

Electrical Vibrators – The New MICRO Series

USE – AND MAINTENANCE MANUAL

Index

Sec 1:	Description, guarantee and main characteristics	2
Sec 2:	Safety regulations	3
Sec 3:	Use and maintenance of the W-MICRO vibrator	4
	3.0 Installation and electrical connection	4
	3.1 Regulating the intensity of vibration	5
	3.2 Maintenance	6
	3.3 Spare parts	6
Tables:	Characteristics / drawings / dimensions / spare part codes	7

Section 1 – Description, guarantee and main characteristics

This manual provides information considered necessary for operators which install, correctly use and service the **WEBAC W-MICRO vibrators**.

Failure to comply with the regulations described in this handbook may oblige WEBAC VIBRATOR GMBH, D-53879 Euskirchen, to void the guarantee covering the motor.

Besides the provisions specified in the supply contract, the Manufacturer guarantees the products for a period of 12 (twelve) months from the date of the purchase. This guarantee solely covers free repair or replacement of those parts which, after having been carefully examined by the Manufacturer's technical department, are recognized as being defective (excluding the electrical parts). With the exclusion of all responsibility for direct or indirect damages, the guarantee shall only cover material defects and shall cease to be of effect should the parts have been disassembled, tampered with or repaired by third parties.

Damages caused by negligence, carelessness, bad and improper use of the motor-driven vibrator, incorrect installation shall also be excluded from the guarantee.

Removal of the safety devices with which the motor vibrator has been equipped shall automatically void the guarantee and the Manufacturer's liabilities. This guarantee also becomes void when non-original spare parts have been used. Even when under guarantee, returned equipment shall be dispatched to us Carriage Paid.

W-MICRO vibrators are manufacturer following European Community Directives. The basic technical characteristics are:

- insulation class F
- power supply as in table page 7
- operating ambient temperature: -30°C to +40°C
- maintenance free
- mechanical protection 65
- continuous duty

Section 2 – Safety regulations

Users are advised to become fully familiar with the instructions in this manual, particularly the safety regulations, paying great attention to those operations that are particularly dangerous.

The Manufacturer declines all and every responsibility for failure to comply with the safety and accident-preventing provisions described herein. The Manufacturer also declines all responsibility for damage caused by improper use of the motors.



Pay attention to the danger signs in this manual. They precede indication of a potential danger.

When electrically operated equipment is used, it is necessary to take all the necessary precautions in order to reduce the risk of fire outbreak, electrical shocks and personal injuries. Before the motor-vibrator is used carefully read and become familiar with the following safety regulations. Keep this manual in a safe place after it has been read.

- It is strictly forbidden to use the motor-vibrator environments with explosion risk.
- Before beginning operations, check that the motor-vibrator and the machine on which it is installed in perfect condition. Check that operation is regular and that there are no damaged or broken parts. Any damaged or broken parts must be repaired or replaced by competent and authorized personnel.
- Repairs made by persons not specifically authorized by the Manufacturer shall void the guarantee and might lead to unsafe and potentially dangerous operation of the equipment.
- Never touch the motor-vibrator while it operates. Only proceed with maintenance when the motor-vibrator and machine are off and with the plug removed from the current socket. Wait until the equipment has cooled before working on the motor-vibrator.
- Children or unauthorized, unskilled persons or those in a poor condition of health are forbidden from touching or using the motor-vibrator.
- The power supply has to comply with the standards.
- Periodically check the condition of the cable. Replace it if it is damaged. This operation may only be carried out by competent and authorized personnel.
- Only use approved and marked extension cables.
- Protect the cable against high temperatures, lubricants and sharp edges. Never twist or knot the cable.

Section 3 – Use and maintenance of the W-MICRO vibrator

3.0 Installation and electrical connection

Before installation and if the motor-vibrator has been stored for over twelve (12) months, remove a weight cover and check that the shaft is free to rotate. WEBAC VIBRATOR GMBH W-MICRO vibrator-motors can be installed in any position.

The vibrator-motor must be rigidly fixed to a perfectly flat structure (0,25 mm) with bolts and nuts type 8.8. Use a torque wrench (table page 7).



Attention: Check the tightness again after a short period of operation.

All W-MICRO vibrators are supplied with a 2m cable. The single-phase vibrators are supplied with the capacitor already connected into the cable (internal connections on page 10).



The power supply cable must be connected to the electricity main by an installer in compliance with the current safety provisions.

Always check that the power main voltage and frequency values correspond to those indicated on the vibrator motor identification plate before powering the equipment.



Attention! The yellow-green conductor of the cable (with a plate embossed with symbol ) must be connected to the yellow green conductor (only green for USA) of the power supply.

When the **electric rotary vibrators are installed in pairs**, it is important to ensure that each one has its own external protection against overloads and that these protections are interlocked together. Should one vibrator accidentally stop, power supply to both machines would be inhibited at the same time to prevent damage to the equipment to which they are connected (see page 9).



Check that the current draw does not exceed nameplate value. If this is not the case:

- Check that the flexible system and structural elements comply with the current use requirements.
- Reduce the vibration force by adjusting the weights until the absorbed current value returns with nameplate values.



Remember to operate the electric rotary vibrator for short periods during set-up in order to prevent damage to both the vibrator itself and to the structure in the event of faults.

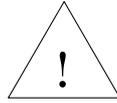
The vibrator must always be started / stopped by setting the power switch to the ON / OFF position respectively.

3.1 Regulating the vibration intensity

- Remove the weight covers (No. 5, page 11).
- Unscrew the nuts at the shaft ends (No. 3, page 11).
- In both sides rotate for 180° a certain number of weights. The number of rotated weights determines the resulting centrifugal force. Each rotated weights nullifies the centrifugal force of two weights. (see page 8).
- For more accurate adjustments the user must remove the weights (the same quantity in both sides) and replace them with washers of the same thickness (see page 8).
- Tighten the nuts and reassemble the weight covers, checking that the seals (No. 4, page 11) are in good condition and have been correctly fitted into their housings.

3.2 Maintenance

The vibrators need no particular maintenance.

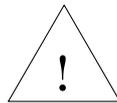


Before servicing a vibrator, wait until the temperature of its casing is not more than 40°C and check that it has been disconnected from the electricity supply. Only use genuine WEBAC VIBRATOR spare parts.

To replace internal parts the vibrator must be disassembled according to the following indications:

- Disconnect the electricity supply and remove the vibrator from the vibrating machine.
- Remove the weight covers (No. 5, page 11).
- Unscrew the nuts in the shaft ends and remove the weights (No. 12, page 11).
- Unscrew the four screws – no. 9 (page 11) and raise the upper part of the casing.
- Now you can access the internal parts and it is possible to replace the stator, bearing houses, shaft, cable, etc.

Carefully reassemble the vibrator following the previous instructions in reversed order. Carry out the internal connections as specified on page 10. Pay attention to set back in place wires and connectors under the protection foam. Assemble the two parts of the casing, replace the sealing paste between them to maintain the IP mechanical protection.



Turn the shaft by hand and check that its float is between 0,5 – 1,5 mm.



Attention: Each time the above mentioned servicing operations are carried out, it is advisable to tighten the screws with a torque wrench (see table on page 8).

3.3 Spare Parts

To order spare parts the W-MICRO vibrator type, the spare part code (page 11 und Tabelle) and the requested quantity must be communicated to WEBAC VIBRATOR GMBH, D-53879 Euskirchen.

Tables: Characteristics / drawings / dimensions / spare part codes

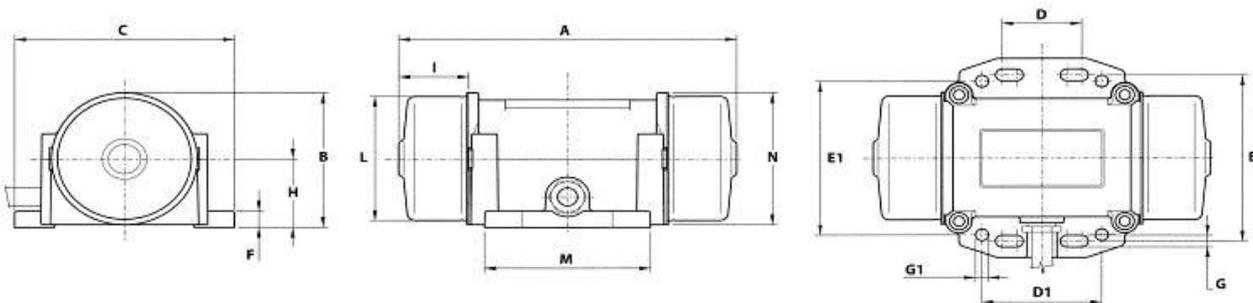
MECHANICAL / ELECTRICAL DATA

Type	RPM		Centrif. Force kg		Max. Power W	Max. Current A			Weight kg
	50 Hz	60 Hz	50 Hz	60 Hz		308/460 V (3ph)	220 V (1ph)	115 V (1ph)	
WM3/04	3.000	3.600	4	6	24	-	0,13	0,30	0,92
WM3/20	3.000	3.600	20	29	35	0,15	0,17	0,42	1,97
WM3/45	3.000	3.600	45	65	45	0,16	0,20	0,46	2,20

POWER SUPPLY

WM3/04	200 – 240 V, 50/60 Hz / 100 – 130 V, 50/60 Hz / single-phase
WM3/20	24 – 480 V, 50/60 Hz / three-phase and single-phase
WM3/45	24 – 480 V, 50/60 Hz / three-phase and single-phase

DIMENSIONS



Type	A	B	C	D	D1	E	E1	F	G	G1	N°	H	I	L	M	N	O
WM3/04	113	62,5	90	25-40	-	75	-	9	5,5	-	4	32	20	56,6	59	61	PG7
WM3/20	154	74,5	110	25-40	60	92	85	9	6,5	∅ 6,5	8	38	27,5	68,6	83	73	3/8" GAS
WM3/45	169	74,5	110	25-40	60	92	85	9	6,5	∅ 6,5	8	38	35	68,6	83	73	3/8" GAS

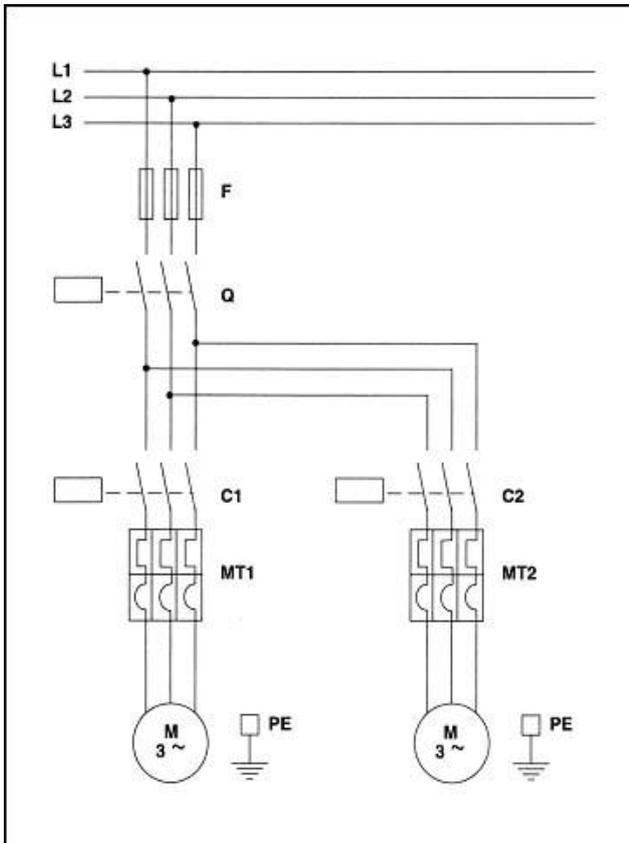
CLAMPING TORQUES

Type	ft-Ibs	Kgm
WM3/04	2,2	0,3
WM3/20	4,4	0,6
WM3/45	7,2	1,0

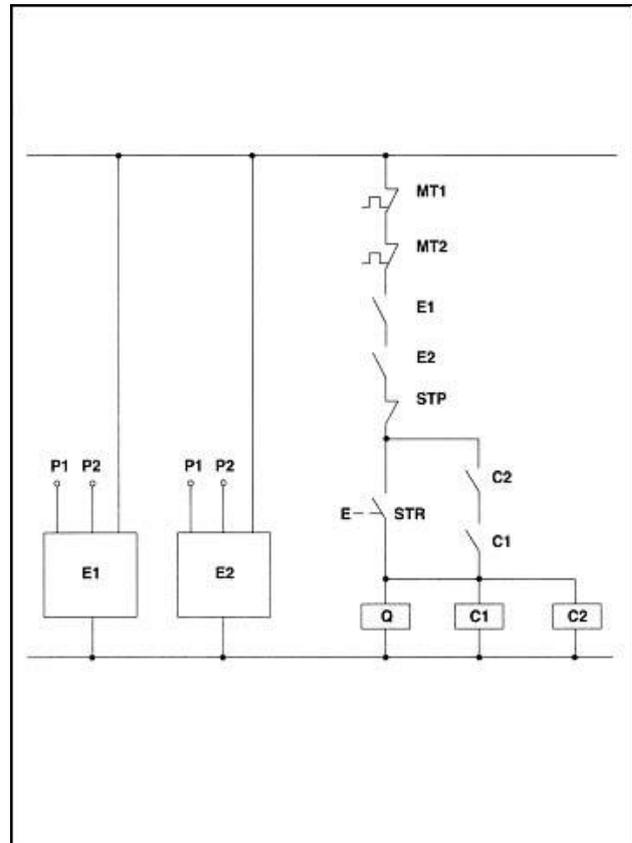
Type	Weights turned 180° (per side) N°	Centrif. Force kg			%	Theoretical bearing life h	
		50 Hz	60 Hz	50 Hz		60 Hz	
WM3/04	0	4	6	100%	>100.000	>100.000	
	1	2	3	50%	>100.000	>100.000	
WM3/20	0	20	29	100%	92.118	22.745	
	1	10	14,5	50%	>100.000	>100.000	
WM3/45	0	45	65	100%	8.087	2.236	
	1	35	50,6	77%	17.188	4.913	
	2	25	36,1	55%	47.165	13.163	
	3	15	21,7	33%	>100.000	>100.000	
	4	5	7,2	11%	>100.000	>100.000	

Type	Weights removed (per side) N°	Centrif. Force kg			%	Theoretical bearing life h	
		50 Hz	60 Hz	50 Hz		60 Hz	
WM3/04	0	4	6	100%	>100.000	>100.000	
	1	3	4,5	75%	>100.000	>100.000	
	2	2	3	50%	>100.000	>100.000	
	3	1	1,5	25%	>100.000	>100.000	
WM3/20	0	20	29	100%	92.118	22.745	
	1	15	21,8	75%	>100.000	53.914	
	2	10	14,5	50%	>100.000	>100.000	
	3	5	7,3	25%	>100.000	>100.000	
WM3/45	0	45	65	100%	8.087	2.236	
	1	40	57,8	89%	11.515	3.184	
	2	35	50,6	77%	17.188	4.913	
	3	30	43,3	66%	27.295	7.547	
	4	25	36,1	55%	47.165	13.163	
	5	20	28,9	44%	92.120	25.472	
	6	15	21,7	33%	>100.000	60.372	
	7	10	14,4	22%	>100.000	>100.000	
8	5	7,2	11%	>100.000	>100.000		

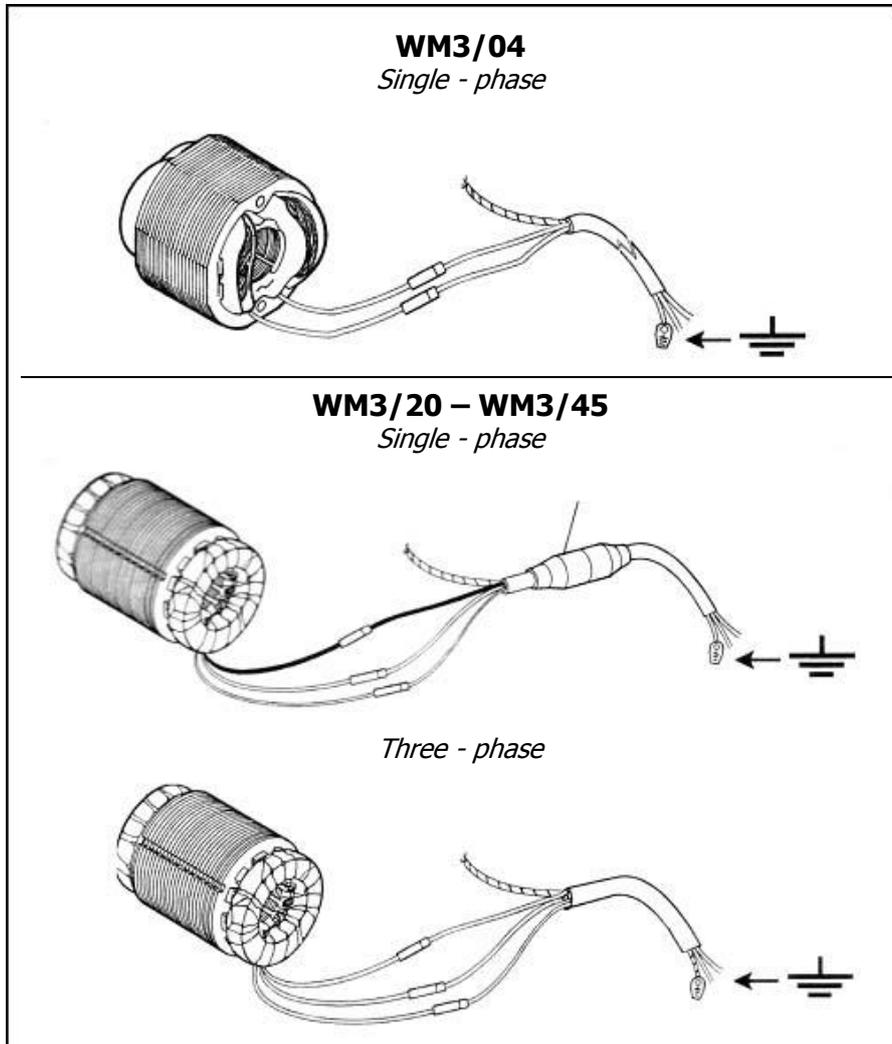
A



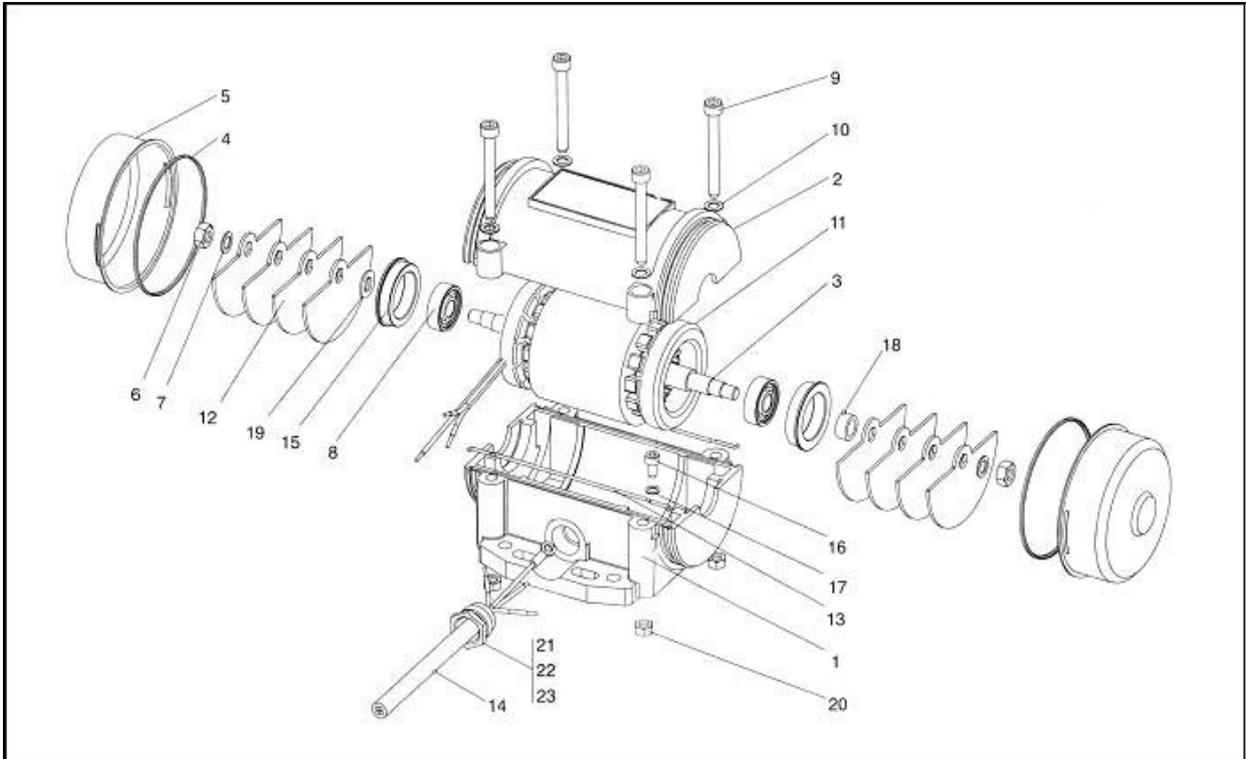
B



INTERNAL ELECTRICAL CONNECTIONS



SPARE PARTS LIST



	Type		
	WM3/04	WM3/20	WM3/45
1	0505514	0505510	0505510
2	0505515	0505511	0505511
3	*	0400362	0400363
4	0508608	0508658	0508658
5	0517317	0517311	0517310
6	0509034	0509039	0509039
7	0513002	0513003	0513003
8	0507036	0507037	0507037
9	0515630	0515527	0515527
10	0513001	0513002	0513002
11	*	*	*
12	0517733	0517689	0517689
13	0539035	0539035	0539035
14	0546011		
15	0515346	0515345	0515345
16	0515629	0515632	0515632
17	0513000	0513001	0513001
18		0508059	0508059
19	0509034	0513517	0513517
20	0509038	0509034	0509034
21	0511535	0511567	0511567
22		0511568	0511568
23		0511569	0511569

* Code related to the voltage