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USE AND MAINTENANCE BOOK MIXERS-AERATORS WITH CARDAN SERIES MOVRED COLONNA



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Data and measures written in this catalogue are approximate and there will be some changes without previous advice.

DODA thanks you for buying an item included in its production range and invites you to read this booklet.

You will find herewith all information necessary for a correct utilisation of the machine you bought; so, please carefully follow the directions contained herewith and read this booklet in all its parts.

Please, also remember to keep this booklet in an adequate place, to preserve it unaltered. The content of this manual can be changed without notice or additional obligations, in order to include changes or improvements to the units already delivered.

No reproduction or translation of any part of this booklet is admitted unless previously authorized.

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EC CONFORMITY DECLARATION ACCORDING
TO 2006/42/CE REGULATIONS AND SUBSE-
QUENT MODIFICATIONS

The machines described in the following "USE AND MAINTENANCE" booklet are horizontal liquid manure mixers-aerators endowed with a an arm, powered by the power take-off of a tractor. By means of this arm it is possible to mix and aerate manure at a certain distance from sides.

Movred Razzo and Alpi have been studied to mix liquid manure in tanks where walls must be overcome. These machines are available with a manual, hydraulic positioning device and a thrust block enabling to work in a number of adjacent tanks.

Of particular interest is the bladed unit, specially studied to allow air intake and disaggregation into tiny particles, suitable for better liquid manure homogenizing.

The galvanised structure, the oil bath drive system and the high quality of materials used assure the machine high durability and simple maintenance.

From the technological point of view, the concept adopted for all other DODA products has been applied to this machine, too:

" Highest quality to obtain the maximum reliability and durability. "

MOVRED RAZZO

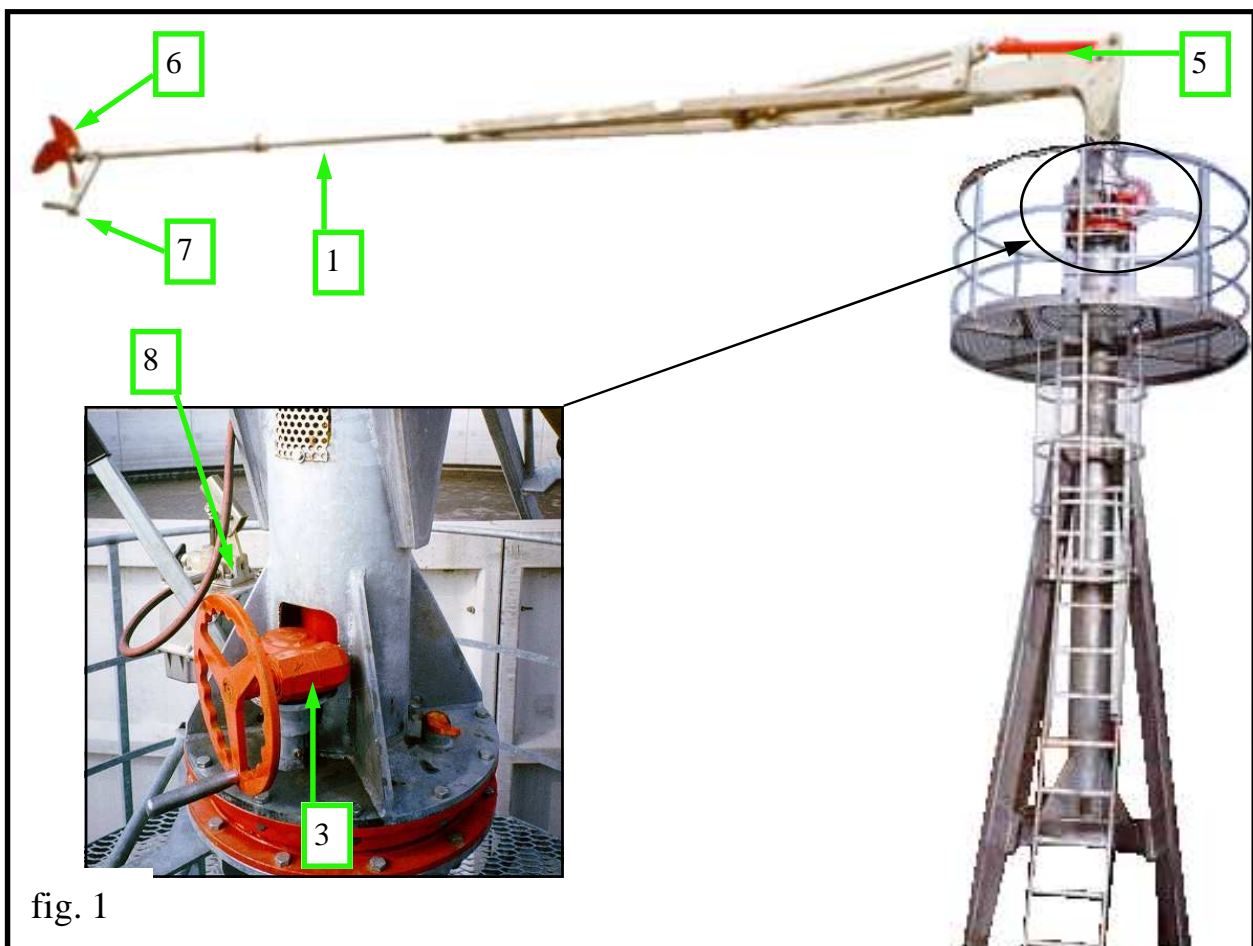
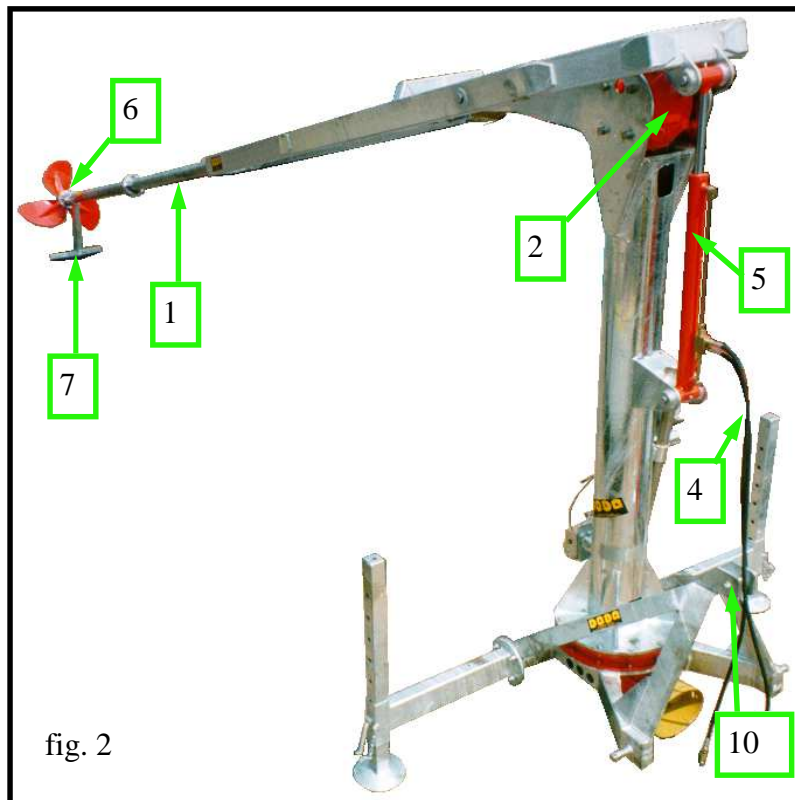


fig. 1

MOVRED ALPI



- | | |
|--|-----------------------------------|
| 1) Driving pipe | 6) Bladed unit |
| 2) Reduction gear | 7) Distance piece from soil |
| 3) Thrust block rotation winch (Razzo) | 8) Manual pump (Razzo) |
| 4) Oleodynamic pipes | 9) Cardan joint |
| 5) Hydraulic piston | 10) Three-point connection (Alpi) |

2. MACHINE LOADING AND UNLOADING

The machine loading and unloading operation can be carried out:

- by means of a hoisting crane.

N.B.: the carrying capacity of the sling must be seven times as much as the machine total weight (if it is made of a textile fibre).

WARNING: in either case the machine must not be lifted by catching on the weakest parts of the structure (delivery pipes, etc...).

WARNING : before lifting the structure, be sure that it is well-balanced.

WARNING: never move abruptly or bump stainless steel parts with the forks of the lift truck.



- 1) Check that no component has undergone damages during transportation. If damages have occurred, call your dealer immediately.
- 2) The connection to supply must be carried out according to DODA instructions, by specialised staff (by connecting the cables of the electric motor to the input or the pump to the tractor by means of the Cardan shaft). DODA is in no way responsible for any electric connection, (please follow instructions on the tag on motor as well as on the sticker showing the rotation sense).
- 3) Before starting the machine check that the rotary driving parts are adequately protected, as foreseen by their manufacturer.
- 4) If the protection of a rotary part is not on issue, it must be carried out by the operator in conformity with prevailing law.
- 5) DODA takes no responsibility for modifications altering the characteristics of the machine bought.
- 6) DODA machines must not be installed on structures not consistent with EC safety provisions.
- 7) Before operating the machine it is indispensable to carefully read all directions in the **“Instructions for Use and Maintenance”** booklet. In particular, be sure that you have completely understood the machine operation.
- 8) The machine has been designed and built to treat water and sewage, not for chemical products. Handling these substances can cause permanent damages to this machine.
- 9) Check that the machine length is adequate to the depth of the tank.
- 10) As regards machines with oil-bath driving, the driving pipe as well as the geared units (if presents) must be filled with oil.
- 11) Carefully avoid that machine rubber parts come into contact with oil, grease or oil derivatives.

4. PRELIMINARY CHECKS

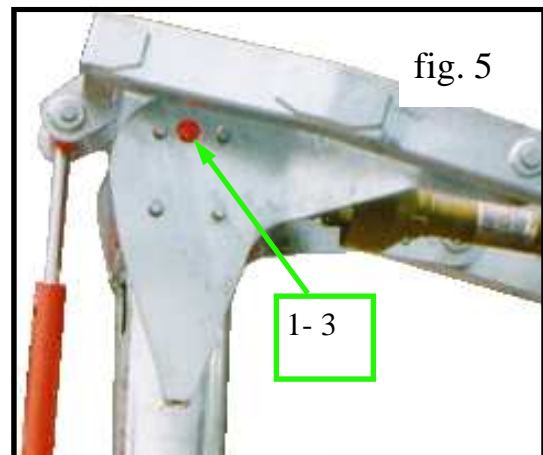
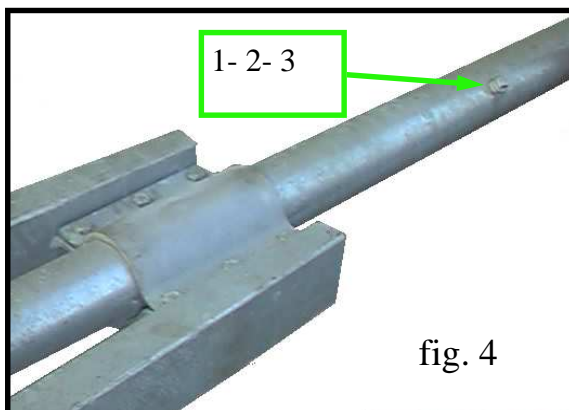
pag. 4

Our machines are supplied without lubricating oil either in the driving pipes or in the geared units. Before starting the machine, fill in the lubricating oil:

- unscrew caps: fill with oil and blow air out.
- Pour SAE90 oil **very slowly** see oil quantity on table;
- fill with high-temperature resistant, synthetic oil (ONLY AFI REVERSE GEAR).
- wait at least 3 hours before checking the minimum oil level (ONLY FOR DRIVING PIPES);
- close caps.

Check the level cap periodically: oil must never be under that level.

N. B. The driving pipe must be horizontal during filling and the controls operations.



- 1) Fill oil
- 2) Blow air out oil
- 3) Level oil

INDICATIVE OIL QUANTITY LEVELS FOR CARDAN-OPERATED DRIVING PIPE

Drive type	Type A (4 m)	Type B (5 m)	6 m Type
Oil quantity (Kg)	7.7	9.5	15

Gear box	N°2 gearboxes
Oil quantity for each (Kg)	3

N.B.: As far as all machines with Cardan are concerned, connect the Cardan shaft between the tractor power take-off and machine unit. For good functioning, the Cardan shaft must operate on ground level. Also check that the chain, on issue for Cardan-shaft protection, is fastened to the ring.

N.B.: For transporting the machine on long distances, load it on an proper vehicle by following directions indicated in paragraph “MACHINE LOADING AND UNLOADING”. Never use a tractor for machine transportation on roads.

MOVRED RAZZO

Before positioning **Movred Razzo**, arrange a suitable structure on the tank edges.

Connect hydraulic pipe 4 between piston 5 and the manual pump 8 fig. 1; act on the lever and the breather of the pipe for positioning the mixing unit.

Movred Razzo is available in two versions:

- with a raised balcony, from where to follow and check all work fig. 6.
- without balcony: in this case positioning is done from the ground fig. 7.

In both cases this machine is supplied with rotary thrust block allowing a 360° rotation of the whole structure for working in adjacent tanks.. For machine rotation: withdraw the locking pin A fig. 6 (only in the version with balcony); act on the winch B fig. 6 until the desired position is reached.

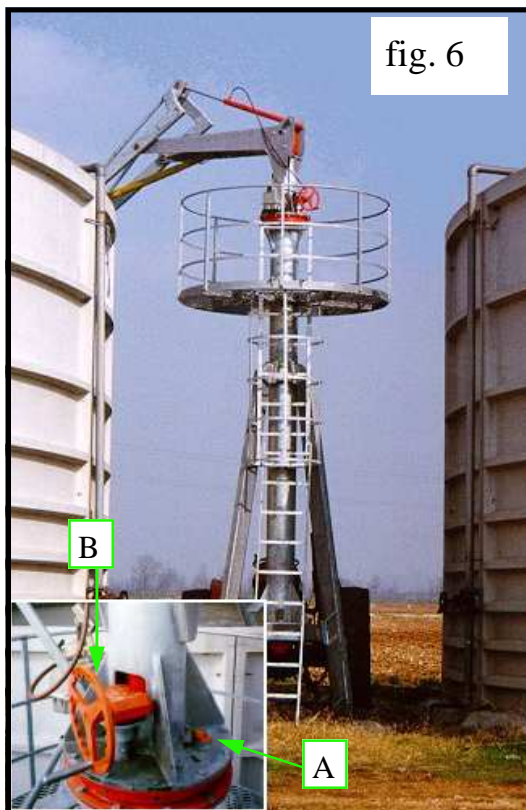




fig. 8

MOVRED ALPI

For positioning the machine, connect the three-point connection 10 fig. 2 to the tractor's lifting arms.

Back up until the tank edge is reached.

Lower lifting unit in such a way that the machine Cardan shaft lies on the same level as the tractor's power take-off.

Adjust feet so that the machine rests better on the ground.

Connect the pistons' hydraulic pipes 4 fig. 2 to tractor; operate the levers of the tractor's hydraulic system for positioning the mixing unit.

Movred Alpi is available in two versions:

- with stationary base, where only the mixing arm is adjustable;
- with a rotary thrust block that allows 360° rotation of the whole structure for operating in more adjacent tanks. For rotating the machine: withdraw locking pin; position pipe in bushing and act manually to reach the desired position; insert locking pin again.

Since these machines must operate in a raised position, when the ground distance piece 7 touches the tank bottom lift the mixing unit by some centimeters.

6. WORKING

WARNING: read section "GENERAL INSTRUCTIONS" before starting the machine. After arranging the machine and checking its stability during normal functioning you can start utilising it.

Starting phases:

- start tractor;
- operate the lever engaging the tractor's power take-off;
- bring tractor to desired speed rate.

Stop phases:

- disconnect lever engaging tractor's power take-off;
- stop tractor's engine;
- disconnect Cardan shaft on the tractor as well as on the machine side.

- 1) During machine inspections, in the work as well as in the inspection phases, always wear proper clothing (overalls, gloves, helmet, accident prevention shoes, fastened clothes, etc...).
- 2) The machine must always be utilised well lit.
- 3) Since gases released by liquid manure are poisonous, check that:
 - the work area is adequately ventilated;
 - the machine is not operated in proximity to flames.
- 4) Never inspect the liquid manure tank alone. If you lose your balance or if you feel faint due to fumes, ask for help immediately.
- 5) If you do not need to work in a tank, cover it.
- 6) The machine must be operated by accountable adults, while the place must not be accessible to children.
- 7) Do not carry out operations or regulations when the machine is in motion or when it is connected to supply.
- 8) The machine must only be employed with all protections correctly positioned, following instructions indicated in the previous paragraphs to avoid possible contact with moving parts. Do not damage or remove those protections.
- 9) The machine must never be operated without having filled oil-tank (driving pipes and geared units).
- 10) Before starting work phases, be sure that the whole assembly is stable (machine and tractor).
- 11) During maintenance be sure that the machine is perfectly standing and disconnected from supply.
- 12) The truck must not be used for road-transportation (if any).
- 13) During operation, maintenance or regulation, avoid contact of machine rubber parts (gaskets, etc...) with oil, grease or oil derivatives.
- 14) Be sure that motor rotation is clockwise as indicated by the arrow on the motor (when envisaged).
- 15) As for electrically operated machines, connection must be carried out in a place protected from rainfall.
- 16) If delivery is connected to pipes or hoses, check that the special fastening joints are under perfect conditions; do not halt near them: hazard of bursting and tearing.
- 17) Work and keep the machine in a dry area, protected from rainfall if it is not utilised for a long time.

Before carrying out any maintenance operation stop the machine and disconnect it from supply.

- 1) Check the oil level regularly in machine parts requiring lubrication, (driving pipes and geared units) and replace oil completely every 2 years (SAE90).
- 2) Grease rotary parts every 50 working hours (lubricators, piston articulated joints, gear wheels, etc...).
- 3) At the end of its utilisation, wash the machine to prevent liquid manure from solidifying: this would cause damages with time passing.
- 4) Wear-conditions of mixing unit must be checked periodically. Replace it if necessary.
- 5) If the air intake pipe becomes obstructed, unplug it by letting water in from upper end.

As for all spare parts, address DODA authorized dealers directly.

9. STICKERS

The machine is provided with the following stickers:

IMPORTANTE

PRIMA DELL'USO RIEMPIRE D'OLIO

FINO A LIVELLO (SAE 90)

WARNING: fill with oil up to the maximum level before using the machine (SAE 90).


**LIVELLO
OLIO**

OIL LEVEL

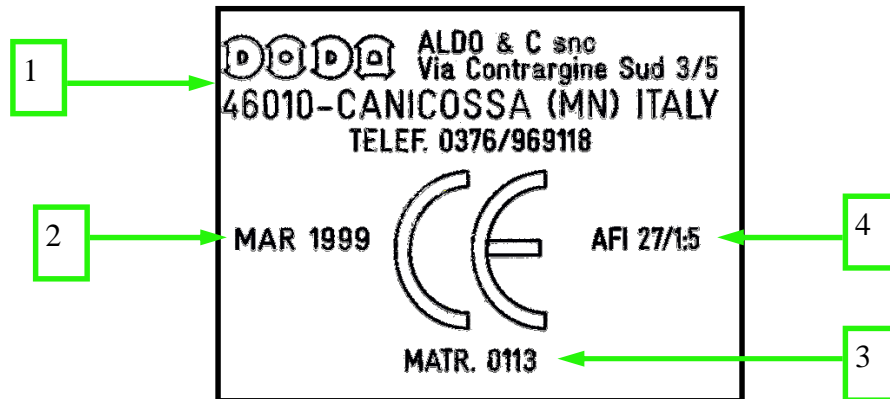
ATTENZIONE

Prima di posizionare la macchina verificare che il motore sia collegato nel senso di rotazione indicato dalla freccia.

WARNING

Before placing the pump control the turning direction of the motor it must run as pointed out by the arrow. 

THIS STICKER REMINDS YOU TO CHECK THE ROTATION SENSE OF THE MACHINE ELECTRIC MOTOR BEFORE STARTING THE MACHINE.



Sticker consistent with EC rules:

- 1) **NAME OF FIRM**
- 2) **MONTH AND YEAR OF PRODUCTION**
- 3) **PRODUCT IDENTIFICATION CODE**
- 4) **TYPE OF MACHINE**

10. PERFORMANCE AND TECHNICAL DATA

The technical features assuring a DODA high reliability and long duration are multiple:

- Wholly hot-galvanised structure.
- Oil-bath drive.
- Widia-Widia mechanical seal.
- Geared reduction groups.
- Stainless steel impeller-holding shaft.
- Self-cleaning mixing unit
- Liquid manure aeration systems.
- Mixing depth can be changed by means of a hydraulic system.
- Possibility of operating in various adjacent tanks.

NOTES

NOTES

EC DECLARATION OF CONFORMITY WITH EC REGULATIONS 2006/42/CE AND SUBSEQUENT MODIFICATIONS

WE

DODA owned by Doda Aldo & C. S.n.c.

Via Contrargine Sud, 3/5
46010 Canicossa (Mantova)

DECLARE UNDER OUR OWN EXCLUSIVE RESPONSIBILITY THAT THE FOLLOWING PRODUCTS,

MIXERS– AERATORS WITH CARDAN SERIES MOVRED COLONNA

TO WHICH THIS DECLARATION REFERS, ARE CONSISTENT WITH PROVISIONS CONTAINED IN GUIDELINE 2006/42/CE AND SUBSEQUENT MODIFICATIONS.

CANICOSSA (MANTOVA)

.....
(Name, signature, equivalent stamp)



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di DODA ALDO & C SNC

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