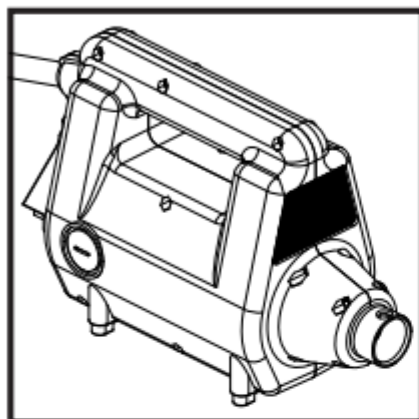




BELLE MEGAVIB+

870/20000/3
10/17


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- Pièces Détachées
- Libro Despiece
- Lista de Peças
- Onderdelen Boekje
- Reservedele Skrift
- Ersatzteilhandbuch
- Manuale dei Ricambi
- Bruksanvisning
- Bruksanvisning
- Varaosaluettelo
- Lista Części Zamiennych
- Запасные Части Книга
- Varuosade Nimekiri
- Rezerves Daļu Saraksts
- Atsarginių Daliu Sarašas
- Част Списък
- Část Barevný Pruh
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BELLE
LIGHT
CONSTRUCTION
EQUIPMENT

EC DECLARATION OF CONFORMITY / DECLARATION CE DE CONFORMITE / DECLARACIÓN DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE / EG-VERKLARING VAN OVEREENSTEMMING / EF OVERENSSTEMMELSESERKLÆRING

- (GB)** We, Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB, hereby certify that if the product described within this certificate is bought from an authorised Belle Group dealer within the EEC, it conforms to the following EEC directives: 2006/42/CE (This directive replaces directive 98/37/EC), Electromagnetic Compatibility Directive 2004/108/CE (as amended by 89/336/EEC, 92/31/EEC & 93/68 EEC), The Waste Electrical and Electronic Equipment (WEEE) 2002/96/CE, the low voltage directive 2006/95/CE, BS EN ISO 12100-1:2003 Safety of machinery and associated harmonised standards, where applicable.
Noise Technical files are held by Ray Neilson at the Belle group Head Office address which is stated above.
- (F)** Nous soussignés, Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB, certifions que si le produit décrit dans ce certificat est acheté chez un distributeur autorisé Belle Group au sein de la CEE, il est conforme aux normes CEE ci-après: 2006/42/CE (Cette norme remplace la norme 98/37/CE), Norme compatible pour l'électromagnétisme 2004/108/CE (modifiée par 89/336/EEC, 92/31/EEC & 93/68 EEC). Les déchets électriques, et d'équipement électronique 2002/96/CE, caractéristiques basse tension 2006/95/CE, BS EN ISO 12100-1:2003 Norme de sécurité des machines et des critères associés et configurés, si applicable.
Les fichiers techniques des émissions sonores sont détenus par Ray Neilson à l'adresse du Siège du Groupe Belle qui est indiqué ci-dessus.
- (E)** La Sociedad, Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK 17 0EU, GB, por el presente documento certifica que si el producto descrito en este certificado es comprado a un distribuidor autorizado de Belle Group en la CEE, este es conforme a las siguientes directivas: 2006/42/CE de la CEE (Esta directiva sustituye a la Directiva 98/37/CE), Directiva 2004/108/CE sobre Compatibilidad Electromagnética (según enmiendas 89/336/EEC, 92/31/EEC & 93/68 EEC). Los residuos eléctricos y electrónicos (RAEE) 2002/96/CE, Directiva sobre Bajo Voltaje 2006/95/CE, BS EN ISO 12100-1:2003 de Seguridad de Maquinaria y Niveles armonizados estándares asociados donde sean aplicables.
Archivos de ruido técnicos están en manos de Ray Neilson en la dirección del grupo Belle Sede de la que se ha dicho.
- (P)** O signatário, Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK 0EU, GB, pelo presente, declara que se o produto descrito neste certificado foi adquirido a um distribuidor autorizado do Belle Group em qualquer país da UE, está em conformidade com o estabelecido nas seguintes diretivas comunitárias: 2006/42/CE (Esta diretiva substitui a Diretiva 98/37/EC), Diretiva de Compatibilidade Eletromagnética 2004/108/CE (conforme corrigido pelas 89/336/EEC, 92/31/EEC & 93/68 EEC). O Elétrico de Desperdício e Equipamento Eletrônico (DEEE) 2002/96/CE, a diretiva de baixa voltagem 2006/95/CE, BS EN ISO 12100-1:2003 Segurança da maquinaria e às normas harmonizadas afins se aplicáveis.
Arquivos de ruído técnicos são detidos por Ray Neilson no endereço Escritório Belle grupo Cabeça que é dito acima.
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Lawaai Technische dossiers zijn in handen van Ray Neilson op de Belle groep hoofdkantoor adres, dat staat boven.
- (DK)** Vi, Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB, erklærer hermed, at hvis det i dette certifikat beskrevne produkt er købt hos en autoriseret Belle Group forhandler i EU, er det i overensstemmelse med følgende EØF-direktiver: 2006/42/CE (Dette direktiv erstatter direktiv 98/37/EF), 2004/108/EØF (som ændret ved 89/336/EEC, 92/31/EØF & 93/68 EØF), Affald af elektrisk og elektronisk udstyr (WEEE) 2002/96/CE, og tilknyttede, harmoniserede standarder, hvor relevant. Støjniveauet er i overensstemmelse med direktiv 2006/95/CE, BS EN ISO 12100-1:2003.
Støj Tekniske filer er i besiddelse af Ray Neilson på Belle-gruppen hovedkontoret adresse, som er nævnt ovenfor.

PRODUCT TYPE	TYPE DE PRODUIT	TIPO DE PRODUCTO
MODEL	MODELE	MODELO
SERIAL No.	N° DE SERIE	N° DE SERIE
DATE OF MANUFACTURE	DATE DE FABRICATION	FECHA DE FABRICACIÓN
SOUND POWER LEVEL MEASURED / (GUARANTEED)	NIVEAU DE PUISSANCE SONORE MESUREE / (GARANTIE)	NIVEL DE POTENCIA ACÚSTICA MEDIDO / (GARANTIZADO)
WEIGHT	POIDS	PESO
TIPO DE PRODUCTO	PRODUCTTYPE	PRODUKTTYPE
MODELO	MODEL	MODEL
NO. DE SÉRIE	SERIENUMMER	SERIENR
DATA DE FABRIC	FABRICATEDATUM	FREMSTILLINGSDATO
NIVEL DE POTÊNCIA DE SOM MEDIDO / (GARANTIDO)	GEMETEN GELUIDSSTERKTENIVEAU / (GEGARANDEERD)	LYDEFFEKTNIVEAU MÅLT / (GARANTERET)
PESO	GEWICHT	VEGT

Signed by:
Signature:
Medido por:
Assinado por:
Getekend door:
Underskrevet af:


Ray Neilson

Managing Director - On behalf of BELLE GROUP (SHEEN) UK.
Le Directeur Général - Pour le compte de la SOCIÉTÉ BELLE GROUP (SHEEN) UK.
Director Gerente - En nombre de BELLE GROUP (SHEEN) UK.
Director-Geral - Em nome de BELLE GROUP (SHEEN) UK.
Algemeen Directeur - Namens BELLE GROUP (SHEEN) UK.
Administrerende direktør - På vegne af BELLE GROUP (SHEEN) UK.

Place of Declaration - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Lieu de déclaration - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Declaración hecha en - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Lugar de Declaração - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Plaats van de Verklaring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Sted i erklæring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK

Date of Declaration - 2006

Date de déclaration - 2006

Fecha de la declaración - 2006

Data da Declaração - 2006

Datum van de verklaring - 2006

Dato for erklæringen - 2006



How To Use This Manual

This manual has been written to help you operate and service the Megavib+ safely.
This manual is intended for dealers and operators of the Megavib+.

Foreword

The '**Machine Description**' section helps you to familiarise yourself with the machine's layout and controls.
The '**Environment**' section gives instructions on how to handle the recycling of discarded apparatus in an environmentally friendly way.
The '**General Safety**' and '**Health and Safety**' sections explain how to use the machine to ensure your safety and the safety of the general public.
The '**Trouble Shooting Guide**' helps you if you have a problem with your machine.
The '**Servicing**' section is to help you with the general maintenance and servicing of your machine.
The '**Warranty**' Section details the nature of the warranty cover and the claims procedure.
The '**Declaration of Conformity**' section shows the standards that the machine has been built to.

Directives with regard to the notations.

Text in this manual to which special attention must be paid are shown in the following way:



CAUTION

The product can be at risk. The machine or yourself can be damaged or injured if procedures are not carried out in the correct way.



WARNING

The life of the operator can be at risk.



Warning



WARNING

*Before you operate or carry out any maintenance on this machine **YOU MUST READ** and **STUDY** this manual.*

KNOW how to safely use the unit's controls and what you must do for safe maintenance.

(NB Be sure that you know how to switch the machine off before you switch on, in case you get into difficulty.)

ALWAYS wear or use the proper safety items required for your personal protection.

If you have **ANY QUESTIONS** about the safe use or maintenance of this unit, ASK YOUR SUPERVISOR OR CONTACT THE Altrad Belle.



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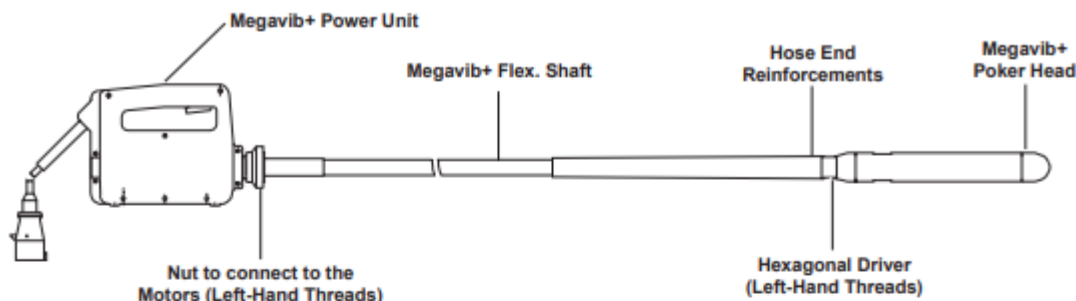
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Altrad Belle reserves the right to change machine specification without prior notice or obligation.

Machine Description



The flexible shaft connected to the 'Megavib+' power unit sends the movement to an eccentric mass placed in the poker head. When operated this mass produces the vibration required for the compacting of the concrete.



Technical Data



Power Unit	230v	115v
Isolation Type	■ Classe 2 double isolation	
Housing	Plastic High Resistance	
Power (kW)	2	1.6
Voltage (V)	230 (50Hz)	115 (60Hz)
Consumption in Load (A)	7,5	13
Speed with Load (rpm)	16,000	
Vitesse en utilisation (rpm)	12,000	
Weight (kg)	7	
Application	To transmit the movement to an internal vibrator through a towline.	
Connection type to the motor	Hexagonal male of 10mm	
Connection type to the transmission	Hexagonal female of 10mm	
Level of acoustic power (dB(A))	35	36
Cable: Minimum Section (mm ²)	1,5	
Cable: Maximum Length (mts)	40	15

Poker Head	25	36	50	57
Diameter (mm / in)	25 - 1	36 - 1 1/4	50 - 2	36 - 2 1/4
Head Length (mm)	300	292	327	346
Frequency (Hz)	225	217	200	192
Centrifugal Force (N)	882	4018	5039	6468
Weight (Kg)	0.5	1.9	3.7	5

Environment



Safe Disposal



Instructions for the protection of the environment. The machine contains valuable materials. Take the discarded apparatus and accessories to the relevant recycling facilities.

Component	Material
Motor Housing	Plastic
Internal Motor	Copper and Aluminium
Connectors	Steel



General Safety

For your own personal protection and for the safety of those around you, please read and ensure you fully understand the following safety information. It is the responsibility of the operator to ensure that he/she fully understands how to operate this equipment safely. If you are unsure about the safe and correct use of the 'Megavib+', consult your supervisor or Altrad Belle.



CAUTION

Improper maintenance can be hazardous. Read and Understand this section before you perform any maintenance, service or repairs.

Work Area

- **KEEP** your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- **DO NOT OPERATE** power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- **KEEP** bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- **EARTHED TOOLS MUST BE PLUGGED INTO** an outlet properly installed and grounded in accordance with all codes and ordinances.
- **NEVER REMOVE** the grounding prong or modify the plug in any way.
- **DO NOT USE** any adaptor plugs.
- **CHECK** with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- **AVOID** body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
- **DON'T EXPOSE** power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- **DO NOT ABUSE** the cord.
- **NEVER USE** the cord to carry the tool.
- **NEVER PULL** the plug from an outlet.
- **KEEP** cord away from heat, oil, sharp edges or moving parts.
- **REPLACE** damaged cords immediately. Damaged cords increase the risk of electric shock.
- **WHEN OPERATING** a power tool outside, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

Service

- Tool service **MUST BE PERFORMED** only by qualified repair personnel.
- When servicing a tool, **USE** only identical replacement parts.
- **FOLLOW instructions in the Maintenance section of this manual.**

Personal Safety

- **STAY ALERT**, watch what you are doing and use common sense when operating a power tool.
- **DO NOT USE TOOL** while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **DRESS PROPERLY.**
- **AVOID** accidental starting.
- **BE SURE** switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- **REMOVE** adjusting keys or spanners before turning the tool on. A spanner or a key that is left attached to a rotating part of the tool may result in personal injury.
- **DO NOT** overreach.
- **KEEP** proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- **USE** safety equipment.

Tool Use And Care

- **DO NOT FORCE** the tool.
- **USE** the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- **DO NOT USE** tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **DISCONNECT** the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- **STORE** idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- **CHECK** for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- **USE** only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Specific Safety Rules



- For the safe and proper operation of the 'MEGAVIB+', **make sure** that operators have been instructed in the correct use of this machine.
- Before connecting the motor to the electrical system, **make sure** that the voltage and frequency match with the ones stated on the machine serial plate, located in the top part of the plastic housing.
- **ENSURE** that all housing screws are tight before starting work.
- **AVOID** the flattening of the cable by heavy machinery with could cause breakage.
- **DO NOT CONNECT** the flexible shaft to the power unit when it is working.
- **DO NOT OPERATE** the motor when this is working and without transmission.
- **DO NOT WORK** with transmission or poker in bad conditions, the motor overheats.
- **DO NOT WORK** with the plastic housing broken.
- **DO NOT PERMIT** untrained personnel to operate the motor or connections.
- **MAINTAIN** free ventilation of air.
- **KEEP** the motor in a clean and dry area.
- **MAKE SURE** that the electrical cable is with the proper section and functioning properly.
- **BEFORE DOING** any type of repair, **DISCONNECT** the motor from the electrical system.
- **WHEN CONNECTING** to a generator, **make sure** that the output voltage and frequency is stable, right, and has the proper power, (the converter's feeding voltage should not vary more than $\pm 5\%$ as stated on the motor's plate).
- **WHEN FINISHING** the job or when taking a break, the operator should unplug, disconnect it from the electrical system, and have it placed in such a way that it should not fall or tip.
- In addition, all local regulations should be respected.

Vibration

Some vibration from the poker is transmitted through the flexible hose to the operator's hands.

PPE (Personal Protective Equipment).

Suitable PPE must be worn when using this equipment i.e. Safety Goggles, Gloves, Ear Defenders, Dust Mask and Steel Toe capped footwear. Wear clothing suitable for the work you are doing. Always protect skin from contact with concrete. Suitable ear defenders **Should be used** because the acoustic power level of this machine is 92 dB and the acoustic pressure level is 86 dB.

Pre-Start Checks



1. Before starting the job, ensure all handling and safety devices are operating correctly.
2. Regularly inspect the condition of the electrical cables
3. If defects are found in the safety devices or other defects which could reduce the safe handling of the equipment, notify the proper responsible person immediately.

Operation



Shaft Connection To Power Unit

Power unit is designed to facilitate a quick and safe connection to flexible shaft.

Connection Procedure:

1. Face the male hexagon of the transmission in the female hexagon of the motor.
2. Once faced the hexagons push until making that the anchorage of the transmission enters in the special lodging of the motor.

Connection possibilities

Length of the transmission: 2, 3 & 4 metres

Diameter of the vibrator: 25, 38, 48, & 58

Electric Motor Connection To The System

Turn off the motor switch before connecting it.

Electrical Connection

All portable electric appliances are dangerous if abused. This machine will only operate on one voltage. Check the power supply to ensure it corresponds to the voltage indicated on the rating label.

Make sure the Power Unit is switched off before you plug it into the power supply.

230v - Always use a Residual Current Device (RCD), (earth leakage trip), plugged directly into the RCD.

115v - When using a portable transformer it must have a minimum output of **2.5kw** and to be continuous rated.

Extension Cables

If you need to use an extension cable it must be no longer than 15m / 49.5ft (115v) and 40m / 132ft (230v) in length. The wire section must be 1.5mm². Ensure that the extension cable is carefully laid out avoiding liquids, sharp edges and places where vehicles might run over it. Unroll it fully or it will overheat and could catch fire. Make sure that any extension cable connections are dry and safe.



CAUTION

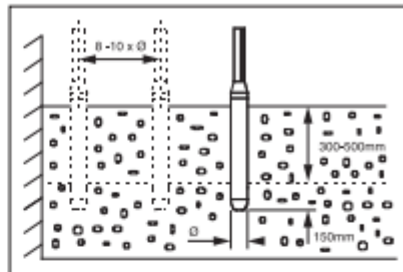
Do not use damaged or worn out cables.
Do avoid heavy loads on top of cables.



Operation

RECOMMENDATIONS OF USE OF CONCRETE VIBRATOR

1. Choose the right size of poker for: the size of the job, the spacing of reinforcement, slump of the concrete and the mix design.
2. It is recommended to have an additional concrete vibrator available.
3. Pour the concrete evenly, into the form work, in 300-500 mm thick layers.
Do not use the poker vibrator to spread the concrete.
4. Vibrate the concrete systematically. Make 300-500 mm vertical insertions at intervals of 8 - 10 times the tube diameter. Where possible, push the poker vibrator about 150 mm into the previous layer of the concrete, this will help obtain the best level of bonding between the two layers.
The concrete has been thoroughly vibrated when the surface around the poker is shiny and no large air bubbles rise to the surface of the concrete. This normally takes 10 - 20 seconds at each location of the poker.
5. Withdraw the poker slowly so that the concrete can flow into the void left by the poker.
6. Do not push or force the vibrator against the reinforcement. Keep a distance of 70 mm minimum from the walls.
7. Always remove the poker vertically, so the concrete fills the empty space again.
Do not switch off until the poker is withdrawn. The speed of removal is approximately 80 mm per second. When the vibrator is almost out, extract quickly to avoid shaking the surface.



CAUTION

Do not keep the concrete vibrator out of the concrete during long periods. If you have stopped vibrating the concrete, turn the poker off.



Storage

When it is not used for long periods of time, store the Megavib+ motor in a clean, dry, and protected environment.



Transportation

When transporting, ensure the Megavib+ motor is safe against damage occurring as a result of slipping, over turning and sudden impact.

Service & Maintenance



The Altrad Belle Megavib+ is designed to give many years of trouble free operation. It is, however, important that the simple regular maintenance listed in this section is carried out. It is recommended that an approved Altrad Belle dealer carries out all major maintenance and repairs. Always use genuine Altrad Belle replacement parts, the use of spurious parts may void your warranty.

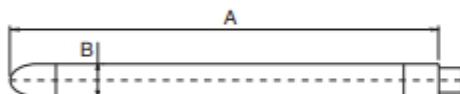
Periodic Maintenance - Power Unit

1. Only a qualified electrician should work on the electrical parts.
2. Make sure that the electricity is switched off before conducting any maintenance work.
3. In all maintenance operations, original parts will be used.
4. Periodic lubrication of the converter's bearings is not necessary.
5. Every 100 hours carbon brushes should be inspected. They should be changed if effective length is under 5 mm.
6. Periodically, clean the ventilation vents in the front and back part of the converter to avoid overheating.
7. After maintenance, ensure all safety devices are assembled correctly.
8. Before operating, inspect the housing's holding bolts.
9. Every 12 months or more frequently, depending on the usage conditions, its recommended a inspection be done by an authorised Altrad Belle dealer.

Periodic Maintenance - Poker Head & Flexible Shaft

1. Before conducting any maintenance work on the flexible shaft and poker, first disconnect of the motor.
2. In all maintenance operations, original parts will be used.
3. To check for wear, measure the outside diameter and length of the poker. Replace the housing or cap when the diameter or length, at the smallest point, is less than the dimension specified in the wear table.
4. Lubricate the shaft every 100 working hours.
The correct way in which to lubricate the shaft is to grasp some grease in the palm of the hand and run the lubricant over the length of the shaft. This should leave a light coating of the lubricant on the entire length of the shaft. The recommended quantity is 25g per metre. Do not overlubricate, it could cause the grease penetrate into the poker. Do not clean the shaft with solvent.
5. When the length of the shaft is not equal to the hose (+/-10 mm) it is necessary to repair it.
6. After maintenance, all the parts must be assembled correctly.
7. Every 12 months, or less depending on the usage conditions. It is recommended an inspection be done by an authorised dealer

DIMENSIONS OF WEAR FOR DIAMETERS AND LENGTHS OF THE POKER



- a. The minimum dimensions are printed in bold.
- b. The dimensions in brackets are the original dimensions.
- c. Replace the housing when it reaches the minimum diameter.
- d. Replace the tip when it reaches the minimum length.

Model	Diameter (mm)	Length (mm)
25mm	23.5 (25)	310 (315)
38mm	36 (38)	330 (335)
48mm	45.5 (48)	355 (360)
58mm	55.5 (58)	360 (365)

<div> <div>GB</div> <div>Troubleshooting Guide</div> </div>	
Problems	Cause / Remedy
Motor doesn't work	Make sure the power is on
	Carbon brushes defective
	Faulty switch
Motor works but is overheating	Clean the front air vents
	Clean or substitute the back filter
	Tighten outer casing fasteners
Motor works slowly	Verify voltage of electrical system
	Check the cable specification
	Verify the cable or length of connection
	Defective poker or shaft
Motor make more noise than normal	Carbon brushes defective
	Faulty bearings
	The rotor may be toughing the stator
	Outer casing broken or fasteners loose
The motor works but overloads and overheats	Head is over lubricated
	Too much grease in shaft or too little
	Failure of seal. The transmission grease has penetrated the head or the head oil has escaped.
	Head movement is restricted
	Transmission with extreme bends
	Transmission in bad condition, broken hose
Bearing failure	Not enough oil in head
	The head has been working outside concrete for a long time
	Water has penetrated the head
	The housing has received strong stroke

GB

Warranty

Your new Altrad Belle 'Megavib+' is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase. The Altrad Belle warranty is against defects in design, materials and workmanship.

The following are not covered under the Altrad Belle warranty:

1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
2. Alterations, additions or repairs carried out by persons other than Altrad Belle or their recognised agents.
3. Transportation or shipment costs to and from Altrad Belle or their recognised agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

The following components are not covered by warranty.

- Drivebelt/s
- Engine air filter

Altrad Belle and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

Warranty Claims

All warranty claims should firstly be directed to Altrad Belle, either by telephone, by Fax, by Email, or in writing.

For warranty claims:

Tel: +44 (0)1298 84606

Fax: +44 (0)1298 84722

Warranty@belle-group.co.uk

Write to:

Altrad Belle Warranty Department,
Sheen, Nr. Buxton
Derbyshire
SK17 0EU

How To Use This Manual



This manual has been written to help you operate and service the Megavib+ safely.
This manual is intended for dealers and operators of the Megavib+.

Foreword

The **'Machine Description'** section helps you to familiarise yourself with the machine's layout and controls.
The **'Environment'** section gives instructions on how to handle the recycling of discarded apparatus in an environmentally friendly way.
The **'General Safety'** and **'Health and Safety'** sections explain how to use the machine to ensure your safety and the safety of the general public.
The **'Trouble Shooting Guide'** helps you if you have a problem with your machine.
The **'Servicing'** section is to help you with the general maintenance and servicing of your machine.
The **'Warranty'** Section details the nature of the warranty cover and the claims procedure.

Directives with regard to the notations.

Text in this manual to which special attention must be paid are shown in the following way:



CAUTION

The product can be at risk. The machine or yourself can be damaged or injured if procedures are not carried out in the correct way.



WARNING

The life of the operator can be at risk.

Warning



WARNING

*Before you operate or carry out any maintenance on this machine **YOU MUST READ** and **STUDY** this manual.*

KNOW how to safely use the unit's controls and what you must do for safe maintenance.

(NB Be sure that you know how to switch the machine off before you switch on, in case you get into difficulty.)

ALWAYS wear or use the proper safety items required for your personal protection.

If you have **ANY QUESTIONS** about the safe use or maintenance of this unit, **ASK YOUR SUPERVISOR OR CONTACT ALTRAD BELLE.**

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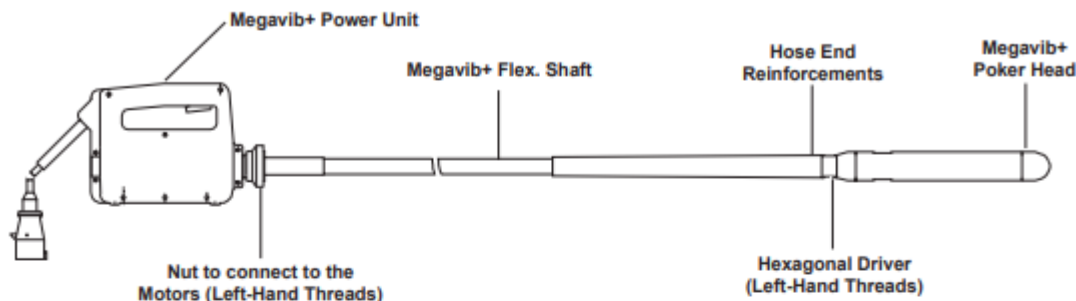
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Altrad Belle reserves the right to change machine specification without prior notice or obligation.



Machine Description

The flexible shaft connected to the 'Megavib+' power unit sends the movement to an eccentric mass placed in the poker head. When operated this mass produces the vibration required for the compacting of the concrete.



Technical Data

Model	230v	115v
Isolation Type	■ Classe 2 double isolation	
Housing	Plastic High Resistance	
Power (kW)	2	1.6
Voltage (V)	230 (50Hz)	115 (60Hz)
Consumption in Load (A)	7,5	13
Speed with Load (rpm)	16,000	
Vitesse en utilisation (rpm)	12,000	
Weight (lbs)	15.4	
Application	To transmit the movement to an internal vibrator through a towline.	
Connection type to the motor	Hexagonal male of 10mm	
Connection type to the transmission	Hexagonal female of 10mm	
Level of acoustic power (dB(A))	35	36
Cable: Minimum Section (mm ²)	1,5	
Cable: Maximum Length (ft)	131.2	49.2

Poker Head	25	36	50	57
Diameter (mm / in)	25 - 1	36 - 1 1/4	50 - 2	36 - 2 1/4
Head Length (in)	11.8	11.5	12.9	13.7
Frequency (Hz)	225	217	200	192
Centrifugal Force (N)	882	4018	5039	6468
Weight (lbs)	1.1	4.2	8.2	11



Environment

Safe Disposal



Instructions for the protection of the environment. The machine contains valuable materials. Take the discarded apparatus and accessories to the relevant recycling facilities.

Component	Material
Motor Housing	Plastic
Internal Motor	Copper and Aluminium
Connectors	Steel

General Safety



For your own personal protection and for the safety of those around you, please read and ensure you fully understand the following safety information. It is the responsibility of the operator to ensure that he/she fully understands how to operate this equipment safely. If you are unsure about the safe and correct use of the 'Megavib+', consult your supervisor or Altrad Belle.



CAUTION

Improper maintenance can be hazardous. Read and Understand this section before you perform any maintenance, service or repairs.

Work Area

- **KEEP** your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- **DO NOT OPERATE** power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- **KEEP** bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- **EARTHED TOOLS MUST BE PLUGGED INTO** an outlet properly installed and grounded in accordance with all codes and ordinances.
- **NEVER REMOVE** the grounding prong or modify the plug in any way.
- **DO NOT USE** any adaptor plugs.
- **CHECK** with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- **AVOID** body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
- **DON'T EXPOSE** power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- **DO NOT ABUSE** the cord.
- **NEVER USE** the cord to carry the tool.
- **NEVER PULL** the plug from an outlet.
- **KEEP** cord away from heat, oil, sharp edges or moving parts.
- **REPLACE** damaged cords immediately. Damaged cords increase the risk of electric shock.
- **WHEN OPERATING** a power tool outside, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

Service

- Tool service **MUST BE PERFORMED** only by qualified repair personnel.
- When servicing a tool, **USE** only identical replacement parts.
- **FOLLOW** instructions in the Maintenance section of this manual.

Personal Safety

- **STAY ALERT**, watch what you are doing and use common sense when operating a power tool.
- **DO NOT USE TOOL** while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **DRESS PROPERLY.**
- **AVOID** accidental starting.
- **BE SURE** switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- **REMOVE** adjusting keys or spanners before turning the tool on. A spanner or a key that is left attached to a rotating part of the tool may result in personal injury.
- **DO NOT** overreach.
- **KEEP** proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- **USE** safety equipment.

Tool Use And Care

- **DO NOT FORCE** the tool.
- **USE** the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- **DO NOT USE** tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **DISCONNECT** the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- **STORE** idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- **CHECK** for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- **USE** only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.



Specific Safety Rules

- For the safe and proper operation of the 'MEGAVIB+', **make sure** that operators have been instructed in the correct use of this machine.
- Before connecting the motor to the electrical system, **make sure** that the voltage and frequency match with the ones stated on the machine serial plate, located in the top part of the plastic housing.
- **ENSURE** that all housing screws are tight before starting work.
- **AVOID** the flattening of the cable by heavy machinery with could cause breakage.
- **DO NOT CONNECT** the flexible shaft to the power unit when it is working.
- **DO NOT OPERATE** the motor when this is working and without transmission.
- **DO NOT WORK** with transmission or poker in bad conditions, the motor overheats.
- **DO NOT WORK** with the plastic housing broken.
- **DO NOT PERMIT** untrained personnel to operate the motor or connections.
- **MAINTAIN** free ventilation of air.
- **KEEP** the motor in a clean and dry area.
- **MAKE SURE** that the electrical cable is with the proper section and functioning properly.
- **BEFORE DOING** any type of repair, **DISCONNECT** the motor from the electrical system.
- **WHEN CONNECTING** to a generator, **make sure** that the output voltage and frequency is stable, right, and has the proper power, (the converter's feeding voltage should not vary more than $\pm 5\%$ as stated on the motor's plate).
- **WHEN FINISHING** the job or when taking a break, the operator should unplug, disconnect it from the electrical system, and have it placed in such a way that it should not fall or tip.
- **In addition, all local regulations should be respected.**

Vibration

Some vibration from the poker is transmitted through the flexible hose to the operator's hands.

PPE (Personal Protective Equipment).

Suitable PPE must be worn when using this equipment i.e. Safety Goggles, Gloves, Ear Defenders, Dust Mask and Steel Toe capped footwear. Wear clothing suitable for the work you are doing. Always protect skin from contact with concrete. Suitable ear defenders **should be used** because the acoustic power level of this machine is 92 dB and the acoustic pressure level is 86 dB.



Pre-Start Checks

1. Before starting the job, ensure all handling and safety devices are operating correctly.
2. Regularly inspect the condition of the electrical cables
3. If defects are found in the safety devices or other defects which could reduce the safe handling of the equipment, notify the proper responsible person immediately.



Operation

Shaft Connection To Power Unit

Power unit is designed to facilitate a quick and safe connection to flexible shaft.

Connection Procedure:

1. Face the male hexagon of the transmission in the female hexagon of the motor.
2. Once faced the hexagons push until making that the anchorage of the transmission enters in the special lodging of the motor.

Connection possibilities

Length of the transmission: 6.5, 10 & 13 ft

Diameter of the vibrator: 25, 38, 48, & 58

Electric Motor Connection To The System

Turn off the motor switch before connecting it.

Electrical Connection

All portable electric appliances are dangerous if abused. This machine will only operate on one voltage. Check the power supply to ensure it corresponds to the voltage as indicated on the rating label.

Make sure the Power Unit is switched off before you plug it into the power supply.

230v - Always use a Residual Current Device (RCD), (earth leakage trip), plugged directly into the RCD.

115v - When using a portable transformer it must have a minimum output of **2.5kw** and to be continuous rated.

Extension Cables

If you need to use an extension cable it must be no longer than 15m / 49.5ft (115v) and 40m / 132ft (230v) in length. The wire section must be 1.5mm². Ensure that the extension cable is carefully laid out avoiding liquids, sharp edges and places where vehicles might run over it. Unroll it fully or it will overheat and could catch fire. Make sure that any extension cable connections are dry and safe.



CAUTION

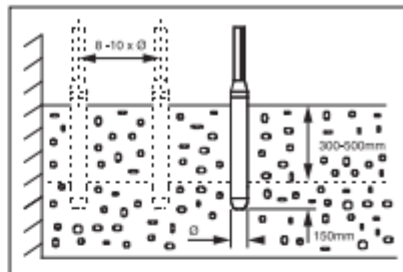
Do not use damaged or worn out cables.
Do avoid heavy loads on top of cables.

Operation



RECOMMENDATIONS OF USE OF CONCRETE VIBRATOR

1. Choose the right size of poker for: the size of the job, the spacing of reinforcement, slump of the concrete and the mix design.
2. It is recommended to have an additional concrete vibrator available.
3. Pour the concrete evenly, into the form work, in 300-500 mm thick layers.
Do not use the poker vibrator to spread the concrete.
4. Vibrate the concrete systematically. Make 300-500 mm vertical insertions at intervals of 8 - 10 times the tube diameter. Where possible, push the poker vibrator about 150 mm into the previous layer of the concrete, this will help obtain the best level of bonding between the two layers.
The concrete has been thoroughly vibrated when the surface around the poker is shiny and no large air bubbles rise to the surface of the concrete. This normally takes 10 - 20 seconds at each location of the poker.
5. Withdraw the poker slowly so that the concrete can flow into the void left by the poker.
6. Do not push or force the vibrator against the reinforcement. Keep a distance of 70 mm minimum from the walls.
7. Always remove the poker vertically, so the concrete fills the empty space again.
Do not switch off until the poker is withdrawn. The speed of removal is approximately 80 mm per second. When the vibrator is almost out, extract quickly to avoid shaking the surface.



CAUTION

Do not keep the concrete vibrator out of the concrete during long periods. If you have stopped vibrating the concrete, turn the poker off.

Storage



When it is not used for long periods of time, store the Megavib+ motor in a clean, dry, and protected environment.

Transportation



When transporting, ensure the Megavib+ motor is safe against damage occurring as a result of slipping, over turning and sudden impact.



Service & Maintenance

The Altrad Belle Megavib+ is designed to give many years of trouble free operation. It is, however, important that the simple regular maintenance listed in this section is carried out. It is recommended that an approved Altrad Belle dealer carries out all major maintenance and repairs. Always use genuine Altrad Belle replacement parts, the use of spurious parts may void your warranty.

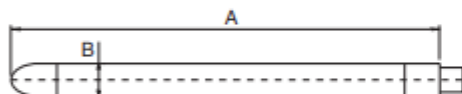
Periodic Maintenance - Power Unit

1. Only a qualified electrician should work on the electrical parts.
2. Make sure that the electricity is switched off before conducting any maintenance work.
3. In all maintenance operations, original parts will be used.
4. Periodic lubrication of the converter's bearings is not necessary.
5. Every 100 hours carbon brushes should be inspected. They should be changed if effective length is under 5 mm.
6. Periodically, clean the ventilation vents in the front and back part of the converter to avoid overheating.
7. After maintenance, ensure all safety devices are assembled correctly.
8. Before operating, inspect the housing's holding bolts.
9. Every 12 months or more frequently, depending on the usage conditions, its recommended a inspection be done by an authorised Altrad Belle dealer.

Periodic Maintenance - Poker Head & Flexible Shaft

1. Before conducting any maintenance work on the flexible shaft and poker, first disconnect of the motor.
2. In all maintenance operations, original parts will be used.
3. To check for wear, measure the outside diameter and length of the poker. Replace the housing or cap when the diameter or length, at the smallest point, is less than the dimension specified in the wear table.
4. Lubricate the shaft every 100 working hours.
The correct way in which to lubricate the shaft is to grasp some grease in the palm of the hand and run the lubricant over the length of the shaft. This should leave a light coating of the lubricant on the entire length of the shaft, The recommended quantity is 25g per metre. Do not overlubricate, it could cause the grease penetrate into the poker, Do not clean the shaft with solvent.
5. When the length of the shaft is not equal to the hose (+/-10 mm) it is necessary to repair it.
6. After maintenance, all the parts must be assembled correctly.
7. Every 12 months, or less depending on the usage conditions. It is recommended an inspection be done by an authorised dealer

DIMENSIONS OF WEAR FOR DIAMETERS AND LENGTHS OF THE POKER



- a. The minimum dimensions are printed in bold.
- b. The dimensions in brackets are the original dimensions.
- c. Replace the housing when it reaches the minimum diameter.
- d. Replace the tip when it reaches the minimum length.

Model	Diameter (in)	Length (in)
25	0.925 (0.984)	12.204 (12.401)
38	1.417 (1.496)	12.992 (13.188)
48	1.791 (1.889)	13.976 (14.173)
58	2.185 (2.283)	14.173 (14.370)

Troubleshooting Guide

Problems	Cause / Remedy
Motor doesn't work	Make sure the power is on
	Carbon brushes defective
	Faulty switch
Motor works but is overheating	Clean the front air vents
	Clean or substitute the back filter
	Tighten outer casing fasteners
Motor works slowly	Verify voltage of electrical system
	Check the cable specification
	Verify the cable or length of connection
	Defective poker or shaft
Motor make more noise than normal	Carbon brushes defective
	Faulty bearings
	The rotor may be toughing the stator
	Outer casing broken or fasteners loose
The motor works but overloads and overheats	Head is overlubricated
	Too much grease in shaft or too little
	Failure of seal. The transmission grease has penetrated the head or the head oil has escaped.
	Head movement is restricted
	Transmission with extreme bends
	Transmission in bad condition, broken hose
Bearing failure	Not enough oil in head
	The head has been working outside concrete for a long time
	Water has penetrated the head
	The housing has received strong stroke

Warranty

Your new Altrad Belle 'Megavib+' is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase. The Altrad Belle warranty is against defects in design, materials and workmanship.

The following are not covered under the Altrad Belle warranty:

1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
2. Alterations, additions or repairs carried out by persons other than Altrad Belle or their recognised agents.
3. Transportation or shipment costs to and from Altrad Belle or their recognised agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

The following components are not covered by warranty.

- Drivebelt/s
- Engine air filter

Altrad Belle and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

Warranty Claims

All warranty claims should firstly be directed to Altrad Belle, either by telephone, by Fax, by Email, or in writing.

For warranty claims:

Tel: +44 (0)1298 84606

Fax: +44 (0)1298 84722

Warranty@belle-group.co.uk

Write to:

Altrad Belle Warranty Department,
 Sheen, Nr. Buxton
 Derbyshire
 SK17 0EU