DALTIO
DIVISIONE LATTE-MATIC

Milk vending machine- Standard configuration

a.) INSULATED HOUSING

CARACTERISTICS

Made up from "sandwich" type modular panels, realised with high density polyurethane insulation in order to obtain high heat isolation capacity

- *The panel frames are made up from a PVC profile with male-female shaping with gasket between the various joints*
- *The connections between the various panels are realised via hooks that make use of the cams system*
- *The coldrooms have thickness 80mm (walls thickness 80mm, top and bottom thickness 100mm)*
- *The insulation will have:*
  - *density of 42kg/m3*
  - *percentage of closed cells: >95%*
  - *heat transmission coefficient "K":*
  - *thickness 80mm = 0.24 kcal/hm²°C and 0.28 W/m2°C*
- *All vertical angles and those of the base are equipped with rounded corners obtained directly from the foamed panel (R=13 mm).*

WALL FINISHING

INTERNAL

- White plastic-coated plate with non-toxic covering, thickness of. 5/10

- 304/2B stainless steel sheet with thickness 5/10

EXTERNAL

- White plastic-coated plate with non-toxic covering, thickness of. 5/10

- 304/2B stainless steel sheet "scotch-brite finish with thickness 6/10

BASE FINISHING

Base height: 100mm (or 120mm) Insulation thickness: 80mm (or 100mm) Corner rounding height: 20 mm (see section)

The base is equipped with a panel (with water-proof treatment) with thickness of:

- 10mm (for standard floor)

- 18mm (for reinforced floor)

INTERNAL

- Grey plastic-coated plate with non-toxic covering, thickness of. 5/10

- Slip-proof stainless steel sheet (R12) with thickness 7/10

EXTERNALL (under the cell)

- Galvanised sheet steel thickness 5/10

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EXTERNALL (lateral profiles)
- 304/2B stainless steel "scotch-brite finish with thickness 6/10

TOP FINISHING
Insulation thickness: 100mm
INTERNAL
- White plastic-coated plate with non-toxic covering, thickness of. 5/10
- 304/2B stainless steel sheet with thickness 5/10
EXTERNAL (over the cell)
- Galvanised sheet steel thickness 5/10
EXTERNAL (lateral profiles)
- 304/2B stainless steel "scotch-brite finish with thickness 6/10

FLOOR CAPACITY
- Plastic-coated sheet floor: 1000kg2/(mevenly distributed)
- Reinforced plastic-coated sheet floor: 3000k2g(/emvenly distributed)
- Stainless steel floor: 1500kg/2m(evenly distributed)
- Reinforced stainless steel floor: 3500kg2/(mevenly distributed)
On request, the floor can be supplied with entry ramps for trolleys or set-up for recessing
The cells can be without floor. In this case, they will be equipped with rounded profiles in PVC . perimetrals for fixing to the floor

HINGED
DOORS
Standard door span dimensions: 800x1900h
The doors will be equipped with: hinge with ramp, handle with lock and internal button for safety release, door stop
anti-condensate resistance (as per standard on the positive cells)

ACCESSORIES(on request)
- Profiles for creation of underfloor ventilation space
- Single door
- Double glass inspection window 450x450mm (heated in BT version)
- Strip curtains in PVC
- Drain connection
- Pressure balancing valve
- Plastic bumpers

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- Cooling system

Technical data

Characteristics		Value
Working temperature	°C	+10 ÷ -5
Starting mode		Direct
Voltage	Volt-Ph-Hz	230/1~/50
Rated input	kW*	0,80
Rated input	Amp*	5,10
Peak current	Amp	22,0
Max current	Amp	6,6
Refrigerant		R404A
Defrost		Hot gas
Mass	Kg	42
Compressor		
Type		Hermetic
Nominal power	kW	0,4
Condenser		
Air flow	m³/h	400
Evaporator		
Air flow	m³/h	500
Air throw	m**	3

Power data

Tc °C	Ta °C	Watt	Kcal/h	V100 m³	V80 m³	V60 m³
10	20	1382	1189	10	9,1	8,3
	25	1310	1127	9,3	8,5	7,7
	30	1236	1063	8,4	7,6	7
	35	1163	1000	7,6	6,9	6,3
	40	1090	937	6,8	6,2	5,6
5	20	1239	1066	8,5	7,7	7,1
	25	1172	1008	7,7	7	6,4
	30	1103	949	6,9	6,3	5,7
	35	1034	889	6,2	5,6	5,1
	40	966	831	5,5	5	4,6
0	20	1111	955	7,1	6,5	5,9
	25	1050	903	6,4	5,8	5,3
	30	988	850	5,7	5,2	4,7
	35	924	795	5,1	4,6	4,2
	40	861	740	4,4	4	3,7
-5	20	969	851	5,8	5,3	4,8
	25	939	808	5,2	4,7	4,3
	30	868	746	4,5	4,1	3,7
	35	789	679	3,8	3,5	3,2
	40	716	616	3,1	2,8	2,6

Calculation of the refrigerating power and volume

Ta 35,0 °C

Tc 0,0 °C

PF

924 Watt

795 Kcal/h

V100 m³

V80 m³

V60 m³

b.) MILK STORAGE CONTAINER-TANK

- Isolated with two laiers (inox): stainless Steel AISI 316 Heat Treatment 1070 C – Tickness 1,5 mm
- Insulating: Polyurethane
- Milk container: 200 liters
- Agigator: LENZE Mod. MR. R1C225-F2BC-21G
- Pump: Teorema mod. MGK 313XOS 07S
- Probe for measuring temperatura: SAT 003
- Tube for milk: Stainless stell AISI 316
- Release valve
- Base plate with a wheels
- Electrical non-return valve:

c.) DOSING SYSTEM

- Automatic sliding door
- Cleaning nozzles
- Laser senzor for detecting bottles
- Button with a warning light for pouring milk
- Light for disinfection

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- Air shield for insects
- Heating system for chamber
- Lighting for chamber
- Cover panel

d.) CLEANING SYSTEM

- Water tank-PVC for clean water- 25 l
- Water tank for waste water- 25 l
- High pressure pump

e.) CONTROL SYSTEM

- Elektrical cabinet
- Process control panel ETKM 7.0
- Voice panel
- GSM panel

f.) PAYING UNIT

- LCD display
- Non–cash operating modul

g.) PRINTER

CUSTOM Mod. TPT112CMII - 112MM RECEIPT/TICKET PRINTER

MAIN FEATURES

- 200dpi best printing quality
- Paper width 112mm
- Paper thickness from 60 to 180 g/m²
- Speed > of 140 mm/sec
- RS232+USB interface
- Barcodes: UPC-A, UPC-E, EAN13, EAN8, CODE39, ITF, CODABAR, CODE93, CODE128, CODE32
- Fonts: European, International, Portuguese, Nordic, Chinese and Russian
- Highly reliable rotative cutter: > of 1.000.000 cuts
- MTBF > of 430.000 hours
- Sensors: ticket presence, near paper end

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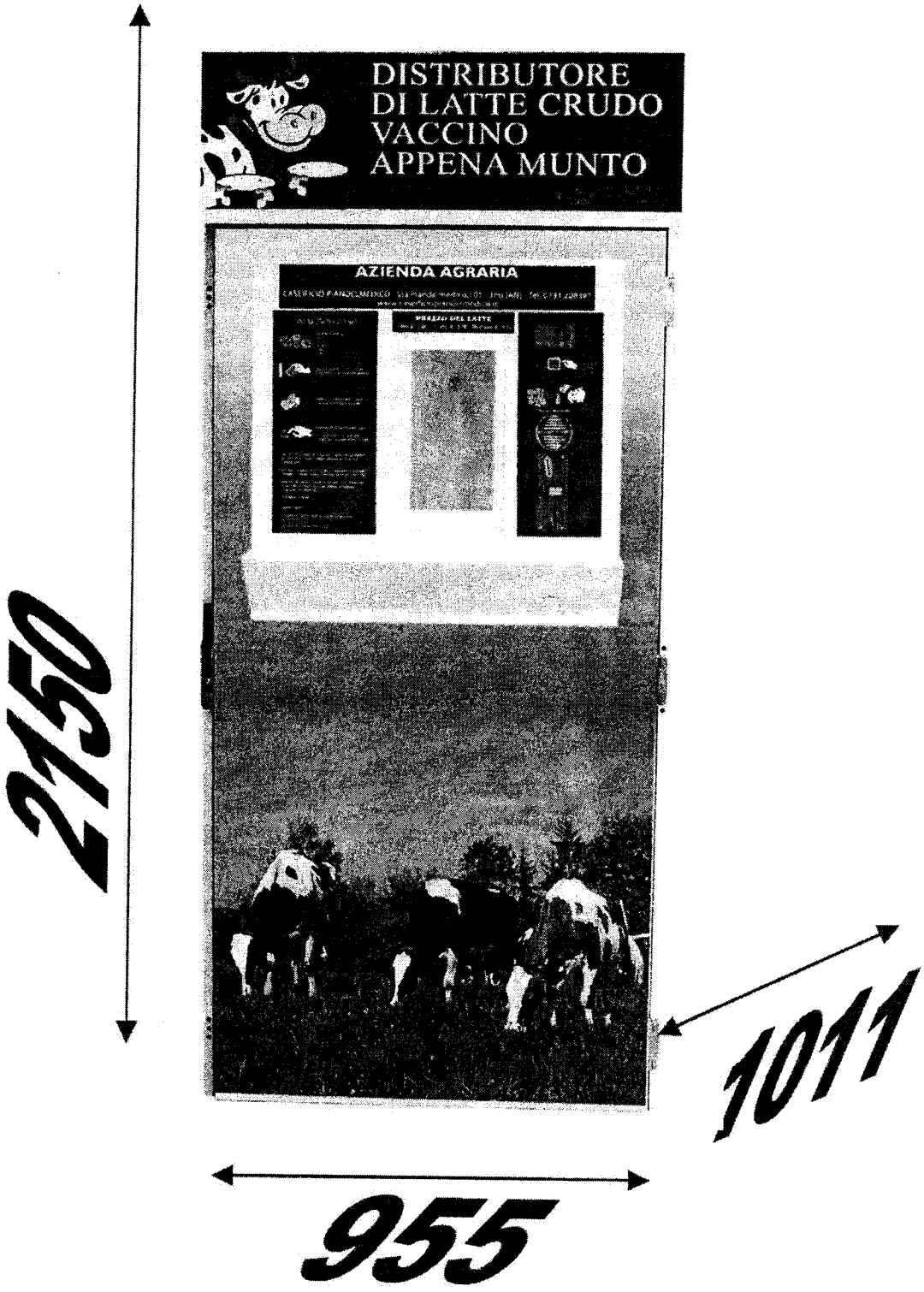
It consists of a graphic display, control units, coin box, cards transponder reader, distribution box with dispenser, 2 UVA lamps and a wash system.

Inside the cold store there is space for one or two tanks of 200 liters (or other capacity), insulated or not, with wheel and an air tight closure, provided with a total opening lid where they are fastened, volumetric pump, temperature drill, nozzle and socket.

For the wash system has to be prepared the installation to the water net and waste to sewers; if it weren't possible, there would be prepared two tanks, one for the wash and the other for reutilization.



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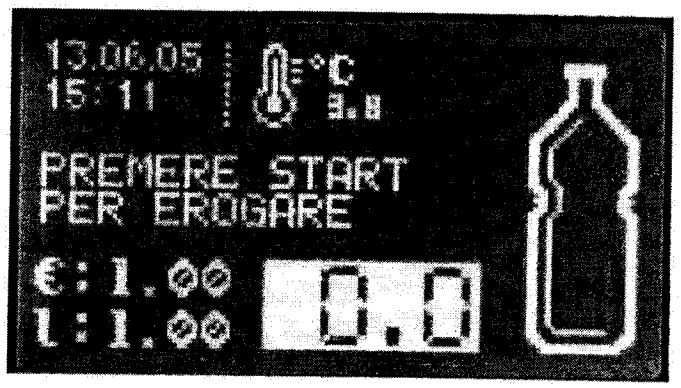
How does it work

After inserting one or more coins the customer starts the machine by letting appear on the display the credit and the product quantity that will be delivered. Instead of coins it is even possible to use a prepaid card to pass on the provided transponder.
Then the door opens automatically and comes down the nozzle of milk.

Now it is possible to put in the empty bottle and push the "start" button in order to start the distribution.

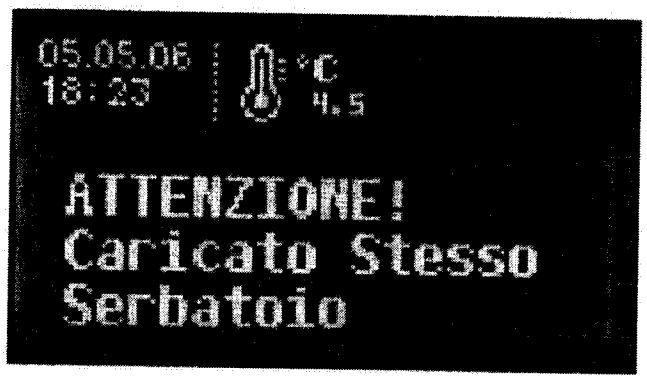


After delivering the intended quantity of milk, the bottle has to be taken away and after a sufficient time the door automatically closes and starts a wash cycle at the end of which the nozzle goes up again.

The user is assisted along each operation by the visual aid of the display and by a guiding voice.

LOADING

The tanks are filled in the milk hall, they are hermetic closed and are carried to the machine on a closed provided motor vehicle.
By the vending machine the nozzle is inserted in the conveyor and is put in the plug for the electrical connection. On the display will appear "caricamento in corso" and the operation will be registered in the computer memory.
In case it has been loaded the same tank with milk which has been in the cell more than 24 hours, it appears on the display the writing "caricato lo stesso serbatoio", the machines stops till the tank with fresh milk will be connected. The operation of wrong loading will be registered by the memory.



ALARMS AND SAFETY

The machine has a series of alarms and safety measures some of which are:

- Milk cut in case the planned lowest temperatures of deliver exceed the planned minimum threshold, that is a milk temperature over 4°.
- Milk best-before date; if the container won't be replaced after 24 hours (+ 2 hours supply) the machine is being cut.
- Stirrer control; the control unit provides to start, inside milk container, the stirrer with programmable frequency.
- General control of the use; if the control unit reveals with frequency some anomalies, it will notify on the screen the need of technical assistance, this request is visible on the display as follows: "SERVICE". If 5 days later with the remaining report, assistance hasn't been called yet, the machine stops and compares the notice:

- Cut in case of lack of product with registration in the memory.
- Every 20 minutes are registered temperatures, product loading, anomalies and controls made by Health Service, and the Office for the Prevention of the Adulteration of Beverages and Foodstuffs with the possibility to print it and read it with transponder card.
- The machine can be controlled by the distance through GSM card in order to verify milk, temperatures levels and the working stages. Technical assistance ervice too can control it at a distance.
- The machine can be controlled at a distance even with the use of a camera.

Health Service, Office for the Prevention of the Adulteration of Beverages and Foodstuffs

Local authorities and/or authorities in charge of are issued with cards that enable to read the historic course of milk and fridge temperatures, milk loading (date and hour), possible mistakes, damages and anomalies.
These data are registered every 20 minutes.

DALTIO
MACCHINE CAFFE ESPRESSO

MILK DISTRIBUTOR DL1 - POWER CONSUME

	WORKING TIME	Power consume (W)
Electronic sheet		50
Gear Box Motor 10W	It runs about 3 minutes per hour	10
Pump Engine	It works just during the supply time (about 20 sec. per 1 liter)	40
UVC Lamp		40
Air cooling		800
Wash pump 4A	It works just in the end of supply (max 6 sec.)	48
		988

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