



• **Vibrators**
KV-16 / KV-26 / KV-26 plus /
KV-36 and KV-56



KV-16, KV-26 plus, KV-36
stainless steel version
plastic-powder coated
(natural white close to RAL 9016)



KV-16, KV-26 plus, KV-36
stainless steel version
matt



KV-56
cast housing
plastic-powder coated
(natural white close to RAL 9016)



KV-26
stainless steel version
matt

• **SERVICE MANUAL**

Dear customer,

Thank you for choosing a product from the Wassermann range. Wassermann Dental-Maschinen incorporates the highest standards of quality and the latest technology.

In order to enjoy maximum performance and years of trouble-free operation, please read this service manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this service manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.



Make sure that anyone using this device has read and understood this service manual.

Keep this service manual in a safe place where it can be referred to as required at any time.

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1 Features

- extremely powerful vibrator for even and void-free shaking
- powerful vibration intensity thanks to the highest manufacturing accuracy
- switchable from 3000 to 6000 oscillations
- KV-26 plus, KV-36 and KV-56 with infinitely adjustable vibration intensity
- even vibration intensity across the entire table, thanks to centrally mounted magnets suitable for continuous loads
- removable and washable rubber supports
- all machines have a stainless steel yoke on the left-hand side which can be used when removing casts
- extremely robust housing in stainless steel, plastic-powder coated or matt
- KV-56 plastic-powder-coated cast housing
- heavy weight for maximum stability

2 Safety guidelines

2.1 Safety symbols used in this manual



Warning!

This is a warning of risk situations and dangers.

Failure to observe this warning could be life-threatening. These warnings has to be observed.



Information!

This symbol draws your attention to specific features that has to be observed.

2.2 Safety guidelines

Configuring and operating this equipment requires **precise knowledge** and **observance** of the instructions in this **service manual**. The equipment is designed only for its intended application.



WARNING:

Servicing and repairs should be carried out only by authorised specialists.



The unit is designed to operate on 220-240 V / 50/60 Hz. Make sure that the equipment is connected to the correct power source.

Shocks from handle.

The handle is not intended for carrying the unit. Its mounting points are not designed to take the weight of the unit, which could be dropped as a result.

2.3 Responsibility for operation or damage

The responsibility for operating the device lies exclusively with the owner or user if said device is incorrectly serviced, maintained or altered by persons not employed by an authorised dealer or if the device is used in a manner contrary to its specified purpose.

The unit has to be maintained and operated in accordance with this service manual. Wassermann Dental-Maschinen GmbH is not responsible for damage arising from the **nonobservance** of these instructions.

Warranty and responsibility provisions contained in the sales and supply conditions of Wassermann Dental-Maschinen GmbH are not extended by these instructions.

3 Application

KV units are used exclusively in dental laboratories to provide a blister-free, homogenous compound which is the prerequisite for a smooth finish on casts. In addition, all vibrators are fitted on the left-hand side with a stainless steel handle which can be used when removing casts.

Only use the device for this type of application.

4 Before starting

4.1 Transport

Before transporting the unit, ensure that it has been unplugged from the power socket. Make sure that it is packed correctly in order to avoid accidental damage.



Be sure to check for any transport damage when unpacking the goods. Note down any damage if found.



The handle is not intended for carrying the unit. Its mounting points are not designed to take the weight of the unit, which could be dropped as a result.

4.2 Installation

Open the box, remove the packing materials, and carefully lift out the device and accessories. Check the included accessories.

The device has to stand horizontally on a steady and even surface.



Install the device in a place where it will not block the working area and the functionality (take the dimensions into account). Make sure that there are about 10 cm of free space on each side to guarantee air circulation (heat dissipation).



Do not install the unit outdoors or in places without proper ventilation.

Before start-up, be sure the device reaches room temperature.

4.3 Storage

If the unit is to be stored for an extended period, protect it from moisture and dust.

5 Installation / Start-up



Insert the power plug into the socket, making sure that the mains and the unit operate on the same voltage.

6 Operation

6.1 General operating instructions

All instructions for using the unit, whether in verbal or written form, are based on our own experience and experimentation and can only be regarded as guidelines.

Place the container on the vibrating table or attach it to the handle (the intensity is varied by pressing the container on the vibrating surface).

Note: When mixing materials or removing casts using vibrators, there will be almost zero air disturbance.

If the unit is not going to be used for an extended period, remove the plug from the socket.

6.2 KV-16

Switch the unit on.

KV-16: Turn knob 1-0-2 to select the vibrations per minute.

(1 = 3000 vibrations/min. - 2 = 6000 vibrations/min.)

6.3 KV-26

Switch the unit on.

KV-26: Turn knob 1-0-2 to select the vibrations per minute.

(1 = 3000 vibrations/min. - 2 = 6000 vibrations/min.)

6.4 KV-26 plus and KV-36

Switch the unit on.

KV-26 plus and KV-36 :

1. Turn left-hand knob 1-0-2 to select the vibrations per minute.
(1 = 3000 vibrations/min. - 2 = 6000 vibrations/min.)
2. Select the vibration intensity using the right-hand knob (with the arrow).
(Turn left for lower intensity or right for increased intensity.)

6.5 KV 56


Switch the unit on.

KV-56:

1. Select the vibrations per minute using the left-hand knob labelled 3000-0-6000
(data on scale = vibrations/min.)
2. Select the vibration intensity using the right-hand knob (with the arrow).
(Turn left for lower intensity or right for increased intensity.)


7 Troubleshooting


Fault	Cause	Remedy
Vibrator does not vibrate	Power plug not connected	Insert and/or check plug
	Faulty knob or rocker switch	Replace or repair switch (contact our service department)
Vibrator does not vibrate or vibrates at the same level, i.e., the intensity is not variable (KV-36 and KV-56 only)	Faulty KV vibration regulator and potentiometer	Replace or repair potentiometer or entire assembly (contact our service department)

 If the above recommendations do not solve the problem, contact your dental depot or our service department.

8 Care and maintenance

8.1 Cleaning

 Disconnect the power plug before starting any maintenance work.
The identification plate has always to be kept in easily legible condition and has not to be removed.

 Remove external dirt from time to time with some form of cold cleaner.
Use only cold cleaners to avoid damaging the paintwork or removing the lettering.

The equipment should be cleaned at regular intervals to ensure trouble-free operation. It requires only normal cleaning (sponge, damp cloth, mild detergent) and no further chemical additives.

8.1.1 Cleaning the rubber plates

To make cleaning the rubber plates easier, they can simply be removed from the vibrating table and reinstalled after cleaning.

8.2 Maintenance

The unit does not require any servicing. Just make sure that the device is kept clean.

8.3 Repairs



Servicing or repairs to the unit has only to be carried out by qualified technicians. Only original spare parts are to be used. Responsibility for the product is voided if unauthorised persons alter it or if inappropriate components are installed.

8.4 Spare parts

If necessary please contact our service hotline phone:
0049 (0)40 / 730 92 6-0

8.5 Warranty



The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our service department.

Your equipment should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

This warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

8.6 Scope of delivery/Accessories

Included parts:	Item no.
KV-16, cpl. with rubber plate stainless steel version plastic-powder coated (natural white close to RAL 9016)	169998 A
KV-26, cpl. with rubber plate stainless steel version plastic-powder coated (natural white close to RAL 9016)	169996 A
KV-26 plus, cpl. with rubber plate stainless steel version plastic-powder coated (natural white close to RAL 9016)	169992 A
KV-36, cpl. with rubber plate stainless steel version plastic-powder coated (natural white close to RAL 9016)	169999 A
KV-16, cpl. with rubber plate stainless steel version matt	169986 A
KV-26, cpl. with rubber plate stainless steel version matt	169987 A
KV-26 plus, cpl. with rubber plate stainless steel version matt	169988 A
KV-36, cpl. with rubber plate stainless steel version matt	169989 A
KV-56, cpl. with rubber plate cast housing plastic-powder coated (natural white close to RAL 9016)	169997 A

Accessories:	Item no.
Spare rubber plate KV-16	169201 C
Spare rubber plate KV-26 / KV-26 plus	169101 C
Spare rubber plate KV-36	169010 C
Spare rubber plate KV-56	169510 C

9 Technical data

Vibrators

KV-16	Item no.: 169998 (plastic-powder coated) Item no.: 169986 (matt)
Voltage*	220–240 V / 50/60 Hz
Power consumption	0.3 A
Output	70 W
W x H x D	145 x 150 x 143 mm
Weight	3.9 kg
Sound level	53 dB(A)
Vibrating intensity	3000 / 6000 vibr./min.
Table dimensions	130 x 130 mm
Safety class	IP 54

KV-26	Item no.: 169996 (plastic-powder coated) Item no.: 169987 (matt)
Voltage*	220–240 V / 50/60 Hz
Power consumption	0.3 A
Output	70 W
W x H x D	228 x 150 x 143 mm
Weight	5.2 kg
Sound level	52 dB(A)
Vibrating intensity	3000 / 6000 vibr./min.
Table dimensions	210 x 130 mm
Safety class	IP 54

KV-26 plus	Item no.: 169992 (plastic-powder coated) Item no.: 169988 (matt)
All Technical data as KV-26, in addition with infinitely adjustable vibration intensity	

KV-36	Item no.: 169999 (plastic-powder coated) Item no.: 169989 (matt)
Voltage*	220–240 V / 50/60 Hz
Power consumption	0.6 A
Output	130 W
W x H x D	308 x 173 x 208 mm
Weight	10.9 kg
Sound level	58 dB(A)
Vibrating intensity	3000 / 6000 vibr./min. (infinitely variable)
Table dimensions	293 x 200 mm
Safety class	IP 54

KV-56	Item no.: 169997 (cast housing, plastic-powder coated)
Voltage*	220–240 V / 50/60 Hz
Power consumption	1.3 A
Output	282 W
W x H x D	445 x 187 x 286 mm
Weight	18.6 kg
Sound level	≤ 70 dB(A)
Vibrating intensity	3000 / 6000 vibr./min. (infinitely variable)
Table dimensions	430 x 286 mm
Safety class	IP 54

*Other voltages on request.

The noise level of the unit amounts to ≤ 70 dB (A).



The technical data are subject to change without prior notice.

10 EC Conformity Certificate

in accordance with 2006/95/EG (low-voltage guidelines) and 2004/108/EG (EMV guidelines) and 2006/42/EG (machinery guidelines)

Manufacturer: **WASSERMANN** Product description: Vibrators for dental applications
Dental-Maschinen GmbH
Rudorffweg 15 - 17
D-21031 Hamburg

Model: white / matt
KV-16 REF. 169998 / 169986
KV-26 REF. 169996 / 169987
KV-26 plus with infinitely adjustable vibration intensity REF. 169992 / 169988
KV-36 with infinitely adjustable vibration intensity REF. 169999 / 169989
KV-56 with infinitely adjustable vibration intensity REF. 169997

Applicable standards: DIN EN 61010-1
DIN EN 61000-6-3
DIN EN 61000-6-1
DIN 45635-1
DIN EN 60335-1

Hiermit wird bestätigt, dass die oben bezeichnete Maschine den genannten EG-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EC rules. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur de la Communauté Européenne. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los límites requeridos por el reglamento EC. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigingen aan de machine worden aangebracht.

Place, date: Hamburg, 09.10.2012

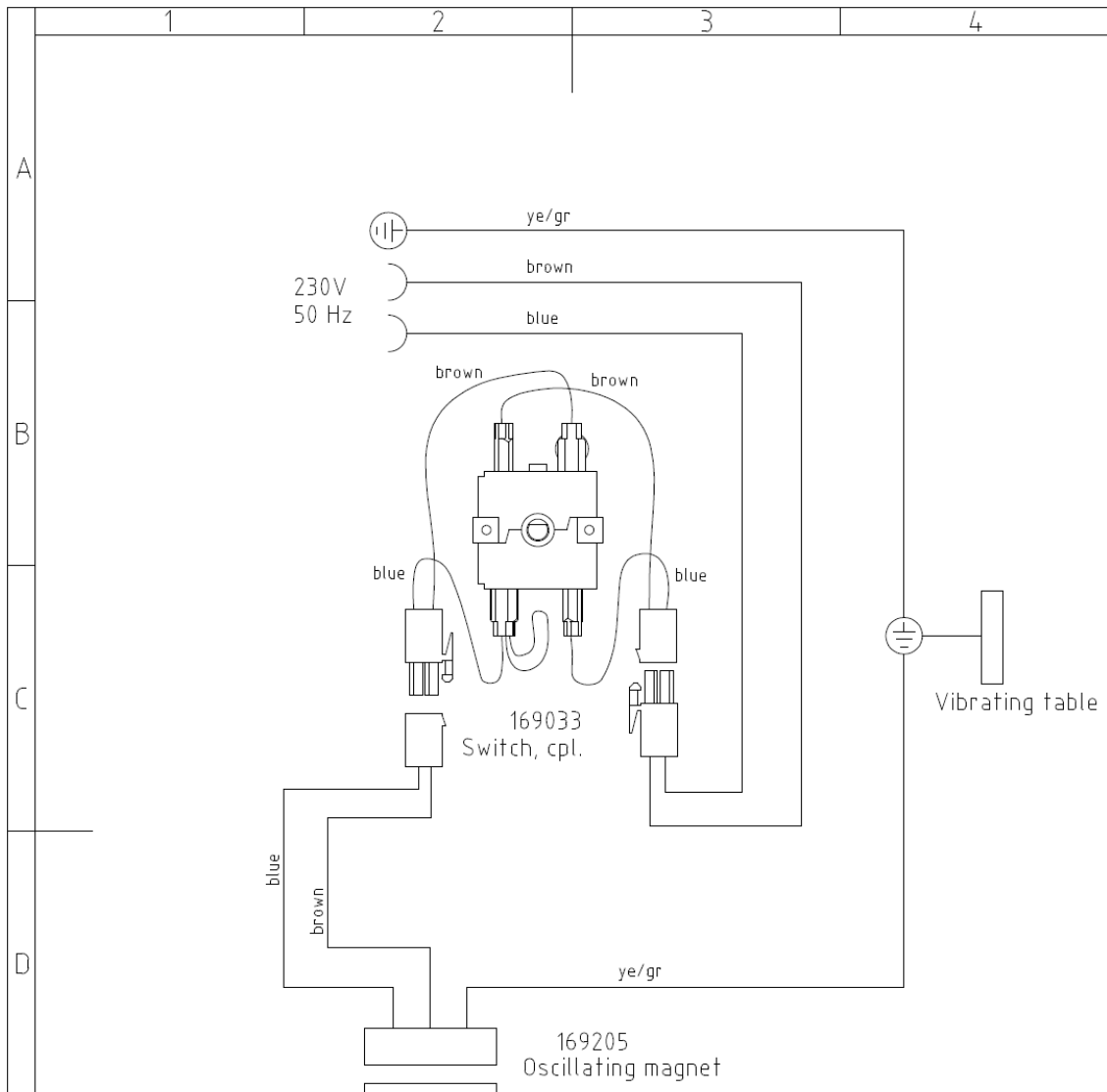
Company stamp :




WASSERMANN
DENTAL-MASCHINEN GMBH
Rudorffweg 15-17 · 21031 Hamburg

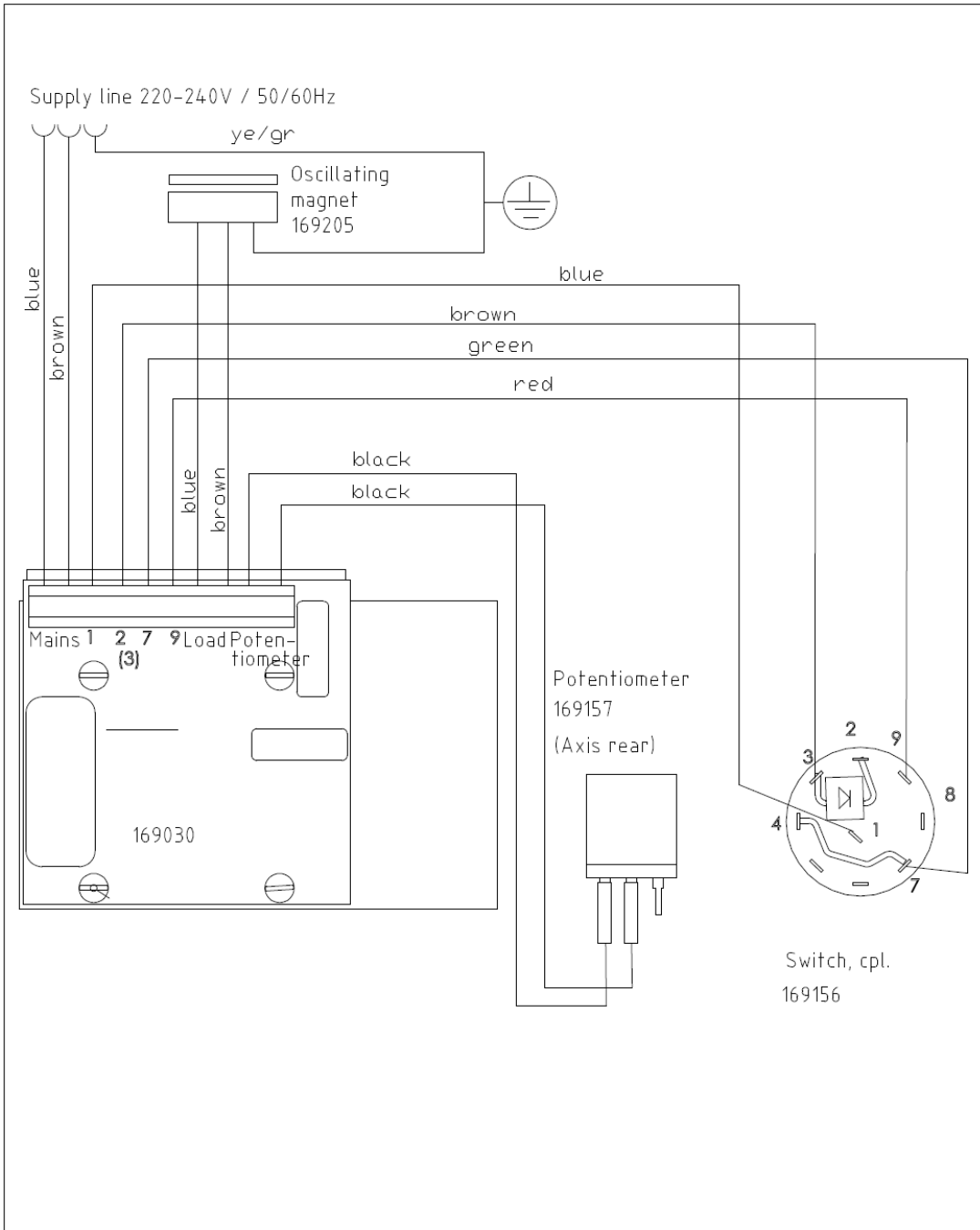
Signature: _____
Wilfried Wassermann
(Managing Director)

11 Wiring diagram KV-16 and KV-26



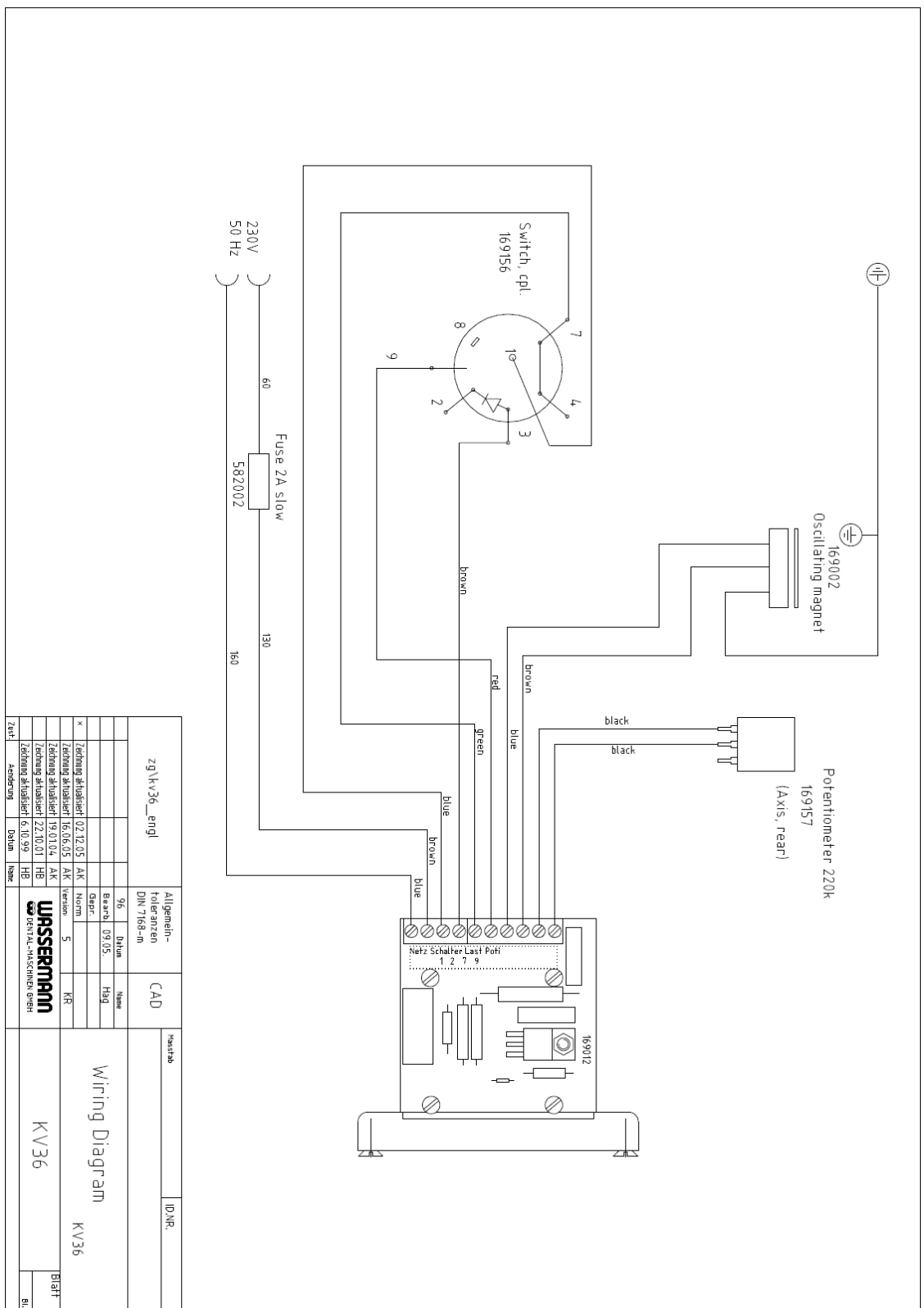
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			Datum	Name	Wiring Diagram	
			Bearb. 29.03.06	AK		
			Gepr.			
			Norm			
			Version: 2	KR		
			 WASSERMANN DENTAL-MASCHINEN			Blatt
			KV 26/KV16			Bl
×	Neuer Schalter	28.05.08	HB			
Zust.	Änderungen	Datum	Name	Dateiname FAZGKV26_KV16_engl.dwg		

12 Wiring diagram KV-26 plus

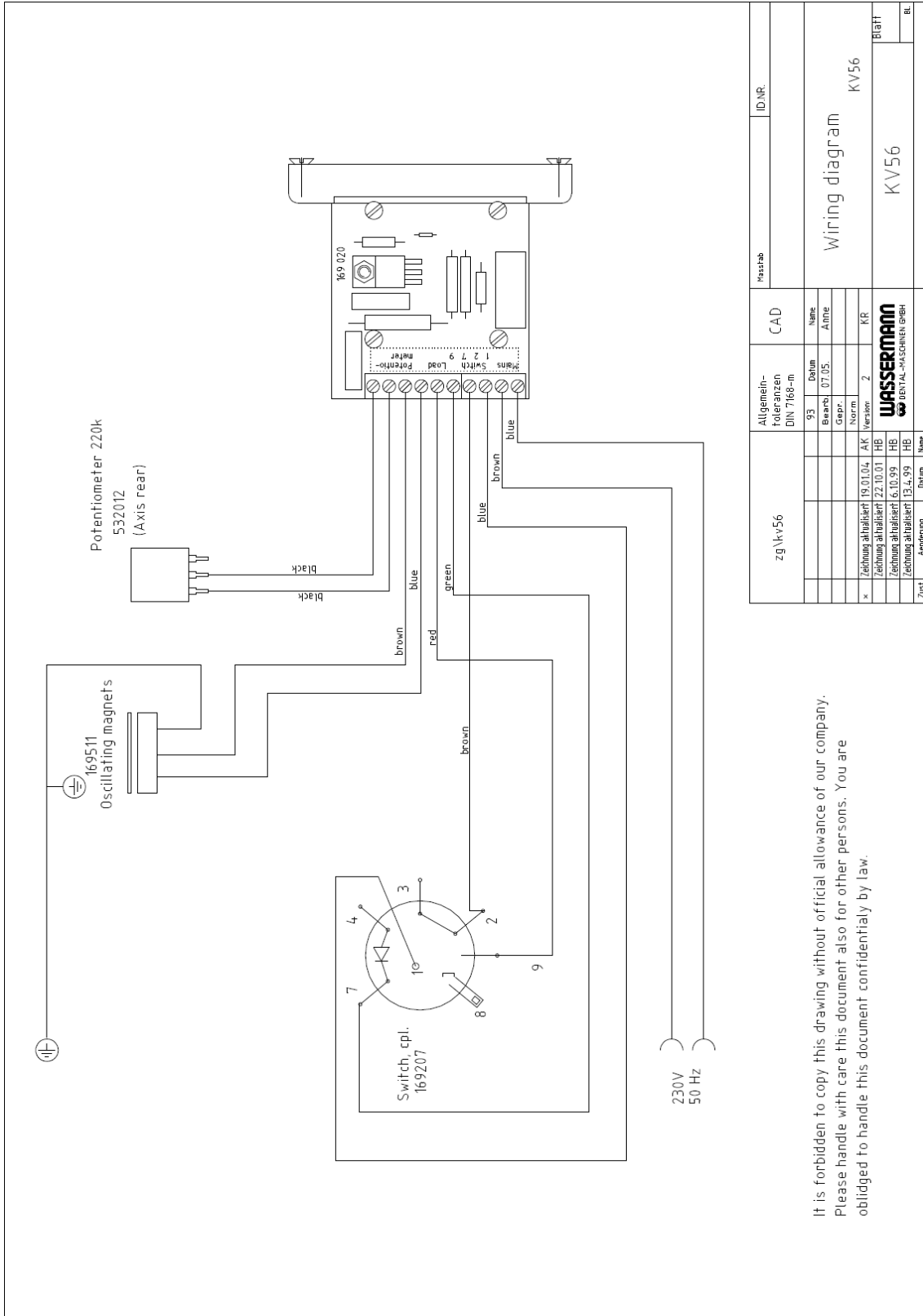


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		Gepr.			
		Norm			
		Version	1	KR	KV 26plus__engl
Zust.	Aenderung	Datum	Name		Blatt Bl.

13 Wiring diagram KV-36



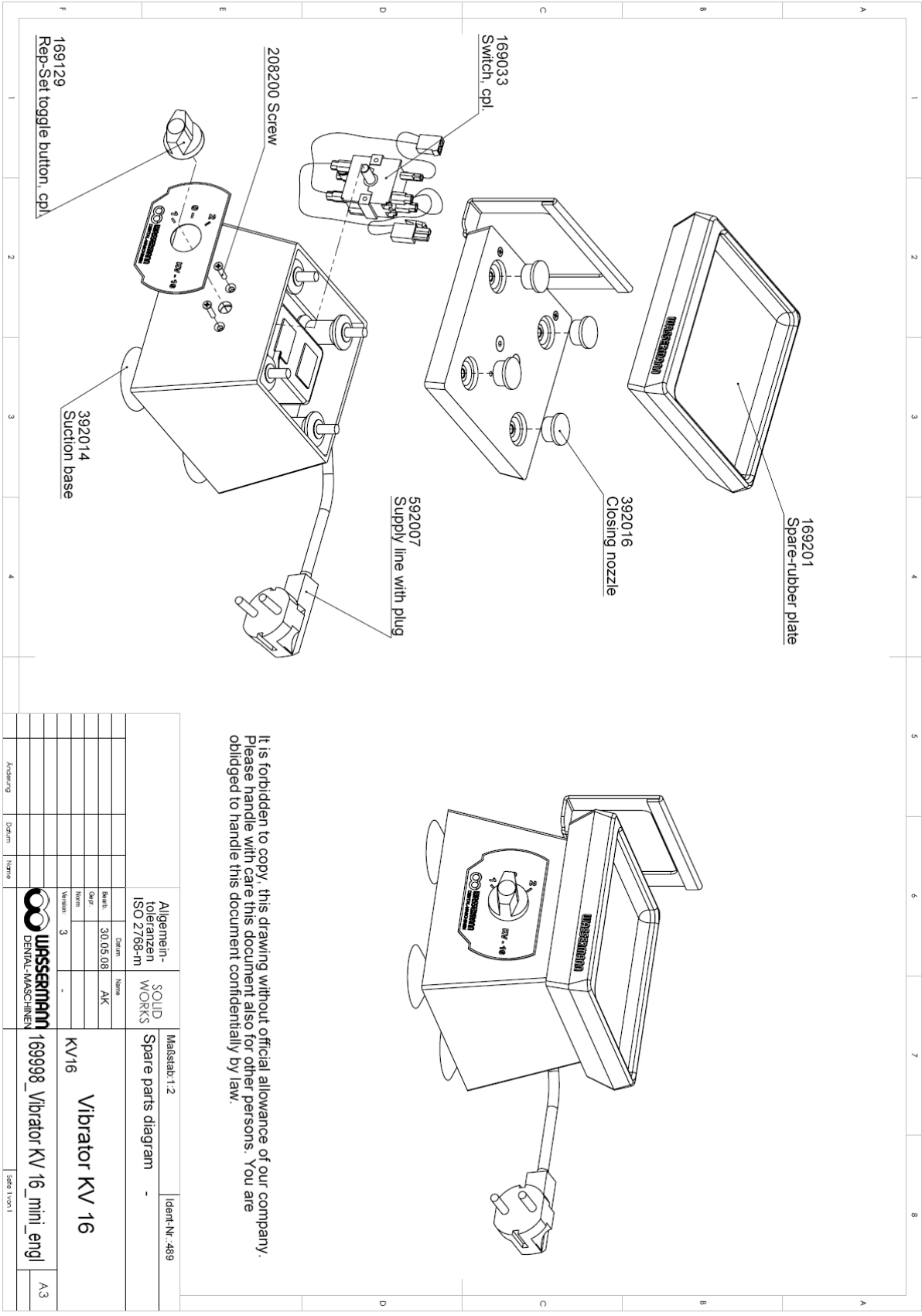
14 Wiring diagram KV-56



zg kv56		Allgemein- Forderungen DIN 7100-m		Maßstab		ID.NR.	
93	Datum	CAD		Name		KV56	
Beaufh.	07.05.	Name		Adlme		Wiring diagram	
Gepr.		Norm		Version		2	
* Zeichnung aktualisiert 19.01.04. AK		WASSERMANN		DENTAL-MASCHINEN		Blatt	
Zeichnung aktualisiert 22.10.01 HB		DENTAL-MASCHINEN		DENTAL-MASCHINEN		KV56	
Zeichnung aktualisiert 01.10.99 HB		DENTAL-MASCHINEN		DENTAL-MASCHINEN		KV56	
Zeichnung aktualisiert 13.11.99 HB		DENTAL-MASCHINEN		DENTAL-MASCHINEN		KV56	
Zust.	Änderung	Datum	Name	Blatt		BL	

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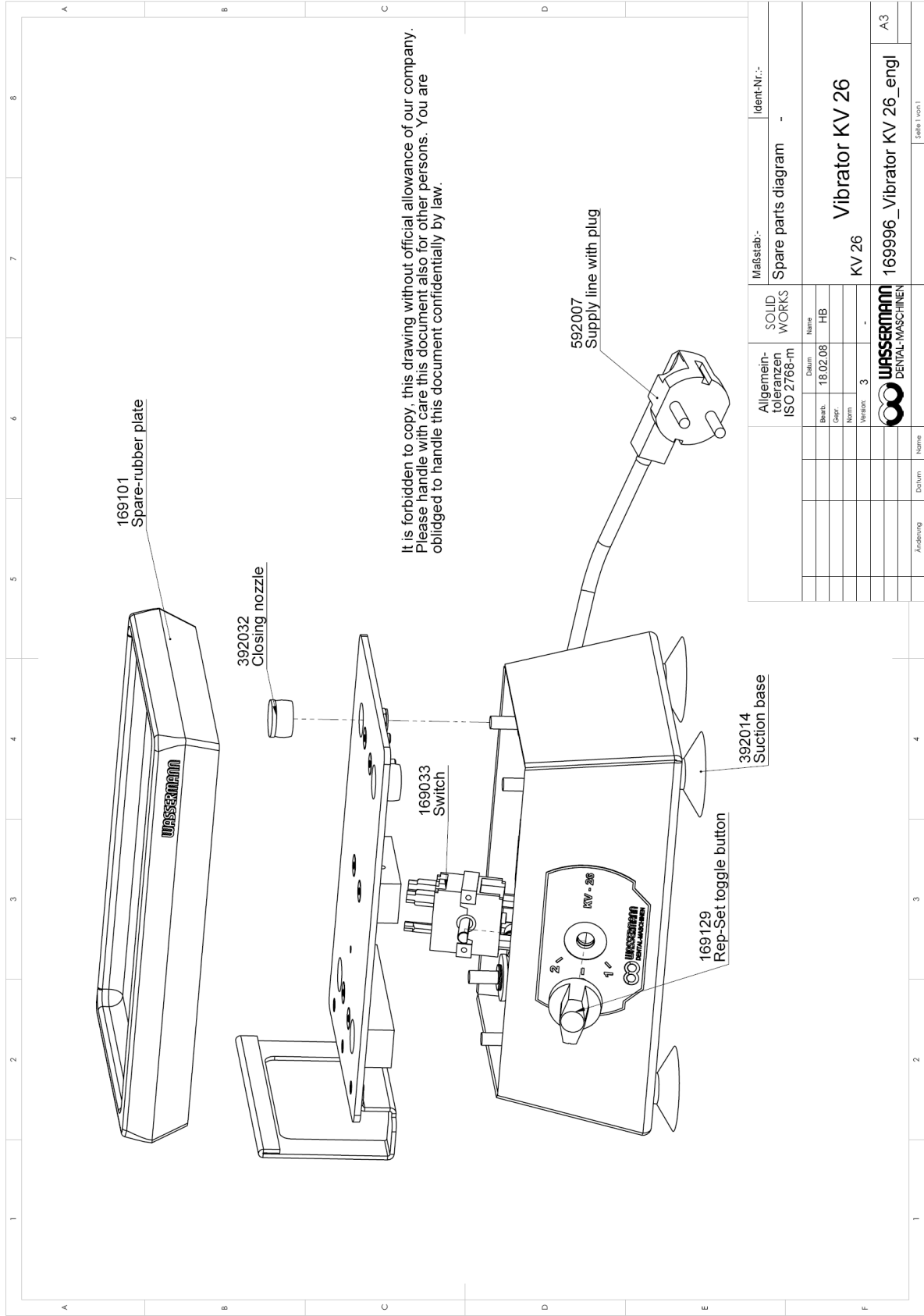
15 Spare part digram KV-16



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Allgemein- toleranzen ISO 2768-m		SOLID WORKS		Maßstab 1:2		Ident-Nr. 489	
Schrift		Schrift		Spare parts diagram		-	
30.05.08		AK		KV16		Vibrator KV 16	
Version 3		-		169998_Vibrator KV 16_mini_engl		A3	
Änderung		Datum		Name		Seite 1 von 1	

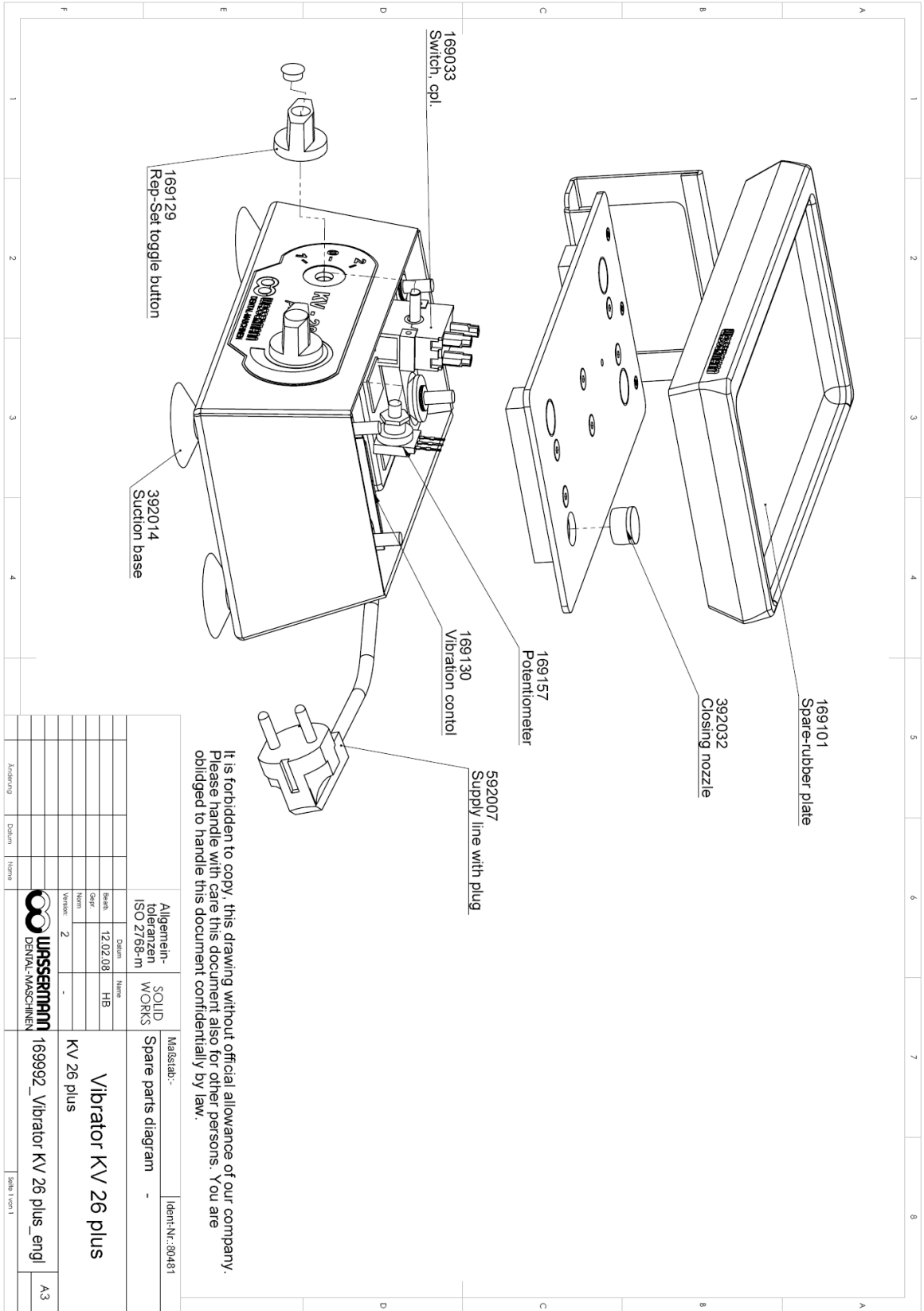
16 Spare part digram KV-26



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Allgemein-toleranzen ISO 2768-m		SOLID WORKS		Matst.-Nr. -		Ident-Nr. -	
Bearb.	Datum	Name	Spare parts diagram		-		
18.02.08	HB		KV 26		Vibrator KV 26		
Rev.			169996_Vibrator KV 26_engl		A3		
Norm							
Version	3						
WASSERMANN DENTAL-MASCHINEN		WASSERMANN DENTAL-MASCHINEN		Seite 1 von 1			
Änderung	Datum	Name					

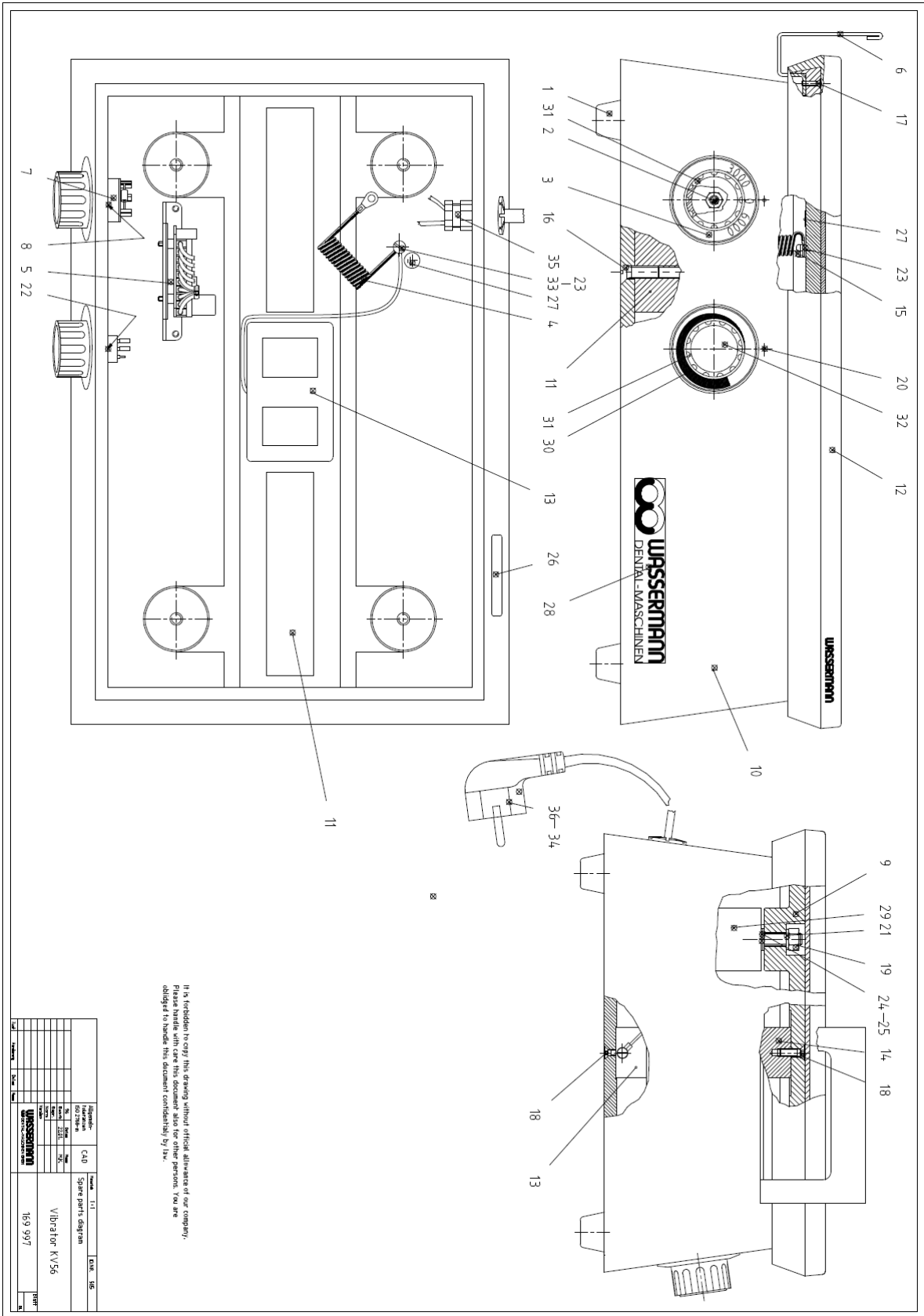
17 Spare part digram KV-26 plus



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Allgemein- toleranzen ISO 2768-m		SOLID WORKS		Masterlab:-		Ident.Nr.:80481	
Bezeichnung	12.02.08	HB	Vibrator KV 26 plus		KV 26 plus		
Material			Vibrator KV 26 plus		KV 26 plus		
Version	2		169992_Vibrator KV 26 plus_engl		KV 26 plus		
Änderung	Datum	Name	169992_Vibrator KV 26 plus_engl		KV 26 plus		

19 Spare part digram KV-56



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Hersteller: Wassermann AG D-72634 Waldenbuch	Modell: CA 10	Zeichnung: Spare parts diagram	Datum: 1987
WASSERMANN DENTAL-MASCHINEN	Vorbild für KV 56	169 997	

Spare parts KV-56

Stck	Beschreibung	Lfd. Nr.	Material	Zeichn.Nr.
4	Rubber foot with grooved drive stud	1		169009
1	Segment	2	St - Rd. 6	169011
1	Graduated dial 3000 - 0 - 6000	3		169014
1	Earth strand	4		169016
1	KV-vibrating control with potentiometer	5		169020
1	Vibrating yoke	6	VA - BI t= 2	169026
1	Switch, cpl. for vibrator	7		169207
1	Washer for switch	8		169210
1	Vibrating table	9	G-Al 225	169501
1	Case KV 56	10	G - Al	169502
2	Weight	11		169503
1	Spare-rubber plate	12		169510
1	Oscillating magnet	13		169511
1	Rotor fpr oscillating magnet	14		169512
1	Screw DIN 85 M4 x 6	15	St Zn	200103
4	Screw DIN963 M8 x 25	16	VA	201019
3	Screw DIN 966 M3 x 12	17	VA	201115
4	Screw DIN 7991 M5 x 16	18	St Br	201504
4	Nut DIN 934 M8	19	VA	202057
2	Grooved drive stud DIN 1476 D2 x 6	20	Ms Zn	203204
4	Serrated washer DIN 6798 A8,4	21	St Zn	204018
1	Washer DIN 125 D10,5	22	VA	204032
2	Serrated washer DIN 6798 J4,3	23	VA	204037
4	Fiber washer D18 x D12	24		304003
4	Fiber washer D14 x D8 x 1,0	25		304008
1	Script name plate-WASSERMANNm.Logo-SW	28		310074
1	Type plate 52 x 52 , neutral	26		310035
2	Earth sign, self adhesive	27		310057
4	Rubber bonded metal D40 x 40	29		353004
1	Graduated dial with ring arrow	30		560002
2	Knob	31		560101
2	Cap	32		560102
1	Earth clamp DF	33		580004
3	Cable end sleeve 0,75qmm	34		581003
1	Cable connection MZI 9	35		584006
1	Supply line with plug 3 x 0,75qmm	36		592007
1	Packaging KV56	37		673024

Notes:

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