Apparecchiature
per laboratorio

Laboratory
Equipment

KARTELL spa

Art. 2233 – Art. 2234 (100 – 240 V / 50 – 60 Hz)

Agitatore magnetico multiposizione Mod. TK 6 - TK15

Multiposition magnetic stirrer Mod. *TK 6 - TK15*

IMPORTANTE:
LEGGERE LE INFORMAZIONI CONTENUTE NEL PRESENTE MANUALE PRIMADELLA MESSA IN FUNZIONE.
LA SOCIETA' DECLINA OGNI RESPONSABILITA' SULL'IMPIEGO NON CONFORME ALLE ISTRUZIONI DELLO STRUMENTO.

IMPORTANT:
READ THE INFORMATION CONTAINED IN THE PRESENT MANUAL BEFORE USING THE UNIT.
THE MANUFACTURER DOES NOT ACKNOWLEDGE ANY RESPONSIBILITY FOR AN IMPROPER USE OF THE EQUIPMENT, NOT RESPONDING TO DIRECTIONS FOR USE

Preface:

Thanks you for choosing the Multiposition Magnetic Stirrer.
The magnetic stirrer **TK 6 and 15** positions are able to stir up to 6 or 15 beakers respectively.

Safety instructions:

Before using the unit, please read the operating manual supplied with the apparatus carefully.

Do not dispose of this equipment as urban waste

In order to prevent possible risk of electric shocks, fire and personal injury when the unit is being used, basic safety measures must always be taken, including:

The liquid must not come into contact with the electric power cable or with the electrical parts inside the instrument.
Check that the rating of external power supply corresponds to the rating of the electric line.
Do not use the unit if it is not working correctly. In case of malfunctioning, contact your nearest assistance centre.
Personal protective equipment must be compatible with the possible risks posed by the material being processed and the glass parts.
Follow the cleaning instructions described in this manual.
The magnetic fields are active on magnetic and metallic parts (magnetic supports, CDs, floppy discs, cardiac stimulators, magnetic cards). Keep these items away from the magnetic stirrer plate and the magnetic stir bars.

This unit must only be used for laboratory applications

The manufacturer declines all responsibility for any use of the unit that does not comply with these instructions.

This unit has been designed and produced in compliance with the following standards.

Safety requirements for electrical apparatus for:

Measurement and control and for laboratory use	**CEI EN 61010-1**
Electrical equipment for laboratory use	**UL 3101-1**
General requirement – Canadian electrical code	**CAN/CSA-C22.2**

N.B.: *The manufacturer is committed to constantly improving the quality of the products and reserves the right to modify the characteristics without prior notice.*

CONTENTS

1. Introduction

The magnetic stirrer TK is able to stir up to 6 beakers having a maximum diameter of 85 mm (TK 6) or up to 15 beakers having a maximum diameter of 64 mm (TK 15) at the same time.

The stirrer stays cold even after several days of continuous operation. This feauture makes it particularly appreciated in microbiology and biochemistry.

Epoxy painted metal structure studied and tested in order to give to the instrument an excellent resistance to the attack of chemical agents and to corrosion in general.

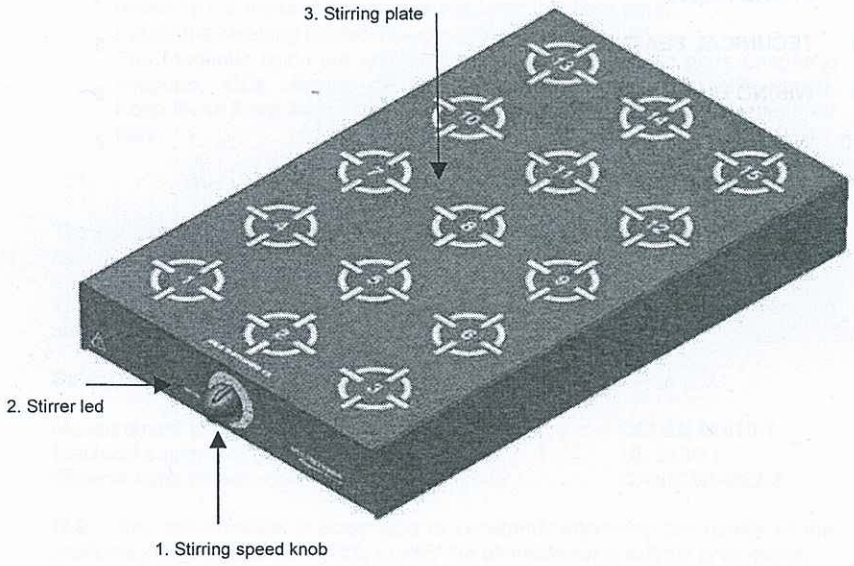
NOTE: *It's important to choose the most suitable magnetic stir bar related to the quantity and quality of liquid to be stirred as well as to the type of beaker used.*

*For **TK 6** is suggested the stirring bar code A00001056 (6x35 mm)*

*For **TK 15** is suggested the stirring bar code A00001057 (6x20 mm)*

Turn the stirring speed knob (1) on the front panel in order to start the stirring function. It is possible to select speeds from between 0 and 1100 rpm.

The Stirrer Led (2) shows when the stirring is running.



1.1 Parts included

Check the unit is complete after unpacking.
The table below shows the parts included.

Parts included		Cod.	Qty
1	Magnetic stirrer TK 6	F203A0177	1
1	Magnetic stirrer TK 15	F203A0178	1
2	Switching 100-240V/12V without plug	40001099	1
3	Plug for power supply	10003082 See Chapt. 7	1
4	Operating manual	10003556	1

1.2 Instrument description

The structure of the unit is made of aluminium coated with an epoxy paint studied and tested in order to give to the instrument an excellent resistance to the attack of chemical and mechanical agents and to corrosion in general.

The stirring speed can be set within a range of 0-1100 rpm using the knob on the front panel.
It's possible to thermostat the sample with a suitable recirculating water bath.

1.3 Functions

STIRRING SPEED 	Turn the stirring speed knob on the front panel in order to start the stirring function. It is possible to select speeds from between 0 and 1100 rpm.
STIRRER LED	When the led is lighted it means that the stirring is ON

1.4 Information regarding construction materials

Structure	Aluminium
Frontal panel label	PET
Foot	MQ/MVQ

If any liquid being processed falls onto the above materials, clean them immediately to avoid chemical corrosion.

2. Assembly and installation

2.1 Electrical connection

After having unpacked the instrument, place the unit on a laboratory bench.
Before connecting the instrument to the electric line, make sure that the values on the rating plate correspond to those of the electric line.
Use the external power supply to connect the instrument to the socket.
The power supply can be from 100 to 240V AC with a frequency of 50 or 60Hz.

2.2 Start-up

After the connecting the instrument to the electric line by the external power supply, place the flasks containing the sample and a suitable magnetic stir bar on the stirring plate.

3. Operating controls

Start the stirring function by turning the stirrer knob on the front panel. Speeds from 0 to 1.100 rpm can be selected using the analogical scale around the knob.

4. End of work cycle operations

At the end of the work cycle turn off the stirring knobs.
If the instrument is not used for a long period it's better to disconnect the external power supply from the electric line.

5. Maintenance

No routine or extraordinary maintenance is necessary apart from periodically cleaning of the unit as described in this manual (chap.5.1).

In compliance with the product guarantee law, repairs to our units must be carried out in our factory, unless previously agreed otherwise with local distributors.

5.1 Cleaning

Disconnect the unit from the power supply and use a cloth dampened with a non-flammable and non-aggressive detergent to clean the unit.

5.2 Disposal

The final disposal of the unit or of its components must be carried out in compliance with the directives and laws in force in the country concerned.

6. Accessories available on request

The following accessories or other type of stirring bars can be ordered separately:

Description:	Code
Stirring bar 6x35mm	A00001056
Stirring bar 6x20mm	A00001057
Thermostating bath for samples, 408x240x85mm	A00001055

		
A00001056	A00001057	A00001055

7. Spare parts

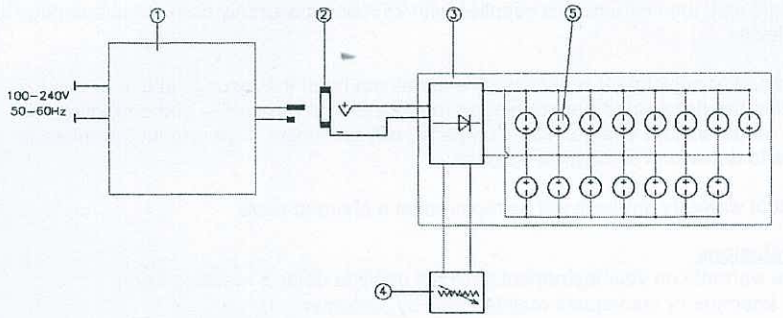
Description:	Code
Knob 24D black	10002097
Bumpon exagonal 11x3.5mm	10000231
Switching 100-240V/12V without plug	40001099
UE plug for power supply 40001099	10003082
USA plug for power supply 40001099	10003083
UK plug for power supply 40001099	10003084
AU plug for power supply 40001099	10003085

8. Technical features

GENERAL			
Power supply	V	DC 12 ± 0,5	
Power	W	3,6 (6 pos.)	9 (15 pos.)
Dimensions	mm (bxhxp)	230x51,5x366	
	Inch (wxhxd)	9x2x14.4	
Weight	Kg	1,75 (6 pos.)	2,1 (15 pos.)
	lbs	3,85	4,63
Speed control	rpm (1/min)	0÷1100	
Max load-bearing capacity of plate	Kg	15	
	lbs	33	
Construction material		Aluminium	
Environmental temp. range	°C	+5...+40	
	°F	+41...+104	
Storage temp. range	°C	-10...+60	
	°F	+14...+140	
Max. humidity	%	Max 80	
Operating mode		Continuous	
Pollution degree CEI EN61010-1		2	
Installation category CEI EN61010-1		2	

EXTERNAL POWER SUPPLY	
Inlet	AC 100÷240V ; 50-60 Hz ; 0.5A
Outlet	DC 12V ; 1.25A

9. Wiring diagram



1) External power supply
2) Back socket
3) Main board
4) Potentiometer set speed
5) Motor

10 Warranty

Starts from the date of delivery note and is referred to the number of register of the single unit, the instrument is supplied with 25 months warranty from manufacturing defects.

If repair or adjustment is necessary and has not been the result of abuse or misuse within the designated period, please return – freight pre-paid – and correction will be made without charge. The Company will determine if the product problem is due to deviations or customer misuse.

Out of warranty products will be repaired on a charged basis.

Exclusions

The warranty on your instrument shall not apply to defects resulting from:

- Improper or inadequate maintenance by customer
- Unauthorized modification or misuse
- Operation outside of the environment specifications of the products

Declaration of compliance

We *KARTELL spa*

address *Via Delle Industrie, 1*
20082 NOVIGLIO (MI)
Italy

under our responsibility declare that the product is manufactured in conformity with the following standards:
EN 61010-1 (2001)
EN 61326-1 (1997) + A1 (1998) + A2 (2001) + A3 (2003)
2002/95/EC (RoHS)
2002/96/EC (WEEE)

and satisfies the essential requirements of the following directives:
Machines directive 2006/42/EC
Low voltage directive 2006/95/EC
Electromagnetic compatibility directive 2004/108/EC
plus modifications and that the documents listed in annex I are available at Velp's offices as foreseen by the machine directive.