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Diamond
catering equipment

USER MANUAL



SELF LEVELLING DISPENSERS

FOR CROCKERY

MOBILE UNITS

MANUAL MOBILE UNITS

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REGISTRATION FILE

(First read the instructions in chapter 2)

Type	serial number first	last

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1. About this manual	3
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This manual informs you about the function, the operation and the use of your self levelling dispenser, further to be called dispenser.

This manual is for those who,

- receive and check the product (Chapter 4),
- place, adjust and connect the product (Chapter 5),
- use the product (Chapter 6),
- clean the product (Chapter 7),
- service the product (Chapter 8).

Please read the for you relevant chapters carefully.

In any case you should read the chapters 2 en 3; this gives you a good understanding (in the parts of) the dispenser and working of the dispenser. This is necessary for the right operating and good working with the dispenser.

In this manual some texts are framed; these are warnings. If you neglect these warnings, you may take the risk the unit does not work well or does not work or that you might be injured.

In that case we accept no liability.

Your dispenser, depending on the type, is meant to be used for:

- 1) storage of one or more stacks crockery with the dimensions as defined for this dispenser,
- 2) issue of the crockery at a constant level,
- 3) heating of heat-resistant crockery, when the dispenser is provided with a heating,
- 4) transport of crockery.

Crockery is:

- 1) plates, saucers, bowls, cups, glasses,
- 2) trays,
- 3) baskets filled with crockery as mentioned at point 1.

The crockery is clean and empty and filled with solid substance or else properly sealed.

Damages and defects on the goods should be reported within 8 days upon receipt of the goods.

For all electrical parts (cable, wiring, thermostat, switch, heatingelement) there is a warranty-term of 6 months.

For all moving, mechanical parts (stacking-unit with guiderolls, swivel-casters) there is a warranty-term of 12 months.

This warranty is only valid,

- when the dispenser has been used for it's purpose,
- for the parts and not for costs of labour.

The dispensers, equiped with heating (electricity), are:

- are in conformity with the EN 60335-1 and 60335-2-50 following the provisions of the VEM directive,
- are in conformity with the EN 50081-1 and 50082-1 following the provisions of the EMC directive.

2. Description of the dispenser.

Depending on the type and model the dispenser is built from the following parts.

1) Cabinet:

- a) closed, half open (type ORT-MS) or completely open (type OX-MS) construction,
- b) with or without heatingunit and operating-panel,
- c) with or without push-bar.

2) Stacking unit:

- a) with or without flange,
- b) with frame-guidance or extra adjustable guiding-rods,
- c) with spring-ring.

3) Carrier-frame:

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- a) rollers,
 - b) as a frame with or without platform,
 - c) with spring-ring.
- 4) Springs, between stacking-unit and platform.
- 5) Electrical heating-installation
- a) spiral
 - b) switch,
 - c) thermo
 - d) heating element with or without fan.

On the front-side of the cabinet an identification-label is placed. On this identification-label you will find the model and type.

The appendix A gives a listing with:

- dimensions of the crockery,
- dimensions of the dispenser,
- power supply of the heating.

The description tells you whether your model is equipped with platform, fix or adjustable guiding-rods and/or heating.

Whether the instructions further on are applicable for you, depends on the model you own.

Just aside the identification-label you will find a second label with a serialnumber on it.

Write down the type(s) and serialnumber(s) on page 1 (registration file).

3. Operating of the dispenser

When the upward spring-strength has been adjusted correctly to the weight of the crockery, the upper crockerypart of the stack is at the same level as the end of the guiding-rods. When the upper crockerypart is taken away, the next crockerypart replaces it. The total number of springs determines the total spring-strength of the dispenser.

Too much springs and the crockeryparts are above the guiding-rods and the cover does not fit properly. Not enough springs, the upper crockerypart cannot or is difficult to be reached.

When you have a unit with heating, you have the possibility to warm the crockery.

The heating-element warms the air in the dispenser; this air gives its warmth to the crockery. A cover locks the dispenser, so that less warm air (energy) is wasted. We advise you to use a cover. The brakes on the 2 castors are operated with the feet and block turning and swivelling of the castors.

4. Checking at arrival

During production and preparation for transport every dispenser is checked on:

- 1) damages,
- 2) complete deliver
- 3) operating of the stacking-mechanism
- 4) operating of the switch, the thermostat and the heating-element and the electrical safety.

Check directly upon arrival of the goods:

- 1) is the package undamaged,
- 2) is the dispenser undamaged,
- 3) is the dispenser complete; have all accessories been provided.

REPORT DAMAGES ON THE DISPENSER WITHIN 8 DAYS TO YOUR SUPPLIER

5. Installation of the dispenser

- 1) Remove the packaging
- 2) Remove the plastic foliage from the cabinet and the platform.
- 3) Adjust the spring-strength with a stack of crockery:
 - a) remove one or more of the following parts:
 - removable platform from the carrier-frame,
 - removable panel (only OX-MS),

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- partly detachable inside-panel (only types with stacking unit with all 4 sides closed and without flange), by unlocking 2 panels on the upper-side,
 - removable stacking-unit (only types with stacking-unit with all 4 sides closed and with flange), by taking out the stacking-unit itself out of the cabinet, the springs can now be reached,
 - b) loosen springs (less spring-strength) or fasten springs (more spring-strength) until the upper part of the stack is at the same level as the end of the guiding-rods.
- All delivered springs are fastened during production of the dispenser.

DO NOT PUSH THE PLATFORM DOWNWARD DURING ADJUSTING OF THE SPRING STRENGTH; THERE SHOULD BE NO TENSION ON THE SPRINGS

LOOSEN THE SPRING AT THE UNDERSIDE, THERE WHERE THE SPRINGS ARE FASTENED TO THE SPRING-RING OF THE PLATFORM

DIVIDE THE SPRING-STRENGTH EQUALLY ON THE SPRING-RING; NOT ALL SPRINGS ON ONE SIDE AND ON THE OTHER SIDE NO SPRINGS

- 4) Place the adjustable guiding rods in the right position:
 - a) lift up the guiding-rod and turn it in the required position,
 - b) lower the guiding-rod and search for the nearest fixation-hole.

BE CERTAIN THAT THERE IS ENOUGH SPACE FOR THE CROCKERY BETWEEN THE GUIDING-RODS SO THAT THE CROCKERY WILL NOT BE TIGHTENED

- 5) Plug the cable into the power supply.

SWITCH TO "0" BEFORE YOU PLUG INTO THE SOCKET

ONLY USE A PLUG-SOCKET WITH EARTH CONNECTION

HANG THE CABLE AT THE PANELSIDE IN THE BRACKET, WHEN TAKING THE PLUG FROM THE POWER-SUPPLY

6. Using the dispenser

- 1) Use the brakes of the castors when filling and emptying and during heating of the crockery.
- 2) Do not use the brake when moving the dispenser.

BE CAREFUL WITH DOORSTEPS; DO NOT DRIVE TOO FAST NEITHER WITH LOADED OR UNLOADED DISPENSER

BE CAREFUL WITH SLOPING FLOORS; LET SOMEONE HELP YOU

- 3) Place the crockery only with small stacks at a time in the dispenser.

AVOID DAMAGE TO CROCKERY AND/OR INJURIES TO PERSONS

- 4) Switch to "1"; the pilot-light will light.
 - Turn the thermostatknob to the desired temperature; the heatingelement gets warm. The level of adjustment, the space of time, the crockery and the use or no use of a cover can influence the temperature of the crockery.
 - Find for your situation the best temperature-level and space of time.
 - Start heating up about 2-3 hours before issue and meanwhile use a cover on the

dispenser. Use the cover - also during issue - as much as possible against loss of energy. Place the cover on the dispenser if it's not in use; the dispenser and the plates will stay clean and dustfree.

A cover is not standard on the dispenser, but can be obtained, - when ordered - as an accessory. A cover can be ordered seperatly; inform at your supplier.

THE HEATING-ELEMENT AUTOMATICALLY SWITCHES OFF AT A TEMPERATURE OF MAX ± 120 °C AT THE TOP OF THE UNIT
AT THE BOTTOM, JUST ABOVE THE ELEMENT THE TEMPERATURE WILL BE ABOUT ± 10 TO 20 °C HIGHER

AFTER A FEW HOURS OF HEATING THE TOPSIDE OF THE CABINET GETS VERY WARM; USE A PUSH-BAR OR SPECIAL GLOVES WHEN MOVING THE UNIT

7. Cleaning of the dispenser.

- 1) Remove dust/dirt from the cover and the cabinet of the dispenser daily with a moist cloth.
- 2) Remove dust/dirt in the dispenser a least twice a year:
 - a) Switch to "0".
 - b) Take the plug form the power-supply.
 - c) Remove the crockery and the platform from the dispenser.
 - d) Dust or vacuumclean the inside.
 - e) Clean the inside with a moist cloth.

DO NOT USE A WET, BUT A MOIST CLOTH OR SPONGE WHILE CLEANING THE DISPENSER WITH HEATING

DO NOT USE A HIGH-PRESSURE SQUIRT WHILE CLEANING THE DISPENSER WITH HEATING

DO NOT USE AGGRESSIVE DETERGENTS WHILE CLEANING THE PC COVERS (IN A DISHWASHING-MACHINE)

- 3) Put the plug into the power-supply, the platform and the crockery back into the dispenser.

8. Maintenance of the dispenser.

In appendix B all the parts are listed.

- 1) Check the right spring-strength at least twice a year.
As the result of permanent stretching and under influence of constant heating the spring-strength is reduced.
Hang in all available, but not yet used, springs in or replace (all) springs by new ones:
 - a) Switch to "0".
 - b) Take the plug from the power-supply.
 - c) Remove the crockery and the platform from the dispenser.
 - d) Hang not yet used springs onto the spring-ring of the platform or repace the old springs by new ones.

DO NOT PUSH THE PLATFORM DOWNWARD WHILE ADJUSTING THE SPRING- STRENGTH; THERE SHOULD BE NO TENSION ON THE SPRINGS

DIVIDE THE SPRING-STRENGTH EQUALLY ON THE SPRING-RING; NOT ALL SPRINGS ON ONE SIDE AND ON THE OTHER SIDE NO SPRINGS

- 2) Check all fastening bolts and nuts of the castors twice a year.
Check if all castors roll and swivel well, if not:
 - a) take the wheel out of the fork.
 - b) clean the wheel and pivot-joint with a moist cloth with cleaner.

REPLACE WORN WHEELS IN TIME AND LOST NUTS DIRECTLY

DO FIX THE BOLTS OF THE CASTORPLATE IN A CROSS AND NOT TOO TIGHT (FIXED IS OK)

USE A SAFETY-NUT OR A NUT IN COMBINATION WITH A RING

- 3) Check the the condition of the electrical parts 1 or 2 times a year.
 - a) Switch to "0".
 - b) Take the plug form the power-supply.
 - c) Remove the heating-drawer and the operating-panel.

All electrical parts are now visible and can be reached.

MAINTENANCE AND REPARATION SHOULD ONLY BE DONE BY - IN THE FIELD OF ELECTRICITY - QUALIFIED PERSONNEL

ONLY USE ORIGINAL PARTS OR PARTS WITH EXACT THE SAME SPECIFICATIONS, OR PARTS WITH A CERTIFICATION

CHECK THE FAN SEVERAL TIMES A YEAR, THE FAN SUCKS IN EXTRA DIRT AND DUST, THIS CAUSES REDUCED FUNCTIONING OR DAMAGE TO THE FAN

- 4) Replace parts in bad condition or defective parts:
 - a) Read the apendixes A en B of this manual or inform at your supplier or servicedesk.
 - b) Place all new parts in the same way as the old parts.
 - c) Place the heating-drawer and the operating-panel back into the dispenser.
- 5) Put the plug into the power-supply, the platform and the crockery into the dispenser.

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APPENDIX A - 1: TYPES

CROCKERY DIMENSIONS		DIMENSIONS DISPENSER IN MM		HEATING- INSTALLATION FOR H
IN MM		L[1] x B[2] x H[3]	I	
MINIMUM MAXIMUM				
TN-MS/THN-MS/THNU-MS FOR ROUND PLATES IN 1, 2, STACKING-UNITS, WITH 4 FIXED GUIDING-RODS				
210	160	210	1T(H)N-MS: 470 x 435 x 900	230 V 600 W
240	190	240	2T(H)N-MS: 870 x 435 x 900	230 V 1600 W
280	230	280		
310	260	310	2THNU-MS : 850 x 520 x 900	230 V 1750 W
T-MS/TH-MS/THU-MS FOR ROUND PLATES IN 1, 2 OR 4 STACKING-UNITS WITH FLANGE, WITH 3 ADJUSTABLE GUIDING-RODS				
245	140	220	1T(H)N-MS: 470 x 435 x 900	230 V 600 W
280	185	255	2T(H)N-MS: 870 x 435 x 900	230 V 1600 W
310	210	285	2THNU-MS : 850 x 520 x 900	230 V 1750 W
TX-MS/THX-MS/THXU-MS FOR ROUND, RECTANGULAR OR OVAL PLATES AND DISHES IN 1, 2 STACKING-UNITS WITH 4 CORNER-GUIDES				
round, rectangular and oval			1 T(H)X-MS: 470 x 435 x 900	230 V 600 W
180 - 295 mm			2 T(H)X-MS: 870 x 435 x 900	230 V 1600 W
180 x 180 - 295 x 295 mm				
TS-MS/THS-MS/THSU-MS FOR RECTANGULAR PLATES AND DISHES IN 1, 2 OPEN STACKING-UNITS WITH 4 CORNER-GUIDES OR 1 OR MORE STACKS CROCKERY IN 1, 2 CLOSED STACKING-UNITS				
dimensions adapted to plate			1 T(H)S-MS: 470 x 435 x 900	230 V 600 W
or dish			2 T(H)S-MS: 870 x 435 x 900	230 V 1600 W
SE-MS FOR 1 STACK OF TRAYS, WITH 4 FIXED CORNER-GUIDES				
A	530 x 325		650 x 450 x 900	
B	530 x 370			
C	480 x 370			
S	[4]		[4]	
ZS-MS FOR 2 STACKS OF TRAYS IN 2 STACKING-UNITS, WITH 4 FIXED CORNER-GUIDES				
A	370 x 530		650 x 450 x 900	
B	370 x 480			
C	325 x 530		745 x 645 x 900	
S	[4]		[4]	
S-MS FOR 1 STACK OF BASKETS FOR CROCKERY, WITH 4 FIXED CORNER-GUIDES				
A	650 x 530		745 x 645 x 900	
B	500 x 500			
D	580 x 580			
S	[4]		[4]	
SH-MS/SHU-MS FOR 1 STACK OF BASKETS FOR CROCKERY, WITH 4 FIXED CORNER-GUIDES				
A	650 x 530		835 x 645 x 900	SH-MS:230 V 1600 W
B	500 x 500		670 x 645 x 900	SHU-MS: 230 V 1750 W
D	580 x 580		835 x 645 x 900	
OX-MS FOR 1 OR 2 STACKS OF TRAYS OR 1 STACK OF BASKETS FOR CROCKERY, WITH 1 STACKING-PLATFORM WITHOUT GUIDING (OPEN DISPENSER)				
A	530 x 740		740 x 635 x 910/870	
B	530 x 650			
C	370 x 480		740 x 510 x 910/870	
D	370 x 530			
E	500 x 500			
F	325 x 530			
S	[4]		[4]	
ORT-MS FOR 1 OR 2 STACKS OF TRAYS OR 1 STACK OF BASKETS FOR CROCKERY, WITH 4 FIXED CORNER-GUIDES (HALF OPEN DISPENSER WITH EMPTY-BASKET-BOTTOM				
A	650 x 530		750 x 600 x 900	
B	500 x 500		600 x 570 x 900	
C	370 x 530		470 x 605 x 900	
D	370 x 480		470 x 520 x 900	
E	325 x 530		425 x 605 x 900	
2TOS-MS/2THOUS-MS FOR 2 STACKS OF SAUCERS IN 2 STACKING-UNITS, WITH 3 FIXED GUIDES AND 1 STACK OF BASKETS FOR CUPS, WITH 4 FIXED CORNER-GUIDES				
SAUCER	80	160	2TOS-MS : 865 x 600 x 900	
BASKETS	500 x 500		THOUS-MS: 925 x 645 x 900	230 V 1750

EXPLANATION:

- [1] LENGHT WITHOUT BUMPERS (WITH= LENGTH + 50 MM)
[2] WIDHT WITHOUT BUMPERS (WITH= WIDHT + 50 MM)
[3] HEIGHT TOPCOVER WITHOUT EXTENDED GUIDES OR PUSH BAR
[4] DIMENSIONS STACKING UNIT ADAPTED TO CROCKERY AND DISPENSER WHEN NECCEARY

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NDIX B: PARTSLIST

Art.code	Descriptionused in	
ALL TYPES		
95.7602	STST PULL-SPRING 8 g/mm	T(H)-MS
95.7610	STST PULL-SPRING 6 g/mm	ALL TYPES EXCEPT T(H)-MS
95.7630	STST PULL-SPRING 15 g/mm	OX-MS
95.7640	STST PUSH SPRING FOR GUIDING ROD	T(H)-MS
95.7650	STST PUSH SPRING FOR GUIDING ROD	T(H)X-MS
95.7700	ADJUSTABLE GUIDING ROD	T(H)-MS
95.7720	ADJUSTABLE GUIDING ROD	T(H)X-MS
95.7740	SCREWBOLT M5 X 10 FOR GUIDING ROD	T(H)-MS
95.8000	PLASTIC PUSHCORNER	ALL TYPES
95.8050	SWIVELWHEEL WITHOUT BRAKE (5")	ALL TYPES
95.8060	SWIVELWHEEL WITH BRAKE (5")	ALL TYPES
95.8150	PTFE BEARING FOR CARRIER-FRAME	T(H)X-MS/T(H)S-MS/S(H)-MS/ORT-MS/2T(H)OS-MS
95.8160	BRASS AXLE FOR CARRIER-FRAME	T(H)X-MS/T(H)S-MS/S(H)-MS/ORT-MS/2T(H)OS-MS
95.8170	BLOCK FOR PUSHBAR WITH M10	ALL TYPES (WITH PUSBAR)
95.8200	KNOB FOR SMAL STST COVER	ALL TYPES (WITH COVER)
95.8210	GRIP FOR BIG STST COVER	ALL TYPES (WITH COVER)
95.8260	BEARING FOR CARRIER-FRAME	OX-MS
95.8270	PSU GUIDING-WHEEL FOR CARRIER-FRAME	OX-MS
95.8310	BRASS AXLE FOR CARRIER-FRAME	T(H)-MS/T(H)N-MS
95.8320	PTFE BEARING FOR CARRIER-FRAME	T(H)-MS/T(H)N-MS
95.8343	PLASTIC GUIDE FOR DFE	T(H)N-MS
95.8050	SKIFFY FOR PUSHCORNER 95.8000	T(H)N-MS/ALL TYPES
95.8051	SKIFFY FOR GUIDE FOR DFE 95.8343	T(H)N-MS
TYPES WITH HEATING		
95.7000	OPERATING PANEL COMPLETE	ALL TYPES
95.7010	OPERATING PANEL WITHOUT PARTS	ALL TYPES
95.7014	HINGE FOR OPERATING PANEL	ALL TYPES
95.7015	GUIDINGSTRIP FOR CONTACT WIRES	ALL TYPES
95.7016	TIEWRAP FOR CONTACT WIRES	ALL TYPES
95.7020	SPIRALCABLE WITH PLUG 3 x 1mm2	ALL TYPES (CONT. VERSION)
95.7023	SPIRALCABLE 3 X 1mm2	ALL TYPES (UK VERSION)
95.7032	PULLDISCHARGE FOR SPIRALCABLE	ALL TYPES
95.7040	SWITCH/PILOTLIGHT WHITE	ALL TYPES
95.7042	PLASTIC CAP FOR SWITCH/PILOTLIGHT	ALL TYPES
95.7050	THERMOSTAT 30 - 120 °C	ALL TYPES
95.7055	TEMPERATURE-BLOCK UP SET	ALL TYPES (OPTIONAL)
95.7060	THERMOSTATKNOB	ALL TYPES
95.7075	CONNECTING BLOCK 3-WAY	ALL TYPES
95.7085	PLUG FOR SPIRALCABLE UK	ALL TYPES (UK VERSION)
95.7214	BUSHING	FAN HEATING DRAWER
95.7225	FAN	FAN HEATED TYPES
95.7226	FAN HEATING ELEMENT 1750 W	FAN HEATED TYPES
95.7364	ELECT. WIRE BLUE 150 MM	FAN HEATED TYPES
95.7368	ELECT. WIRE BLACK 170 MM	FAN HEATED TYPES
95.7380.01	ELECT. WIRE YELLOW/GREEN L= 150 MM	ALL TYPES
95.7380.02	ELECT. WIRE YELLOW/GREEN L= 300 MM	ALL TYPES
95.7380.05	ELECT. WIRE BROWN L= 160 MM	ALL TYPES
95.7380.07	ELECT. WIRE BLACK L= 200 MM	ALL TYPES
95.7 38 0. 08	ELEC T. WIRE BLACK L= 890 MM	ALL TYPES
95.7 38 0.09	ELEC T. WIRE BLUE L= 890 MM	ALL TYPES
95.7 39 0.04	ELEC T. WIRE BLACK L= 890 MM	FAN HEATED TYPES
95.74 20	HEATING ELEMENT 230 V - 600 W	1TH-MS/1THN-MS/1THS-MS/1THX-MS
95.74 60	HEATING ELEMENT 230 V - 1600 W	2TH-MS/2THN-MS/2THS-MS/2THX-MS
95.7500	HEATING ELEMENT 230 V - 1600 W	SH-MS

