



Allure

Vestra salus – nostra salus

**WHEEL TEMPERING MACHINE
T-20-0,500-240x1-50-M**

OPERATOR'S MANUAL

TU 28.93.17-001-02351413-2018



**LLC «Allure»
FEBRUARY 2019**

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

Identification Data

Type and designation	T- 20-0,500-240x1-50-M
Production year	2019
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STRUCTURAL IDENTIFICATION SCHEME

Wheel Tempering Machine (WTM): T-M-W-VxF-Hz-X

Where "T" is one symbol, letters from A to Z, typical equipment: "T" is the Wheel tempering machine, "B" is the tempering bath.

Where "M" - no more than 2 characters (numbers from 0 to 9), denoting the maximum load of raw materials kg,

"W" - no more than 3 characters (digits from 0 to 9, and / or the symbol ",") denoting the maximum power consumption, kW,

"VxF" - no more than 3 characters (digits from 0 to 9) denoting the single-phase supply voltage, V,

"Hz" - no more than 2 characters (numbers from 0 to 9), denoting the frequency of Hz,

X - the letters from A to Z, denoting the design of the product: "M" is a programmable microcontroller or "K" is a temperature controller.

ATTENTION!

The manual must be read before the start of the Wheel Tempering Machine by operators, repairmen and other persons who are responsible for transporting the product, installing it, putting it into operation, maintaining and maintaining it in working condition.

Carefully read the instructions and safety instructions in this manual.

Do not start work until you have fully read and read the material contained in this manual and the other supplied documentation.

The use of all safety measures recommended in this MANUAL is mandatory.

The manual must be accessible to service personnel.

Along with the measures specified in this MANUAL, the Law "On the Basics of Labor Protection" and the rules for the prevention of accidents and the environment should be observed in accordance with applicable law.

Safety must be placed first when using the Wheel Tempering Machine.

This manual does not reflect minor structural changes in equipment made by the manufacturer after signing for publication of this manual, as well as changes in the components and documentation supplied with them. It only means that the Wheel Tempering Machine has been improved to better meet your requirements.

ATTENTION!

The current Operator's Manual applies to the Wheel Tempering Machine with a complete set of all nodes and does not take into account the changes reflected in the contract.

Table of Contents

Identification Data	2
1. INTRODUCTION	5
2. GENERAL INFORMATION	6
2.1. Purpose of the wheel tempering car.....	6
2.2. Staff qualifications.....	6
2.3. Declaration of conformity.....	7
2.4. Manufacturer's warranty and liability.....	8
2.5. General appearance and composition of the WTM.....	10
2.6. Operating principle.....	11
2.7. Operating elements.....	11
3. TECHNICAL DATA AND SPECIFICATIONS	12
3.1. Technical characteristics of WTM.....	12
3.2. Connection conditions for electrical equipment of WTM.....	12
4. SAFETY	12
4.1. General requirements for the safety.....	12
4.2. Safety measures.....	13
4.2.1. The danger warning Signs.....	13
4.2.2. Protective and safety devices.....	14
4.2.3. Requirements for service personnel.....	14
4.3. Safety measures during transportation and installation of the WTM.....	15
4.4. Safety measures when preparing the WTM.....	15
4.5. Safety when operating the WTM.....	16
4.6. The technical design changes.....	17
4.7. Machine noise level.....	17
4.8. The residual risks.....	18
5. SCOPE OF SUPPLY, MARKING, PACKING, STORAGE, UNPACKING AND HANDLING	18
5.1. Scope of supply.....	18
5.2. Marking.....	18
5.2.1. The transport marking on the packaging contains:.....	19
5.3. Packaging.....	19
5.4. Acceptance.....	19
5.5. Storage.....	20
5.6. Unboxing.....	20
5.7. Transport.....	20
6. INSTALLATION AND INITIAL START-UP	22
6.1. Installation location and Foundation.....	22
6.2. The Climatic operation conditions.....	22
6.3. Installation of the WTM.....	22
6.4. Preparation to start-up Melanger.....	23
6.4.1. WTM assembly for tempering with a wheel before first use.....	23
6.4.2. Turn on the WTM.....	23
6.5. The initial start.....	24
6.5.1. Setting the upper temperature of the chocolate mass.....	24
6.5.2. Setting the temperature of the chocolate mass.....	25
6.6. Recommended temperature for dark chocolate.....	26
6.7. Characteristic chocolate tempering points.....	26
6.8. The Emergency Shutdown Melanger.....	27
7. MAINTENANCE	27
7.1. General safety instructions for maintenance.....	27

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

7.2. Scope of maintenance work.....27

Daily maintenance.....28

8. SPARE PARTS ORDER, CALL CUSTOMER SERVICE.....28

9. OVERALL DIMENSIONS OF THE WTM.....29

Appendix 1.....29

Appendix 2.....30

Appendix 3.....31

1. INTRODUCTION

This "Operator's Manual" (hereinafter referred to as the Manual) on the Wheel-Tamping Machine must be considered as an integral part of the Wheel Tempering Machine and must be accessible to service personnel.

The purpose of this manual is to provide all the information necessary for the transportation, commissioning, operation and maintenance of the product. The manual contains instructions for the safe, efficient and cost-effective operation of a wheeled tempered machine. For those bodies of the tempered wheeled vehicle for which this is necessary, the manual includes instructions for maintenance, replacement, adjustment. Compliance with these instructions will help to avoid danger, reduce downtime and repair costs, increase reliability and extend the service life of a Wheel Tempering Machine.

This Guide applies a sign of the need for attention, which has the following meaning:



The sign is located in places where it is necessary to be especially careful, to follow the recommendations, prescriptions and instructions precisely in order to avoid disruption of the technological process and breakdown of the Tempering wheel Machine.



Only conscientious daily observance of safety instructions, maintenance and care of the Wheel Tempering Machine can ensure successful long-term operation!

Failure to comply with this Manual exempts the Manufacturer from warranty.

The use of a Wheel Tempering Machine for purposes other than those specified in this manual is not permitted. The company "Allure" LLC is not responsible for damage caused by non-compliance with the recommendations and guidelines set forth in the Guidelines.

The following documents are an integral part of this manual:

Appendix 1: Parts Catalog

In case of questions that you cannot solve yourself, consult the service department of the company "Allure" LLC.



In any request for the performance of work by our specialists, it should contain an indication of the model of the Wheel Tempering Machine, the serial number and the number of the supply contract.

2. GENERAL INFORMATION

2.1. Purpose of the wheel tempering car

This manual applies to the series of wheeled tempering machines T-M-W-VxF-Hz-X (hereinafter - KTM). The equipment is designed to temper the chocolate mass from the source material. It is applied at the enterprises of confectionery production.

2.2. Staff qualifications



Installation, commissioning, operation, maintenance and repair are allowed to personnel with appropriate qualifications and trained to work at WTM. It is necessary to have documentary evidence of staff qualifications..

The owner or his authorized representative is responsible for the training of inexperienced personnel and the necessary training of qualified personnel in the safe operation and maintenance of the WTM.

Trainees should work at WTM only under the supervision of an experienced person authorized to conduct training.

Personnel training at WTM (specialized instruction) is carried out by specialists of "Allure" LLC at the factory as needed.

To an enterprise using WTM, we recommend introducing in-house instructions taking into account the professional qualifications of its personnel and in all cases documenting the familiarization with the Manual and the implementation of instruction or training.

Operator	<ul style="list-style-type: none"> • Trained staff / specialist • Instructing in the workplace • Manufacturer training
Mechanic technician	<ul style="list-style-type: none"> • Specialist • Instructing in the workplace • Manufacturer training
Electrician	<ul style="list-style-type: none"> • Specialist • Instructing in the workplace • Manufacturer training

The management of an enterprise operating the WTM should periodically check the qualifications of personnel and the safety of its work.



We ask you to make an entry in the journal "Registration of the test of personnel qualifications and maintenance work."

2.3. Declaration of conformity

During the design of WTM, when selecting materials for WTM parts and its components, when selecting components, and in the manufacturing process of WTM, WTM safety was ensured in accordance with the following European standards, directives and safety standards:

- EN 954-1 safety of machinery. Details of control systems for safety. Part 1. The basic principles of design.
- EN1005-2 safety of machinery. The physical characteristics of the person. Part 2. Manual handling of machinery and component parts of machinery.
- EN1005-3 safety of machinery. The physical characteristics of the person. Part 3. Recommended limits of efforts for the operation of the machines.
- GOST r 51333-99 (EN 292-1-91, EN 292-2-91). Safety of machinery. Basic concepts, general principles for design. Terms, technology solutions and specifications.
- GOST r 51334-99 (eN 294-92), safety of machinery. Safety distances for the protection of the upper extremities from getting into the danger zone.
- GOST r 51335-99 (eNo. 349-93) safety of machinery. Minimum distances to prevent crush parts of the human body.
- GOST r 51337-99 (eN 563-94), safety of machinery. Temperature of those surfaces. Ergonomics data to establish limit values for hot surfaces.
- GOST r 51339-99 (eN 811-96), safety of machinery. Safety distances to prevent lower limbs from getting into the danger zone.
- GOST r 51343-99 (eN 1037-95), safety of machinery. Prevention of unexpected start-up.
- GOST r 51344-99 (eN. 1050-96), safety of machinery. Principles of risk assessment.
- GOST r 51345-99 (eN 1088-95), safety of machinery. Locking device of protective devices-principles of design and choice.
- GOST r MEK 60204-1-99 (eN 60204-1) safety of machinery. Electrical equipment of machines and mechanisms. Part 1: General requirements.
- EU directive on machinery (98/37/EG).
- EU directive on electrical equipment designed for use within certain voltage limits (73/23/EEC).
- STATE STANDARD 12.2.003-91. system of labour safety standards. Equipment production. General safety requirements.
- GOST 2.601-2006 ESKD. Operational documents
- GOST 9.014-78 ESZKS. Temporary corrosion protection products. General requirements.
- GOST 9.032-74 ESZKS. Varnish-and-paint coatings. Groups, technical requirements and symbols.
- GOST 9.105-30 ESZKS. Varnish-and-paint coatings. Classification and basic parameters of a method of staining.
- GOST 9.402-2004 ESZKS. Varnish-and-paint coatings. Preparation of metal surfaces before painting.
- GOST 12.1.003-83 SSSL Noise. General safety requirements.
- GOST 12.1.012-2004 SSSL. Vibration safety. General requirements.
- GOST 12.1.030-81 SSSL. Electrical Safety. Protective earth. Features.
- STATE STANDARD 12.2.003-91 SSSL. Equipment production. General safety requirements.
- GOST 12.2.062-81 SSSL. Equipment production. Protective fences.
- GOST 12.2.064-81 SSSL. Control of production facilities. General safety requirements.
- STATE STANDARD 12.2.124-90 SSSL. Food equipment. General safety requirements.
- GOST 12.4.040-78 SSSL. Control of production facilities. Mark.

- GOST 15.201-2000 development system and products. Products for industrial purposes. Procedure for development and production of products for production.
- GOST r 27.403-2009 Reliability in engineering. Test plans to control the probability of non-failure operation.
- 112-78, GOST meteorological glass Thermometers. Technical conditions.
- GOST 2991-85 Boxes sealed the deal for cargo weighing up to 500 kg. General technical conditions.
- GOST 5264-30 manual arc welding. Welded connections. The main types, features and dimensions.
- GOST 6359-75 meteorological barographs of aneroid type. Technical conditions.
- GOST 7502-98 Roulettes, tapes measuring metal. Technical conditions.
- GOST 9150-2002 basic norms of interchangeability. Metric thread. Profile.
- GOST 10354-82 polyethylene film. Technical conditions.
- ISO 10374-93 analogue direct-acting electrical indicating and auxiliary parts to them. Part 7. Special requirements for multi-function instruments.
- GOST 11534-75 manual arc welding. Connections welded under acute and obtuse angles. The main types, features and dimensions.
- GOST 11708-82 basic rules of interchangeability. Thread. Terms and definitions.
- GOST 12969-67 Decals for cars and appliances. Technical requirements.
- GOST 14192-96 cargo marking.
- GOST 14254-96 degrees of protection provided by enclosures (IP code).
- GOST 15150-69 Cars, machinery and other technical products. Performance for different climatic regions. Category, operating conditions, storage and transportation in part the impact of climatic factors in the external environment.
- GOST 17187-81 sound level meters. General technical requirements and test methods.
- GOST 21130-75 electrotechnical products. Earthing Clips and grounding signs. Design and dimensions.
- GOST 23170-78 packaging for mechanical engineering production. General requirements.
- GOST 26582-85 food machinery and equipment. General technical conditions.
- GOST 30150-96 labelling machines. General technical requirements and test methods.
- GOST r 50342-92 thermoelectric converters. General technical conditions.
- GOST r 53228-2008 Scales manual actions. Part 1. Metrological and technical requirements. Tests.
- GOST r 52869-2007 pneumatic drives. The requirement for security.
- GOST r 51317.6.2-2007 electromagnetic compatibility of technical equipment. Immunity to electromagnetic interference technology applied in industrial areas. Requirements and test methods
- GOST r 51317.6.4-2009 electromagnetic compatibility of technical equipment. Electromagnetic interference from equipment used in industrial areas. Standards and test methods
- GOST r MEK 60204-1 2007-safety of machinery. Electrical equipment of machines and mechanisms. Part 1. General requirements
- RD 50-690-89, methodical guidelines. The reliability of the technology. Methods of evaluation of indicators of reliability by experimental data.

General Director
LLC «Allure»



G.V. Korotkov

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

2.4. Manufacturer's warranty and liability

The manufacturer guarantees the compliancy of WTM with the above standards, directives and regulations, subject to following the terms of transportation, storage, installation and operation of the WTM, as set out in this guide.

The warranty period of exploitation for which the manufacturer undertakes to repair or replace the Machine on manufacturer's fault, is **12 months** unless otherwise agreed in the Contract.

Beginning of the warranty period is calculated from the day of commissioning of the WTM, but not later than **3 months** from the date of shipment of the WTM from the warehouse of the manufacturer.



The manufacturer is not liable for injuries to persons or damage to property, if they are the result of:

- non-compliance with the storage rules set out in the WTM Manual;
- accidental or not unintended operation of the WTM;
- improper handling with WTM on maintenance and operation;
- non-compliance to Manual instructions on any of the stages of operation the WTM;
- operation of the WTM with improperly installed, or defective safety devices, as well as when dismantling or ignoring them;
- changing parameters or design of Machine, not confirmed with the manufacturer;
- increased wear because of the lack of maintenance;
- improper repairs of the WTM.

2.5. General appearance and composition of the WTM

A general view of the WTM, the location and designation of the components are presented in Figure 1.

The list of components of WTM is given in table 1.

Fig. 1



Таблица 1. List of components of WTM

№ п/п	The name of the node	Номер позиции по рис.1
1	2	3
1	Tempering tank made of food grade stainless steel	1
2	Power Button	2
3	Modes control keyboard	3
4	Display	4
5	Tempering wheel	5
6	Tempering wheel motor housing	6
7	Wheel speed adjustment	7
8	Drain tray	8

2.6. Operating principle

The design of the wheel tempering machine consists of a tempering tank 1 and a wheel 8. The tempering tank is intended for heating the chocolate mass. The tank is equipped with heating elements, which are distributed inside the walls and bottom of the tank. A tempering wheel is installed on the tank, which performs the functions of mixing and cooling the chocolate mass. The wheel rotation speed is set by the regulator 7. To temper the chocolate mass, it must first be heated to the set temperature, then cooled and further maintained the set temperature. The WTM operation modes are controlled from the keyboard 3 (Fig. 1).

2.7. Operating elements

The following controls are located on the tank 1:

- power button 2;
- control keyboard 3 with two-line display 4;
- power cord from 220 V.

On the case of the electric drive of the tempering wheel 6 the following controls are located:

- power button
- knob 7 for adjusting the speed of rotation of the tempering wheel;
- emergency stop button (only for WTM 50).

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M			
	Operator's Manual TU 28.93.17-001-02351413-2018			

3. TECHNICAL DATA AND SPECIFICATIONS

3.1. Technical characteristics of WTM

The main parameters and dimensions of the WTM should be in accordance with Table 2.

Table 2

Tempering Machine / Model Parameters	WTM 20	WTM 5	WTM 10	WTM 50
Capacity, kg	20	5	10	50
Power supply	230V : 50Hz	230V : 50Hz	230V : 50Hz	230V : 50Hz
Maximum power consumption, kW, including:	1,0	0,6	0,8	3,0
- maximum power consumption of the tank, kW	0,8	0,4	0,6	2,2
- maximum power consumption of the wheel, kW	0,2	0,2	0,2	0,8
Current, no more than, Amps	4,5	1,8	3,2	11,6
Max. Turnover per min	120	120	120	120
WTM dimensions with wheel / package, not more than, mm	h460*550*470/ h480*570*490	h450*400*350/ h470*420*370	h 450*450*400/ h470*470*420	h 1500*650*550/ h1700*680*580
WTM weight with wheel net / gross, not more than, kg	20/30	12/20	16/28	40/70

3.2. Connection conditions for electrical equipment of WTM

Four-wire power supply system is powered by electricity from a single-phase AC network with the following characteristics:

- Voltage: 230 V \pm 10%;
- Frequency: 50 \pm 1 Hz;
- Power: 0.8- 2,2 kWt, depending of the model.

4. SAFETY

4.1. General requirements for the safety

The Manual provides the basic safety instructions on handling WTM, including transportation, storage, operation, maintenance, repair.

Safety at work on the WTM is ensured activities in the design of the WTM in accordance with the requirements laid down in European standards, norms and guidelines. Despite this, the WTM can be dangerous in cases of misuse by unqualified personnel or use for other purposes.

The danger situation is possible:

- for the health and life of the operator or third party;
- for the machine and other property.

Any person who maintains moving the WTM, its commissioning, maintenance and repairs, must read and understand this manual and in particular the section "safety requirements" and strictly implement the guidelines requirements!

Requirements for security, besides this chapter are contained in the relevant sections of the Manual and applications delivered.

The following safety instructions must be observed in addition to the General requirements for the safety and injury prevention.

4.2. Safety measures

4.2.1. The danger warning Signs

In this guide, apply the danger warning signs, have the following meanings.

	Mechanical danger that threatens the life and health of people, and can also cause great damage to property.
	Electric danger that threatens the life and health of people, and can also cause great damage to property.

At the WTM itself marked warning signs of danger that have the following meaning.

	Electric danger that threatens the life and health of people, and can also cause great damage to property.
	The "Grounding". Turn on the tempering bath and the tempering wheel in a grounded outlet. Grounding is required.

Inattention to warning signs and non-compliance with the safety instructions can lead to serious consequences for the health of the personnel and material damage!

Damaged and lost warning signs must be restored without fail!

4.2.2. Protective and safety devices

Protection of electric motors and control circuits against short circuits and overheating are regulated by automatic switches with protective current protection. Protection against overheating is performed on bimetal switches.

The most likely causes of protection operation are: jamming, engine failure, microcontroller (thermal controller) failure, bath overheating, deviation of electrical network parameters from the norm.

4.2.3. Requirements for service personnel

General requirements for service personnel

Personnel authorized to work with the WTM, as well as to commissioning, maintenance and repair the WTM, is obliged to:

- get health and safety training in accordance with the manufacturer's instructions, developed on the basis of the operating instructions, standardly applied safety instructions;
- familiarize with the General rules of operation and maintenance of the WTM with safety instructions contained in this manual;
- familiarize with constructive and technological properties of the WTM and attend a special instruction on the work of the WTM of this model.



Responsibilities on maintenance of the WTM should be clearly defined and strictly adhered, that in the part of ensuring security - the competence of each employee is clearly defined.

It also means that operation on the WTM in special modes (for example, when setting up) may only be carried out by specially trained personnel!

	<p>Work on the maintenance of electrical equipment WTM should be carried out by trained professionals who have access to the maintenance of electrical installations with voltage up to 1000V.</p> <p>The presence of unauthorized persons in the service area of WTM is not allowed.</p> <p>Before switching on the voltage after installation or repair of electrical equipment or after a long interruption in work, it is necessary to ensure that the grounding is in good condition.</p> <p>Access to WTM by unauthorized persons is prohibited.</p> <p>Failure to comply with these requirements may lead to electrical danger or its potential!</p>
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Dismantling or disabling any safety devices is - unacceptable.

	<p>Working with disconnected security devices, gives rise to all kinds of mechanical and electrical dangers.</p>
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The operator must always maintain the Machine in perfect condition. Keep work area clean.

	<p>If there is dirt or foreign objects, if there is no order in the arrangement of the workplace tools, devices, movable goods etc. - there is a danger of confusion, slipping, or being hit by falling heavy objects on lower limbs.</p>
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LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

Errors, noises and obvious flaws shall immediately be reported by service personnel to the person in charge and recorded in the work registry. In the case of danger - WTM should be immediately shut down.

The use of personal protective equipment

When handling WTM service personnel, if necessary, must use personal protective equipment:

- special clothes that cannot catch on parts of the KTM. Sleeves should only tuck inside. Loose clothes, ties, neck ornaments, watches, rings, bracelets, etc. pose a danger;
- a hat covering the hair;
- special gloves for pastry making.

4.3. Safety measures during transportation and installation of the WTM

Due to the diversity of factors to be taken into consideration starting-up and adjustment works are done by the service engineer of the "Allure LLC" company. It is desirable not only in relation to warranty terms, but also in order to:

- check the WTM (damage during transportation);
- training the customer's personnel;
- additional recommendations of the exploitation of the WTM, care and maintenance in good condition.

	During transportation no people should be in the danger zone!
---	--

4.4. Safety measures when preparing the WTM

Before turning on the WTM - make sure that its start is not dangerous for people around, remove from the WTM foreign objects out of the work zone, become familiar with the device, the principle of operation and control system of WTM.

Connect the machine to a low-resistance earthing guild.

After installation of the WTM, before connecting it to a power line, you must make the plant measurements of electrical resistance between earth bus and any metal part of the WTM with the elements of electrical equipment that may be energized above 25V through wire insulation breakdown. The measured resistance should not exceed 0.1 ohms.

	All metal parts of the machine (frame, motor housing), which may be at voltages above 25V must be earthed.
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Connection to power of the WTM must be carried out by a qualified and trained electrician. He must familiarize with electric diagrams and understand them, and ensure correct grounding connection of the WTM.

All switches must be turned to their original or zero position.

4.5. Safety when operating the WTM

Do not disable the locks, foreseen in the wiring diagram!

	When you disable locks of WTM, foreseen in the wiring diagram it may lead to all kinds of mechanical and electrical hazards .
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	When you turn on the mains switch, the input signal green led lights up, which signals the presence of voltage in the WTM. Neglecting this information increases the risk of all types of mechanical and electrical hazards .
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Do not use the WTM in a dangerous (for example, wet) environment because the humidity can cause short-circuits in the electrical system.

	When you use the WTM in a wet environment on the surfaces of the Machine, which typically do not have contact with powered parts and which the operator may touch, can dangerous high voltage appear.
--	--

Dangerous zone between the WTM and other equipment in the production room (if available) should be fenced or protected by the user.

Set the sufficient lighting of the workplace (not less than 150 Lux).

	Do not work in dark workplace in avoidance of operator's mistake and breakdown of the WTM.
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Follow the recommended operation modes of the WTM.

	Failure to follow recommended in the manual operation mode of the WTM increases risk of damage of the WTM and/or injury to the operator.
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The WTM is not intended for use with flammable and explosive materials.

	When using inflammable or explosive materials, there is a risk of fire and/or explosion.
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LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

When using materials that emit harmful substances with concentrations exceeding the permissible limit, we recommend that you:

- identify the type of hazard;
- conduct a risk assessment that takes place during the WTM processes the product;
- develop a security system for this product;
- provide the necessary accessories, such as devices monitoring, or remove harmful substances, shut-off devices, quickly triggered before a dangerous product will get into the hands of others, due to the specifics of a particular production.
- to reduce the concentration of harmful substances in the air of the working area by the exhaust hood system and use a reliable ventilation in accordance with the characteristics of production and local regulations on labour protection;
- use of personal protective equipment.

	Failure to follow the recommendations of this manual on transportation of hazardous materials, leads to the risk of contact or inhalation of hazardous gases or dusts (risk of damage to the skin, eyes, and respiratory tract irritation, as well as disfunctions of the internal organs).
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Since the list of harmful materials is wide, this guide does not provide recommendations for all occasions.

Compliance of these recommendations does not exempt the user from performing of additional security measures due to the specifics of a particular production.

Do not stand on the WTM in any case.

	Failure to do so could result in overturning the WTM, which leads to an increase in the risk of all mechanical hazards that threaten the lives and health of people, and can lead to great material damage
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4.6. The technical design changes



Any modifications or changes in the WTM unauthorized by the manufacturer are not allowed for reasons of safety for people and the WTM.

The user can use the spare and wear parts recommended by the manufacturer only. Otherwise, the manufacturer is not liable for the operability of the WTM.

4.7. Machine noise level

In standard operating conditions the Machine operator workplace noise level does not exceed 60 Dba. The WTM in typical conditions Uncertainty of measurement of noise conforms to ISO 3746 and 95% probability with confidence equal to ± 1.96 OR of the measured values, where OR= 3 DBA.

Noise characteristics were measured in accordance with the methodology of ISO 3746-95 and ISO11204-95 in the light of the requirements of BS EN 415-3: 2000.



At adverse operating conditions, when the average noise level for the 8 hour shift exceeds 80 DBA, one must use safety equipment (ear muffs, ear plugs), and/or reduce the time in these modes.

The above values of noise level are not necessarily safe for work on the WTM. Despite the existence of a correlation between emitted and perceived noise, this cannot be used as a reliable option to determine whether or not you want to take further precautions.

Factors influencing the practical level of perception of the noise emitted include the characteristics of the working premises, other noise sources, etc. e.g. the number of WTM, and other related processes, as well as the time during which the operator is exposed to noise. However, the above information will allow the user to assess the dangers and risks faced by staff.

4.8. The residual risks

The personnel requirements of the above WTM for this model reduces the residual risks to the level achieved in the same equipment, adequate security is proven experience of its operation.

However, the personnel must know and remember about the existence of residual risks, because the fulfillment of the above requirements **are not completely obviate the danger.**

5. SCOPE OF SUPPLY, MARKING, PACKING, STORAGE, UNPACKING AND HANDLING

5.1. Scope of supply

The scope of supply is provided in the packing list, which is composed in accordance with the contract for the Machine.

5.2. Marking

Each Machine has on its frame side surface, a nameplate attached containing:

- The country of the manufacturer;
- Full company of the manufacturer;
- The mark of the manufacturer;
- The address of the manufacturer;
- Product model, serial number, year of manufacture;
- Power supply, voltage and frequency;
- Power;
- Weight.

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

5.2.1. The transport marking on the packaging contains:

Main inscriptions:

- Full or conventional name of consignee;
- The name of the destination (the station), and the short name of a transport route (road, if necessary);
- Name of reloading place (when necessary);
- Package number (in the numerator-the pack number in the lot, in the denominator-the number of places).

Additional inscriptions:

- Full or conventional name of consignor;
- Delivery point (the station) and the short name of a transport route (road, if necessary);
- Inscriptions of transport organizations.

Information box:

- The dimensions of the package, cm;
- NET and gross weight, kg;
- Cargo volume, m³.

Manipulation signs:

- "Beware - delicate";
- "The place of slinging";
- "Top, do not tilt";
- "Center of gravity";
- "Do not stack";
- "No Humidity".

5.3. Packaging

The WTM comes in a crate or a partial package on a pallet, film wrapped. The type of packing is negotiated with the buyer and is fixed in the contract on delivery.

All the WTM accessories, spare parts and documentation are packed in boxes, placed in a box for Machine packing or next to it (on partial packing) and securely fastened.



The manufacturer is not liable for damage of the WTM, occurred during the transport in package inadequate to normative and technical documentation of the manufacturer.

5.4. Acceptance



When receiving the WTM check the integrity of the packaging. The manufacturer does not hold liability for the WTM, delivered with damaged factory packaging.

Found damage should be confirmed by the forwarder by a note in the transportation documents.

5.5. Storage

Storage of packaged Machine shall be:

- for any climate areas in heated and ventilated warehouses under the following conditions:
- ambient temperature: (+5-+40)°c;
- relative humidity: not more than 80% at 25°C;
- Dew is not allowed;
- the impact of corrosive gases is not permitted.

Storage at temperatures below - 20°C may damage electronic components.

	<p>Failure to follow recommended storage mode increases the risk of damaging the WTM and/or injury to the operator.</p>
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Warranty storage period WTM in the factory packaging 1 year under specified storage conditions.

5.6. Unboxing

When unpacking, it is recommended that you first remove the top board of packing box and then the side boards. Care should be taken not to damage the WTM by the tools during unpacking.



Before unpacking the WTM should be kept under operating conditions temperature to align Machine temperature and facilities (usually 24 hours).

When unpacking, verify the completeness of the delivery against the packing list and/or for possible damage during transportation.

If there are discrepancies, please contact your manufacturer.

5.7. Transport

The WTM can be transported by any means of transport provided a reliable fixation and packaging ensured to keep from damage, in accordance with the rules of transporting goods, applicable for each mode of transport.

Transportation must be subject to the following conditions:

- ambient temperature: (-20 to + 50)°c;
- relative humidity: not more than 98 % at temperature of 25°C;
- Dew is not allowed.

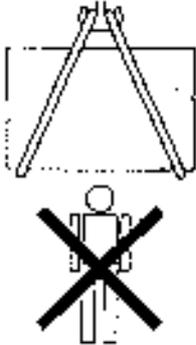


Transport at temperatures below minus 20°C may damage electronic components

	<p>Failure to follow recommended guidelines conditions of transportation increases the risk of possible damages of the Machine and/or injury to the operator.</p>
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Before delivering the WTM carefully plan its unloading and transport to the place of installation. At the time of the delivery transport and lifting devices must be fully prepared.

Before delivering the WTM remove possible obstacles for the transportation from the place of unloading to place of installation.



When un/loading the presence of people in the danger zone is not allowed!



Personnel performing the work on the transport must have appropriate qualifications.

Before the beginning of works on transportation requires that staff are kept up to date with security requirements as described in this manual in the section "safety precautions during transportation and installation."



Incorrect handling can lead to an accident or cause damage or malfunction of Machine, for which the manufacturer is not liable.



Use vehicles only with sufficient carrying capacity, i.e. more than the transported weight!

The weight of packed *WTM* is specified on the box.

When you unload the *WTM* in packed form, make sure to follow the instructions marked on the outside of the package!

During transportation to the place of installation and when placed on the floor, ensure that *WTM* is not subjected to strong shocks or drops

Moving of the WTM inside the workplace in unpacked form is carried out of a trolley on wheels.

6. INSTALLATION AND INITIAL START-UP

6.1. Installation location and Foundation

The floor foundation should be firm for ensuring the maximum use of the WTM capabilities during the specified period of service, and avoid the impact of the WTM on the adjacent equipment.

The WTM does not require special foundation and is not anchored to it. It is enough to ensure the flat floor of sufficient load-bearing capacity and space.

There must be sufficient space for the operator and the maintenance and repair (not less than 1m around the WTM).

6.2. The Climatic operation conditions

Machine is designed for operation in premises with artificially controlled climatic conditions, for example in closed heated and ventilated premises (no direct sunlight, rain, wind, sand and dust from the outside air, the absence or substantial reduction of impacts of condensation of moisture) under the following conditions:

-ambient temperature: (+18 – +22)°C;

--relative humidity: not more than 80% at 22°C;

-Dew is not allowed;

-the impact of corrosive gases is not permitted.

The temperature variation of the workspace is not specified.

Dust content of the work shop shall be within sanitary norms.

The place of installation of the WTM should be selected in such a way as to exclude local heating or cooling (Sun, heating, draughts, etc.).

The WTM is not intended for use in explosive environments or near inflammable objects.



If you fail to comply with the requirements, there is the danger of fire and/or explosion.



The manufacturer is not liable for defects or injuries caused as a result of non-compliance with the requirements on service conditions.

6.3. Installation of the WTM

Set the Melanger to work in accordance with clause 6.1 and 6.2.

You should do the following:

1. Free the equipment from a transport package.
2. Perform a visual inspection of equipment for mechanical damage.
3. Check the tightness of the threaded connections.
4. Install the equipment on site to use it on a flat and solid horizontal area. Adjust the wheels and lock the brake stops.

5. Attach electrical components to the corresponding elements. Unwanted bends of electric cable and pneumatic tubes are NOT allowed!
6. Connect the equipment to a single-phase power supply 230 V / 50Hz. Connect cord (cable) should be placed in such a way as to prevent it from damage (bending, breaking, cut, etc.)



The electrical outlet must be grounded required amperage is 16 A.

6.4. Preparation to start-up Melanger

6.4.1. WTM assembly for tempering with a wheel before first use

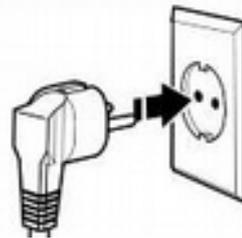
Before using the WTM for the first time, wipe the stainless steel bath, the lid (if equipped) and the tempering (stirring and cooling) disc with a clean, damp cloth (it is recommended that all surfaces that come into contact with chocolate be processed with food alcohol) are dried.



Do not use abrasive cleaners.

The tempering bath can be used both separately and in conjunction with the wheel tempering device (hereinafter referred to as the tempering wheel).

6.4.2. Turn on the WTM



Turn on the tempering bath and the tempering wheel in a grounded outlet!



Grounding is required!



Turn on the power of the tempering wheel (a light bulb should light up on the toggle switch).

6.5. The initial start

Keyboard control modes of the WTM is shown in Figure 2.

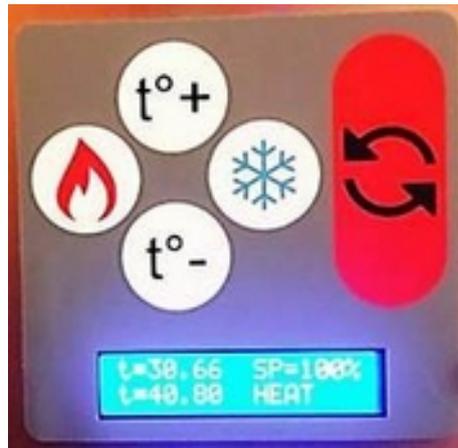


Fig.2

6.5.1. Setting the upper temperature of the chocolate mass.

1. Press the warm up button  on the keyboard control modes of the WTM (Fig.2). By the knobs  and  set the maximum temperature of the heating of the chocolate mass. (the set temperature will remain after switching off).
The display on the bottom line shows the highest heating temperature, and the inscription “HEAT” lights up on the right (Fig.2).
The first line of the display shows the current (actual) temperature of chocolate in the bathroom. It is recommended to install 45 °C.

2. Add 3 \ 4 of the volume of chocolate to be tempered, but no more 15 kg.
3. The warming up of the chocolate will begin. It is recommended to visually monitor the process of melting chocolate.
4. As a result of heating, the chocolate mass should become homogeneous, without lumps and unmelted pieces.
5. Next, turn on the rotation of the wheel. To turn on, press the network button and turn the switch to the Start position.
Using the knob on the device for mixing, set the desired wheel speed.



NOTE: When using the tempering wheel, do not start its rotation until the chocolate is liquid.



6.5.2. Setting the temperature of the chocolate mass.

After reaching the top set temperature of the chocolate and being ready to add

tempered chocolate callets, press the Tempering button ,

at the same time in the lower right corner of the display appears the inscription "TEMPER". If necessary, use the buttons  and



 to set the desired lower tempering temperature. Pressing the Tempering button will turn off the heating elements in the bath and the chocolate mass will cool naturally. When lowering the temperature below the set one on 0.1, short-term heating will be activated to maintain the set temperature.

The cooling of the chocolate mass is accelerated when the wheel rotates.

To temper chocolate, add the callets in small portions until the desired temperature is reached due to the volume of callets added and the rotation of the wheel. The start of the loading of the callets is determined by the temperature of 36 C. In addition to the callets, the following seeds are also used: tempered cocoa butter, remnants of tempered chocolate from the previous load, which are pre-ground on a grater.

After the current temperature drops to the lower limit, the tempering of the chocolate is completed.

The mode of preservation of the temperature of the casting chocolate. Press key Warm  and set the temperature of the chocolate casting. The rotating wheel cools the chocolate mass, and the bath heaters are periodically turned on to maintain the desired temperature, the chocolate is ready for further use.

NOTE: To maintain the tempered mass in working condition for a long time - using the t + button, increase the temperature by 3-5 and reduce the speed of the device for mixing to a minimum (this will prevent chocolate recasting or solidification).

6.6. Recommended temperature for dark chocolate

Recipe	Temperature
Melting the dark chocolate	40 - 45 ° C Use the warm up mode to heat the chocolate to 40 ° C, turn on the mass mixing wheel.
Tempering the dark chocolate	27 - 28 ° C Turn on the tempering mode (Temper), set 28 ° C, wait until the temperature drops to 36 ° C, then add the callet until the temperature decreases to 28 ° C. When the set temperature is reached at 28 ° C, the tempering is completed. If the temperature continues to decrease, the heaters will automatically turn on to maintain the set temperature.
Maintain casting temperature	Press the Warm key, set the temperature to maintain 31 ° C. Proceed to the outflow of chocolate in the form.

6.7. Characteristic chocolate tempering points

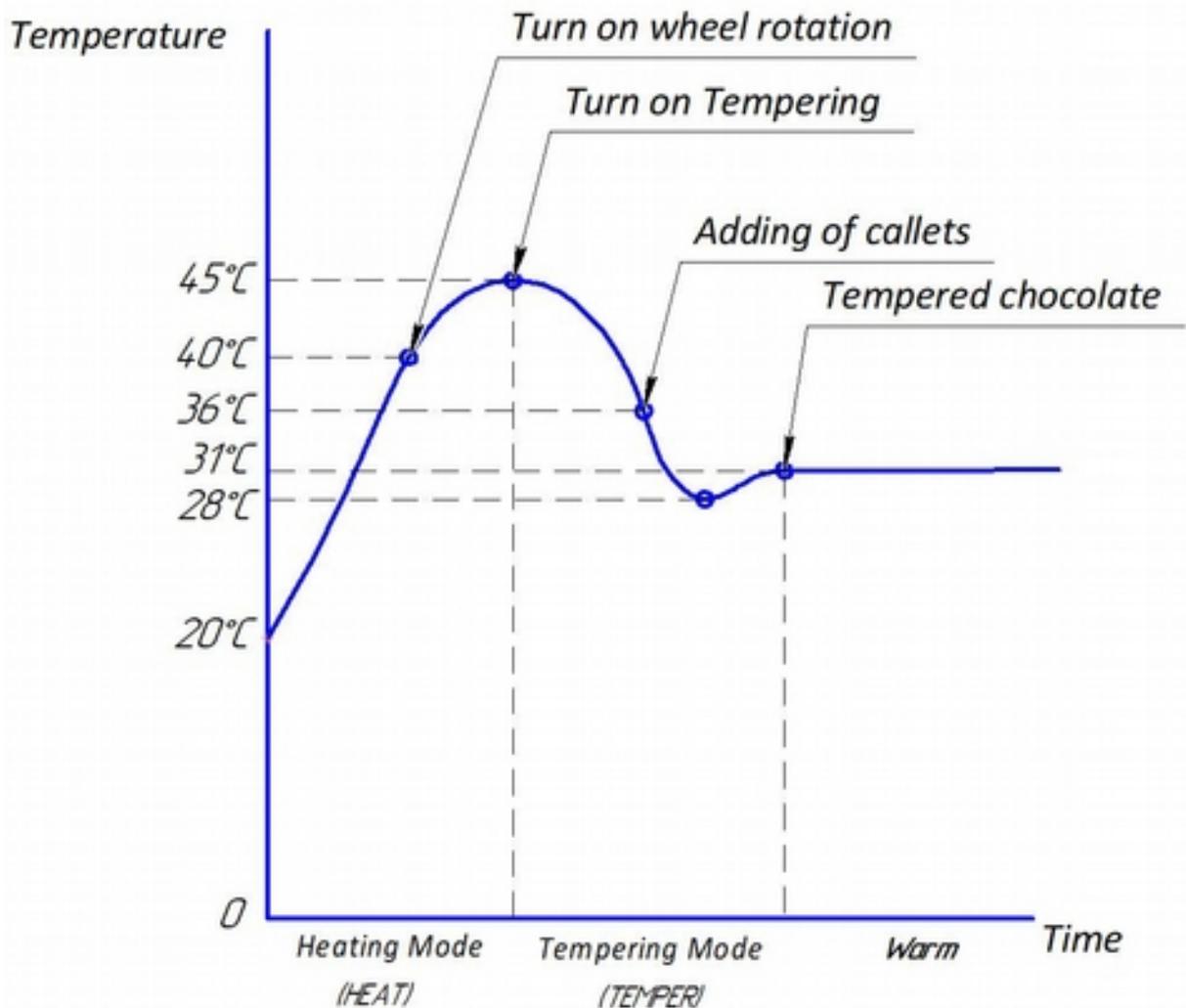


Fig.3

6.8. The Emergency Shutdown Melanger

In emergency situations, to stop the melanger, you must:



- press the red button on the front panel of the bath:

7. MAINTENANCE

7.1. General safety instructions for maintenance

	<p>Maintenance and repair work of the WTM must only be carried out by trained, qualified and certified technicians.</p> <p>Before the beginning of works on maintenance service and repair personnel must familiarize with section "Security insurance".</p>
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	<p>Before starting any maintenance work on the WTM, it is necessary to exclude the possibility of its unintentional activation. The power supply must be switched off (main switch in position 0). It is also recommended to unplug the power supply socket.</p>
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	<p>Hang a warning label on the control cabinet to avoid accidental pressing keys or switches.</p> <p>Install fencing to prevent access or interference by unauthorized persons.</p>
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Regular maintenance is essential for safe and long perfectly work of the WTM. The work described in this section must be carried out in a timely manner.

Please follow the maintenance work, in order to make an entry in the log book maintenance with a brief description of the work, as well as the executive in charge and the date of the work.

No log entries may result in denial of warranty service of the WTM manufacturer.

Maintenance on any subject you can get a free consultation by phone service.

7.2. Scope of maintenance work

The scope of works on maintenance service includes:

1. Checks to be done daily before the WTM is started;
2. Works performed monthly.

Daily maintenance

Perform the external inspection of the WTM.

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	Operator's Manual TU 28.93.17-001-02351413-2018

Th WTM must be kept clean. Dust can be removed with a vacuum cleaner or a dry cloth, and when necessary damp cloth with neutral detergent, avoiding the accumulation and leaving of water on the surface.

Check all fasteners, retighten if necessary.

Monthly maintenance

- Perform the visual contamination check on surfaces of runners along the axis of rotation. If necessary, clean them from the product buildup.
- Perform the daily maintenance.

8. SPARE PARTS ORDER, CALL CUSTOMER SERVICE

Spare parts, accessories, call customer service for warranty or post-warranty repair is carried out only on *written* application form.

The construction of the WTM could be changed during the process of technical improvement. Thus in case of ordering of the spare parts, and requiring the service engineer the application should indicate the following points:

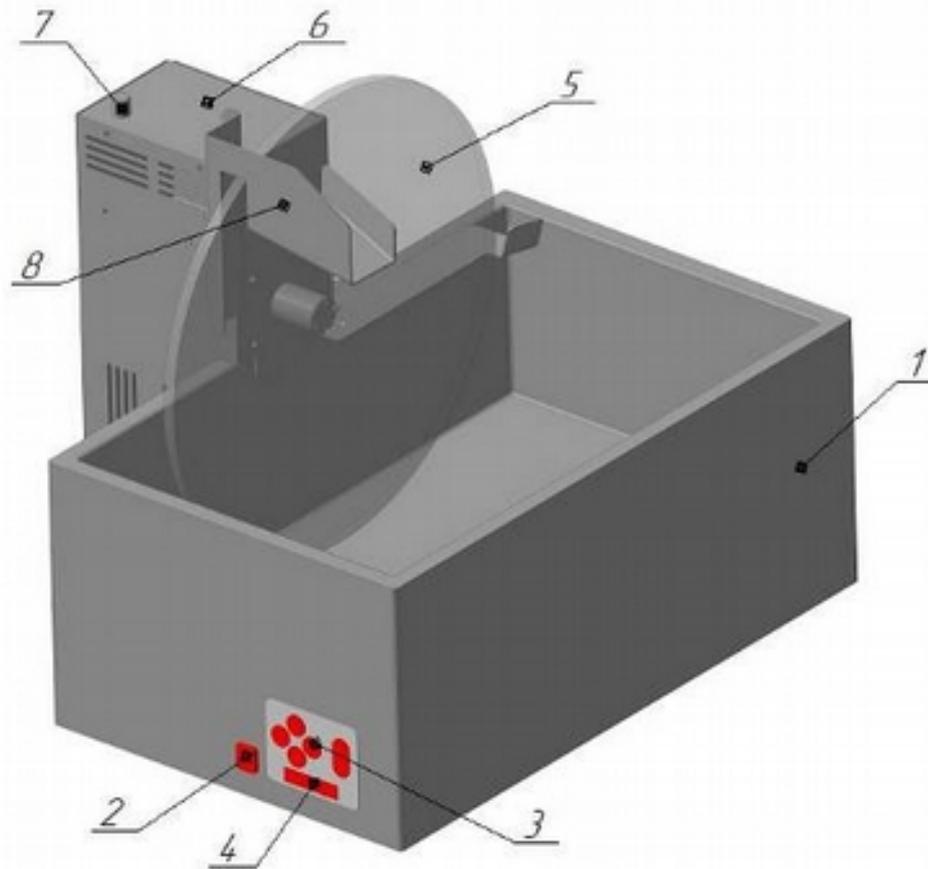
- 1) model and serial number of the WTM. This number is indicated on the machine marking plate, also in the manual's section "information on acceptance";
- 2) description of parts quantity. To identify parts, we recommend that you use catalog of Assembly units and parts.

Components (bearings, electrical equipment, etc.) to acquire by type or number, put directly on them, indicating the master data or the position marked on the diagram.

For details of broken-down specify a brief description of the problems with the old part and, if possible, the reasons for which they have.

9. OVERALL DIMENSIONS OF THE WTM

Catalog of parts of the WTM



№п/п Item NBR	Part NBR	QTY	Description
1		1	Tank
2		1	Button on power supplies
3		1	Keyboard control modes of the WTM
4		1	Display
5	ALR 3.00.001	1	Tempering Wheel
6	ALR 3.10.000	1	The case of the electric drive of the tempering wheel
7		1	Wheel speed adjustment
8	ALR 3.10.000	1	Drain tray

LLC «Allure»	Wheel Tempering Machine (WTM) T-20-0,500-240x1-50-M
	Operator's Manual TU 28.93.17-001-02351413-2018

Appendix 3

Acceptance Information

WTM T-20-0,500-240x1-50-M serial number № _____, manufactured and adopted in accordance with the requirements of standards and technical documentation and recognized as suitable for operation.

Release date: 2019 г.

Technical Control Engineer _____

Service Engineer _____

Deputy quality directors _____