INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE



ED. 02 - 06

GB



AGETWIN 55 - AGETWIN 120



MACCHINE E IMPIANTI PER GELATO

ICE CREAM EQUIPMENTS AND MACHINES

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INTRODUCTION

Thank you for choosing our product. To ensure your machine works perfectly, please make sure you read this **instruction manual** very carefully.

The descriptions and illustrations contained in this manual should not be considered binding. **Technogel** reserves the right to make any alterations to the machine or parts of the equipment that the company considers necessary, at any time and without any prior warning, and for whatever constructional and commercial reasons.

⇒ Who should carry out work on the equipment

Pay close attention to the symbols given at the side of each operation described for installation, use and maintenance:



Technician



User

Where the symbol given indicates the **Technician** (and this could be an electrician, plumber or mechanic depending on the circumstances), this means that the work must be carried out only by this person. If the user were to attempt the work, **this could prove extremely dangerous.**

- Installation and start-up of the machine



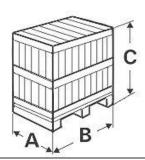
Installation and start-up must be carried out by a **technogel** technician or by a technician **authorized by technogel spa** to do so.

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⇒ Unpacking the machine

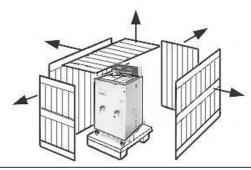




GROSS WEIGHT A	В	С
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AGETWIN 55 = 297 KG mm. 730 1030 1730

AGETWIN 120 = 352 KG mm. 730 1100 1730

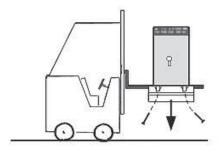


CAUTION: SINCE THE MACHINE IS TALL AND NARROW IT COULD PROVE UNSTABLE DURING LIFTING.

Remove all the top and side wood panels inserted for packing purposes.



Raise the machine using a fork lift truck with the forks inserted between the base of the machine and the bottom of the crate.



Unscrew the four bolts which block the machine from beneath the crate.

CAUTION!

Once the bolts have been removed, the bottom of the crate will detach from the base of the machine.

After removing the bottom of the crate, lower the lifting mechanism to position the machine on the ground.

THE WOOD USED FOR THE PACKING CRATE IS <u>NATURAL FIR</u> WITH NO CHEMICALS AND IT IS THEREFORE IDEALLY SUITED FOR RECYCLING.



⇒ Lifting the machine





	NE	T WEIGHT		Α	E	3		С
AGETWIN 55	=	180 KG	mm	. 625	67	5	1:	260
AGFTWIN 120 =	=	260 KG	mm	. 880	80	00	1:	370



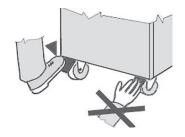
<u>CAUTION</u> ! SINCE THE MACHINE IS TALL AND NARROW IT COULD PROVE UNSTABLE DURING LIFTING.

Lift the machine using a fork lift truck with the forks inserted beside the machine between the front and rear wheels.



Lift the machine using belts, positioning them as shown in the figure close to the front and rear wheels.

The tie-rod raising the machine must be positioned exactly in the center of the machine.



Move the machine by grasping the handle of the flange with one hand and the edge of the machine with the other.

After positioning the machine, block the front wheel brakes using the feet.

DO NOT USE THE HANDS



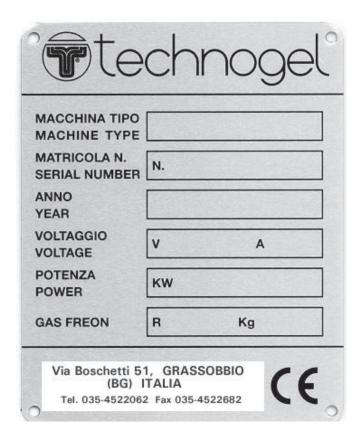
⇒ Machine identification

Each machine has a plate with the following information:

- > Machine type
- > Serial number
- > Year of manufacture
- Voltage and hertz
- > Electrical power
- > Type and quantity of gas

The plate is applied to the rear of the machine.

Here below is the information which appears on the plate of this machine:



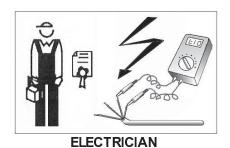
When ordering spare parts or requesting technical assistance, please quote the information given on the plate:

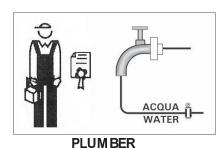
MACHINE TYPE	TINO AGETWIN
SERIAL N°	
VOLTAGE	V HZ



POSITIONING AND CONNECTING THE MACHINE

Qualified personnel required for the operations:













Dimensions and weight:

A – width	B – depth	C – faucet	H – height	Weight of full machine
630 mm.	680 mm.	130 mm.	1360 mm.	290 kg.



CAUTION:

In order to operate correctly, the machine does not have to be anchored to the floor, nor is it necessary to take any technical measures to restrict the transmission of vibrations.

In positioning the machine, however, a number of important points should be borne in mind:

- ⇒ Leave a space of at least **25 cm**. around the machine as this is essential for work to be carried out easily.
- \Rightarrow Make sure the machine is stable by locking the front wheel brakes (F) using the feet (do not use the hands).
- ⇒ Carry out the electrical connection (E) making sure that the electricity cable comes from above as if it were laid on the ground it could get crushed. For details regarding power and absorption please see page 10 Table A ref. AGETWIN 55.
- ⇒ Carry out the plumbing connection (**W**) for filling and drainage of water. For details regarding pressure and consumption please see page 11 ref. **AGETWIN 55**.





Dimensions with plumbing and electrical connections: AGETWIN 120

Dimensions and weight:

A – width	B – depth	C – faucet	H – height	Full machine weight
880 mm.	810 mm.	130 mm.	1390 mm.	500 kg.



CAUTION:

In order to operate correctly the machine does not have to be anchored to the floor, nor is it necessary to carry out any technical measures to restrict the transmission of vibrations.

In positioning the machine, however, a number of important points should be borne in mind:

- ⇒ Leave a space of at least **25 cm**. around the machine as this is essential for operations to be carried out easily.
- \Rightarrow Make sure the machine is stable by blocking the front wheel brakes (F) using the feet (<u>do not use</u> the hands).
- ⇒ Carry out the electrical connection (E) making sure that the electric cable comes from above as if it were laid on the ground it could get crushed. For details regarding power and absorption please see page 10 Table A ref. AGETWIN 120.
- ⇒ Carry out the plumbing connection (W) for filling and drainage of water. For details regarding pressure and consumption please see page 11 ref. AGETWIN 120.



⇒ Electrical installation



The electrical system to which the machine is connected must be carried out by a <u>qualified</u> <u>electrician</u> in compliance with current standards. An efficient, suitably earthed electrical system is the principle requirement to ensure perfect functioning of the machine.

Install an appropriate wall-mounted differential circuit-breaker.

See table (A) for details regarding power and absorption.

Check that the power supply voltage is the same as the voltage indicated on the machine plate (see page 6).

The power cable has four wires if the machine is 220 V and five wires if the machine is 380 or 415 V.

When the cable has four wires, the **yellow/green** is the **earth** and the other three wires are the three **phases.**

Qw

When the cable has five wires, the **yellow/green** is the **earth** - the **blue** is the **neutral** - the other wires are the three **phases**.

Table (A):

AGETWIN 55	200V	200V	200V	380V	380V	415V
	50HZ	60 HZ	50-60 HZ	50 HZ	60HZ	50 HZ
Total power kW .	1,5	1,5		1,5	1,5	1,5
Max. absorption A.	6,5	6,5		4	4	4
Pow er cable	4 x 1	4 x 1		5 x 1	5 x 1	5 x 1
N° of wires & cross	mm²	mm²		mm²	mm²	mm²
section						

AGETWIN 1	20					
Total power	kW.	2	2	2	2	2
Max. absorption .	Α.	17,5	17,5	7,3	7,3	7,2
Power cable N° of wires &	cross	4 x 2,5 mm ²	4 x 2,5 mm²	5 x 1 mm²	5 x 1 mm²	5 x 1 mm²
section						

The efficiency of the power supply must be carefully checked, particularly the earthing and safety system.

TECHNOGEL spa. DECLINES ALL RESPONSIBILITY FOR ANY PROBLEMS ARISING FROM INCORRECT INSTALLATION OR FAULTS IN THE POWER SUPPLY.



⇒ Connection to the water supply



The refrigeration plant has a water cooled system.

Connect the pipe coming from the water supply to the connector marked **WATER INLET**; the drainage pipe must be connected to the connector marked **WATER OUTLET**.

The plates and inlet /outlet connectors are located on the back at the bottom. If for any reason the plates indicating the inlet and outlet connectors are missing or illegible, please note that the inlet connector is the one connected to the pressure valve inside the machine.

For connection to the water supply system, rubber piping used must be suitable for operation at a pressure of 10 Bar.

WATER PRESSURE AND CONSUMPTION

If the machine operates with the mains water supply system, make sure that the water entering the machine has a minimum water pressure of 1,5 Bar.

If the water pressure exceeds 5 Bar, the plumber should fit a pressure reducer to reduce to 4 Bar.

The average water consumption when the refrigerating system is in operation is:

- AGETWIN 55 = 50/200 litres per hour*
- \Rightarrow AGETWIN 120 = 100/480 litres per hour*
- * depending on the temperature of the water entering and whether the machine cools from 85° C or conserves the already cold mix at 4° C.

If the machine operates with water from a tower make sure that;

- ⇒ MAXIMUM TEMPERATURE ON ENTERING = 29°C (84,2°F)
- ⇒ MAXIMUM TEMPERATURE AT OUTPUT = 34°C (93,2°F)

If the water contains impurities, it will be necessary to fit a purifying filter in order to prevent encrusting and/or damage to the pressure valve.

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*technogel

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AUTHORIZED AND UNAUTHORIZED USAGE CONDITIONS OF USAGE OF THE MACHINE SAFETY WARNINGS



AUTHORIZED AND UNAUTHORIZED USAGE

The cooling and ageing vats on the AGETWIN 55 and AGETWIN 120 series are designed exclusively for cooling ice-cream mixes with a composition of up to 42% total solids.

Any attempt to use these machines to process products other than those authorized is made solely at the Customer's own risk.

⇒ Conditions of usage of the machine

The quantities of mix which the AGETWIN 55 and AGETWIN 120 will cool for each tank are as follows:

	minimum	Maximum
AGETWIN 55	20 litres	60 litres
AGETWIN 120	40 litres	120 litres



IF GREATER QUANTITIES THAN THOSE QUOTED ARE USED, THIS COULD DAMAGE THE MACHINE AND PROVE DANGEROUS FOR THE OPERATOR

⇒ Performance of the machine

The machine is able to cool ice-cream mix even at high temperatures $(85^{\circ} C)$ and to maintain it at $+ 4^{\circ} C$ after cooling.

To ensure cooling is perfectly carried out, we recommend cooling from 85°C, should be done one tank at a time.

SPECIAL CARE SHOULD BE TAKEN IN FILLING THE AGEING VAT TO COMPLY WITH THE MAXIMUM RECOMMENDED QUANTITIES.



⇒ Safety warning

If the cover (1) is raised during operation, the stirrer inside the tank will stop working. When the cover is closed it will start working again.

Check periodically that the safety device works correctly.

TECHNOGEL spa DECLINES ALL RESPONSIBILITY FOR DAMAGE CAUSED BY TAMPERING WITH THE PROTECTION DEVICES ON THE MACHINE.



CAUTION:

Faucet (2) for mix output can be opened and closed by turning the appropriate knob anticlockwise (to open) and clockwise (to close). When opening it, do not pull the knob more than necessary as the faucet piston could come out of its seat.

When using for the first time, check the operation mode before pouring in the mix to understand how it works.

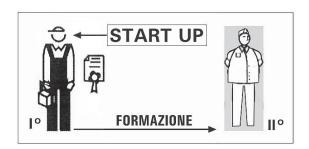


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FUNCTIONS AND START-UP OF THE MACHINE WITH PRELIMINARY CHECKING AND CONTROL

Explanation of the machine functions, together with preliminary checking and control must be carried out by a TECHNOGEL technician in the presence of the User who, after adequate training, will operate the machine.





Initial start-up



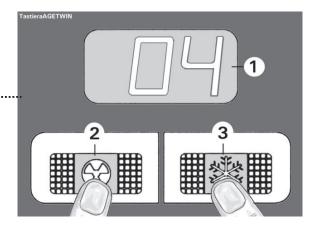
TO CARRY OUT INITIAL START-UP, PRESS THE "START"
BUTTON AND THEN WAIT FOR AT LEAST 60 MINUTES BEFORE
ACTIVATING THE REFRIGERATOR COMPRESSOR.

FOR ONE DAY OR MORE, AFTER PRESSING THE "START"
BUTTON, IT IS NECESSARY TO WAIT FOR AT LEAST 60
MINUTES BEFORE ACTIVATING THE REFRIGERATOR
COMPRESSOR.

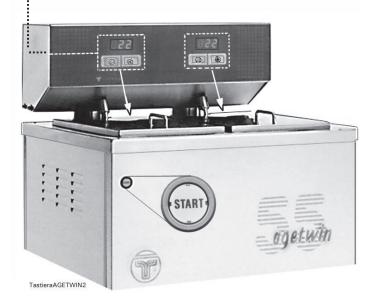
IF THE MACHINE IS NEVER DISCONNECTED FROM THE POWER SUPPLY NO WAITING PERIOD IS NECESSARY.



⇒ Keyboard control functions



- The **START** key turns on the power supply. When pressed it lights up and the keyboard control can then be used. Press again to turn off and block usage of the keyboard whilst stopping any motors in operation. Display (1) remains on and indicates the temperature of the mix in the tank only when the **START** key is on.
- Key 2) controls stirring of the mix in the tank. When pressed it lights up and starti stirring operations, press again to turn off and stop stirring.
- Key (3) controls stirring and the refrigeration compressor. When pressed it lights up and starts stirring and cooling; press again to turn off and stop.



- The left hand keyboard controls cooling and stirring of the left hand tank.
- The right hand keyboard controls cooling and stirring of the right hand tank.
- The temperature for conservation of the mix is pre-set in the factory at 4°C.



⇒ Machine start-up

IMPORTANT WARNING

WHEN THE MACHINE IS TURNED ON FOR THE FIRST TIME, PRESS THE "START" KEY AND WAIT FOR AT LEAST 40 MINUTES BEFORE PRESSING ANY OTHER KEY.

IF THE MACHINE IS SWITCHED OFF FOR ONE DAY OR LONGER, IT IS NECESSARY TO PRESS THE "START" KEY AND THEN WAIT 30 MINUTES BEFORE PRESSING ANY OTHER KEY.

IF THE POWER SUPPLY TO THE MACHINE IS NEVER TURNED OFF, IT CAN BE STARTED WITHOUT WAITING FOR THESE PERIODS.

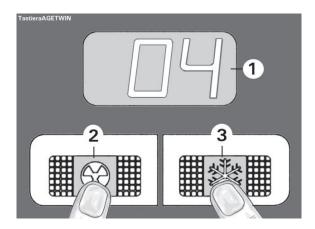
⇒ Checking the direction of rotation

There is no need to check the direction of rotation of the machine stirrers.



⇒ Operation of the machine





Pour the mix into one of the two tanks (see minimum and maximum quantities on page 14) and then press key (3) COOLING for that specific tank.

> PRESS THE COOLING KEY (3) ONLY

The machine will cool the mix and stir it continuously until it reaches the temperature of + 4° C and it will then stop. Stirring only operates when the refrigeration compressor is in operation.

When the temperature of the mix rises, the machine will start up again automatically and take it back to + 4° C.

If you wish to stir the mix while the machine is stopped, press key (2) STIRRING and after a few seconds turn off and leave just the COOLING key switched on.

> DO NOT LEAVE THE STIRRING KEY (2) ON WHEN THE MACHINE IS ON COOLING.

DO's AND DONT's	Consequence
When cooling the mix from 85° C, operate one tank at a time.	If both tanks are cooled from 85°C simultaneously, the machine will not suffer any consequence but the cooling time will be much longer with the risk of infecting the already pasteurised mix.
	Wait for the first tank to reach at least 10° C and then start the second one.

Advice	Reason
When the quantity of mix drops below the minimum level, stop the machine and empty out the remaining mix.	When the quantity of mix in the tank is less than the minimum quantity recommended (see page 14), cooling and stirring are no longer efficient.



⇒ Mix outlet faucet

To remove the mix from the machine, turn knob (1) of the faucet **anticlockwise** one complete rotation for rapid emptying or, less than one rotation for slow emptying.

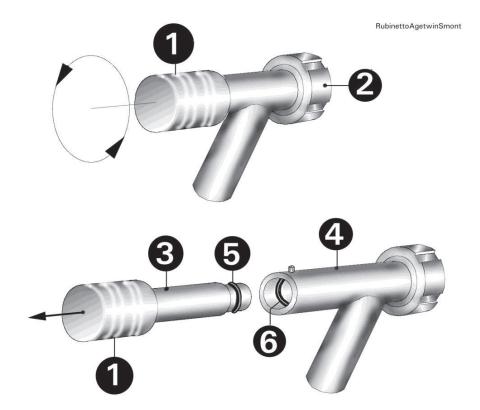
To turn off, rotate clockwise until it stops without forcing it.

To dismantle the faucet of the machine, loosen ring nut (2) using the appropriate spanner.

To clean the faucet, dismantle as follows:

Turn knob (1) anticlockwise as far as it will go. Holding the knob steady, turn it again until the faucet piston (3) detaches from the faucet body (4).

Clean thoroughly using the brush provided. Before re-assembling it, grease washers (5) and (6) with vaseline.





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WASHING



⇒ Washing the machine

After emptying the machine, before gaining access to the inside of the tanks for cleaning purposes, press the **START** key (light off) and disconnect the power supply.

Rinse with water and drain from the faucets.

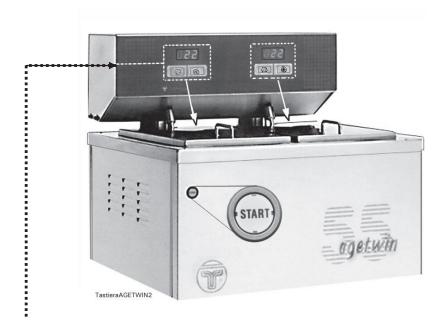
For thorough washing, pour in very hot water (70/75°C) mixed with dishwasher detergent in the quantity recommended by the manufacturer and, after reconnecting to the power supply with the **START** key, start the two stirrers using the appropriate keys.

Let it rotate for 20 minutes then stop it and drain the water. Rinse thoroughly and dry.

If you wish, it is possible to wash just one of the two tanks while the other still contains mix.

UNDER NO CIRCUMSTANCES SHOULD YOU LEAVE WATER MIXED WITH CHLORINE IN THE MACHINE AS THIS COULD CORRODE THE MACHINE PARTS.

⇒ Cleaning the keyboard film cover



The blue keyboard film should be cleaned using a sponge dipped in water (hot or cold) and liquid detergent. Do not use abrasive soap powder as this could ruin the film by removing colour and design.

Never use acids or solvent of any kind as this would damage the film.

Do not use brushes with metal or stiff plastic bristles, or abrasiv metal pads designed for use in the kitchen.

To remove stubborn dirt, under no circumstance should you use <u>blades or metal instruments</u> (knives – scissors – screwdrivers – etc.): these could cut the film.

Soften with hot water and remove the dirt with a sponge or soft cloth.



MAINTENANCE AND ECOLOGICAL INFORMATION



⇒ Maintenance to be carried out by the *User*



The machine does not require any special maintenance except for lubrication of the washers on the faucets with Vaseline. This should be done after each washing operation and the washers must be replaced when worn.

⇒ Caution danger of machine breakage

During the winter season, if production stops, make sure that the temperature in the room where the equipment is stored does not drop below 0° C.

As the machine is water-cooled, with below zero temperatures the refrigeration system could break down, which would prove extremely costly to repair.

If it is not possible to avoid such low temperatures, please contact the Authorized Technician who will drain the water from the refrigeration condenser.

⇒ Maintenance to be carried out by the Authorized Technician



At the end of the season or at the start of the new season:

- Check the efficiency of the refrigeration system: quantity of refrigerating gas and cleaning of the condenser.
- Check that the temperature indicated on the display (4°C) correponds to that of the mix inside the tanks



	1/0
⇒ Noise le	· v ei

The level of acoustic pressure when the machine is in operation, measured at a distance of 1 meter, is less than 70 dB (A).
⇒ Ecological information
CAUTION !!
" This machine contains substances which can damage the ozone layer; when it has outlived its useful working life it should be consigned to specialized disposal centers. Ask your local refuse disposal center for specific information."

<u>.....</u>



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TROUBLE-SHOOTING

CAUTION DANGER

The user can carry out work on the machine in complete safety only when the symbol is given to indicate this.

In all other cases, the work must be carried out exclusively by an Authorized and Qualified Technician

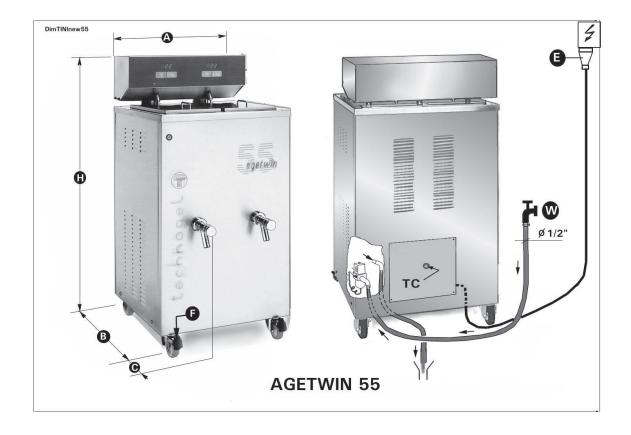






WORK WHICH CAN BE CARRIED OUT BY THE OPERATOR IN TOTAL SAFETY

PROBLEM	CAUSE	REMEDY
The refrigeration compressor stops and starts continually.	Lack of condensation water. Insufficient water.	Check whether faucet W is open. If it is check the water is at the correct pressure and capacity.
The refrigeration compressor stops and will not start again.	The heat protection device on the refrigeration compressor has come into operation.	Reconnect the heat protection device TC by pressing behind the machine as indicated in the figure. If the heat protection device comes on again, contact the Technical Service and have the compressor checked.



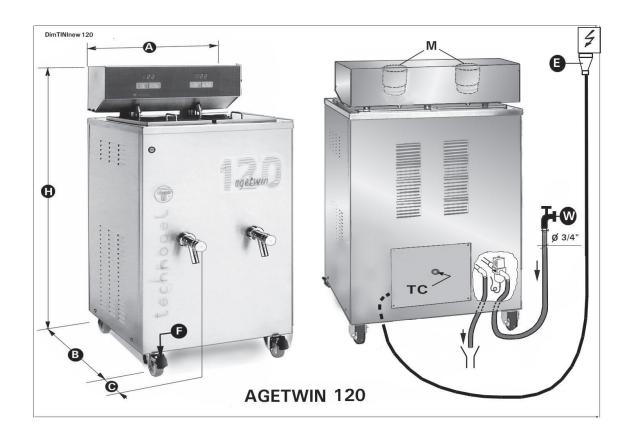






WORK WHICH CAN ONLY BE CARRIED OUT BY THE AUTHORIZED TECHNICIAN

PROBLEM	CAUSE	REM EDY	
Cooling time is too long	No cooling agent in the cooling system	Check and top up the gas if necessary. See the plate for details of type and quantity.	
The temperature of the mix in the tanks is too cold and the compressor keeps on working.	The heat regulator or electronic temperature probe is broken or is not operating correctly	Check the heat regulator or electronic temperature probe and replace if necessary.	
During operation of the machine, one of the two stirrers in the tanks stops.	No power supply to the motor Mowing to breakage of one of the protection fuses.		
	Breakdown of motor M.	Check motor M.	





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TECHNICAL CHARACTERISTICS WITH DIAGRAMS

Section reserved for the Authorized Technical Service



⇒ Technical characteristics:

AGETWIN 55

Refrigerator compressor	Semihermetic HP 1.5 (kW 1.1)
Refrigerating gas	Freon R134a (quantity 1.2 kg.)
Stirrer	N° 2 - 30 rpm kW. 0.110

Heat setting	220V	220V	200V	380V	380V	415V
	50HZ	60HZ	50/60HZ	50HZ	60HZ	50HZ
Refrigerating compressor A.	6.5	6.5		4	4	4

Electric system fuses	200V and 220V	380V and 415V	
Line protection	n° 3 d, 10 x 38 16A, type AM	n° 3 d. 10 x 38 16A. type AM	
Comp. Element protection	n° 1 d, 5 x 20 1A, rapid type	n° 1 d. 5 x 20 1A. rapid type	
Primari transformer F2	n° 1 d. 5 x 20 2A. rapid type	n° 1 d. 5 x 20 2A. rapid type	
Secondary transformer F3	n° 1 d. 5 x 20 6,3A. delay type	n° 1 d. 5 x 20 6,3A. delay type	
Stirrer motors protection	n° 4 d, 5 x 20 2A, rapid type	n° 4 d. 5 x 20 2A. rapid type	

Fixed setting high pressure switch	Intervention pressure values	
Disconnecting pressure	20.7 Bar = 300 Psi	
Connecting pressure	13.8 Bar = 200 Psi	
Differential	6.9 Bar = 100 Psi	

Safety valve	Intervention pressure 28 bar

Ideal condensation	Start of process (mix at 85°C)	End of process (mix at 4°C)
+ 35° C		

The machine is supplied with the above values and settings fixed in the factory.

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⇒ Technical characteristics

AGETWIN 120

Refrigerator compressor	Semihermetic Power HP 2 (kW 1,5)	
Refrigerating Gas	Freon R134a (quantity 2 kg.)	
Stirrer	N° 2 - 30 rpm kW. 0.110	

Heat setting	220V	220V	200V	380V	380V	415V
	50HZ	60HZ	50/60HZ	50HZ	60HZ	50HZ
Refrigerator compressor A.	16.5	17.5		7.3	7.3	7

Electric system fuses	200V and 220V	380V and 415V	
Line protection	n° 3 d. 10 x 38 20A. type AM	n° 3 d. 10 x 38 16A. type AM	
Compressor element protection	n° 1 d. 5 x 20 1A. rapid type	n° 1 d. 5 x 20 1A. rapid type	
Primary transformer F2	n° 1 d. 5 x 20 2A. rapid type	n° 1 d. 5 x 20 2A. rapid type	
Secondary transformer F3	n° 1 d. 5 x 20 6,3A. delay type	n° 1 d. 5 x 20 6,3A. delay type	
Stirrer motors protection	n° 4 d. 5 x 20 2A. rapid type	n° 4 d. 5 x 20 2A. rapid type	

Fixed setting high pressare switch	Intervention pressure values	
Disconnecting pressure	20.7 Bar = 300 Psi	
Connecting pressare	13.8 Bar = 200 Psi	
Differential	6.9 Bar = 100 Psi	

Safety valve	Intervention pressure = 28 Bar

REFRIGERATING SYSTEM PRESSURES AND TEMPERATURES				
Ideal condensation	Start of process (mix at 85°C)	End of process (mix at 4°C)		
+ 35° C				

The machine is supplied with the values and settings given above pre-set in the factory.

TECHNOGEL Spa SHALL NOT BE HELD RESPONSIBLE FOR DAMAGE TO OBJECTS OR PERSONS ARISING FROM ANY ALTERATIONS MADE TO THE PRESET VALUES OR FROM THE USE OF FUSES OF INCORRECT SIZE OR WITH INCORRECT CHARACTERISTICS

