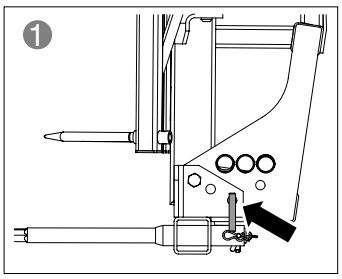
— Operate the probe to its fullest extent (1).

— Remove the clip and insert it into the upper hole of the drilled screw (2).

CAUTION: if the MANUBAL is supplied with independent controls for the 2 grabs then there will be no sensor for a 2nd bale.

10. MANUBAL V400HD, V5000HD and V7000HD: Using the lower tines

The MANUBAL V400HD, V5000HD and V700HD have lower tines which are particularly suitable for handling rectangular bales. Its tines may be fixed, floating or folding.

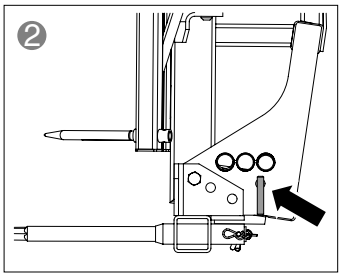


10.1 The 3 configurations

10..1 Configuration 1: fixed tines.
Traditional configuration

10..2 Configuration 2: floating tines.
Several benefits:
- It eases withdrawal of the tines when setting a bale down. You simply need to tilt the MANUBAL to push the bale with the vertical mast and the tines will withdraw.
- It prevents unnecessary pressure from being exerted on the bales when stacking and above all prevents the telescopic handler boom from dropping abruptly once the tines are clear.
- It reduces dragging on the ground and hence wear.

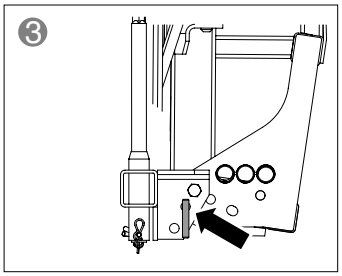
CAUTION: do not close the grab when the MANUBAL is tilted.



10..3 Configuration 3: folding tines for road use.

1. Open the grab to its fullest extent (ram in rectangular bale setting; see chapter 6.2). Stop the engine.
2. Remove the clips and pins.
3. Fold up the tines and carrier assembly.
4. While holding this position, refit the pins and clips in the holes provided for this purpose.

CAUTION: do not close the grab with the tines folded.



10.2 Park position

When the lower tines are not being used, they can be stowed away in the MANUBAL bale grab without affecting its operation.

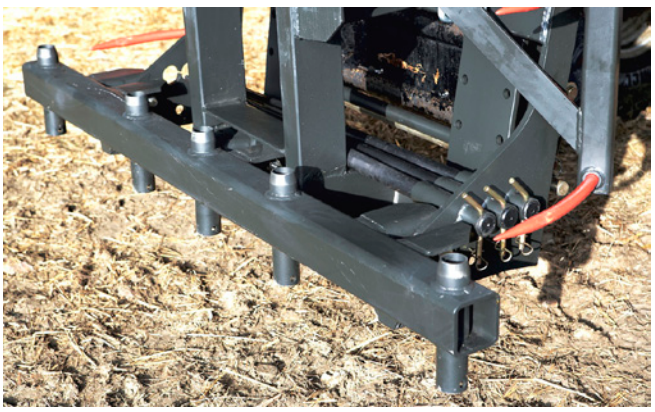
10.2.1 Place the MANUBAL bale grab on the ground with the grab closed and stop the engine.

10.2.2 Remove the clip then the pin from the tine.

10.2.3 Remove the tine from its location and slide it into the carrier.

10.2.4 Refit the pin and the clip.

10.2.5 Use the same procedure for the 2nd and 3rd tines (if lower tine kit spacing distance is 1700 mm).

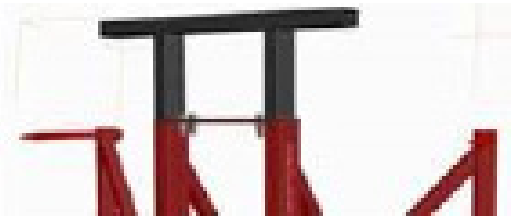


CAUTION: bumping into the ends of the grab tines may result in injury. For increased safety, this procedure should be carried out with the grab closed.

Additional tine on MANUBAL V400HD/V5000H/V7000HD: a 4th and 5th tine are available as an option (if lower tine kit spacing distance is 1700 mm).

11. OPTIONS FOR V400HD/V5000HD

— Bolted height extension 30 cm (for V400HD and V5000HD)



— Bolted height extension + grab extension kit 30 cm (for V400HD)

— Lower tine kit, 850 mm narrow spacing (for V400HD and V5000HD)

— Lower tine kit, 1700 mm wide spacing (for V400HD and V5000HD)

12. MAINTENANCE/LAYING UP

12.1 Maintenance

— Lubricate pivot points regularly. See lubrication points below.

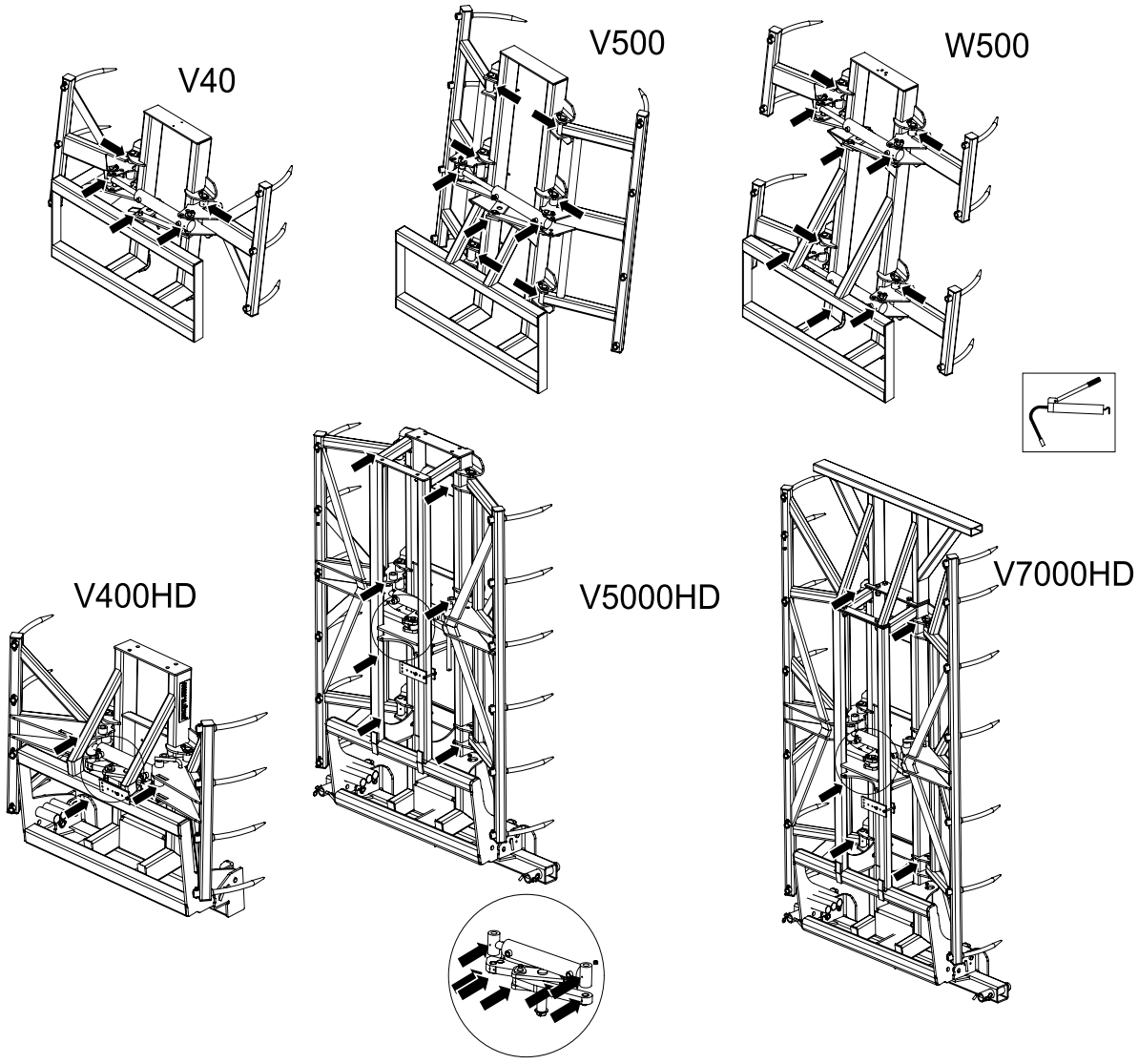
— Ensure hydraulic connections are clean each time before they are made.

— See to it that straw or hay residues do not jam up pivot points.

— Check the MANUBAL bale grab to ensure that it is in proper working order throughout and that screws, clips and pins are in place before any use.

— Check the condition of the wear bushes and replace them before they are fully worn.

Lubrication points:



12.2 Laying up

— Unhitch the MANUBAL bale grab with the grab open (ram rod retracted).

— Lubricate pivot points.

— Coat the tines with oil.

13. RECYCLING MX PROD-

Hydraulic systems

— At the end of their service life, MX products must be drained of hydraulic oil by an authorised service technician.

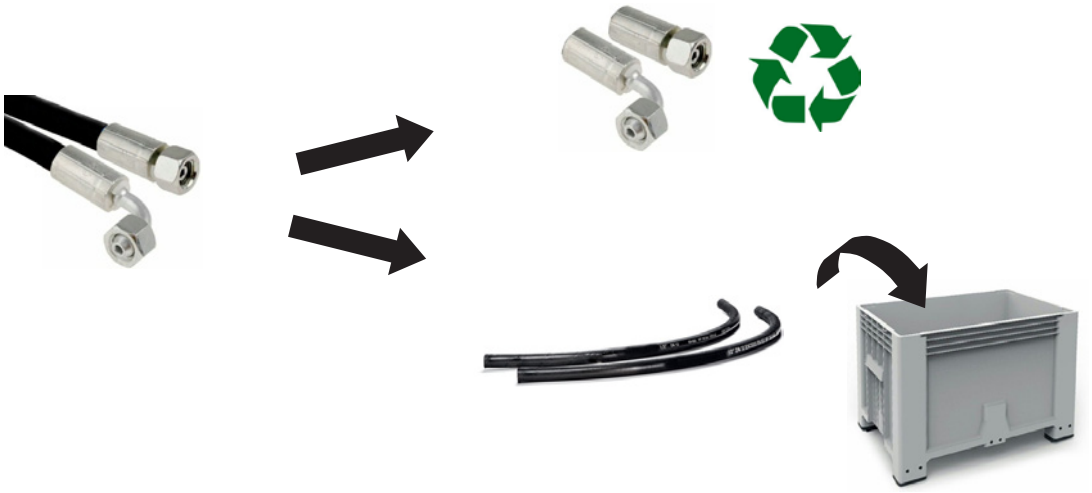
— The hydraulic hoses must be removed before the equipment can be recycled.

— All MX product owners are obliged to comply with these environmentally-friendly precautions if they decide to dismantle their end-of-life products themselves.

Disposal of hazardous waste (oils and hoses)

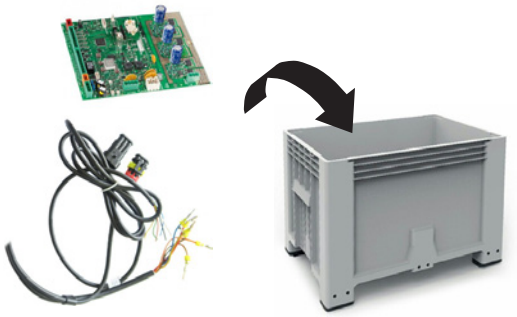
— Hydraulic oils must be stored in the containers or drums provided for this purpose and sent to approved disposal channels.

— For hydraulic hoses, the steel connectors can be separated from the rubber hoses.
The steel connectors will be recycled into scrap via the approved channels.
The rubber hoses will be placed in sealed containers and sent for processing to the approved channels.



High-tech components from MX products and electrical and electronic equipment:

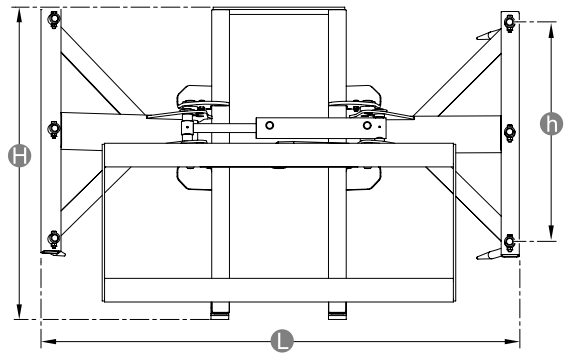
— Waste electrical and electronic equipment (WEEE) present in MX products will be removed and then disposed of via approved channels for recovery.

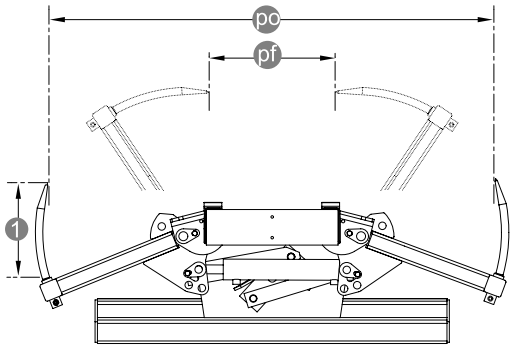


Recycling of decontaminated MX products

— Decontaminated MX products will be sent to approved iron and metal recycling channels.

14. TECHNICAL SPECIFICATIONS





		MANUBAL V40	MANUBAL V500	MANUBAL W500	MANUBAL V400HD	MANUBAL V5000HD	MANUBAL V7000HD
Performance	Stacking height	4 bales H 1.20 m	5 bales H 1.20 m	5 bales H 1.20 m	5 bales H 1.20 m	6 bales H 1.20 m	6 bales H 1.20 m
	Number of bales picked up	Up to 2 bales H 1.20 m	2 bales H 1.20 m	2 bales H 1.20 m (with 2 independent grabs)	2 bales H 1.20 m (with height extensions)	2 bales H 1.20 m	3 bales H 1.20 m
	Bale diameter	from 0.90 to 1.80 m					
	Number of tines on grab	6	8	2 x 4	8 (+2)	12	14
	Max. permissible load on the device	1000 kg	1500 kg	1500 kg	1500 kg	1800 kg	1800 kg
Dimensions	Overall height (H)	1070 mm	1800 mm	1800 mm	1120 mm 1420 mm ***	2300 mm 2600 mm ***	3000 mm
	Grab height (h)	750 mm	1450 mm	450 mm	900 mm	1900 mm	2550 mm
	Width (W)	1625 mm	1625 mm	1625 mm	1480 mm	1480 mm	1800 mm
	Distance between tips grab closed (gc)	In round bale setting: 420 mm In rectangular bale setting: 1020 mm					
	Distance between tips grab open (go)	In round bale setting: 1510 mm In rectangular bale setting: 1570 mm					
	Tine diameter	25 mm					
	Usable length of tines (1)	340 mm					
Weight		200 kg	250 kg	280 kg	300 kg	520 kg	700 kg
Wrapped grab kit*	Wrapped bale diameter	1 to 1.60 m	-	1 to 1.60 m	-	-	-
	Wrapped bale weight	Up to 800 kg	-	Up to 800 kg	-	-	-
Lower tines**	Number of tines	2	2/3***	2	3/4***/5***	3/4***/5***	3/4***/5***
	Usable length of tines (1)	950 mm					
	Tine diameter	40 mm					
	Tine spacing	from 0.60 to 1.10 m	from 0.60 to 1.10 m	from 0.60 to 1.10 m	from 0.60 to 1.10 m	from 0.60 to 1.10 m	1.70 m ext
Recommendations	Loader/telescopic handler	Loader and telescopic handler	Loader and telescopic handler	Loader and telescopic handler	Loader and telescopic handler	Loader and telescopic handler	telescopic handler
	Min. pivot height	3.45 m	3.60 m	3.60 m	3.60 m	3.60 m	3.60 m
	Loader model	from MX T406	from MX T410	from MX T410	from MX T410	from MX T417	-

*Option on MANUBAL V40, W500 **Option on MANUBAL V40, V500, W500 ***Option on MANUBAL V500, V400HD, V5000HD, V7000HD

DECLARATION OF CONFORMITY

The manufacturer:
M-extend France SAS
Registered office: 19, Rue de Rennes, 35690 Acigné (France).
Registered with the RCS of Rennes under number 639 200 260.

Hereby declares that the material :

Front loader *T408evo or T408+evo or T410evo or T410+evo or T412evo or T412+evo or T414evo or T417evo or T418evo or TX420evo or TX425evo or TX430evo*
or
Front loader *U503 or U504 or U505 or U506 or U506+ or U507 or U508 or U508+ or U509 or U510 or U510+ or U511 or U512 or U512+ or U514 or U514+*
or
Front loader *A104 or A106 or A110 or F303 or F304*
or
Front loader *C1 or C1s or C2u or C2 or C2+ or C3u or C3 or C3+ or C4 or C4+*
or
Loader implement *BMS or BRDS or BQU or BF + GF or CGU or TR or TRu or BMSC or CGC or TRC or BT or BR or BC or BF or BMSU or BRU or BFU or CL or BRC or BFC or LC or CG or BP or SG or BB or PCS or LS or PG*
or
Implement for telescopic handler loader *BMSA or CGA or BTA or TR or BCA or BCDA*
or
Feeding bucket *BD or GDT*
or
Manubal *L40 or L400 or L400HD or L500 or L6000 or C30 or C40 or U40 or V40 or V60 or V500 or W500 or V400HD or V5000HD or V7000HD*
or
Front linkage *R04 or R05 or R06 or R08 or R09 or R10 or R12 or R16 or R20 or R28 or R38 or R53*
or
Weight *M250 or M400 or MM600 or MM900 or MM1200 or MM1500 or MM400AD or MBX or MXS 250 or MXS 400 or MXS 600 or BOX 100L or BOX 150L or MBX XS*
or
Multibumper

serial number: [ ] **,**

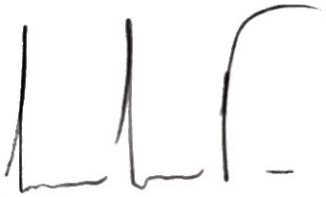
please write in the box above the serial number given on the equipment's nameplate.

included in the list of serial numbers 000001001 to 999999365,

is in conformity with the Machinery Directive 2006/42/EC
and with the Supply of Machinery (Safety) Regulations 2008.

M-extend France SAS, 19 rue de Rennes at Acigné (35690), is authorised to prepare the technical file.

Acigné, 2 September 2025.



B.Gauchenot
CEO

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