

User Manual Watering station

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Martin Stolze b.v.
Leemidden 6
2678 ME De Lier
The Netherlands
T: +31(0)174 518 113
info@martinstolze.nl
www.martinstolze.nl

Contents

1	<i>Introduction / Definitions / Safety symbols</i>	3
2	<i>Technical specifications, options</i>	5
3	<i>Safety instructions</i>	6
	3.1 <i>General safety instructions</i>	6
	3.2 <i>Specific safety instructions</i>	8
4	<i>Description of working / Scope of use and Parts to be used</i>	9
	4.1 <i>Working</i>	9
	4.2 <i>Scope of use</i>	10
5	<i>Putting into operation</i>	10
	5.1 <i>Operating the machine</i>	10
6	<i>Use</i>	11
7	<i>Maintenance</i>	11
	7.1 <i>Lubrication and maintenance schedule</i>	12
	7.2 <i>Annual overhaul</i>	12
8	<i>Environment</i>	12
9	<i>Faults</i>	13

1 INTRODUCTION / DEFINITIONS / SAFETY SYMBOLS

With the acquisition of the watering station, you have made a very good choice.

You have an excellent machine that has been designed and manufactured with great care.

This user manual must be made available to the user of the watering station and should be kept at a place within easy reach when the watering station is being used.

Anyone who is to work with/on the watering station must have read the user manual to the end, and the directions therein contained must be strictly followed.

You will benefit most from this investment by accurately following the instructions given for safety, use and maintenance.

Martin Stolze b.v. shall not be responsible for any damage and indirect damage resulting from operator's errors, lack of proper maintenance and any other use than described hereinafter.

Any liability of Martin Stolze b.v. shall be cancelled immediately as soon as any adaptations, modifications or extensions are made to the watering station or its accessories by you or any third parties without our prior written consent.

Martin Stolze b.v. guarantees the proper operation of the watering station for a period of 6 months after delivery, but shall not be liable for any damage including consequential damage to buildings, other machines and surroundings caused by the watering station and due to any cause whatsoever.

Martin Stolze b.v. is constantly engaged in improving its products and services. We therefore reserve the right to change the specifications mentioned in this user manual at any moment as deemed appropriate and without prior notice.

This product has been supplied subject to the general terms and conditions for delivery and payment issued by the Metaalunie and referred to as METAALUNIE

CONDITIONS, formerly as SMECOMA CONDITIONS.

The text has been in effect as from 1 January 2014 and has been lodged with the Registry of the Court of Rotterdam. Publication of Metaalunie, Postbus 2800, 3430 GA Nieuwegein.

In this user manual, the definitions set out below shall apply;

: Option

Hazard zones : These are the areas in, at and around the watering station where there is a potential risk of injury.

Machine operator : The person who operates, checks, and is watchful of the proper operation of the watering station, and can start and stop it.

Maintenance technician: The person who is fully acquainted with the entire watering station, can adjust the safeguards and can perform maintenance of the belt conveyor.

The maintenance technician knows the functions, safety standards and has been trained in the installation and maintenance of the machine.

It is the responsibility of the company using the watering station to ensure that the maintenance technician is appropriately qualified.

Safety symbols

The watering station is provided at various points with standardized safety pictogram stickers such as the adjoining pictures.



The upper part warns of a general or a specific hazard or risk.

The lower part identifies the kind of hazard to which the warning relates or it indicates what you **should** or **should not** do.

2 TECHNICAL SPECIFICATIONS

Length x width x height	cm	150 x 60 x 110
Weight	kg	100
Water reservoir	length x width x height	mm 1500 x 450 x 100
Conveyor belt	length x width	mm 1300 x 400
Supply voltage		3-phase + PE 400VAC
Motor with reduction gearbox for conveyor	kW	0.18
Spraying unit, 4x		
Water connection		Geka
Minimum water pressure	bar	2
Water drain	mm	70
Timer, 4x		
Plastic foot 4 cm, vertically adjustable, 4x		

Photocell, pot detection

type E3JM-DS70M4-G

Rod lever switch

type ZCY55

3 SAFETY INSTRUCTIONS

*

Use the watering station only for the purpose for which it has been designed.

*

Your machine is provided with the pictograms shown below.

Familiarize yourself with these pictograms and know their meaning.

This chapter on safety is divided into:

3.1 General safety instructions

3.2 Specific safety instructions

3.1 General safety instructions

3.1.1

Caution!

Before starting to work with the watering station, read this user manual carefully so that you know exactly what the adjustment features and switches are for.

Also read the user manuals of any associated coupled machines.



3.1.2

Caution! Before carrying out any maintenance work.

- 1 Consult the user manual.
- 2 Switch off the main switch and disconnect the plug from the socket outlet.
- 3 Press the emergency-stop switch
- 4 Place a warning board 'Maintenance – Out of order'.



This way, you will avoid any hazardous situations that could occur in the event the watering station should suddenly start working. One could also think of an unexpected mishap or something accidental.

3.1.3

Caution! Risk of injury from a collision when carrying products to and from their location.

When driving for instance a fork-lift truck with a pot fork or a tractor with trolleys, make sure that there are not any obstacles and that there is nobody in the driving zone.

3.1.4

Caution! Risk of injury at the watering station.

The following persons could be seriously injured when working at or near the watering station:

- persons under 16 years of age
- persons who may be expected *not* to be able to (sufficiently) recognize the hazards associated with the watering station.

3.1.5

Caution! Risk of injury. Test the emergency-stop switch at least once a day.

3.1.6

Caution! Risk of injury.

Ensure there is sufficient lighting at and around the watering station.

3.1.7

Caution! Risk of injury.

Ensure that the safety instructions and method of working are completely passed on to new users of the watering station.

3.1.8

Caution! Risk of serious injury.

Ensure that unauthorized persons and, in particular, children are kept away from the watering station.

3.1.9

Caution! Risk of injury.

Ensure that the watering station and the area around the watering station are cleaned regularly, and that spilled pot filling and plant residues cannot hamper the proper functioning, operation and control of the machine.

3.1.10

Caution! Risk of injury.

Ensure that warning stickers remain clearly visible and replace them immediately when damaged.

3.1.11

Caution!

When replacing parts, use only Martin Stolze b.v. or CE-certified parts.

3.1.12

Caution! Risk of injury.

Use the watering station for the sole purpose as described in section 4.2 'Scope of use'. If in doubt, consult your supplier.

3.1.13

Caution! Risk of injury.

See to it that electric connections and maintenance are carried out competently.



3.2 Specific safety instructions

3.2.1

Caution! Risk of serious injury due to being trapped at the transition points of the feed and discharge belts.

Use a fork, narrow board or stick to remove any obstructions.



3.2.2.

Caution! Risk of serious injury at the driving and return pulleys of the conveyor belts.

Keep hands away from driving and return pulleys.



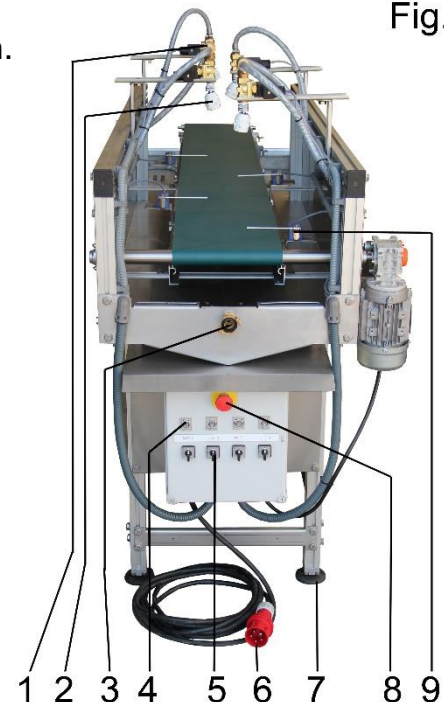
4 DESCRIPTION OF WORKING / SCOPE OF USE (Figures 1 and 2)

Fig. 1 is a photo of the entry side of the watering station.

Fig. 1

Parts of the watering station

- 1 Magnetic valve, 4x
- 2 Sprayer, 4x
- 3 Geka water connection
- 4 Water supply timer 4x
- 5 Water supply switch activated / off, 4x
- 6 Plug, 5-pole, 400VAC 3-phase + earth
- 7 Plastic foot 4 cm, vertically adjustable, 4x
- 8 Emergency stop
- 9 Rod lever switch trigger to open water valve



4.1 Working of watering station

The watering station comprises a main frame placed on 4 vertically adjustable plastic feet. The main frame contains a water reservoir with drain. On both sides, 2 sprayers (2) are provided above the water reservoir. A conveyor belt placed in the water reservoir moves the pot plants under the sprayers.

The height and direction of spraying are individually adjustable, the spray nozzles can be adjusted as well.

The pots are fed to the station and carried off by , # , for instance conveyor belts.

As soon as a pot plant is detected, the sprayers will spray during a preset time.

The spraying time of each sprayer is individually set with the timers (6).

4.2 Scope of use

*

The watering station has been especially developed to automatically give pot plants a preset amount of water, conceivably with an additive. Toxic additives are not allowed. Use only additives legally allowed in your country.

Carefully follow the directions for use of the additive.

5 PUTTING INTO OPERATION

*

Ensure that the installation of the watering station complies with the general and local building regulations.

*

Ensure that the electric connection complies with the general regulations laid down in NEN EN 60204-1 and NEN 1010.

The switch unit must meet the requirements of NEN-EN-IEC 60439-1 and any local regulations. Note for countries outside Europe: make sure the electric connection complies with (equivalent) standards and regulations as applicable to the machine in your country.

The electric connections and controls must be carried out in accordance with Annex I by a recognized firm of electrical contractors.

Pay special attention to the execution of the emergency-stop circuit.

*

Ensure that the machine is installed in a stable position and properly coupled to the feed and discharge belts.

*

Make sure that you and the person who will work with the watering station are thoroughly familiar with the safety instructions (chapter 3) contained in this user manual.

*

Always check to ensure that the parts of the watering station are working smoothly and without jerks and without unusual sounds.

*

Check, in advance, the whole driving zone of the fork-lift truck or trolleys with pot plants for any obstacles.

*

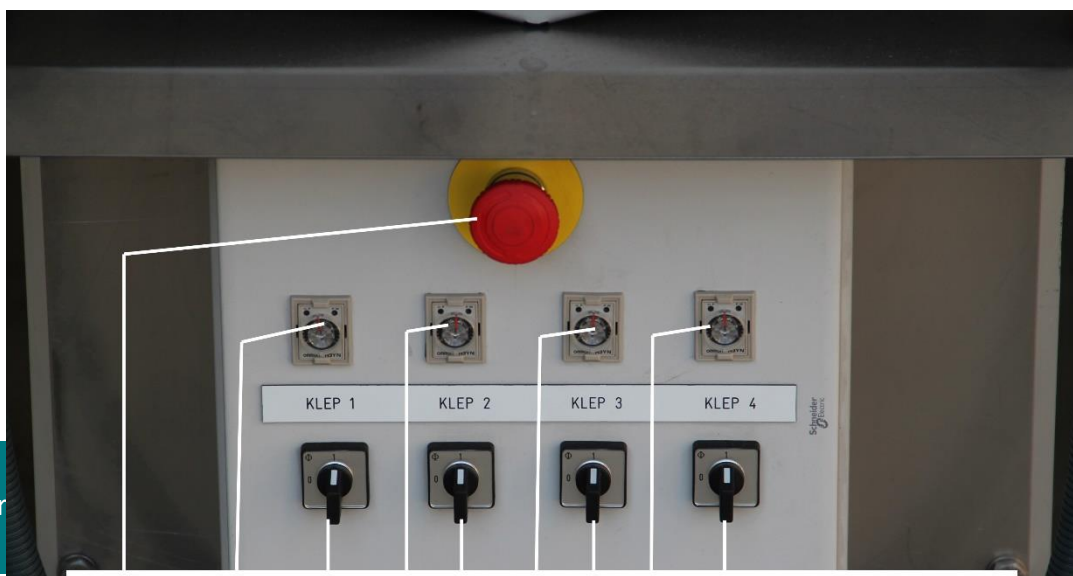
Keep the watering station clean; remove potting soil, pot filling, plant residues etc. regularly (at least every day).

*

If you find a defect or any damage, you must not use the machine until repairs have been competently carried out by a firm recognized by Martin Stolze b.v.

5.1 Control unit, fig. 2

- 1 Emergency stop
- 2 Sprayer timer, 1
- 3 Sprayer, 1, on / off
- 4 Sprayer timer, 2
- 5 Sprayer, 2, on / off
- 6 Sprayer timer, 3
- 7 Sprayer, 3, on / off
- 8 Sprayer timer, 4
- 9 Sprayer, 4, on / off



6 USE

*

Be sure you have familiarized yourself with the watering station, adjustment features and switches.

*

Ensure that no person can come in the vicinity of the moving parts and that all guards are in place before you start working with the watering station.

Pay special attention to the driving and turning pulleys and transition points of the conveyor belts.

*

Be sure you and the person operating the watering station have read the safety instructions (chapter 3).

*

Keep the watering station and the area around the watering station clean.

*

Ensure the availability of sufficient water, see technical specifications

*

Ensure proper water drainage.

*

Use the watering station only when you have thoroughly studied the preceding pages and you have no more questions.

*

In the event of a fault, ALWAYS press the emergency-stop switch before remedying the fault.

Ensure that no person can come in the vicinity of the moving parts when the machine is in standby.

7 MAINTENANCE

*

When carrying out maintenance, at all times observe the safety instructions described in chapter 3.

*

Make a permanent employee responsible for the regular maintenance of the watering station.

*

When carrying out maintenance, always place a warning board “OUT OF ORDER, MAINTENANCE” on the control unit and press the emergency-stop switch.

*

Thoroughly clean the watering station and the area around it each time it has been used.

*

Have adjustments, settings and repairs carried out by a person recognized by Martin Stolze b.v.

*

If in doubt, always consult the supplier.

7.1 Lubrication and maintenance schedule

The following maintenance instructions are based on normal use. For intensive use or use under extreme conditions, maintenance must be carried out at shorter intervals.

d=daily w=weekly m=monthly o=oil g=grease d/w/m

1	# clean photocell and reflector plate	-	W
2	check conveyor belts for proper alignment, tension, wear, any damage, etc.	-	W
3	check the water supply	-	W
4	check the sprayers for even distribution of water, clean or replace if necessary	-	W
5	check the connection of water drain	-	w

7.2 Annual (general) overhaul

See 7.1

*

Thoroughly clean the watering station each year, including

- removing all dirt/fouling from the watering station
- lubricating all moving parts and checking the gear wheels, chain and sprocket wheels as well as bearings of the driving and return pulleys of conveyor belts for play.

Repairs on the watering stations must be carried out by a recognized expert designated by the supplier.

8 ENVIRONMENT

Life span

The life expectancy of the watering station depends on maintenance, operating hours and conditions of the environment (dust, dirt/fouling, humidity and the like).

Proper maintenance will benefit the life of your machine.

Scrapping the conveyor

Have the removal and processing preferably carried out by a recognized scrap yard that has the requisite permits.

Designate a competent person to be responsible for supervising the execution.

Waste disposal

Designate a competent person to be responsible for supervising the disposal.

Sort disassembled materials according to material properties and contamination.

Separate all materials falling within the category of chemical waste such as oil and lubricants.

Dispose of them as chemical waste.

Make sure residual materials go to recognized waste processing plants that have the requisite permits.

9 FAULTS

Cause	Solution
A Watering station does not start	
1 Photocell and/or reflector plate fouled or proximity switches defective	1 Clean or replace
2 Emergency-stop switch has been pressed stop	1 Pull out to release emergency
3 Timers improperly set	3 Set timers properly
4 Conveyor belt	2 Tension or replace conveyor belt
3 Driving motor shut down by a thermal cut-out	3 Eliminate the cause of the overload and then reset

For faults the cause of which is not immediately clear, we advise you to contact our service department by telephone: +31 (0)174 51 81 13.

Spare part list:

Nr	Description	Article number
1	Iddle Roller dubble seal 170mm wide	3003235
2	Iddle Roller dubble seal 210mm wide	3002588
3	Iddle Roller dubble seal 250mm wide	3002590
4	Bearings Drive rol	1003514

5	Gear CM030	Depending on the ratio
6	Moto 0,18 KW	3001520
7	Magnetic valve, 24V AC	3001411
8	Magnetic valve, 24V DC	3002409
9	Sprayer,	1003087
10	Switch	1004292