



MOBILE SHOTBLASTER

HORNET

OWNER'S MANUAL AND PARTS BOOK



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**ORIGINAL LANGUAGE OPERATING MANUAL FOR
CONTEC SHOT BLASTER**

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00	11/2018	Initial Release	AN





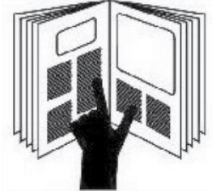
SAFETY PRECAUTIONS	
	<p style="text-align: center;">DANGER EXPLOSION HAZARD</p> <p>Never operate the machine in an explosive atmosphere, near combustible materials, or where ventilation does not clear exhaust fumes.</p>
	<p style="text-align: center;">WARNING BURN HAZARD</p> <p>Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur.</p>
	<p style="text-align: center;">CAUTION ROTATING HAZARD</p> <p>Never place hands or feet inside safety guards. Serious injury will result from contact with rotating parts.</p>
	<p style="text-align: center;">CAUTION MOVING PARTS</p> <p>Before starting the machine, ensure that all guards and safety devices are in place and functioning properly.</p>
	<p style="text-align: center;">ATTENTION READ OWNER'S MANUAL</p> <p>Read and understand owner's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.</p>

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QUALITY ASSURANCE/ MACHINE BREAK IN

The Contec Shot Blaster is the product of extensive engineering development designed to give long life and unmatched performance. The Shot Blaster are shipped completely assembled.

You can help ensure that your Shot Blaster will perform at top levels by observing a simple routing on first use. Consider that your new Shot Blaster is like a new car. Just as you would break in a new car to the road or any new machine to the job, you should start gradually and build up to full use. Learn what your machine can do and how it will respond. Full throttle and control may be used after this time period, as allowed by material. This will serve to further break in the machine on your specific application, as well as provide you with additional practice using the machine.

We thank you for the confidence you have placed in us by purchasing a Shot Blaster and wish you many years of satisfied use.

WARRANTY INFORMATION

Bartell agrees to furnish without charge, F.O.B. our plant, a replacement for any part or portion thereof, comprising the main unit of the Contec Shot Blaster, consisting of the handle, housing assembly, save and except tooling, and power units, prove upon our examination, to be defective in either material or workmanship within a period of twelve (12) months from date of purchase, provided that notice of such defective part or portion thereof is given to Bartell Ltd. within the twelve month warranty period. No further or other guarantee or warranty expressed or implied in connection with the sale of the Shot Blaster is given and our sole liability consists in replacing defective parts or portions thereof. We shall not be responsible for any special, indirect or consequential damages arising in any manner whatsoever.

This guarantee is for the sole benefit of the original purchaser as end user. Our responsibility under this guarantee ends in the case the original purchaser transfers ownership of the Shot Blaster, makes any changes or adds any parts or devices not of our manufacture to the Shot Blaster machine.

SPECIFICATIONS

HORNET			
Dimensions			
Working Width, mm (in)	200 (8)		
Overall Width, mm (in)	315 (12.6)		
Overall Length, mm (in)	73-78 (29.2-31.2)		
Overall Height, mm (in)	100-108 (40-43.2)		
Weight			
Weight, kg (lb)	51 (113)		
Power Source			
Power kw (HP)	2.1 (2.9)		
Volts (V)	110		
Frequency (Hz)	60		
Amperage (A)	20		
Shot			
BSS 2451	SAE J444a	Shot Size	Application
S 390	S 390	1.0 – 1.7 mm	Concrete and coatings
S 340	S 330	0.85 – 1.4 mm	Concrete with thin coatings or paint

PREVENTATIVE MAINTENANCE AND ROUTINE SERVICE PLAN

This Contec Shot Blaster has been assembled with care and will provide years of service. Preventative maintenance and routine service are essential to the long life of your Shot Blaster. Your dealer is interested in your new machine and has the desire to help you get the most value from it. After reading through this manual thoroughly, you will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service be sure to see your Bartell dealer. For your convenience, we have provided this space to record relevant data about your Shot Blaster. When in need of parts or service be prepared to provide your Shot Blaster serial number. Locate the serial number now and record in the space below.

Date Purchased:		Type of Machine:	
Dealer Name:		Model:	
Dealer Phone:		Serial Number:	

Replacement Parts Used				Maintenance Log:	
Part No.	Quantity	Cost	Date	Date	Operation

ROUTINE SERVICE SCHEDULE

Routine Service Intervals		Each Use	After 1.5 months or 50 hrs	Each 3 months or 100 hrs	Each 6 months or 200 hrs	Each 9 months or 300 hrs	Each 12 months or 400 hrs
General Inspection							
Guards	Check		○	○	○	○	○
Warning Stickers	Check		○	○	○	○	○
Test Run	Check Operation		○	○	○	○	○
Fasteners	Check Tightness	○					
Electrical							
Cord	Check for Damage	○					
Plug	Check for Damage	○					
Switches/Buttons	Check	○					
Blasting Components							
Blast Wheel	Check		○	○	○	○	○
Shot Cage	Check			○		○	
Blast Chamber	Check			○		○	
Reclaim Chamber	Check			○		○	
All Sealing around Blast Opening	Check	○					
Magnetic Frame				○		○	
Motor							
Fan	Check - Clean		○	○	○	○	○

ROUTINE SERVICE INTERVALS

Due to the nature and environment of use, Shot Blasters could be exposed to severe operating conditions. Some general maintenance guidelines will extend the useful life of your machine.

- The initial service for your Shot Blaster should be performed after 25 hours of use, at which time your mechanic (or authorized repair shop) should complete all the recommended checks in the schedule above. The maintenance log is handy for keeping a record of the maintenance performed and the parts used for servicing your Shot Blaster.
- Regular service according to the schedule above will prolong the life of the Shot Blaster and prevent expensive repairs.
- Keeping your Shot Blaster clean and free from debris is the single most important regular maintenance operation, over and above the checks in the service schedule above, that can be performed. After each use your Shot Blaster should be cleaned to remove any dust and debris from the undercarriage and surrounding components.
- In the Service Schedule above, items that should be checked, replaced or adjusted are indicated by “o” in the appropriate column. For ease of recording place, a checkmark through the “o” when the item is complete. If an item is not required or not completed place an “x” through the “o” in the box.
- Failure to have your Shot Blaster regularly serviced and properly maintained in accordance with the manufacturer’s instructions will lead to premature failure and void the warranty.

OPERATING SAFETY PRECAUTIONS

The HORNET Shot Blasters are constructed according to existing safety rules and regulations. These technical precautions should not be removed or changed under any circumstances. While operating the machines the following points should also be kept in mind:

IMPORTANT: NEVER attempt to disable or circumvent these safety devices. They are present for the operator's protection and any tampering will result in substantial risk to the operator and all present at the job site. If your compactor's safety devices have been tampered with, do not use the equipment. Immediately contact your sales representative to obtain replacement parts or return the compactor to your dealer for repairs.

The instructions provided in this manual are done so to ensure the operator's safety as well as that of others, the equipment, and the job site. Failure to follow these guidelines can lead to serious personal injury and even death. The operator and any service personnel should read and understand the entire manual before working with or servicing any Contec Shot Blaster.

- Disconnect the machine before commencing any servicing or maintenance work
- In nearly every part of the HORNET® high electrical currents and mechanical forces are transmitted. The danger of injury is therefore not only from electric shock, but also from moving parts of the machine.
- It is necessary to use safety goggles with side protectors and ear plugs. All persons, in the operating area of the Shot blaster must take these precautions. When switching on, or lifting the machine during blasting, it is possible that shot escapes at high speed. Unprotected eyes can be seriously damaged.
- Never wear loose or poorly fitting clothing. Flapping sleeves may be pulled into the machine causing serious injury.
- All rotating parts of the machine are suitably protected by covers, which prevent clothes or similar from entering the machine. Under no circumstances should these covers be removed before you switch the machine on.
- Access by unauthorised persons into the blasting area should be prevented. (Due to a high risk of slipping on lost shot)
- The HORNET® should be switched off immediately if unusual noises or vibrations are detected during the operating of the machinery. A thorough check must be carried out in order to detect the cause.
- Always pre-check the floor for undulations, steps, stones, screws or other foreign bodies. It might be necessary to brush, or in extreme cases, vacuum the floor. Wet or oily spots can make blasting impossible and damage the Dust Collector.
- Check the power cables regularly as damage may have occurred while operating the machine or transportation. Always disconnect the cables before examination and treat all electrical parts with extreme care.

OPERATION INSTRUCTIONS

SETTING UP YOUR SHOT BLASTER

Your Hornet Shot Blaster comes fully assembled with handle and motor fully installed. Transport the HORNET® and the Dust Collector to the floor which is to be blasted. Shot can now be loaded, and your Shot Blaster is ready for use.

OPERATION

Operating

Check and make sure that all wear & tear parts are in good condition. If there are any doubts, replace them immediately. Check the power cables.

Connect the HORNET® with the hose to the Dust Collector. It is important, that there are no lesions or holes in the whole length of the hose. Even small holes or a wrong connection can significantly decrease the performance of the dust collector.

Connect the power cables of the HORNET® and the Dust Collector to the sockets. Insulation tape or similar can be used to secure the power cable to the hose.

Check the floor for screws, nuts or stones etc., and sweep the floor if necessary, with a brush or a vacuum system. Small obstacles like joints pose no problems for the HORNET®. If there are bigger steps or similar check if it is possible for the machine to drive over them before the turbine is switched on.

In the case of higher steps, difficult joints or severe undulation of the floor it is possible, that the blast opening of the machine rises too far above the floor. The sealing of the Shot blaster becomes ineffective and shot escapes from the machine at high speed. This can cause injury to persons and equipment. Before operating always check the condition of the floor to prevent this from occurring.

Remove the separator lid. Make sure that the shot valve is closed and pour in the shot until it reaches the level of the sieve. Do not fill above the sieve level as suction from the Dust Collector will suck it away with the dust. Only place new or clean shot in the shot compartment.

Clean the sieve in the shot compartment if it is blocked.

Switch the Dust Collector on.

Switch the turbine on.

Push the shot valve lever on the right side of the handle. The HORNET® will start to blast the floor. Pull or push the machine in the direction you want. If the machine stays still on one spot, it will blast a hole in the floor!

After a few meters of blasting close the shot valve and stop the machine. Check the track on the floor. If the track is not evenly blasted, adjust the position of the shot cage as described in the “Adjusting the Blast Track” Section.

The dust container of the Dust Collector must be emptied on a regular basis. The intervals depend on the size of the container and on the condition of the floor.

ADJUSTING THE BLAST TRACK

The blasting path is adjusted by turning the shot cage in the blast chamber. If blasting leaves an uneven path, then one side of the path is being blasted more heavily than the other. Remove the shot hose situated in between shot valve and shot enter pipe. The shot cage is situated under the shot enter pipe. It is secured by two screws situated on both sides of the shot enter pipe. Loosen the screws, remove the shot enter pipe and the shot cage will turn freely.

If the path is heavier on the left-hand side compared to the right, turn the cage counter-clockwise. Turn in a clockwise direction if the path is heavier on the right-hand side. Retighten the screws, fix the shot enter pipe and shot hose and try a test run. Repeat the adjustment if necessary, until the path is smooth, even and without variation.

BLAST WHEEL AND SHOT CAGE INSPECTION

The blast wheel is a pure wear & tear part and must be checked regularly. It is recommended to do a first check after approximately 50 hours of blasting. The life time of the blast wheel depends on the application of the machine.

For example, a lot of wear & tear occurs when blasting soft concrete with a lot of surface fat. Concrete dust is a very aggressive substance and increases wear & tear enormously. This decreases when blasting steel or ceramic tiles. To give an accurate figure for the lifetime of the wheel is therefore impossible. As a rough guide, this could be anywhere between 50 and 150 hours.

Take off the blast chamber with the reclaim chamber. The reclaim chamber is fixed with 4 screws on the blast chamber. The flange of the reclaim chamber must be sealed with silicon. The blast chamber is also fixed with 4 screws to the machine frame. It should also be sealed with silicon.

Now the blast wheel should be visible. In the middle of the wheel there is a hexagonal shaped screw. Loosen the screw and remove the wheel from the blast chamber. Check the wear & tear on the wheel. The thickness of the five blades should not be less than 3 mm. If less, the blade could break and destroy the whole wheel. The same applies, if one of the blades is damaged or broken as a result of a foreign body entering the wheel.

The shot cage is like the blast wheel - a pure wear & tear part and must be checked regularly. Two different kinds of wear & tear on the cage are possible. The window in the cage has a width of 30 mm. Change the cage if this width is more than 33 mm. The second type of wear & tear is the decrease in the thickness of the cage wall itself. Change the cage before a hole appears.

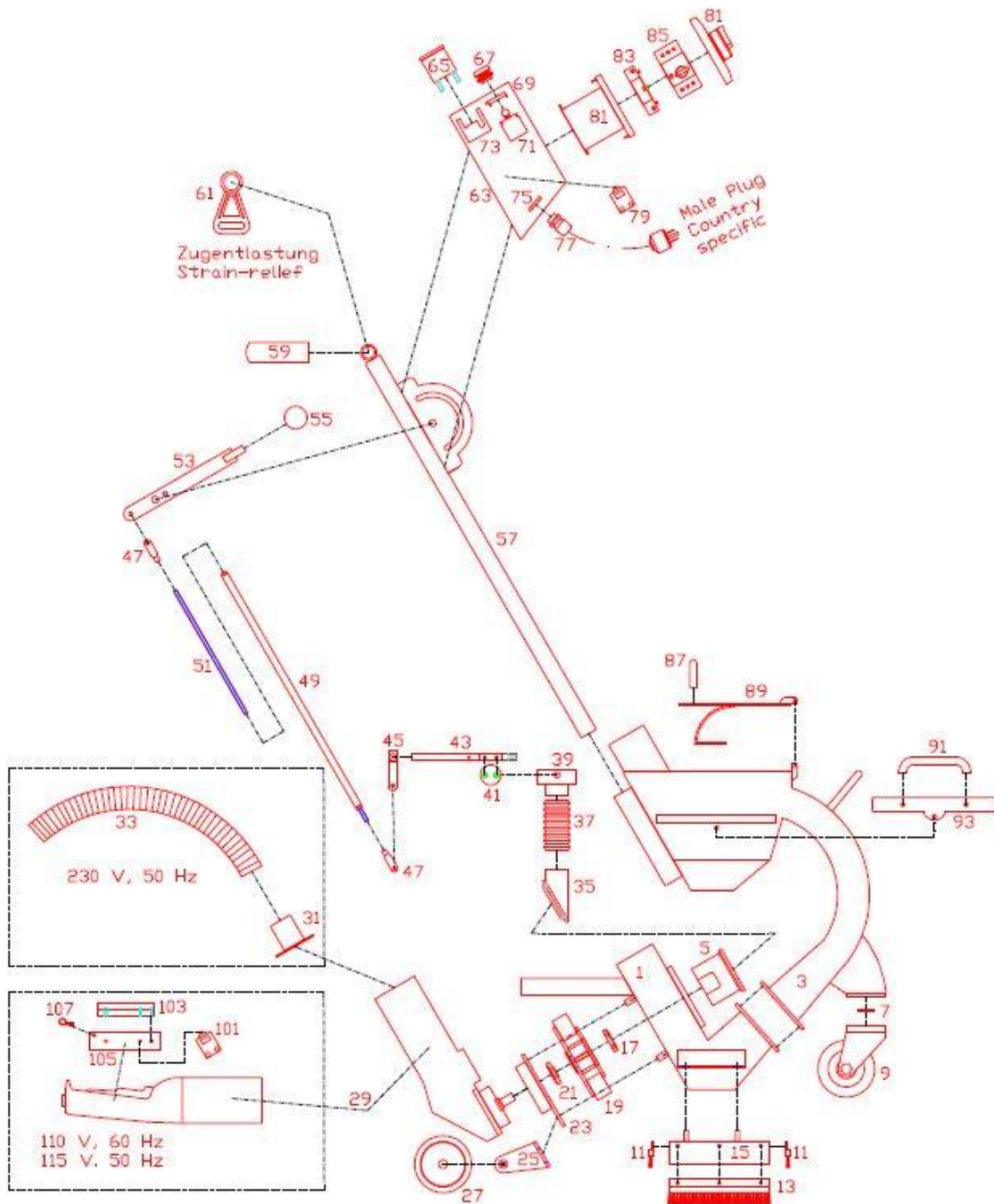
If the blast wheel and cage are in a good condition replace the parts using the opposite direction to that described above.



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PARTS LIST – HORNET SHOT BLASTER

HORNET,
230 V, 50 Hz
115 V, 50 Hz
110 V, 60 Hz
(c) Contec GmbH 2016



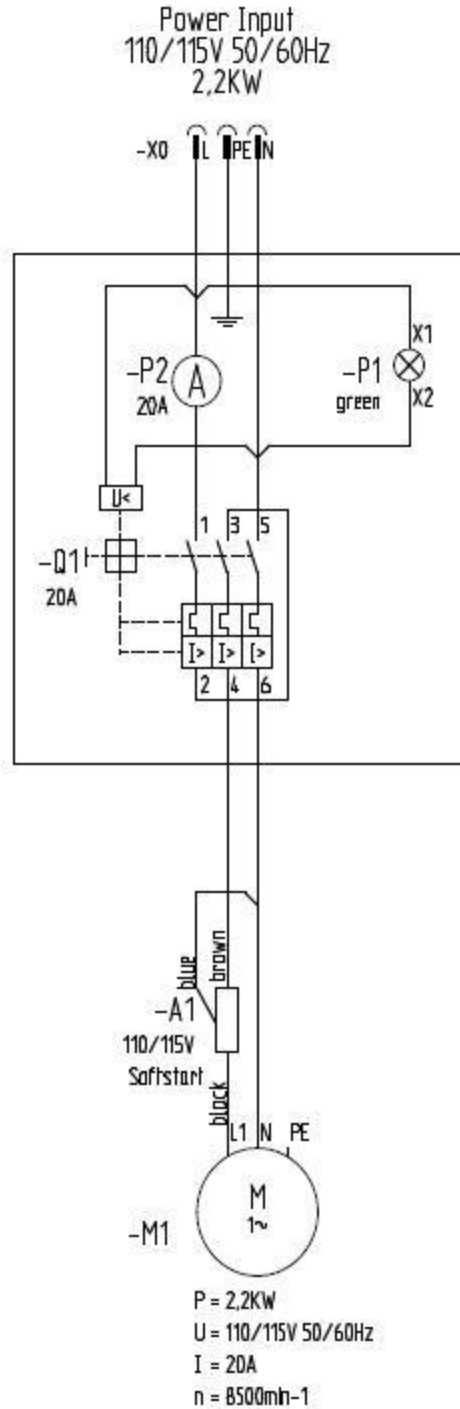
HORNET SHOT BLASTER – PARTS LIST

Item #	Part #	Description	QTY	Remarks
1	8730121200	Blast Chamber	1	
3	8730121300	Reclaim Chamber	1	
5	8730151702	Shot Cage	1	
7	8761330001	Washer	1	
9	8780206260	Rear Caster	1	
11	8730110700	Brush Front / Back	2	
13	8730110701	Brush Left / Right	2	
15	8730110600	Magnetic Frame	1	
17	8761320001	Nut Angle Grinder	1	
19	8730152000	Blast Wheel	1	
21	8761330002	Washer Angle Grinder	1	
23	8730102005	Bracket for Angle Grinder	1	
25	8730102000	Rear Wheel Bracket	1	
27	8780201040	Castor	2	
29	8755030033	Motor	1	
35	8731100300	Shot Enter Pipe	1	
37	8770254001	Shot Hose	1	
39	8731140302	Shot Valve Pipe with Magnets	1	
41	8731100307	Shot Valve Lid	1	
43	8731100306	Shot Valve Axis	1	
45	8731100301	Shot Valve Lever	1	
47	8760331226	Joint	2	
49	8730100306	Rod for Lever	1	
51	8730100308	Threated Rod	1	
53	8730100307	Lever at Handle	1	
55	8790214512	Ball Head	1	
57	30-10-05-00	Handle	1	
59	8770212610	Rubber Grip	2	
61	8790200024	Strain-Relief	1	
63	8730103600	Switchbox	1	
66	8751203025	Amp meter	1	
67	216773	Indicator Light	1	
69	8750202309	Mounting Adapter	2	
71	87502033061	LED Element	1	
73	51-20-30-00	Cover for Amp meter	1	
75	50-20-24-M25-MS	Nut Brass	2	
77	50-20-23-M25-MS	Cable Gland	2	
81	8751101001	Motor Protective Switch Box	1	
83	8751203002US	Low Voltage Protective	1	
85	875110020US	Motor Protective	1	
87	8790215016	Handle	1	
89	8730111000	Shot Compartment Lit	1	



91	8790215017	Handle inclined	1	
93	8730100101	Sieve	1	
101	8750201020	Power Limiter 115V	1	
103	8730111200	Cooling block	1	
105	8730111201	Cover	1	
107	870542812	Hose Clamp	1	

ELECTRICAL DIAGRAM – HORNET SHOT BLASTER



TROUBLE SHOOTING

The turbine motor is not working.

- Has the blast chamber filled with shot and blocked the blast wheel during transportation of the machine?
- Is the power connection correct? (230V, single phase or 400/460V three phase)
- Is the motor overload protection tripped? (The turbine switch is also the overload protection)
- Are the cables in good condition and properly laid?

The blast performance is too low.

- Has the blast wheel worn out?
- Has the shot cage been correctly adjusted?
- Is the shot cage worn out?
- Is the sieve (Appendix diagram No. 81) in the shot compartment blocked?
- Is the shot valve (Appendix diagram No. 13) blocked?
- Has the shot worn out? (Check the size of the shot)

The HORNET® works for a short time and then loses all the shot ('carpeting effect').

- Has the blast wheel worn out?
- Has the shot cage been correctly adjusted?
- Is the shot cage worn out?
- Does the rubber sealing of the magnetic frame lie snugly with the floor?
- Is the rubber sealing worn out?
- Is the belt of the turbine too loose? (The belt will slip on the pulleys and the blast wheel will not rotate quickly enough)
- Is it possible to blast the floor? Check the condition. Is it dry and not too elastic or soft?

DECLARATION OF CONFORMITY

Declaration of Conformity / Certificat de conformité / Gelijkvormigheids certificaat Declaración de Conformidad/Declaração de Conformidade/Dichiarazione Di Conformita

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Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative documents.

Déclarons sous notre responsabilité que le produit cette déclaration est conforme aux normes suivantes ou d'autres documents habituels.

Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standaards of anders gebruikelijke documenten is.

Declaramos bajo nuestra única responsabilidad que el producto en lo que esta declaración concierne, es conforme con la siguiente normativa u otros documentos.

Declara sob sua responsabilidade que o produto a quem esta declaração interessar, está em conformidade com os seguintes documentos legais ou normas directivas.

Dichiariamo sotto la ns. unica responsabilità che il prodotto al quale questa dichiarazione si riferisce, è fabbricato in conformità ai seguenti standard e documenti di normative.

EN 349:1993	Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body.
EN 418:1993	Safety of Machinery - Emergency stop equipment, functional aspects - Principles for design
EN 12100-1:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 1: Basic Terminology, methodology
EN 12100-2:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 2: Technical Principles
EN ISO 4872:1978	Acoustics - Measurement of Airborne noise emitted by construction equipment intended for outdoor use - Method for determining compliance with noise limits.
EN ISO 5349-1:2001	Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements
EN ISO 5349-2:2001	Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace.

Following the provisions of Directive(s):

Suivant les directive(s) déterminées:

Volgens de vastgestelde richtlijnen:

Siguiendo las directiva(s):

No seguimento das clausulas da Directiva(s):

Seguendo quanto indicato dalla Direttiva(s):

98/37/EC	Machinery Directive
2000/14/EC	Noise Directive
2001/95/EC	General Product Safety Directive
2002/95/EC	Reduction of Hazardous Waste Directive

NORTH AMERICA

CONTEC

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