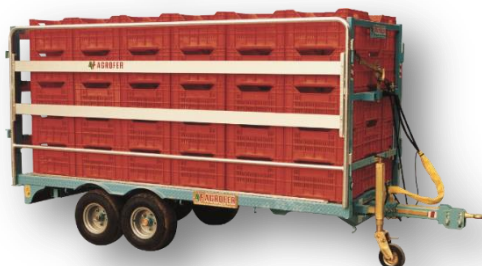
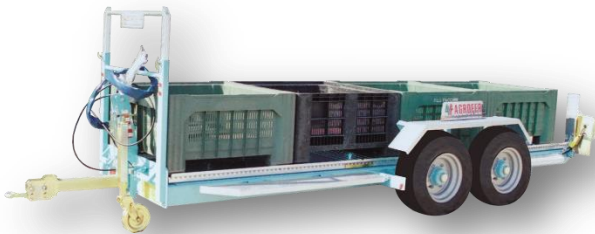


TRAILERS FOR COLLECTION AND TRANSPORT AND PLATFORMS



Please read fully
and carefully
before use

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CE DECLARATION OF CONFORMITY

AGROFER S.r.l.

Via dell'Artigianato - Loc. Ponte Cantone | 25010 Pozzolengo Brescia Italia.

Declares on its own responsibility that the **TRAILER**:

Brand: **AGROFER**
Model: **TRAILER Mod.** _____
Serial number: _____
Year of construction: _____

complies with the provisions of the following European directives and national implementing provisions:

Machinery Directive 2006/42 / EC (Machinery Safety)

Applied harmonized standards:

UNI - EN-ISO 12100-1: 2010-03

Machinery Safety - General principles of design - Risk assessment and risk reduction

DECLINES

any responsibility for accidents occurred to persons or things caused by alterations of the trailer by third parties, by lack of maintenance or repair and applications not approved by the manufacturer, according to the instructions indicated in the "Operator's Manual".

The technical brochure of the construction is available at the technical office of the company itself at the aforementioned address.

Pozzolengo
day/month/year

The Legal Representative

Zenegaglia Simone

1 GENERAL INFORMATION

The text of this manual is originally written in Italian.

The content of this manual is written in compliance with what was considered at point 1.7.4 in the attachment I of the machinery directive 2006/42/CE.

It is forbidden to reproduce and publish to third parties the content of this manual without the permission of AGROFER s.r.l.

1.1 WHEN THE MANUFACTURER IS CONSIDERED RELIEVED OF ANY RESPONSIBILITY

AGROFER s.r.l. is relieved of any responsibility when:

- 1) the trailer is used improperly;
- 2) the staff that use the trailer is not adequately prepared;
- 3) the trailer is not used according to the specific national standards;
- 4) the installation on the tractor is not performed correctly;
- 5) the driving force lacks a power source;
- 6) serious flaws in the maintenance occur;
- 7) unauthorized interventions and modifications take place;
- 8) unoriginal spare parts or parts not fitted for this model are used;
- 9) the instructions are totally or partially not followed.

1.2 IMPORTANCE OF THIS MANUAL

- This manual is an integral part of the CONTAINER.
 - This manual is the fundamental tool for the use and maintenance of the CONTAINER.
 - This manual must be kept until the final demolition of the CONTAINER.
 - In case of loss or damage, a new copy of the manual can be asked to the manufacturer.
 - This manual must be kept near the CONTAINER, in a safe place which is known and accessible only by the responsible staff.
 - It must be handled with care in order not to damage it. It is strictly forbidden to remove, rewrite or modify pages and their contents.
 - This manual must be updated when the documents for updating are delivered.
 - When the CONTAINER is resold, this manual must be delivered to the buyer and the new user.
 - This manual describes the technical condition when the CONTAINER is sold and therefore it cannot be considered inadequate only because it have been subsequently updated because of new experiences.
- The manufacturer reserves the right to update the production and the specific manuals without being obliged to update the previous production and manuals, except for exceptional cases.

1.3 RECIPIENTS OF THIS MANUAL

- Staff employed in the transport.
- Staff employed in the assembly of the trailer.
- Staff employed in connecting the trailer with energy sources (i.e. tractor).
- Staff employed in the functional testing and staff training.
- Authorized staff.
- Staff employed in the maintenance.
- Staff employed in the final demolition.

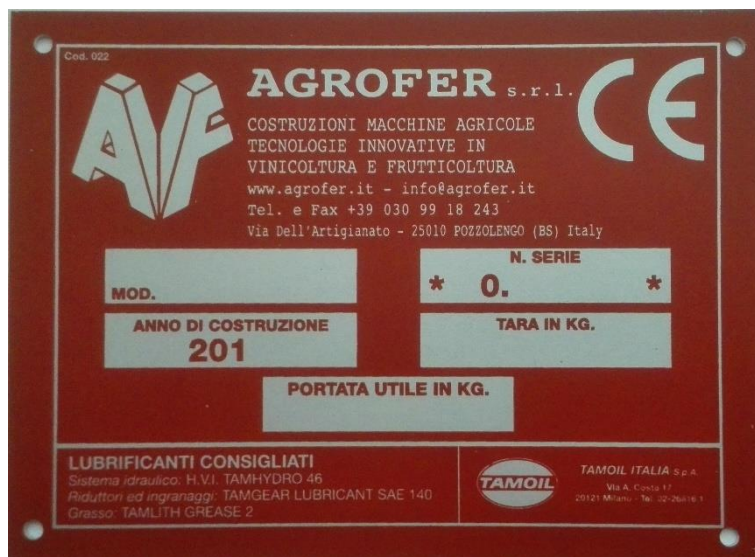
1.4 INSTRUCTIONS CONTAINED IN THIS MANUAL

- General safety warnings.
- Description and technical details.
- Expected and unexpected use.
- Movement and transport of the parts, assembly and disassembly.
- Installation and coupling to energy sources.
- Testing and staff training.
- Use.
- Maintenance and repair.
- Ordering spare parts.
- Final demolition.

1.5 IDENTIFICATION DETAILS ABOUT THE MANUFACTURER AND THE CONTAINER

A metal plaque, attached and stamped on the trailer, gives the information requested by the “CE MARKING”:

- Name of the manufacturer and his address
- CE Marking
- Model
- Year of construction



Picture 1. Plaque CE

A second metal plaque attached and stamped on the trailer could be present. It contains some information about the approval of the TRAILER.



Picture 2. APPROVAL Plaque

WARNING!

Removing or substituting the plaque “CE Marking” and “APPROVAL” is FORBIDDEN

If the plaque is damaged or the seal of the manufacturer is removed, AGROFER s.r.l. must be informed.

1.6 INFORMATION ABOUT THE MANUFACTURER

Manufacturer: AGROFER S.r.l.

Address: Via dell'Artigianato - Loc. Ponte Cantone | 25010 Pozzolengo - BS - ITALY

Phone number: +39 (0)30 9918243

E-mail: info@agrofer.it

1.7 GENERAL DESCRIPTION OF THE TRAILER

The available TRAILERS fall into two main categories:

- TRAILERS for containers:
 - indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.
- TRAILER for vehicles transport too:
 - Specially designed to transport machines such as tracked tractors, mini-excavators, pallets and others that are difficult to be transported on the road

1.8 AVAILABLE MODELS, TECHNICAL DETAILS, STANDARD EQUIPMENT

1.8.1 TRAILER mod. G40 RT

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.

Details:

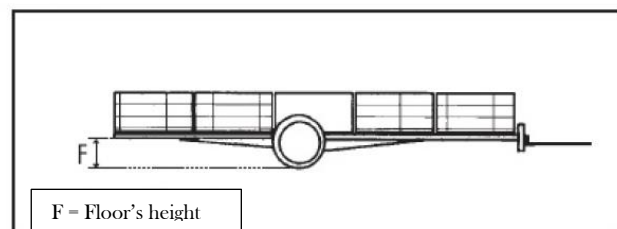
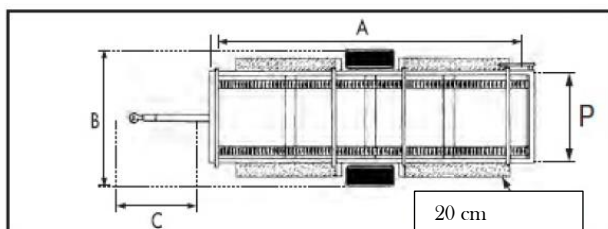


- Main frame structure consisting of 150x150 tubular metal struts;
- Lowering of the floor;
- Support mobile platforms to reach the second row of containers;
- Roller conveyor with adjustable double wheels for container unloading;
- Adjustable guides;
- Removable drawbar;
- Axle with mechanical brake;
- Road signaling system "lights".
- Wheels 10/75/15 18PR.

The unloading is carried out by operating the special hydraulic lever from the tractor, thanks to which the trailer inclines upwards by means of a hydraulic jack; the container slides easily and gently on double-wheeled roller conveyors, avoiding damaging the product transported.

On demand "Italian Certificate" road homologation for 40 quintals only for Italian road traffic.

Model G 40 RT - FOR CONTAINERS 113 X 113 - 120 X 110							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/3	3	344	185	100	117	55	5000
G 40 RT/4	4	457	185	100	117	55	5000
G 40 RT/5	6 pallets 120x80	486	185	100	117	55	5000
G 40 RT/5	5	570	185	100	117	55	5000
Model G 40 SA - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/SA	3	364	165	100	100	55	5000
G 40 RT/4 SA	4	486	165	100	100	55	5000
G 40 RT/5 S	5	605	165	100	100	55	5000
Model G 40 LS - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/3 LS	3	305	185	100	117	55	5000
G 40 RT/4 LS	4	405	185	100	117	55	5000
G 40 RT/5 LS	5	505	185	100	117	55	5000
G 40 RT/6 LS	6	605	185	100	117	55	5000



1.8.2 TRAILER mod. G40 RT TA TANDEM

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.

Details:

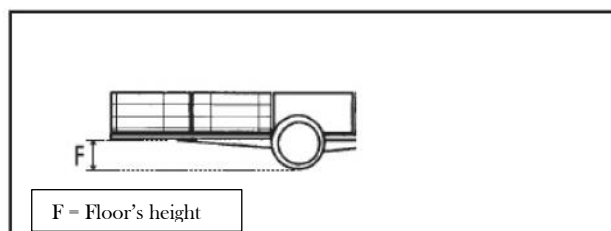
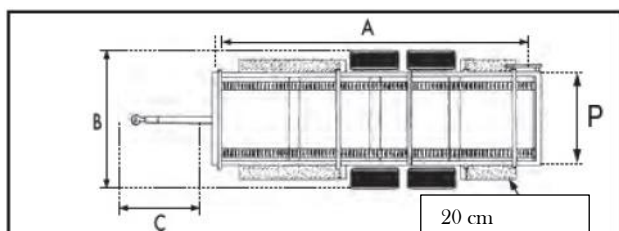


- Main frame structure consisting of 150x150 tubular metal struts;
- Lowering of the floor;
- Support mobile platforms to reach the second row of containers;
- Roller conveyor with adjustable double wheels for container unloading;
- Adjustable guides;
- Removable drawbar;
- Axle with mechanical brake;
- Lights.

The unloading is carried out by operating the special hydraulic lever from the tractor, thanks to which the trailer inclines upwards by means of a hydraulic jack; the container slides easily and gently on double-wheeled roller conveyors, avoiding damaging the product transported.

On demand "Italian Certificate" road homologation for 40 quintals only for Italian road traffic.

Model G 40 RT - FOR CONTAINERS 113 X 113 - 120 X 110 WHEELS 200/60 14.5 10PR							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/4 TA	4	457	195	100	117	55	5000
G 40 RT/S TA	6 pallets 120x80	486	195	100	117	55	5000
G 40 RT/5 TA	5	570	195	100	117	55	5000
Model G 40 RT SA - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/4 SA TA	4	486	180	100	97	50	5000
Model G 40 RT LS - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/4 LS TA	4	405	195	100	117	55	5000
G 40 RT/5 LS TA	5	505	195	100	117	55	5000
WHEELS 10.075.15.3 12PR							
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/5 super TA	5	570	205	100	117	55	5000
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/5 super SA TA	5	605	185	100	97	50	5000
Mod.	Containers number	A cm	B cm	C cm (Adjustable rudder)	P cm	F cm	Capacity Kg
G 40 RT/6 super TA	6	605	205	100	117	55	5000



1.8.3 TRAILER mod. E12 - E12 Big

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.

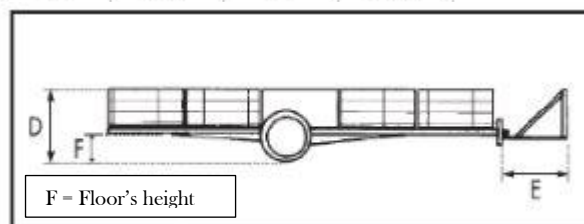
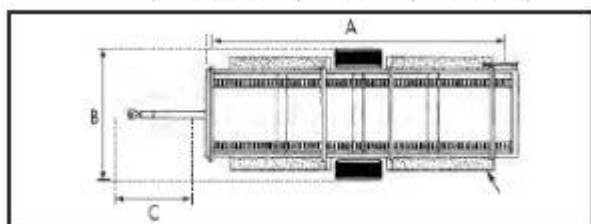
Details:

- Main frame structure consisting of 120x120 tubular metal struts;
- Lowering of the floor;
- Support mobile platforms to reach the second row of containers;
- Roller conveyor with adjustable double wheels for container unloading;
- Adjustable guides;
- Pivoting drawbar with three-point linkage of the tractor's lifter.
- Without mechanical brake and road signaling system.
- Lights.
- Wheels 10/75/15 12PR.



The unloading is carried out by raising the tractor lift so that the pivotal drawbar leans up, the rear part of the trailer rests on the ground and, thanks to the angle that takes the wagon, the box falls gently and accurately on roller conveyors and double wheel guides without damaging the product transported.

Model E 12 - FOR CONTAINERS 113 X 113 - 120 X 110							
Mod.	Containers number	A cm	B cm	F cm	D cm	E cm (Adjustable rudder)	Capacity Kg
E 12/3	3	340	185	45	100	85	4000
E 12/4	4	453	185	45	100	85	4000
E 12/5	5	566	185	45	100	85	4000
Model E 12 SA - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	F cm	D cm	E cm (Adjustable rudder)	Capacity Kg
E 12/3 SA	3	364	165	45	100	85	4000
E 12/4 SA	4	486	165	45	100	85	4000
Model E 12 LS - FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A cm	B cm	F cm	D cm	E cm (Adjustable rudder)	Capacity Kg
E 12/3 LS	3	305	185	45	100	85	4000
E 12/4 LS	4	405	185	45	100	85	4000
E 12/5 LS	5	505	185	45	100	85	4000
Model E 12 BIG - CHASSIS 150 X 150							
Mod.	Containers number	A cm	B cm	F cm	D cm	E cm (Adjustable rudder)	Capacity Kg
E 12/5 SA	5	605	165	50	100	85	5000
E 12/6 LS	6	605	185	50	100	85	5000



Also available in the version with a hydraulic draw-out drawbar with quick tractor couplings

1.8.4 TRAILER mod. ECO S and mod. ECO

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.

1.8.4.1 mod. ECO

Details:

- Main frame structure consisting of 100x100 tubular metal struts.
- Pivoting drawbar with three-point linkage of the tractor's lifter.
- 4 wheels - 16.5 x 6.5-8.
- Equipped with rear stops for fixing the containers.
- Roller conveyor with double wheels on demand.



The **unloading** is carried out by raising the tractor lift so that the pivotal drawbar leans up, the rear part of the trailer rests on the ground and, thanks to the angle that the trailer takes, the container falls gently and accurately.

Mod.	Containers number	A	B	F	P	E cm (Adjustable rudder)	Tare Kg	Capacity Kg
		cm	cm	cm	cm			
ECO 3 S	3	340	150	45	110	85	300	1500
ECO 4 S	4	453	150	45	110	85	380	1500
ECO 3 SA S	3	364	150	45	80	85	320	1500
ECO 4 SA S	4	486	150	45	80	85	430	1500
ECO 3 LS S	3	305	150	45	110	85	300	1500
ECO 4 LS S	4	405	150	45	110	85	430	1500

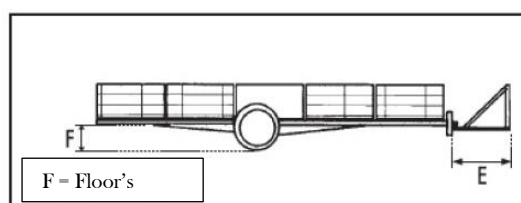
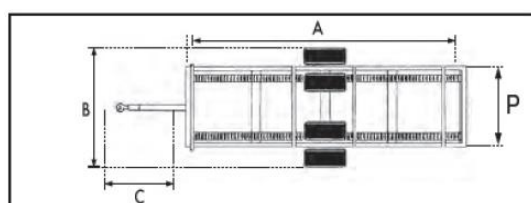
1.8.4.2 mod. ECO S

Details:

- Main frame structure consisting of 100x100 tubular metal struts.
- **Fixed drawbar.**
- 4 wheels -16.5 x 6.5-8;
- Equipped with rear stops for fixing the containers.
- Roller conveyor with double wheels on demand.



Mod.	Containers number	A	B	F	P	C cm (Adjustable rudder)	Tare Kg	Capacity Kg
		cm	cm	cm	cm			
ECO 3	3	340	150	45	110	100	300	1500
ECO 4	4	453	150	45	110	100	380	1500
ECO 3 SA	3	364	150	45	80	100	320	1500
ECO 4 SA	4	486	150	45	80	100	430	1500
ECO 3 LS	3	305	150	45	110	100	300	1500
ECO 4 LS	4	405	150	45	110	100	430	1500



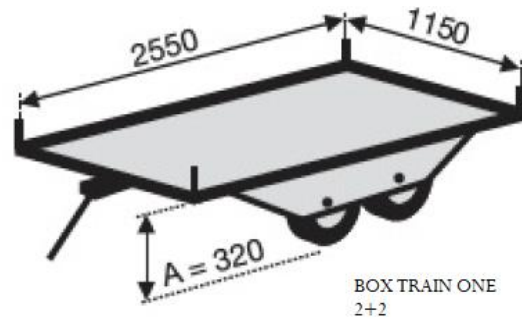
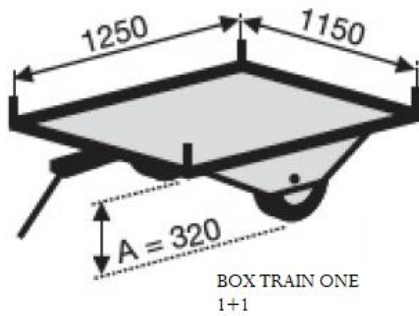
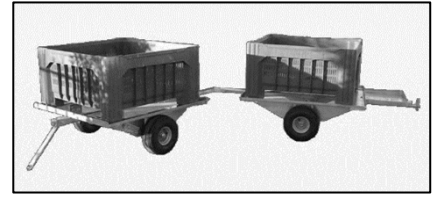
The **unloading** is carried out by operating the hydraulic lever of the tractor, thanks to which the trailer inclines upwards by means of a hydraulic jack.

1.8.5 LITTLE TRUCK mod. BOX TRAIN ONE

Little truck for carrying containers with articulated drawbars for coupling to the tractor.

Details:

- Hinged drawbars for coupling to the tractor.
- Linking drawbar with absorption suitable for shock-free transport of the product
- Up to 5 pairs of connectable BOX TRAIN ONE (Max capacity 250 Kg)
- Sold in pairs.

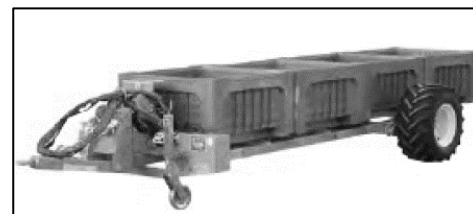


1.8.6 TRAILER mod. TELESCOPIC

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading. Loading and unloading operations take place automatically.

Details:

- Molded sheet metal chassis;
- Square tubing load-bearing chassis;
- Expandable chassis for bins loading;
- 2 wheels 31x15.5-15.76x43 or 10.075 15.3
- Hydraulic control in the cabin for load phase adjustment.;
- 2 wheels 31x15.5-15.76x43 or 10.075 15.3
- Hydraulic control in the cabin for load phase adjustment.



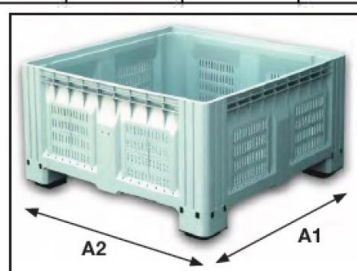
FURTHER DETAILS:

Distributor with 4 levers to be positioned on the tractor - tractor oil supply with 2 double-acting sockets (tractor liters 30).

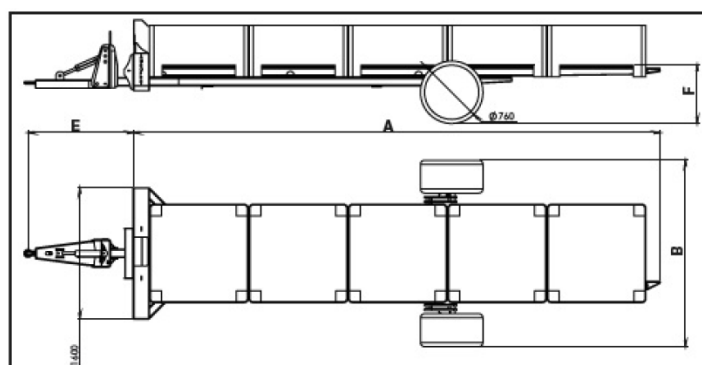
- 1 lever controls the hydraulic catenary for bins' load.
- 1 lever controls the wheels (raise / lower) for chassis inclination during loading and unloading.
- 1 lever controls the hydraulic drawbar for all terrain adjustments.
- 1 lever controls the movement of the drawbar to facilitate the insertion of the bins.

Mod. Telescopic SUPER 4 MANUAL LEVERS						
Mod.	Containers number	A cm	WHEELS	F cm	E cm	Capacity Kg
TELESCOPIC/4	4	500	10.075 15.3 - B=198	10 60	128	3000
TELESCOPIC/5	5	600	31x15.50-15 - B=220	10 60	128	3000

Mod. Telescopic TOP ELECTRONIC with electric control						
Mod.	Containers number	A cm	WHEELS	F cm	E cm	Capacity Kg
TELESCOPIC EL/4	4	500	10.075 15.3 - B=198	10 60	128	3000
TELESCOPIC EL/5	5	600	31x15.50-15 - B=220	10 60	128	3000



BINS DIMENSION	
A1	A2
113	113
120	110
120	100
120	120
120	80 ON DEMAND



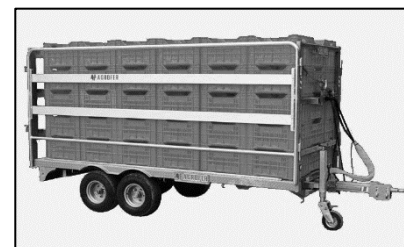
1.8.7 TRAILER mod. PBC/3 and PBC/3 BINS

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading.

1.8.7.1 Mod. PBC/3

Details:

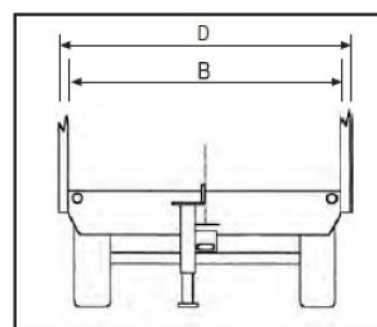
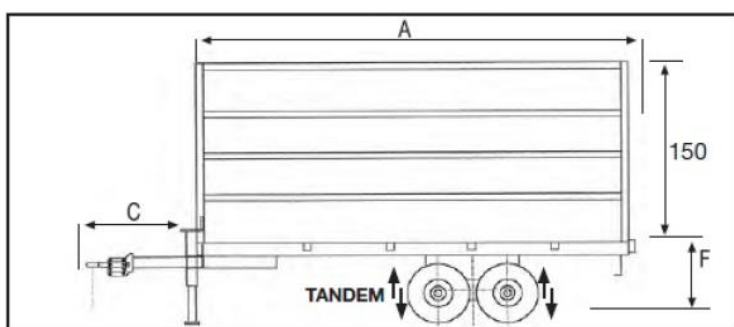
- Platform of non-slip embossed sheet.
- Metal strut of molded press-formed sheet metal.
- Front and rear mobile structure.
- Side gates (left/right) with aluminum internal stops that can have a side opening: "mobile gate".
- Aluminum sheet metal and bars on the gate structure and special stops for fixing the containers.
- TANDEM rocker axle with 4 wheels.
- 2-wheel mechanical brake.
- Tiller with hydraulic movement and quick coupling operation to facilitate entry/exit from the rows. Tractor oil operations (not on model 2250 - 2250 S)
- Removable drawbar.
- Height adjustable eyelet.
- Support foot.
- "Lights" signaling system.



Without hydraulic drawbar

Model without road homologation with CE certificate						
	A	B	F	D	C	roadway external wheel
	cm	cm	cm	cm	cm	
Mod. PBC/3 - 950 WHEELS 20.5 / 8.00-10	330	95	60	105	100	105
Mod. PBC/3 - 1300 WHEELS 20.5 / 8.00-10	330	130	60	140	100	140
Mod. PBC/3 - 1450 WHEELS 20.5 / 8.00-10	330	145	60	155	100	145
Mod. PBC/3 - 4100x1300 WHEELS 20.5 / 8.00-10	410	130	60	140	100	140
Mod. PBC/3 - 4100x1450 WHEELS 20.5 / 8.00-10	410	145	60	145	100	140
Mod. PBC/3 S - 5000x1300 WHEELS	500	130	72	145	100	145
Mod. PBC/3 S - 6000x1300 WHEELS	600	130	72	145	100	145
Mod. PBC/3 - 2250 WHEELS 10.07515 12PR	410	225	73	235	100	225
Mod. PBC/3 - 2250 S WHEELS 10.07515 12PR	550	225	83	235	100	225

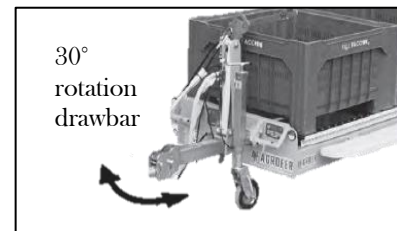
you can choose any size that is not in the catalog



1.8.7.2 Mod. PBC/3 BINS

Details:

- TANDEM rocker axle with 4 wheels.
- Construction in 30dm omega moldings.
- 30dm platform of non-slip embossed sheet.
- Telescopic front bulkhead.
- Rear footrests that stop the product.
- Side angles for containment.
- Height adjustable eyelet;
- Hooks for ropes;
- Tiller with hydraulic movement and quick coupling operation to facilitate entry/exit from the rows. Tractor oil operations.
- Braking axis;



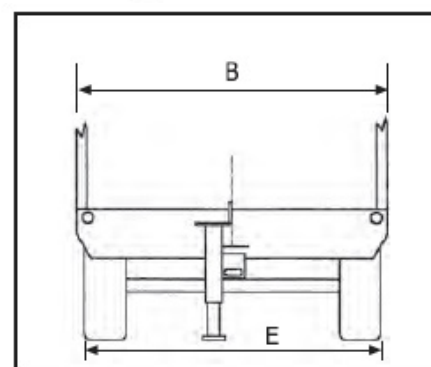
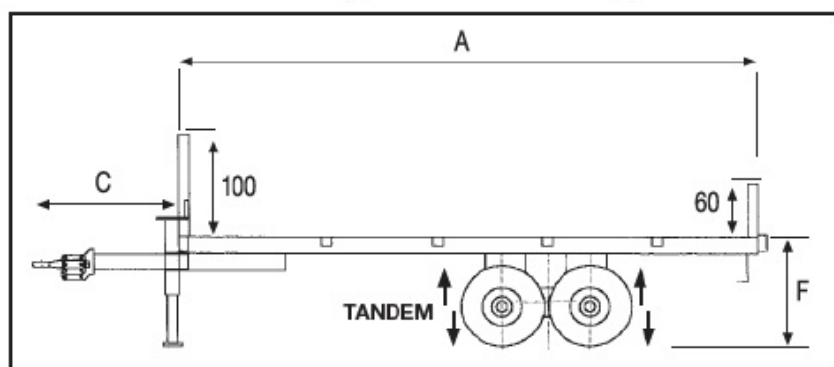
ON DEMAND:



Excludes 30° rotation drawbar

	WHEELS	A cm.	B cm.	F cm.	C cm.	E cm.
Mod. PBC/3 BINS 345x120	20.5/8.00-10	345	120	58	90	130
Mod. PBC/3 BINS 460x120	20.5/8.00-10	460	120	58	90	130
Mod. PBC/3 BINS 365x90	20.5/8.00-10	370	90	58	90	105
Mod. PBC/3 BINS 365x105	20.5/8.00-10	365	105	58	90	105
Mod. PBC/3 BINS 330x130	20.5/8.00-10	330	130	58	90	145
Mod. PBC/3 BINS 305x130	20.5/8.00-10	305	130	58	90	145
Mod. PBC/3 BINS 405x130	20.5/8.00-10	405	130	58	90	145
Mod. PBC/3 BINS 370x130	20.5/8.00-10	370	130	58	90	145
Mod. PBC/3 BINS 490x130	20.5/8.00-10	485	130	58	90	145

you can choose any size that is not in the catalog

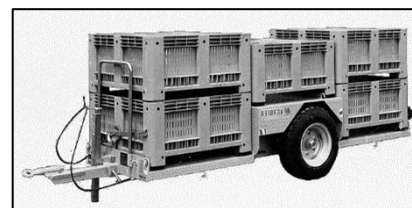


1.8.8 TRAILER mod. PC R 25

Trailer indicated to facilitate the work that is commonly carried out for the phases of harvesting of fruit and vegetables in-row cultivation, road transport and container unloading pallets with grapes and fruit.

Details:

- 30 dm platform of non-slip embossed sheet.
- Complete with mezzanine to avoid obstacles during collection.
- Sectioned tubular construction.
- Side angles for containing container.
- Front bulkhead that stops containers.
- Removable drawbar length- and height-
- Wheels 10/75/17/ 12 PR



ON DEMAND:

articulated
drawbar to turn
better in the rows



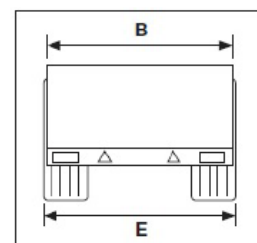
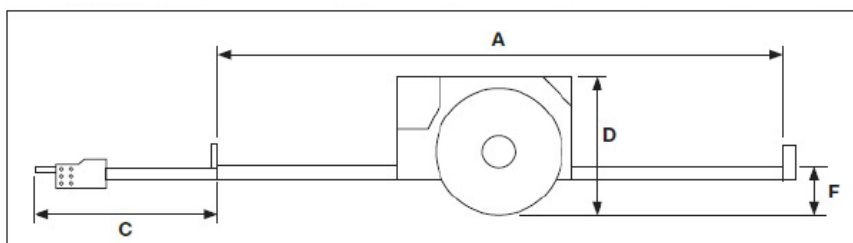
adjustable.

Mod. PC R 25 FOR CONTAINERS 113 X 113							
Mod.	Containers number	A	B	F	C	D	E
		cm	cm	cm	cm	cm	cm
PC R 25/3	3	345	115	35	100	77	115
PC R 25/4	4	457	115	35	100	77	115
PC R 25/5	5	570	115	35	100	77	115

Mod. PC R 25 SA FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A	B	F	C	D	E
		cm	cm	cm	cm	cm	cm
PC R 25/3 SA	3	365	105	35	100	77	115
PC R 25/4 SA	4	485	105	35	100	77	115
PC R 25/5 SA	5	600	105	35	100	77	115

Mod. PC R 25 LS FOR CONTAINERS 120 X 100 - 120 X 80							
Mod.	Containers number	A	B	F	C	D	E
		cm	cm	cm	cm	cm	cm
PC R 25/3 LS	3	305	125	35	100	77	115
PC R 25/4 LS	4	405	125	35	100	77	115
PC R 25/5 LS	5	505	125	35	100	77	115

you can choose any size that is not in the catalog



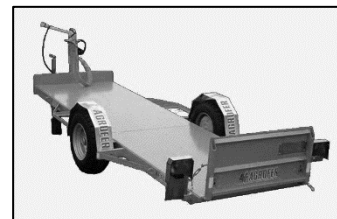
1.8.9 TRAILER mod. TM40 RE and TM40 RS

Type of trailer specially designed to transport machinery such as tracked tractors, mini-excavators, pallets and other difficult machines to transport on the road.

1.8.9.1 mod. TM40 RE

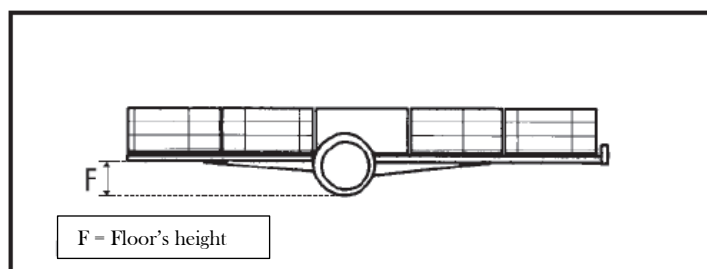
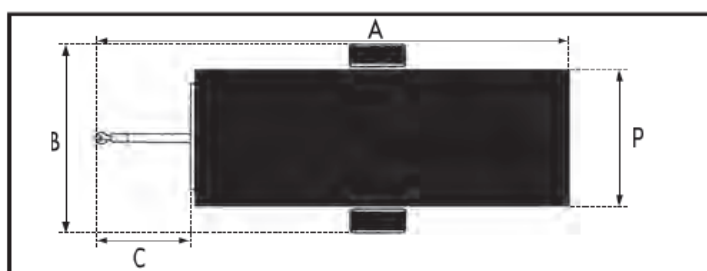
Details:

- Main frame structure consisting of 150x150 tubular metal struts.
- Hydraulic tipping with double-acting piston.
- Fixed platform without cylinder.
- Rear footboards for machines loading.
- Platform made of embossed sheet 30 dm;
- Height-adjustable drawbar
- Axle with mechanical brake.
- Wheels 10/75/15 PR
- "Lights" road signaling system.



Mod.	Platform P	A	B	C	F	Capacity
	cm	cm	cm	cm	cm	Kg
G 40 TM RE 40.14	140	400	200	100	40	5000
G 40 TM RE 45.14	140	450	200	100	40	5000
G 40 TM RE 50.14	140	500	200	100	40	5000
Mod. S						
G 40 TM RE 40.16	160	400	220	100	40	5000
G 40 TM RE 45.16	160	450	220	100	40	5000
G 40 TM RE 50.16	160	500	220	100	40	5000

you can choose any size that is not in the catalog



1.8.9.2 Mod. TM40 RS

Details:

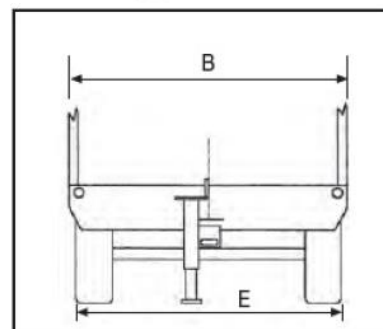
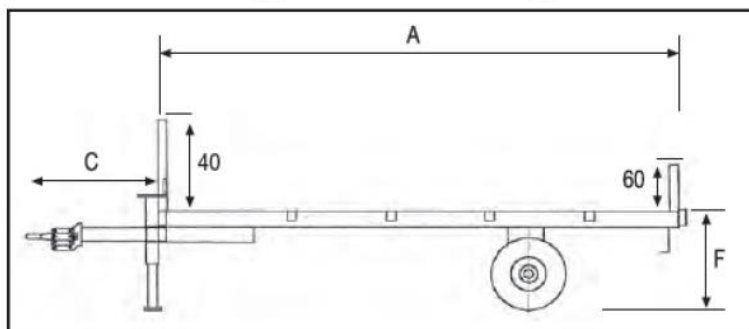
- Main structure of the frame made of sectioned tubular.
- Hydraulic tipping with double-acting piston.
- Rear footboards for 600 mm machines loading.
- Embossed sheet platform of 30 dm.
- Axle with mechanical brake.
- "Lights" road signaling system.



The **overturning** is carried out by activating the hydraulic lever, which in turn activates the double acting piston.

Mod. Twin wheels 205.75.17,5 used	A cm.	B cm.	C cm.	F cm.	E cm.	Capacity Kg
G 40 TM RS 20	400	200	130	75	190	50 Q.li
G 40 TM RS 22	400	230	130	75	210	50 Q.li
G 40 TM RS 23	460	230	130	75	220	50 Q.li
G 40 TM RS 24	500	250	130	75	230	50 Q.li
G 40 TM RS 25	550	250	130	75	230	50 Q.li
G 40 TM RS 26	600	250	130	75	230	50 Q.li
G 40 TM RS 28	650	250	130	75	230	50 Q.li

you can choose any size that is not in the catalog



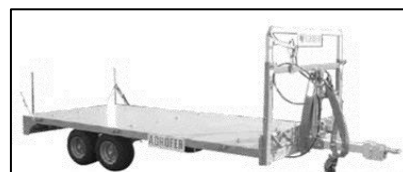
1.8.10 TRAILER mod. PM TA TANDEM and PM RS TANDEM

Type of trailer specially designed to transport machinery such as tracked tractors, mini-excavators, pallets and other difficult machines to transport on the road.

1.8.10.1 mod. PM TA TANDEM

Details:

- TANDEM rocker axle with 4 wheels.
- Fixed platform G;
- Construction in 30dm omega moldings;
- Iron platform with 30 dm embossed sheet.
- Telescopic front bulkhead.
- Rear footrest that stops the product.
- Side angles for containment.
- Height-adjustable eyelet.
- Hooks for ropes.
- Braking axle.
- Removable drawbar.
- Available with single or twin wheels.



WHEELS 20.5 - 14.5



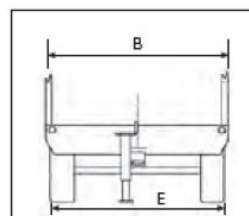
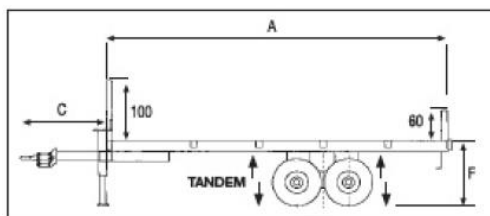
WHEELS 200/60 - 14.5

MOD. TA	Single wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM TA 37x13	20.5/8.00-10	3700	1300	1000	1400	600
PM TA 37x17	20.5/8.00-10	3700	1700	1000	1600	600
PM TA 41x13	20.5/8.00-10	4100	1300	1000	1400	600
PM TA 47x17	20.5/8.00-10	4100	1700	1000	1600	600
PM TA 49x13	20.5/8.00-10	4900	1300	1000 <td 1400	600	
PM TA 37x17 G	200/60-14.5	3700	1700	1000	1600	700

MOD. TA.S	Single wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM TA.S 50x13	200/60-14.5 F740	5000	1300	1000	1400	700-860
PM TA.S 50x17	700 mm	5000	1700	1000	1700	700-860
PM TA.S 60x13	10.075 15.3 F830	6000	1300	1000	1400	700-860
PM TA.S 60x17	860 mm	6000	1700	1000	1700	700-860
PM TA.S 60x20	215/75 17.5 F830 860 mm	6000	2000	1000	2000	700-860

MOD. TA. HI	Twin wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM TA.HI 50x17	200/60-14.5	5000	1700	1000	1700	700
PM TA.HI 60x17		6000	1700	1000	1700	700
PM TA.HI 60x20		6000	2000	1000	2000	700

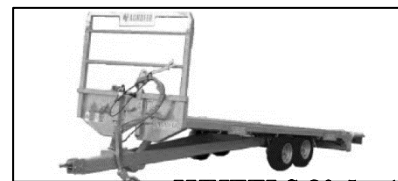
MOD. TA.G	Twin wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM TA.G 50x17	195/50-13	5000	1700	1000	1700	600
PM TA.G 60x17		6000	1700	1000	1700	600
PM TA.G 60x20		6000	2000	1000	2000	600



1.8.10.2 mod. PM RS TANDEM

Details:

- Main structure of the frame made of sectioned tubular.
- 30 dm embossed sheet platform.
- Rear overturning to load double-acting piston machines.
- Rear footrest for machines loading.
- Telescopic front bulkhead.
- 4 wheels with tandem rocker system.
- Braking axle.
- Available with single or twin wheels.



WHEELS 20.5 - 14.5



WHEELS 200/60 - 14.5



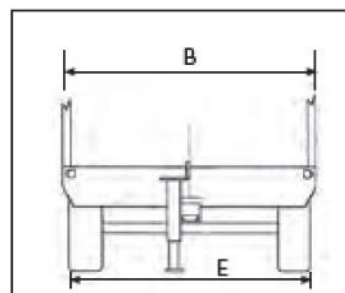
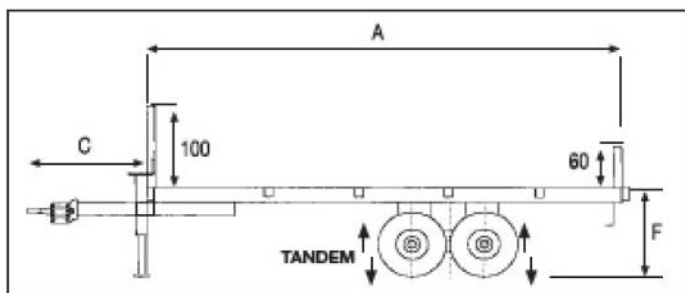
The **overturning** is carried out by activating the hydraulic lever, which in turn activates the double acting piston.

MOD. RS	Single wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM RS 37x13	20.5/8.00-10	3700	1300	1000	1400	600
PM RS 37x17	20.5/8.00-10	3700	1700	1000	1600	600
PM RS 41x13	20.5/8.00-10	4100	1300	1000	1400	600
PM RS 47x17	20.5/8.00-10	4100	1700	1000	1600	600
PM RS 49x13	20.5/8.00-10	4900	1300	1000	1400	600
PM RS 37x17 G	200/60145	3700	1700	1000	1600	700

MOD. RS.S	Single wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM RS.S 50x13	200/60-14.5 F74	5000	1300	1000	1400	700-860
PM RS.S 50x17		5000	1700	1000	1700	700-860
PM RS.S 60x13	10.075 15.3 F85	6000	1300	1000	1400	700-860
PM RS.S 60x17		6000	1700	1000	1700	700-860
PM RS.S 60x20	215/75 17.5 F85	6000	2000	1000	2000	700-860

MOD. RS. HI	Twin wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM RS.HI 50x17	200/60-14.5	5000	1700	1000	1700	700
PM RS.HI 60x17		6000	1700	1000	1700	700
PM RS.HI 60x20		6000	2000	1000	2000	700

MOD. RS.G	Twin wheels	A mm.	B mm.	C mm.	E mm.	F mm.
PM RS.G 50x17	195/50-13	5000	1700	1000	1700	600
PM RS.G 60x17		6000	1700	1000	1700	600
PM RS.G 60x20		6000	2000	1000	2000	600

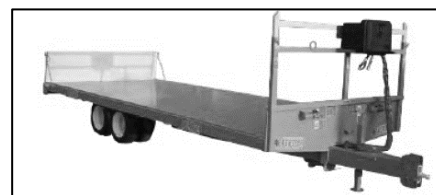


1.8.11 CARRO mod. PTM

Type of trailer specially designed to transport machinery such as tracked tractors, mini-excavators, pallets and other difficult machines to transport on the road.

Details:

- Main structure of the frame made of sectioned tubular.
- Hydraulic overturning with double-acting piston.
- Rear footrest for machines loading.
- 30 dm embossed sheet platform.
- "Lights" road signaling system.
- Front hydraulic footrest.
- Tandem rocker axle.
- Equipped with braking system.



The **overturning** is carried out by activating the hydraulic lever, which in turn activates the double acting piston.

1.8.11.1 mod. PTM

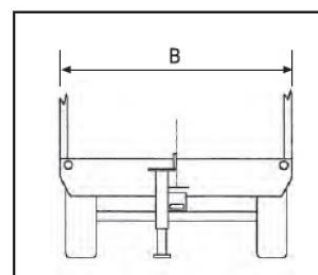
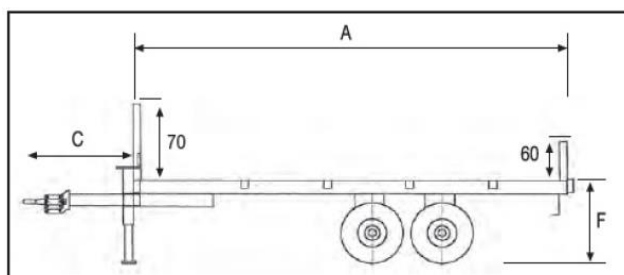
MOD.	A mm.	B mm.	C mm.	F mm.	Twin wheels
P.T.M. HI 50x20	5000	2000	1500	720	200/6014.5
P.T.M. HI 50x23	5000	2300	1500	720	200/6014.5
P.T.M. HI 50x25	5000	2500	1500	720	200/6014.5
P.T.M. HI 55x20	5500	2000	1500	720	200/6014.5
P.T.M. HI 55x25	5500	2500	1500	720	200/6014.5
P.T.M. HI 60x20	6000	2000	1500	720	200/6014.5
P.T.M. HI 60x25	6000	2500	1500	720	200/6014.5

MOD.	A mm.	B mm.	C mm.	F mm.	Twin wheels
P.T.M. 55x25	5500	2500	1500	850	205/65-17.5
P.T.M. 60x25	6000	2500	1500	850	205/65-17.5
P.T.M. 65x25	6500	2500	1500	850	205/65-17.5
P.T.M. 70x25	7000	2500	1500	850	205/65-17.5

1.8.11.2 mod. PTM – AS

- Rear axle steering.

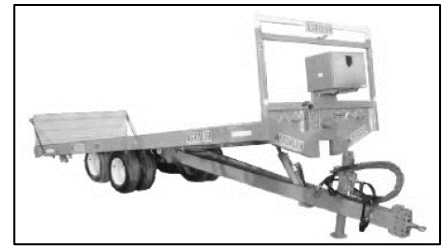
MOD.	A mm.	B mm.	C mm.	F mm.	Twin wheels
P.T.M. AS 55x25	5500	2500	1500	850	205/65-17.5
P.T.M. AS 60x25	6000	2500	1500	850	205/65-17.5
P.T.M. AS 65x25	6500	2500	1500	850	205/65-17.5
P.T.M. AS 70x25	7000	2500	1500 <td 850	205/65-17.5	
P.T.M. AS 55x23	5500	2300	1500	850	205/65-17.5
P.T.M. AS 60x23	6000	2300	1500	850	205/65-17.5
P.T.M. AS 65x23	6500	2300	1500	850	205/65-17.5
P.T.M. AS 70x23	7000	2300	1500	850	205/65-17.5



you can choose any size that is not in the catalog

1.8.12 TRAILER mod. P.M.G. & P.M.G. AS

Type of trailer specially designed to transport machinery such as tracked tractors, mini-excavators, pallets and other difficult machines to transport on the road.



Details:

- Hydraulic overturning with double-acting piston.
- Rear footrest for machines loading.
- 30 dm embossed sheet platform.
- “Lights” road signaling system.
- Front hydraulic footrest.
- Equipped with braking system.

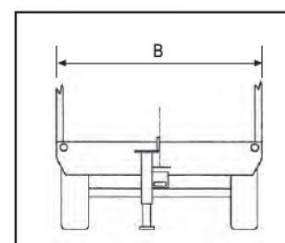
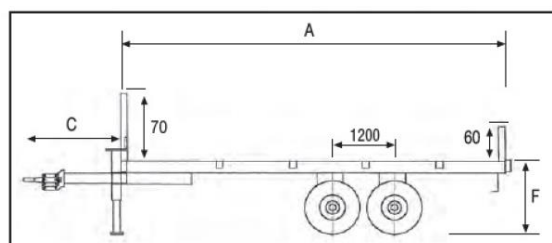
The **overturning** is carried out by activating the hydraulic lever, which in turn activates the double acting piston.

Mod.	A	B	C	F	BRAKING	TIRES	AIR SUSPENSION
	cm	cm	cm	cm			
P.M.G. 60	600	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM REAR FIXED WHEELS
P.M.G. 65	650	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM REAR FIXED WHEELS
P.M.G. 75	750	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM REAR FIXED WHEELS
P.M.G. 80	800	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM REAR FIXED WHEELS
P.M.G. 85	850	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM REAR FIXED WHEELS

PMG AS model is equipped with a steering rear axle

Mod.	A	B	C	F	BRAKING	TIRES	AIR SUSPENSION
	cm	cm	cm	cm			
P.M.G. AS 60	600	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	TANDEM ROCKER ARM STEERING REAR
P.M.G. AS 65	650	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	ROCKER ARM STEERING REAR WHEELS
P.M.G. AS 75	750	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	ROCKER ARM STEERING REAR WHEELS
P.M.G. AS 80	800	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	ROCKER ARM STEERING REAR WHEELS
P.M.G. AS 85	850	250	150	90	HYDRAULIC OR PNEUMATIC	245/70 R17.5 USED TWIN	ROCKER ARM STEERING REAR WHEELS

you can choose any size that is not in the catalog

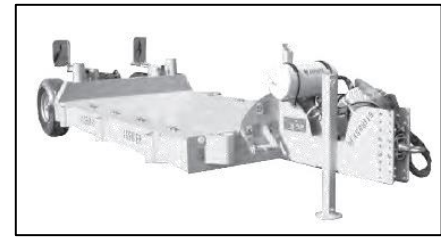


1.8.13 TRAILER mod. PR

Type of trailer specially designed to transport machinery such as tracked tractors, mini-excavators, pallets and other difficult machines to transport on the road.

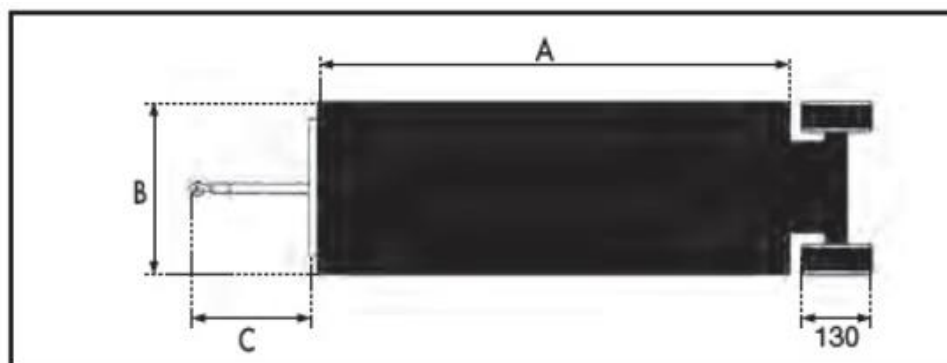
Details:

- Low-platform for various transport.
- Platform with non-slip embossed sheet metal with special reinforcements to the frame.
- Main structure of the frame made of 60 dm sectioned tube.
- Rear wheels to raise and lower the hydraulic platform with double-acting drive with tractor quick-coupling operation.
- Height adjustable F” hooking eye on the tractor.
- Hydraulic parking foot.
- Specific stops to the wheels for road circulation.



The **lowering** of the platform is carried out by operating the special hydraulic lever of the tractor, which in turn activates the double acting pistons which act on the rear wheels.

Mod.	A cm.	B cm.	C cm.	Twin wheels	BRAKING
PR 35	350	200	150	245/70 17.5	HYDRAULIC PNEUMATIC
PR 45	450	200-250	150	245/70 17.5	HYDRAULIC PNEUMATIC
PR 55	550	200-250	150	245/70 17.5	HYDRAULIC PNEUMATIC
PR 65	650	200-250	150	245/70 17.5	HYDRAULIC PNEUMATIC
PR 80	800	250	150	245/70 17.5	HYDRAULIC PNEUMATIC
PR 80-30 S	800	300	150	245/70 17.5	HYDRAULIC PNEUMATIC



you can choose any size that is not in the catalog

1.8.14 FURTHER ACCESSORIES ON DEMAND

1.8.14.1 HYDRAULIC CAGES

The trailers can be equipped with hydraulic cages to contain the containers during transport. They are also available with side, front and rear closing tarps.



cod. Ci 10



**STRUCTURE WITH HYDRAULIC CAGES TO CONTAIN THE CONTAINERS DURING TRANSPORT.
THERE ARE ALSO ALUMINIUM BARS TO THE SIDE, WHICH CAN BE REMOVED DURING THE UNLOADING PHASE OF THE TRAILER.
QUICK COUPLING OPERATION.**

MINIMUM LENGTH 330 CM - MAXIMUM LENGTH 550 CM



cod. Ci 20



**STRUCTURE WITH HYDRAULIC CAGES TO CONTAIN THE CONTAINERS DURING TRANSPORT.
THERE ARE ALSO ALUMINIUM BARS TO THE SIDE, WHICH CAN BE REMOVED DURING THE UNLOADING PHASE OF THE TRAILER.
QUICK COUPLING OPERATION.**

MINIMUM LENGTH 500 CM - MAXIMUM LENGTH 850 CM

WARNING!

*Do not climb, do not move with people on the trailer or nearby,
do not move during loading and unloading phases. Keep a safe distance during operations.*

WARNING!

Keep off roof. It is not load-bearing.

WARNING!


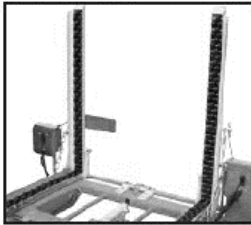
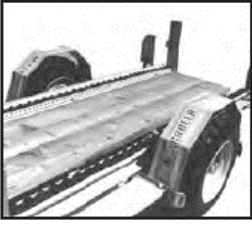



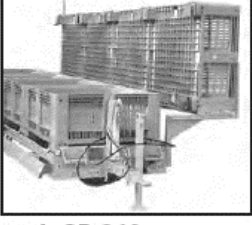
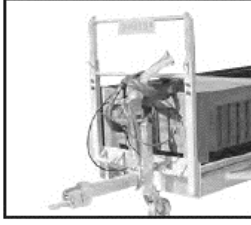
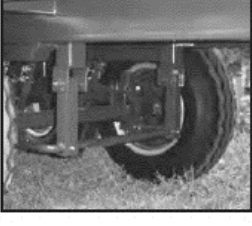
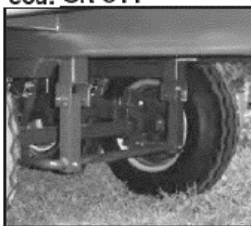
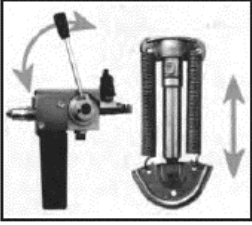

PLEASE close the hydraulic circuit cut-off valve (tap) located on the tractor's jack in order to keep the cage in position once the device has been switched off to exclude any oil leakage.



Figure 3. Hydraulic circuit cut-off valve

1.8.14.2 Accessories

REFERENCE MODELS			
G40RT	<input checked="" type="checkbox"/>	ECO S	<input checked="" type="checkbox"/>
G40RT TA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
E12	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
ECO	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

<p>cod. CR 001</p> 	<p>Complete set of lights for Mod. E12 - ECO - ECO S</p> <p>(in the other models: standard)</p>	<p>cod. CR 002</p> 	<p>Hydraulic rear supports with quick-coupling operation for containers unloading</p> <p>To be applied to all models</p>
<p>cod. CR 003</p> 	<p>Wooden platform with treated larch boards</p> <p>300-400 mm 400-600 mm</p>	<p>cod. CR 004</p> 	<p>Painted embossed sheet platform</p> <p>300-400 mm 400-600 mm</p>
<p>cod. CR 005</p> 	<p>2 double-wheeled roller conveyors for unloading the "extra" containers for Mod.: G40 TM RE - G40 TM RS - ECO - ECO S (in the other models: standard)</p> <p>Cod. CR 005 Application to your solution Cod. CR 006</p>	<p>cod. CR 007</p> 	<p>Application pivoting coupling</p>
<p>cod. CR 008</p> 	<p>Empty bins-holder structure with side opening/closure (for the phase of machine harvesting of tomatoes)</p>	<p>cod. CR 009</p> 	<p>Telescopic front bulkhead to stop the containers</p>
<p>cod. CR 010</p> 	<p>Axle with mechanic brake</p>	<p>cod. CR 011</p> 	<p>Axle with hydraulic external brake and register valve for braking adjustment</p> <p>Quick tractor couplings operation</p>
<p>cod. CR 012</p> 	<p>Manual brake system with "Bulgani" hydraulic lever</p> <p>60 Quintals CR 012 Hydraulic brake pedal on the tractor if supplied 60 Quintals CR 013</p>	<p>cod. CR 015</p> 	<p>Pneumatic brake system</p> <p>60 - 80 Quintals</p>

1.8.14.3 Accessories

REFERENCE MODELS:			
PBC/3	☑	PBC/3 hydraulic piston	☑
PC25	☑		☑
PCR/25	☑		☑
PBC/3 BINS	☑		☑

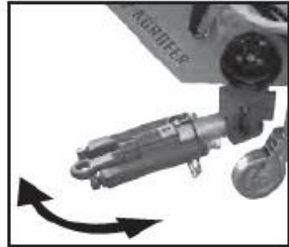
cod. CR 030



Drawbar with hydraulic movement and quick-couplings operation to facilitate entry and exit from the rows.

To be applied to: Mod. PCR/25/3 - PBC/3 STANDARD

cod. CR 007



Application pivoting coupling

cod. CR 032



Lateral supports that can be moved from the trailer 30 cm in height sectioned

- 300-400 cm
- 400-600 cm
- 600-800 cm

cod. CR 005



2 double-wheeled roller conveyors for unloading the containers from the platform (available on all models)

- 300-400 cm
- 400-600 cm
- 600-800 cm

cod. CR 010



Axle with mechanic brake

cod. CR 011



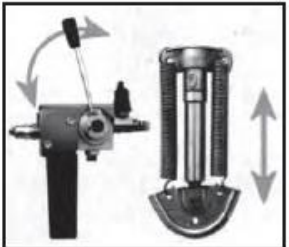
Axle with hydraulic external brake and register valve for braking adjustment

Quick tractor couplings operation



CR 015
Pneumatic brake system
60 Quintals

CR 037
Pneumatic brake system
80 - 100 - 120 Quintals



CR 012
Manual brake system with hydraulic lever
60 Quintals

CR 013
Hydraulic brake pedal on the tractor if supplied 60 Quintals

CR 020
Hydraulic brake
80 - 100 - 120 Quintals

1.8.14.4 Accessories

REFERENCE MODELS:					
PC R 25	<input checked="" type="checkbox"/>	PM TA TANDEM	<input checked="" type="checkbox"/>	PR	<input checked="" type="checkbox"/>
G40 TM RE	<input checked="" type="checkbox"/>	PM RS TANDEM	<input checked="" type="checkbox"/>		
G40 TM RS	<input checked="" type="checkbox"/>	PTM	<input checked="" type="checkbox"/>		
PBC/3 BINS	<input checked="" type="checkbox"/>	PMG	<input checked="" type="checkbox"/>		

<p>cod. PN 001</p> 	<p>Drawbar with hydraulic movement and quick-couplings operation Tractor oil</p>	<p>cod. PN 007</p> 	<p>Application pivoting coupling ONLY FOR: PBC BINS -PM TA-PM RS</p>
<p>To be applied to: PMG -</p>		<p>cod. PN 005</p> 	<p>2 double-wheeled roller conveyors for unloading the containers from the platform (available on all models)</p> <p>300-400 400-600 600-800</p>
<p>cod. PN 002</p> 	<p>Lateral supports sectioned tubular</p> <p>300-400 : 400-500 : 500-600 : 600-800 :</p>	<p>cod. PN 006</p> 	<p>Manual enlargement with bolts fixing Width: 20 or 25 cm Lengths:</p> <p>500-550 600-650 700-800</p>
<p>cod. PN 080</p> 	<p>Telescopic rear extension Run 1 m</p>	<p>cod. PN 011</p> 	<p>Axle with hydraulic external brake and register valve for braking adjustment</p> <p>Quick tractor couplings operation</p>
<p>PMG / PTM</p> <ul style="list-style-type: none"> - Mod. hydraulic 2 cylinders - Telescopic sheet locking 	<p>PM.RS - PM.TA</p> <ul style="list-style-type: none"> - Manual - Mod. hydraulic 2 cylinders - Telescopic sheet 	<p>PN 015</p> 	<p>Manual brake system with hydraulic lever 60 Quintals</p>
<p>cod. PN 081</p> 	<p>Hydraulic rear platform with double-acting cylinders Net bottom</p> <p>from 170 to 250</p>	<p>PN 037</p> 	<p>Hydraulic brake pedal on the tractor if supplied 60 Quintals</p>
	<p>Pneumatic brake system 60 Quintals</p> <p>Pneumatic brake system 80 - 100 - 120 - 140 Quintals</p>	<p>Brake pedal system if supplied 80 - 100 - 120 - 140 Quintals</p>	

1.9 SOUND LEVEL

The noise level was detected no-load according to the UNI EN 1553/2001 standard and resulted:

- Sound pressure: LpAm dB < 85, with the tractor running.

WARNING

If the tractor is equipped with a cab, the sound level will depend on the level of isolation of the cab itself. If the tractor is not equipped with a cab or it works with open windows, evaluate the level of the trailer at work and its noise: if it is over 85 Db, hear protectors are compulsory as required by every country's law.

1.10 INFORMATION ABOUT TECHNICAL ASSISTANCE AND MAINTENANCE OF THE TRAILER

In case of damage, first check if included in the CHAPTER MAINTENANCE AND REPAIRING. Otherwise contact the firm AGROFER S.r.l.

WARNING

If the instructions written in the CHAPTER MAINTENANCE AND REPAIR are not respected, AGROFER S.r.l. is relieved of any responsibility in case of accident to people and/or things or malfunction of the trailer.

2 GENERAL SAFETY WARNINGS

In designing the TECHNICAL BROCHURE and in realising this manual, AGROFER s.r.l. has evaluated every interaction between the operator and the trailer. Therefore, the number and the title of the operators responsible for every intervention given in this manual is optimal. If too many operators or operators without adequate titles are employed, every manufacturer's effort in guaranteeing security and high performance is considered useless. The user must train the staff in the risks derived from injuries, in the devices predisposed for the operator's safety and in the safety rules provided by the laws in force.

As provided by the Directive 2006/42/CE and the following modifications, AGROFER s.r.l. recommends everyone to know these definitions:

- **DANGEROUS AREA:** "DANGEROUS AREA" is every area in and/or near the trailer where the presence of an exposed person is a risk for the safety and the health of this person.
- **EXPOSED PERSON:** every person who is entirely or partially in a dangerous area.
- **OPERATOR:** the person in charge for performing, regulating, executing the ordinary maintenance or cleaning.

2.1 OPERATOR AND MAINTENANCE MAN

- **USERS of the TRAILER:** staff who is adequately trained and who can execute only simple tasks, that is, using the trailer for the purposes which it was realized for.
- **MAINTENANCE MAN:** a qualified technical man who can use the TRAILER and can perform regulations, maintenance or repairing interventions on mechanical units.
- **MANUFACTURER TECHNICIAN:** qualified technician made available by AGROFER S.r.l. to do complex repairs in particular situations, according to what previously agreed with the client.

2.2 PREVENTIVE AND SAFETY MEASURES

If these warnings or the ones written in the chapter INSTRUCTIONS ORDINARY MAINTENANCE are not respected and in case of possible alteration of the safety devices, AGROFER S.r.l. is relieved of any responsibility in case of accidents, damages or malfunctions of the trailer.

Before using the TRAILER, the operator must know very well the position and operation of every device and control.

The operator must also be able to perform every operation described in this manual, he must be sure to have entirely understood the safety rules and be able to apply them correctly while using and maintaining the TRAILER. The TRAILER can be used only in compliance with what is prescribed in this manual.

WARNING!

Every operator, maintenance man and staff employed in the cleaning must read this manual carefully before using the trailer

WARNING!

The staff employed in the installation, control, maintenance of the TRAILER and its equipment should be technically trained in relation to the tasks they have to perform

WARNING!

The staff employed in the installation, control, maintenance of the TRAILER and its equipment should be technically trained in relation to the tasks they have to perform

- The content of this manual must be compulsorily followed, the CEE general safety rules, the national rules and the ones valid for the specific sector must be respected.
- The use, regulation and maintenance must be executed only by authorized and trained staff (AGROFER S.r.l. offers training courses for the responsible staff).
- If any interventions and regulation take place, the tractor must be blocked or turned off, the cardan shaft unfastened and the trailer set in a safety position.
- Every device, in particular safety devices, have to be checked by a specialized technician before starting the trailer for the first time after modifications and repair works.
- Before using the trailer, the operators have to feel comfortable in using the control and manoeuvre units. This manual must be kept always at hand.
- Driving the tractor is strictly forbidden for unprepared staff, for staff without an adequate driving licence, or with bad psychophysical conditions.
- Driving on the road is subordinated to the road code laws in force in the relative country.
- During road transport the trailer has effect on the braking system and the directional control of the tractor.
- Only tractors with adequate power must be used with the trailer (See paragraph “Technical Details”)
- Do not abandon the tractor running or turned off with the key on the control panel.
- While working, the operator must not permit people or animals to approach to the operating range of the trailer.
- The TRAILER must not for any reasons be modified. In case of malfunctions caused by this reason, the AGROFER S.r.l. Is relieved of any responsibility.
- The TRAILER must be employed only for the use it was designed for.
- Do not run the TRAILER with dismantled fixed/mobile protections.
- Do not eliminate the safety devices and protections installed.
- The client must inform AGROFER s.r.l. In case of lacks or malfunctions in the safety systems or in every situation of supposed danger.
- Before using the TRAILER, make sure that every safety devices is in good condition and correctly situated at its right place; if damages or malfunctions to protections occur, they must be immediately replaced before using the trailer.
- The staff must follow every safety and caution instructions relative to the TRAILER
- When connecting the TRAILER to the means for transmission of the motion and before turning it on the employed staff must check that nobody is in the danger area.
- A general check of the TRAILER condition before starting is necessary. If malfunctions or unidentified conditions occur, do not use the TRAILER and ask the maintenance service. Do not take the initiative on the TRAILER outside the own operative area of expertise and not respecting the instructions contained in this

manual.

- The operators must have the individual safety devices that are described in this manual and the ones that are prescribed in the specifications about the safety in the work environment where the trailer is to be used.
- The operator must not do operations or interventions which are not of own competence.
- The operator must report every problem or dangerous situation that can happen.
- The staff must always be trained by an experienced staff.
- Check always every element that builds the system of the TRAILER and every safety device before using it to see if they are intact.
- When the TRAILER is not used, every action (e.g. Removing the keys of the tractor, removing the tractor and so on) to prevent accidental starts or starts carried out by unauthorized staff must be undertaken.
- After using it, the TRAILER must be cleaned by the user, who must control the wear conditions of the transmission units, the tyres, the casings and the protection elements.
- Before maintaining or repairing it, the TRAILER must be completely released from the means for motion transmission and placed in an adequate area with drawbar on the ground and always stopped with the handbrake. In case the trailer is not supplied with braking system use wheel stopper.
- The maintenance and repairing operations must be performed by the staff qualified for these functions.
- During maintenance or repairing operations the staff not in charge must remain at a safety distance from the trailer.
- At the end of maintenance and repairing operations, before using the TRAILER, the maintenance man must be sure that every safety device is reactivated.
- The signage on the trailer gives important indications that must be respected.

Make sure that every safety pictogram is readable. Clean them and if needed, replace them with new labels.

2.3 PREVENTIVE AND SAFETY MEASURES "WORKING AREA CARDAN SHAFT"

If the model of TRAILER requires the use of cardan:

- In order to start the hydraulic system, use the appropriate cardan shaft supplied or suggested by AGROFER s.r.l. equipped with appropriate safety devices and protections fastened with specific chains.
- Do not come between the tractor area and the trailer when the tractor engine is on.
- Do not come between the tractor and the trailer when the cardan shaft is in motion.
- Do not come between the tractor and the trailer when the handbrake is not put on.
- Control frequently if the cardan shaft is perfectly intact and if its protections are fastened.
- The disassembly/assembly of the cardan must be performed when the tractor engine is turned off, the handbrake put on and the key removed from the control panel.
- Be careful to the correct assembly and to the safety of the cardan shaft and be sure that the rotation of the protection of the cardan shaft is blocked by the specific chain.
- The cleaning and the greasing of the cardan shaft must be performed only with the engine shut off, the power take-off released, the handbrake put on and the starting key of the tractor removed from the control panel of the tractor.

2.4 EXPECTED AND UNEXPECTED USE

The CONTAINER TRAILER is designed to operate in both agriculture and industry. The only purpose is reserved for transport, loading and unloading of ortho-fruit products contained in special standard-sized PVC containers. It is intended to be towed exclusively by agricultural tractors.









The PLATFORM TRAILER is designed to operate in both agriculture and industry. The only purpose is that of the unloading and unloading of small machines and bins baskets/containers for the transport of fruit/vegetables. It is intended to be towed exclusively by agricultural tractors.












WARNING!

AGROFER S.r.l. is relieved of any responsibility in case of accident to people and/or things or malfunctions of the TRAILER if it is used in sectors different from which it was designed for.

2.5 WARNING PICTOGRAMS ABOUT POTENTIAL DANGERS

The TRAILER had been constructed following the safety laws for the operators' protection. Further risks could occur. Some of them are marked on the trailer with safety sticky signals that show various dangerous situations in their essential form. The pictograms must always be cleaned and replaced immediately when they are detached or damaged. The manufacturer can supply safety replacement stickers. Put the new supplied stickers in the same position of the damaged ones.

	<p>Read carefully and respect what is prescribed on the use and maintenance book supplied by the manufacturer and perform the ordinary maintenance.</p>
	<p>Before implementing any interventions on the trailer, stop the tractor engine and remove the key.</p>
	<p>Risk of lateral overturning on inclined streets.</p>
	<p>Do not remain between the trailer and the tractor.</p>
	<p>Only one person can use the trailer.</p>
	<p>Before disconnecting the hydraulic piping system, check that the circuit is not under pressure. To avoid a wrong coupling of the hydraulic piping system, the oil jacks of the tractor and the quick coupling operation of the trailer must be supplied with an identification code.</p>
	<p>Liquid under pressure. Danger of injuries. Remain at a safety distance.</p>
	<p>Remain at a sufficient distance from the electric line during lifting phases. Danger of contact with overhead electric lines.</p>

	<p>Entanglement in the cardan shaft in rotation. In order to avoid the risk of entanglement and dragging by the units for motion transmission – cardan shaft – keep away from it when it is in rotation; approach only when the tractor engine is turned off or the trailer is stopped; use the transmission provided with protections and wear the suitable clothing. Respect the rotation sense and the rotation speed.</p>
	<p>Danger: falling of parts from the lifted trailer. Remain at a safety distance.</p>
	<p>Before performing any operation block the container through the supplied wheel stopper</p>
	<p>The use by unprepared staff is forbidden. The access or transport of people is forbidden. Lifting people is forbidden. Running with container lifted is forbidden.</p>
	<p>Remaining in the operating area of the trailer is forbidden.</p>
	<p>Before every manoeuvre be sure that people, animals or things are not in the operating area of the trailer.</p>
	<p>Moving parts, keep away every person from dangerous area</p>
	<p>Minimum distance pressure washing: 30 cm Water temperature under 40 °C (104 °F) Support foot: do not exceed 80 kg</p>
	<p>Tighten the wheels nuts after 8 operating hours.</p>
	<p>Greasing points.</p>
	<p>Wear the individual safety devices required.</p>

3 INSTRUCTIONS FOR DELIVERY AND STORAGE

3.1 DELIVERY OF THE TRAILER TO THE CLIENT

The delivery of the trailer is performed with a truck. The unloading operation of the trailer can be very dangerous if not performed with the maximum attention. When the unload of the trailer is disposed, the mean of transport must be parked in a safety and adequate area, the unauthorised people kept away, the area must be free and defined. The operating area has to be free and there must be a sufficient “escape route”, i.e. a free and safe area where to move fast in case the trailer falls. These operations must be performed only by staff prepared and authorised to this type of manoeuvres.

DELIVERY WITH TRUCK SUPPLIED WITH CRANE:

If the truck is supplied with a crane, the carrier unloads the trailer autonomously.

DELIVERY WITH TRUCK SUPPLIED WITH SLIDES/REAR FOOTBOARDS

The carrier prepares the rear footboards so that the client could go up the truck, which is going into reverse with the tractor, then the carrier couples the trailer and go on with the unloading. This operation must be carried out with attention and expertise, for this reason operate with caution, proceed slowly and be sure not to deviate from the slides, danger of falling.

3.2 INSTRUCTIONS FOR STORING

Be careful not to damage the TRAILER during the parking,

The parking area should have a good support basis for the trailer, a good lightening (according to existing rules) and should be accessible on every side for control and maintenance. Equip the quick coupling of the TRAILER with the supplied protection cups and position them to avoid the contact with the ground or with elements which could compromise their integrity.

WARNING!

The trailer must always be parked with the handbrake put on or wheel stoppers placed.

Be careful that the ground is not inclined.

3.3 ENVIRONMENTAL CONDITIONS ALLOWED IN THE PARKING AREA

Environmental conditions allowed in the parking area of the trailer.

- Ambient temperature between -10°C and +50°C (14 °F and +122 °F).
- A good homogeneity of the supporting base.
- Dry place protected from the atmospheric agents.
- If a long period of storing is necessary, the trailer must be cleaned in every part, greased and protected with a waterproof cloth so as to prevent the passing of the dust, the humidity and so on.

WARNING!

AGROFER s.r.l. is relieved of any responsibility for malfunctions of the trailer if the parking conditions are different from those described above.

3.4 NECESSARY SPACE FOR THE MAINTENANCE IN THE PARKING AREA

In the parking area there should be at least 1 meter of space around the perimeter of the trailer in order to permit the maintenance in safety conditions.

3.5 PARKING AREA OF THE TRAILER

The trailer must be parked in an area with a bearing floor, without depressions, in order to preserve the trailer from potential tampering and bumps.

3.6 INSTRUCTIONS TO SET “OUT OF SERVICE”, DISMANTLE AND ELIMINATE THE TRAILER

At the end of its activity, the trailer must be dismantled and eliminated. In this case the operation must be performed according to the local disposal laws, beyond what is provided by the EU laws on the environmental protections.

- Directive CEE 75/442 about generic waste disposal.

- Directive CEE 78/319 about toxic and noxious waste disposal.
 - Directive CEE 75/439 about used oils disposal.
- For the demolition of the trailer call a firm specifically authorized to the waste disposal.

4 INSTRUCTIONS FOR USE

4.1 PRECAUTIONS FOR GENERAL USE

- The skilled staff must check preliminarily the integrity of the TRAILER.
- The TRAILER must be used only by authorized staff, which must be adequately trained and equipped with the suitable driving licence for the tractor.
- Be sure that there are not people or animals in the manoeuvre and working area of the TRAILER.
- Keep the TRAILER cleaned and eliminate the extraneous elements (debris, possible accessories and so on) which can cause damages to its system or to the operator.
- Before intervening on parts of the TRAILER in movement, be sure that the container is stopped, stop the tractor engine, put on the brakes and remove the key from the control panel.
- Do not transport people, animals or things on the TRAILER.
- If the TRAILER must be disconnected from the tractor, perform the operation on the flat with the handbrake of the tractor put on.
- Before using the TRAILER be sure that every safety device is in good condition and correctly positioned.
- Before using the TRAILER, check the tightening of every screw, nut, the condition of the hydraulic circuit and the wear of the bearings and if necessary, replace immediately the wear parts according to what is provided in this manual in the chapter “Maintenance”.
- Check the proper functioning of the lightening system of the TRAILER: lights, cabling, plugs.
- Check the pneumatics (pressure, integrity and wear of the tread)
- Check the integrity of the braking system (if present)
- For explanations on the operation and maintenance call the manufacturer or the authorized dealers.
- Use only original spare parts.
- Do not wear clothes that can get entangled on parts in movement (fluttered working clothes, scarfs, coats...).
- Use adequate PPE (for example footwear with reinforced cap and leather gowns, that can reduce the effects of possible little crushing).

4.2 ENVIRONMENTAL CONDITIONS SUITABLE FOR USING THE TRAILER

Environmental conditions suitable for the good operation of the trailer.

- Ambient temperature between -10°C and +50°C (+14 °F and +122 °F).
- A good homogeneity of the ground.
- Absence of big obstacles (rocks and so on...) that can damage the trailer.
- Good ground levelling.
- Absence of strong declivity or strong disconnections, that can cause the overturning of the trailer.
- Absence of climatic conditions that can cause the trailer to be covered too much with mud.

4.3 COUPLING TO THE TRACTOR AND TOWING

The coupling must be performed by a single operator who, before proceeding, must read and follow what is indicated in the general safety warnings.

WARNING!

In case the trailer requires the use of the cardan for the motion transmission, follow the instructions in the chapters 4.4 and 4.5

After having taken the necessary safety precautions, proceed as follows:

1. Bring the tractor slowly near the towing eye of the TRAILER
2. Put on the handbrake of the tractor, turn off the tractor and remove the key
3. Get out the tractor and insert the coupling plug in the towing eye and the safety split pin
4. For the models that use the pivoting drawbar with three-point connection on the tractor lift, check the adjustment of the third point of the lift when connecting
5. Connect the supply quick couplings of the hydraulic system being careful to the correct coupling of the supply and return pipes.
6. Connect the electric coupling plug to the tractor socket
7. If the trailer model requires it, insert the drive shaft to the tractor and trailer PTO
8. Rotate the crank of the parking foot to lower the drawbar, lift the parking foot to avoid that it interferes with the tractor wheel during the circulation and insert the stop lever
9. Release the handbrake of the TRAILER and/or remove wheel stoppers
10. Place the control gear of the TRAILER on the tractor
11. Check that nobody stands near the trailer and tractor
12. Get in the tractor, check that the PTO is released and restart the engine
13. While running, reduce the speed, above all in bends, manoeuvres or bumpy roads.

4.4 COUPLING THE MOTION TRANSMISSION THROUGH THE CARDAN

What follows is valid if the model of trailer requires the cardan shaft, coupled to the tractor PTO.

WARNING!

The examples of dangers identified in the use of cardan shafts are “entanglement” and “dragging”.

To reduce this risk:

- *The employed staff must wear close-fitting working clothes, without fluttered parts like laces, ties, scarfs or everything that can be handhold*
- *Long and flowing hair must be tied because they are easy grab for the rotary organs*
- *Strangers must not stand around the trailer with the motion transmission in action.*
- *Never abandon the group trailer-tractor in the company centre, near houses or on public roads with the engine on, with the key inserted in the control panel or with the cardan transmission on.*

Use only the type of cardan supplied with the trailer. Before using it read carefully the manual of use and maintenance supplied with the present manual.

WARNING!

The coupling of the cardan shaft, trailer/tractor must be performed only on the flat, with the tractor turned off, keys removed and handbrake put on.

WARNING!

AGROFER s.r.l. is relieved of any responsibility in case of accidents to people, animals and/or things or malfunctions of the trailer, if a cardan different from which supplied with the trailer is used.

After reading carefully the manual of use and maintenance of the cardan, and, in any case, before inserting the cardan shaft check:

- The PTO (correct cleaning and slight greasing)
- The correct setting of protections
- The direction of rotation of the PTO

- The appropriate rotation regime
- The curvature angles and correct working length.

For connecting the cardan to the side of the cart:

- Insert the cardan shaft on the grooved shaft of the trailer, keeping the safety plug pushed, release the plug and withdraw with the cardan shaft until the plug itself engages with a "click" in its seat. If you do not hear the click of the plug in, repeat the procedure.

WARNING!

Do not climb the cardan shaft either stable or in rotation.

Do not use the cardan shaft without the adequate protections and small chains, not in compliance with law requirements and without CE-marking

After having coupled the cardan shaft, check that the protections overlap for at least 5 cm

After having coupled the cardan shaft, fasten the relative small chains of the protections, to the tractor and the trailer

The cardan shaft at work must not exceed an inclination of 10 degrees

4.5 ADJUSTMENT OF THE CARDAN SHAFT TO THE INDEPENDENT SYSTEM

What follows is valid if the trailer model requires the use of the cardan shaft, coupled to the PTO of the tractor.

When the trailer is coupled to the tractor for the first time, be sure that:

- the cardan shaft is not completely closed in condition of minimum extension;
- the cardan shaft must overlap for at least 1/3 of its length in condition of maximum extension.

The cardan shaft supplied with the trailer has a standard length. An adjustment to the shaft itself should be necessary.

WARNING!

In case of adaptation before intervening on the cardan shaft contact the manufacturer.

WARNING!

If the trailer is coupled to another tractor, check what it is reported in the previous point and check that the protections cover completely the parts of the cardan shaft in rotation.

4.6 TRANSIT ON PUBLIC STREETS

In case of transit on public street, if the trailer model is homologated for it, follow the traffic code scrupulously, paying specific attention to the advancing speed, following what is written on the approval certificate.

Before entering a public street, these precautions are compulsory:

- provide the tractor with orange or yellow flashing light;
- check that the light bar at the back of the trailer is intact and operative;
- if the trailer comes from muddy ground, clean the pneumatics of the tractor accurately;
- if the trailer uses the tractor PTO check that it is released
- check that the hydraulic system is released
- put the trailer with the platform in a horizontal position;
- ensure the correct closing of any banks
- secure the load following the instructions in paragraph 4.7.1

4.7 DRIVING AND MANOEUVRES

Before driving check that:

- What is written in paragraphs 4.1 and 4.2 has been done
- The hand brake is released
- The electric system of the trailer and the tractor works correctly
- The pressure of the wheels has been checked.

WARNING!

While driving or after having parked, always check the perfect coupling of the trailer to the tractor.

WARNING!

Do not overload the TRAILER and respect the Approval details.

The overload can compromise the safety during the towing or the integrity of the trailer.

DRIVING:

In addition to the general safety rules while driving the tractor, these other precautions must be followed:

- With the trailer coupled, in particular when loaded, the acceleration could diminish
- In bends, the trailer traces a trajectory with an inferior ray compared to the tractor. For this reason, the trailer takes the bends more narrowly
- The braking distance increases
- There is more sensitivity to lateral wind gusts

REVERSING MANOEUVRES:

- Be sure that the handbrake is released
- Be sure of the absence of obstacles on the ground, which could block the wheels
- Back up slowly to keep control on the vehicle
- During the reverse, the trailer is manoeuvred by the towing eye of the drawbar. For this reason, the tractor should turn in the direction opposite to where the trailer should go.

4.7.1 LOAD ARRANGEMENT

The arrangement of the load on the TRAILER must be performed following these points:

- The driver must have full visibility
- Full freedom of driving must be guaranteed
- Danger of falling and/or dispersion must be avoided
- Do not hide lights and plaques
- The load must be contained in the limits of the gauge
- Loading limits must be respected

Important advices:

- Distribute the weights to avoid overloading the vehicle only on one side
- Avoid lateral strokes and violent bumps on the axles
- Adapt the vehicle speed to the road conditions and the load transported
- Do not use the vehicle if a minimum irregularity is found
- Properly bind the load

4.8 RELEASE AND PARKING

Once you are about to park (stable and flat land), proceed as follows:

1. Apply the tractor parking brake
2. Switch off the tractor PTO shaft if it is expected to be used
3. Stop the tractor, remove the ignition key from the control panel and store it
4. Get off the tractor
5. Apply the parking brake system of the TRAILER or place the wheel stoppers
6. Transfer the control unit from the tractor to the appropriate space provided for the TRAILER
7. Disconnect the electrical connection from the tractor socket
8. Disconnect the hydraulic system quick-connect couplings and place them with the supplied protection caps and position them in such a way as to avoid contact with the ground or with elements that could compromise its integrity.
9. Lower the telescopic small wheel to the ground so as to raise the tiller until the eye comes off the tractor hook;
10. Remove the hook plug from the eye and place it in its seat with the safety pin;
11. Get in the tractor, restart the engine and move away carefully, making sure the trailer remains stable.

WARNING

It is necessary that the trailer is parked in a flat and protected area, in order to prevent unauthorized strangers from approaching.

If there is a long period of storage, it is necessary to clean the trailer in all its parts, lubricate and protect it with a tarpaulin, in such a way as to prevent the passage of dust, moisture, etc.
Follow the instructions in the sections "3.2, 3.3, 3.4, 3.5".

5 INSTRUCTIONS FOR ORDINARY MAINTENANCE

5.1 GENERAL INFORMATION

The ordinary maintenance requires periodical and default operations in order to maintain the functionalities of the trailer as a result of the wear intrinsic in its use.

WARNING!

Contact the manufacturer for extraordinary maintenance not considered in this manual.

WARNING!

Before the maintenance, be sure that the trailer is on the flat, blocked and disconnected from the tractor. The maintenance activities should be performed in an adequately equipped garage.

WARNING!

The maintenance operators must have adequate competences and must be equipped with suitable individual safety devices.

WARNING!

All the guards, removed for maintenance or cleaning, must be reassembled at the end of the interventions as they were originally.

5.2 ADVICES

Before maintenance, read what it is reported in the paragraph «2 - General safety advices ».

WARNING!

Before replacing or refilling the oil wait for its cooling. Use the same oil recommended.

WARNING!

Use adequate individual safety devices (glasses, mask...) if compressed air is used for cleaning

WARNING!

Do not ingest lubricants/fluids.

Read carefully the safety instructions and the general advices of every lubricant/fluid used.

Keep the lubricant/fluids out of the reach of children

WARNING!

Clean the trailer in an airy environment in order to prevent the accumulation of toxic gases.

WARNING!

Use oils and lubricants with respect of the anti-pollution regulations of the country where the trailer is used.

WARNING!

During the maintenance do not pollute absolutely the environment. Dismantle the waste (oils and so on...) with respect of the laws in force.

WARNING!

In case maintenance operations require some interventions on the trailer with container in tipping position or open scissor, use the anti-closing stoppers.

5.3 FIRST USE AND ADJUSTMENT

At first use, the trailer is subordinate to a general settlement of every mechanical organ. Every new trailer after the first 8 hours of use must be checked with attention. Follow these instructions:

1. Check the correct tighten of nuts and bolts
2. Check the correct pressure of the pneumatics
3. Check the correct level of the oil in the tank (if present)
4. Check for the absence of oil leakage from the components of the hydraulic circuit
5. Check for the absence of air leakage from the components of the pneumatic circuit (if present)
6. Check the correct lubrication of the components that rotate or move
7. Check the condition of the electric system.

5.4 AXLES, BRAKES AND WHEELS

WARNING!

Do not overload the axles or suspensions according to what written on the plaque of the axle or on the vehicle approval.

WARNING!

Do not use wheels with dimensions different from what written on the vehicle approval.

WARNING!

Use axles or suspensions without exceeding the speed limits written on the axle plaque or on the vehicle approval.

The frequency of maintenance operations is reported on the chapter maintenance calendar. In case of specific intervention on these organs, call the manufacturer and use and/or refer to the manual of use and maintenance, delivered with this one.

5.4.1 GENERAL CHECKS

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, to avoid unexpected movements.

Vehicle movements should be absolutely prevented

Generally, at least once a year, the following checks should be performed:

- ✓ Visual check of the axle carrier, clean perfectly and check the carrier, looking for possible cracks and/or signals of breakups
- ✓ Check the straightness of the carrier, the axles with flexed carrier for overload must be replaced
- ✓ Visual check of the supports of camshafts (axle with brakes), clean perfectly and check the supports, looking for possible cracks and/or signals of breakups
- ✓ Visual check of the welding of the braking supports of cylinders (axles with brakes), clean perfectly and check the supports, looking for possible cracks and/or signals of breakups
- ✓ Check of the welding of the axle to the chassis (direct or through plates), clean perfectly and check the supports, looking for possible cracks and/or signals of breakups
- ✓ Check the correct alignment of the axle and the chassis
- ✓ In case damages or signs of breakups are identified, replace the component, or components, immediately, if these signals are found on the axle carrier, replace the entire axle.

In case one or more anomalies are found, call AGROFER S.r.l. or other authorised staff with adequate security equipment, or appropriate professional training.

5.4.2 CHECK THE TIGHTENING OF THE WHEEL NUTS

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, in order to avoid unexpected movements.

Vehicle movements should be absolutely prevented

METHOD:

Tighten diagonally the tightening nuts of the wheel, using the torque wrench, to the tightening couple shown by the manufacturer, according to the class of resistance of the hub studs.

Do not use lubricants on studs or nuts.

WARNING!

An excessive tightening of nuts can cause a deformation of the wheel disk or the failure of studs and/or nuts and, as a result, the possibility to lose the wheel.

An insufficient tightening can cause the loosening of the tightening of the wheel with consequently the breakup of the studs or the wheel disk itself, and, as a result, the possibility to lose the wheel.

5.4.3 CHECK THE TIGHTENING OF THE HUB COVERS

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, to avoid unexpected movements.

Vehicle movements should be absolutely prevented

The hub covers must always be intact and correctly settled to avoid that contaminants (dirty, ground and so on), get in touch with the grease inside the hub, which reduce greatly the bearing's life.

METHOD:

In case of pressure hub covers, check visually and physically that they are at their place, intact and perfectly coupled on the hub before and after the use. In case of hub covers secured with screws, check the fastening of the screws at least every 4 months.

5.4.4 CHECK BRAKING MASSES (ONLY FOR BRAKED TRAILER)

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, to avoid unexpected movements.

Vehicle movements should be absolutely prevented

METHOD:

Remove the plastic protection of the inspection holes (where required) and check visually that the brake shoes seals do not have imperfection, damage signs or an excessive or abnormal consumption. If the braking seals are worn out or if there is any doubt of it, call the competent staff with adequate security equipment and professional training.

WARNING!

The brakes are security elements and for this reason they must be checked only by technical staff. Any kind of modification to these is forbidden.

5.4.5 BRAKES ADJUSTMENT (ONLY FOR BRAKED TRAILER)

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, in order to avoid unexpected movements.

Vehicle movements should be absolutely prevented

FIXED LEVER:

Push the braking lever in the operation direction.

Check that the lever stroke is not excessive: this must make an angle included between 5°-10°. In case the stroke is higher it is necessary to adjust the brake.

If possible, lift the axle on which the intervention is necessary, releasing in this way the hub rotation. Be sure that the equipment used to lift has a dimension appropriate to the vehicle mass and that the movements of the vehicle are absolutely prevented also after the axle lifting.

Mechanical operation through linkage:

Pull the braking lever in the sense of operation until the brake shoes are in contact with the drum. Adjust the linkage so as to maintain the lever in that position and then release lightly the linkage until the hub is completely free to rotate.

IMPORTANT:

Check, with the rotation of the hub, that the brake shoes do not rub against the drum and that they are free to rotate.

The lever stroke must be as short as possible, avoiding that the brake shoes rub against the drum.

Pneumatic operation:

Pull the brake lever in the operation sense until the brake shoes are in contact with the drum.

Adjust, acting on nut and counter nut, the length of the operation cylinder rod until the hub is completely free to rotate.

IMPORTANT:

Check, with the rotation of the hub, that the brake shoes do not rub against the drum and that they are free to rotate.

The lever stroke must be as short as possible, avoiding that the brake shoes rub against the drum.

In case it is not possible to lift the axle in question, adjust the operation of the brake in the sense of the braking, reducing the free lever stroke. After this adjustment check that the lever stroke is neither excessive nor limited: pushing the braking lever by hand, this must make an angle included between 5° and 10°.

ADJUSTABLE LEVER:

Push the braking lever in the operation direction.

Check that the lever stroke is neither excessive nor limited: it must make an angle not superior to 5°-7°. In case the stroke is superior it is necessary to adjust the brake.

If possible lift the axle on which the intervention is necessary, releasing in this way the hub rotation. Be sure that the equipment used to lift has a dimension appropriate to the vehicle mass and that the movements of the vehicle are absolutely prevented also after the axle lifting.

Acting on the hexagon screw, adjust the braking lever in the braking direction, making the wheel hub rotate simultaneously, until the brake shoes come in contact with the drum, then rotate lightly the set screw in the opposite direction until the hub is completely free to rotate. Be sure that the set screw remains blocked in this position.

IMPORTANT:

Check, with the rotation of the hub, that the brake shoes do not rub against the drum and that they are free to rotate.

The lever stroke must be as short as possible, avoiding that the brake shoes rub against the drum.

In case it is not possible to lift the axle in question, adjust the operation of the brake in the sense of the braking, reducing the free lever stroke. After the adjustment check that the lever stroke is neither excessive nor limited: pushing by hand the braking lever, this must make an angle included between 5° and 7°.

If the adjustment operation do not bring the brake lever in the area of the prescribed angle or in case of doubts call the qualified staff with adequate security equipment and professional training.

WARNING!

The brakes are security elements and for this reason they must be checked only by technical staff. Any modification is forbidden.

5.4.6 CHECKING AND REGISTRATION OF THE BEARING CLEARANCE

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, in order to avoid unexpected movements.

Vehicle movements should be absolutely prevented.

METHOD:

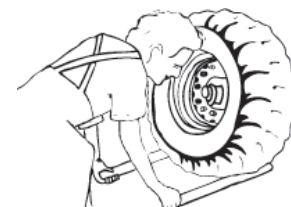
To understand a problem inside the hub linked to the bearings, follow this procedure:

1. After having checked to work in safety conditions, lift the wheel from the ground
2. Make it rotate in both directions in order to detect possible resistant points
3. Make it rotate fast in order to perceive the presence of possible vibrations, noises or shocks

In case any problem is detected, call the qualified staff with adequate safety equipment and professional training to replace bearings and oil seals.

METHOD:

In order to check the bearing clearance, the axle must be lifted and the wheel should not touch the ground. Use only suitable and equipment correctly dimensioned. After having loosened the brake, having checked before that the vehicle remains stable for the entire operation, make the pneumatic swing using the two levers between the pneumatic and the ground. Be sure that the clearance does not come from the suspension or the axle hub (if present).



In case the presence of clearance is seen, call the qualified staff with adequate safety equipment and professional training to adjust the clearance or the replacement of bearings and oil seals.

METHOD:

- 1) Disassembly the hub cover and place it on a clean area so as it does not get dirty
- 2) Remove the split pin of the castellated nut
- 3) Tighten the castellated nut until the bearing stops i.e. until the spanner used for tightening requires a more decisive strength to further rotate the nut.
- 4) After this, rotate lightly the hub, loosen lightly the castellated nut and tighten until it stops again.
- 5) Check the position of the split pin holes and rotate the castellated nut so has to align the nut splits with the nearest hole
- 6) Check that the hub is free to rotate and do not resist excessively
- 7) Insert a new split pin in the free hole and refold it backwards.
- 8) Remount the hub cover.

5.4.7 GREASING

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, to avoid unexpected movements.

Vehicle movements should be absolutely prevented

Clean carefully the greasing points before this operation. Use only a manual greasing pump.

Fixed Axles:

Grease the two holding bushings of the camshaft, the braking lever if adjustable and other possible points supplied with grease gun.

Self-steering Axles:

Besides the operations described above, grease the bushing of the steering hinges, the silent blocks of the steering bar and other possible points where grease guns are present.

5.4.8 GREASING AND REPLACING BEARINGS

The bearings which do not operate correctly have recognizable signs as:

1. Overheating
2. Noise during the rotation
3. Vibration
4. Clearance not recoverable
5. Difficult rotation of the hub.

WARNING!

Place the trailer on a plain area and stop it, with handbrake put on or other means, if it is not supplied with braking system, in order to avoid unexpected movements.

Vehicle movements should be absolutely prevented.

WARNING!

The operation must be performed by qualified staff with adequate safety equipment and professional training.

WARNING!

Never mix different greases so as not to prejudice the bearing duration.

METHOD:

1. Lift the axle which has to be modified. The pneumatics should not touch the ground
2. Be sure that the equipment used for lifting is correctly dimensioned to the mass of the vehicle and that the movements of the vehicle are blocked also after the lifting of the axle
3. Disassembly the hub and clean it carefully internally and externally
4. Remove every residue of old grease
5. Wash the disassembled bearings with appropriate solvent making them rotate slowly and then dry them
6. Check carefully the surface of the rolls and the external cup inserted in the hub, to check if signs of wear, scratches or other damages are present. In case of minimum wear signs replace the bearings. Replacing the bearing must always include either the inner cone or the external cup inserted in the hub
7. Grease carefully the bearing with adequate lithium soap grease (recommended: Grease FL TUTELA MR3). The grease must be put also inside the bearing, in the space between the containment cage of the rollers and their raceway, to assure the correct and complete greasing of the moving elements.
8. Fill the bearing with grease and grease also the rear part of the bearing cone, in particular on the surface of the rollers base
9. Put a thin layer of grease also on the raceway of the external cups, inserted in the hub
10. Check that the sealing ring inside the hub is in good condition, without signs of wear or damages and put it in the correct position. In case of minimum sign of damages or wear, replace it.
11. Grease lightly the sliding surface of the seal
12. After having greased correctly the bearings, remount the hub, paying attention not to damage the rear seal during the operation
13. Insert the external bearing, the possible washer and the castellated nut.
14. Tighten the castellated nut following the described procedure for regulation of bearing clearance
15. Insert a new split pin and put the hub cover.

5.4.9 FLAT TYRE**WARNING!**

Very dangerous situation because the trailer could become unstable.

In case of flat tyre during the use of the trailer, proceed as following:

1. Avoid any upload and unload manoeuvre
2. Go on a plain and solid ground but if this is not possible, avoid absolutely to replace the wheel and call an equipped staff
3. Maintain the trailer coupled to the tractor, turn off the engine, remove the keys, keep them and put on the handbrake
4. Pick up a suitable lifting foot
5. Place suitable wheel stoppers or stones in front of and behind the intact wheel to block it
6. Settle the lifting device under the axle, on the side of the flat tyre
7. Before lifting the trailer release the nut that tighten the wheel rim
8. Lift carefully the trailer checking that it remains stable
9. Extract the wheel and replace it with a new one or bring it to be repaired and then mount it again
10. Lower the trailer so as the wheel touches the ground and tighten diagonally the nuts
11. When returned check the tightening torque and the pressure of the pneumatics.

5.5 ELECTRIC SYSTEM

Perform these checks periodically in order to obtain a correct operation and safety

- ✓ Periodical check of the integrity of the electric wiring, if anomalies are present replace it
- ✓ Check that the electric contacts of the plug and the lights are not oxidised. In this case remove the present oxidation
- ✓ Check periodically the correct operation of the lighting device. Replace, if necessary, lights and light glasses.

WARNING!

The lightning system is a safety element and for this reason it is necessary to check it.

5.6 HYDRAULIC PIPING SYSTEM

WARNING!




In case a replacement of a flexible pipe of the hydraulic circuit is necessary, do the maintenance operation with uncoupled trailer and pay the maximum attention









To substitute a pipe for rupture or to change for a programmed maintenance follow these points:

1. Close the valves of the hydraulic circuit
2. Be sure to have removed the possible residual pressure in the system
3. Identify the pipe to be replaced and release with adequate spanner the coupling points, paying attention to the possible oil leakage
4. Replace the piping system using only original spare parts.

5.7 PLAN OF PROGRAMMED MAINTENANCE (CALENDAR)

Axles		After 1st use	After 1st stretch with load	Every 200 h	Every 500 h (or at least annual)	Every 1000 h (or at least)	METHOD
	General checks	X	X			X	See paragraph Errore. L'origine riferimento non è stata trovata.
	Check tightening of wheel nuts	X	X		X		See paragraph Errore. L'origine riferimento non è stata trovata.
	Check hub covers		X	X			See paragraph Errore. L'origine riferimento non è stata trovata.
	Check braking masses			X			See paragraph 0
	Brake adjustment	X			X		See paragraph Errore. L'origine riferimento non è stata trovata.
	Check bearing clearance		X		X		See paragraph Errore. L'origine riferimento non è stata trovata.
	Greasing			X			See paragraph Errore. L'origine riferimento non è stata trovata. Errore. L'origine riferimento non è stata trovata.
	Greasing bearings and replacing grease					X	See paragraph Errore. L'origine riferimento non è stata trovata.

Other Components		FREQUENCY	METHOD
	Greasing	EVERY 8 HOURS OF USE	Grease <i>piston for rear tailgate opening</i> , with the manual greasing pump and using grease Tamoil type exclusively: TAMLITH GREASE 2.
	Greasing	EVERY 8 HOURS OF USE	Grease <i>telescopic cylinder seal</i> , with the manual greasing pump and using grease Tamoil type exclusively: TAMLITH GREASE 2.
	Greasing	EVERY 8 HOURS OF USE	Grease the remaining points of the trailer indicated with label, with the manual greasing pump and using grease Tamoil type exclusively: TAMLITH GREASE 2.

	Check	EVERY USE	Check the presence of every safety pins on the hubs.
	Check	EVERY USE	Check the suitability of the drawbar towing eyelet.
	Check	EVERY USE	Check the condition of the end switch cable and relative clamps.
	Check	EVERY USE	Check the condition of the electric system. See Paragraph Errore. L'origine riferimento non è stata trovata.
	Check	EVERY 8 HOURS OF USE	Check the wear and tear on the loading and unloading chains, correct lubrication of the sliding guides and correct tensioning. If necessary, run the tension by means of the register.
	Check	EVERY 8 HOURS OF USE	Check the general wear condition of the trailer, the tightening of nuts and screws and of the hinges, the condition and correct placing of pipes and the hydraulic circuit.
	Check	EVERY 24 HOURS OF USE In case the trailer is supplied with independent hydraulic system	Check the oil level of the tank placed on the trailer. If necessary perform the top up with Tamoil oil, Type H.V.I. TAMHYDRO 46 (Do not mix different types of oil)
	Check	See scheme 1	Check the condition and that the pressure of the pneumatic complies with the indications of the wheel supplier. See scheme 1

Model	Wheel Rim Boring	Load (TON)	Pressure (BAR)
15x600 - 6	Con cuscinetti	0.36	2.5
16x650 - 8 10PR	4	0,38	3.0
16x650 - 8 24PR	4	0,45	3.2
20.5 / 80 - 10 12PR	5	0.80	4.0
200/60 - 14.5 10PR	5/6	1.20	3.5
10.075 - 15.3 12PR	6	1.70	4.0
10.075 - 15.3 16PR	6	2.10	4.5
10.075 - 15.3 22PR	6	2.70	5.0
130/65 - 18 18PR	6/8	2.80	5.0
215/75 R17.5	6/8	2.00	6.0
225/75 R17.5	6/8	2.20	6.0
235/75 R17.5	6/8	2.40	6.0
355/50 R22.5	6/8/10	4.70	6.0

NOTE:

maintain constant pressure by monitoring with precision pressure gauge.

Check frequency of standard wheels: every 2 months.

Check frequency of small wheels 15x600 and 16x650-8: every month.

Scheme 1 - Reference pressure values for tyre model

6 ALIENATION

In case the trailer is sold, the buyer has the right to be informed about eventual interventions on the trailer and be instructed about the use and maintenance; moreover, the buyer must be delivered the documentation and the declaration of conformity.

7 ORDERING SPARE PARTS:

To order spare parts please contact:

AGROFER S.r.l.
Via dell'Artigianato -
Loc. Ponte Cantone 25010 Pozzolengo -
BS - ITALY
Tel./Fax +39(0)30 9918243
Email: info@agrofer.it
Web: www.agrofer.it

Specifying what following:

- Trailer model (indicated on the identification plate)
- Trailer type (indicated on the identification plate)
- Serial number (indicated on the identification plate)
- Year of construction (indicated on the identification plate)

8 ATTACHMENTS:

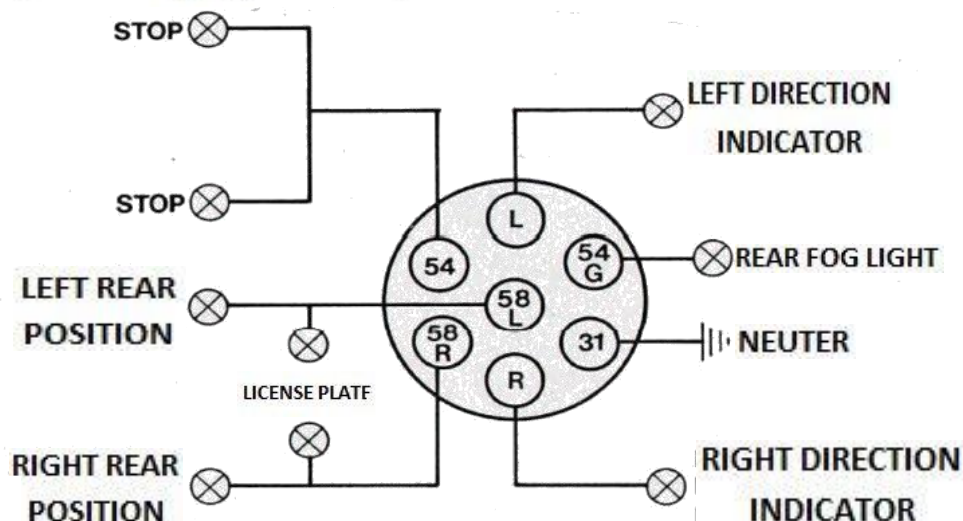
8.1 HYDRAULIC SCHEMES

The hydraulic schemes are available in the TECHNICAL BROCHURE of the company AGROFER S.r.l. as every scheme is peculiar to the model and in some cases specific for the client.

8.2 ELECTRIC SCHEMES

ELECTRICAL SYSTEM with 7-pole socket

The connection of the cables, inside the plug, is as in the picture.



Lights

Position light 12V – 5W

Direction indicator 12V – 20W

Stop light 12V – 20W

License plate light 12V – 5W

For power supply with voltage other than 12V DC, it is necessary to replace all the lights with others having suitable voltage and wattage prescribed for each light.

Notes: where necessary the 54G pole is used as rear fog light (light 12V - 20W)

8.3 SAFETY DEVICE

On the tipping cylinder a valve pre-calibrated by the manufacturer is installed, in order to prevent a fast falling of the rear box in case of hydraulic rupture. More details are available in the technical sheet of the valve shown here.

WARNING!

Tampering the safety device or changing the calibration is strictly forbidden

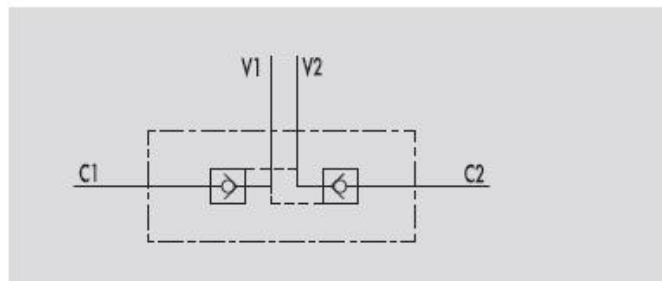


Figure 4. Pre-calibrated Safety Valve

VALVOLE DI BLOCCO PILOTATE A DOPPIO EFFETTO

TIPO / TYPE
VBPDE

SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



DOUBLE PILOT OPERATED CHECK VALVES

IMPIEGO:

Valvola utilizzata per bloccare in posizione un cilindro in entrambi i sensi, consentendo il flusso in una direzione ed impedendolo in senso contrario fino a quando non viene applicata la pressione di pilotaggio.

MATERIALI E CARATTERISTICHE:

Corpo: acciaio zincato.
Componenti interni: acciaio temprato termicamente e rettificato
Guarnizioni: BUNA N standard
Tenuta: a cono guidato. Non ammette trafilementi.

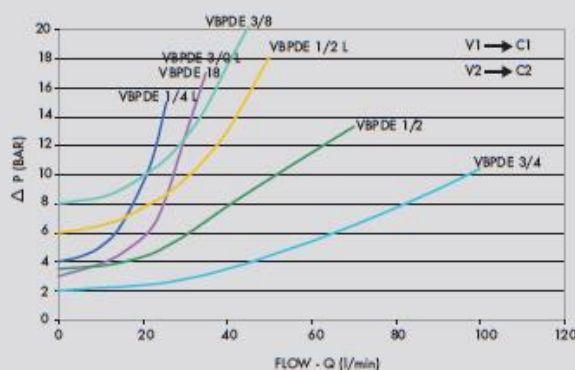
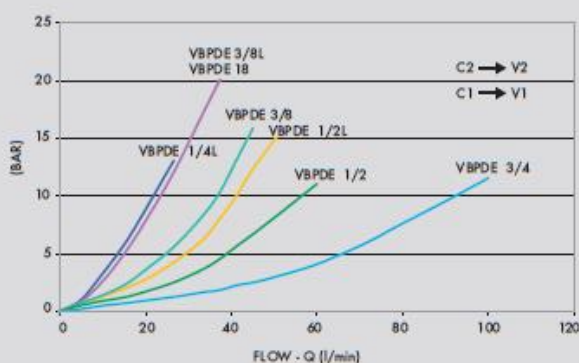
MONTAGGIO:

Collegare V1 e V2 all'alimentazione e C1 e C2 all'attuatore.

A RICHIESTA

- senza guarnizione OR sul pilota
- molla 1 Bar
- molla 8 Bar

PERDITE DI CARICO PRESSURE DROPS CURVE



USE AND OPERATION:

Pilot check valves are used to block the cylinder in both directions. Flow is free in one direction and blocked in the reverse direction until pilot pressure is applied.

MATERIALS AND FEATURES:

Body: zinc-plated steel.
Internal parts: hardened and ground steel.
Seals: BUNA N standard
Poppet type: any leakage.

APPLICATIONS:

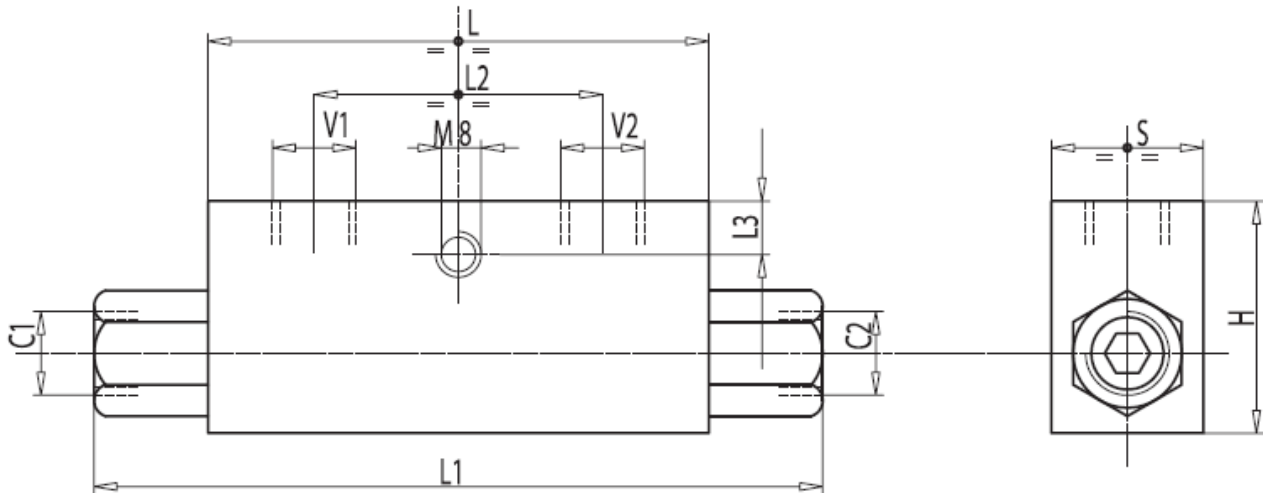
Connect V1 and V2 to the pressure flow and C1 and C2 to the actuator.

ON REQUEST

- without seal on pilot piston
- 1 Bar spring
- 8 Bar spring

Temperatura olio: 50°C - Viscosità olio: 30 cSt
Oil temperature: 50° C - Oil viscosity: 30 cSt

CODICE CODE	SIGLA TYPE	RAPP. PILOT PILOT RATIO	PORTATA MAX MAX FLOW Lt. / min	PRESSIONE MAX MAX PRESSURE Bar	PRESSIONE APERTURA CRACKING PRESSURE Bar
V0010	VBPDE 1/4" L	1:5,5	20	350	4
V0020	VBPDE 3/8" L	1:5,5	35	350	3
V0030	VBPDE 1/2" L	1:5	50	350	6
V0050	VBPDE 3/8" "	1:5	45	350	8
V0061	VBPDE 18 L	1:5,5	20	350	4
V0070	VBPDE 1/2"	1:4	70	350	3,5
V0040	VBPDE 3/4"	1:4	100	300	2



CODICE CODE	SIGLA TYPE	V1 - V2 C1 - C2 GAS - MET	L mm	L1 mm	L2 mm	L3 mm	H mm	S mm	PESO WEIGHT kg
V0010	VBPDE 1/4"L	G 1/4"	64	113	36	8	40	30	0,636
V0020	VBPDE 3/8"L	G 3/8"	80	128	38	8	40	30	0,736
V0030	VBPDE 1/2" L	G 1/2"	90	142	45	12,5	45	35	1,042
V0050	VBPDE 3/8" "	G 3/8"	90	156	45	12,5	45	35	1,174
V0061	VBPDE 18 L	M18X1,5	68	118	38	8	40	30	0,630
V0070	VBPDE 1/2"	G 1/2"	80	144	40	18	60	35	1,284
V0040	VBPDE 3/4"	G 3/4"	100	192	46	12	60	40	1,916

AGROFER SRL

