

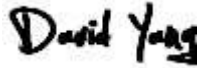
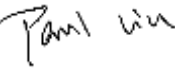


Test Report issued under the responsibility of:



TEST REPORT IEC 62841-2-5 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety Part 2-5: Particular requirements for hand-held circular saws	
Report Number	6018732.50B
Date of issue	2020-04-10
Total number of pages	21 pages
Testing Laboratory	DEKRA Testing and Certification (Shanghai) Ltd. 3F #250 Jiangchangsan Road Building 16 Headquarter Economy Park Shibei Hi-Tech Park, Jing'an District Shanghai 200436 China
Applicant's name	LEE YEONG INDUSTRIAL CO., LTD.
Address	No.2, Kejia Rd., Douliu City, Yunlin County 64057, Taiwan
Test specification:	
Standard	IEC 62841-2-5:2014 (First Edition) for use in combination with IEC 62841-1:2014 (First Edition)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC62841_2_5A
Test Report Form(s) Originator	Eurofins Product Service GmbH
Master TRF	Dated 2015-02
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Test item description :	Metal cutting Circular Saw
Trade Mark :	AGP
Manufacturer	LEE YEONG INDUSTRIAL CO., LTD. No.2, Kejia Rd., Douliu City, Yunlin County 64057, Taiwan
Model/Type reference	CS200; HDC 8200; CS230N; CM230; CM230K; HDC 8230N; HKS230
Ratings	CS200; HDC 8200: 220-240 V; 50-60 Hz; 1700 W; n_0 : 3700 min ⁻¹ ; Ø200 mm; Class II CS230N; CM230; CM230K; HDC 8230N; HKS230: 220-240 V; 50-60 Hz; 1700 W; n_0 : 2200 min ⁻¹ ; Ø230 mm; Class II

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	DEKRA Testing and Certification (Shanghai) Ltd.
Testing location/ address.....:		3F, #250 Jiangchangsan Road, Building 16, Headquarter Economy Park Shibe Hi-Tech Park, Zhabei District, Shanghai, 200436, China
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address.....:		
Tested by (name, function, signature).....:		David Yang 
Approved by (name, function, signature)....:		Paul Liu 
<hr/>		
<input type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Approved by (name, function, signature)....:		
<hr/>		
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address.....:		
Tested by (name + signature).....:		
Witnessed by (name, function, signature) ..:		
Approved by (name, function, signature)....:		
<hr/>		
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Witnessed by (name, function, signature) ..:		
Approved by (name, function, signature)....:		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): See part 1	
Summary of testing: See part 1	
Tests performed (name of test and test clause): See part 1	Testing location: See part 1
Summary of compliance with National Differences: List of countries addressed See part 1 <input type="checkbox"/> The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)	
Copy of marking plate: See part 1	

Test item particulars: Hand held	
Classification of installation and use: Class II	
Supply Connection: Type Y:	
Possible test case verdicts: - test case does not apply to the test object.....: N/A - test object does meet the requirement.....: P (Pass) - test object does not meet the requirement.....: F (Fail)	
Testing:	
Date of receipt of test item: 2019-08-20	
Date (s) of performance of tests: 2019-08-20 to 2020-04-10	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies): See part 1	
General product information: See part 1	

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		--
5.17	The weight of the tool includes the dust extraction adapter and the auxiliary handle, if any		P
8	MARKING AND INSTRUCTIONS		--
8.1	Addition: Saws must be marked with:		P
	Rated no-load speed of the output spindle		P
	Speed (min ⁻¹)	1700	P
8.3	Addition: Specified blade diameter or blade diameter range		P
	Diameter (mm).....	CS230N: 230 mm CS200: 200 mm	P
	The direction of rotation of the spindle must be indicated on the tool by an arrow, raised or recessed or by any other means no less visible and indelible	arrow	P
8.14.1.101	Additional safety instructions for circular saws.		--
8.14.101.1	General		--
	The additional safety instructions as specified in 8.14.1.101.2 to 8.14.1.101.6 shall be given. If in English they shall be verbatim and in the following order as applicable and equivalent in any other language. This part may be printed separately from the "General Power Tool Safety Warnings".		P
	All notes are not to be printed; they are information for the designer of the manual.		P
8.14.1.101.2	Safety instructions for all saws		--
	Cutting procedures		--
	a) DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing. If both hands are holding the saw, they cannot be cut by the blade.		P
	b) Do not reach underneath the workpiece. The guard cannot protect you from the blade below the workpiece.		P
	c) Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade teeth should be visible below the workpiece.		P
	d) Never hold the workpiece in your hands or across your leg while cutting. Secure the workpiece to a stable platform. It is important to support the work properly to minimize body exposure, blade binding, or loss of control.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	e) Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electric shock.		P
	f) When ripping, always use a rip fence or straight edge guide. This improves the accuracy of cut and reduces the chance of blade binding.		P
	g) Always use blades with correct size and shape (diamond versus round) of arbour holes. Blades that do not match the mounting hardware of the saw will run off-centre, causing loss of control.		P
	h) Never use damaged or incorrect blade washers or bolt. The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.		P
8.14.1.101.3	Further safety instructions for all saws		--
	Kickback causes and related warnings		--
	- Kickback is a sudden reaction to a pinched, jammed or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;		P
	- When the blade is pinched or jammed tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;		P
	- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.		P
	Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.		P
	a) Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	b) When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.		P
	c) When restarting a saw in the workpiece, centre the saw blade in the kerf so that the saw teeth are not engaged into the material. If saw blade binds, it may walk up or kickback from the workpiece as the saw is restarted.		P
	d) Support large panels to minimise the risk of blade pinching and kickback. Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.		P
	e) Do not use dull or damaged blades. Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.		P
	f) Blade depth and bevel adjusting locking levers must be tight and secure before making the cut. If blade adjustment shifts while cutting, it may cause binding and kickback.		P
	g) Use extra caution when sawing into existing walls or other blind areas. The protruding blade may cut objects that can cause kickback.		P
8.14.1.101.4	Safety instructions for saws with pendulum guard and saws with tow guard as shown in Figures 101, 102 and 103		--
	Lower guard function		--
	a) Check the lower guard for proper closing before each use. Do not operate the saw if the lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.		P
	b) Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use. Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	c) The lower guard may be retracted manually only for special cuts such as “plunge cuts” and “compound cuts.” Raise the lower guard by retracting handle and as soon as the blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.		P
	d) Always observe that the lower guard is covering the blade before placing the saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.		P
8.14.1.101.5	Safety instructions for plunge type saws shown in Figure 104		--
	Guard function		--
	a) Check the guard for proper closing before each use. Do not operate the saw if the guard does not move freely and enclose the blade instantly. Never clamp or tie the guard so that the blade exposed. If the saw is accidentally dropped, the guard may be bent. Check to make sure that the guard moves freely and does not touch the blade or any other part, in all angles and depths of cut.		N/A
	b) Check the operation and condition of the guard return spring. If the guard and the spring are not operating properly, they must be serviced before use. The guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.		N/A
	c) Assure that the base plate of the saw will not shift while performing the “plunge cut”. Blade shifting sideways will cause binding and likely kick back.		N/A
	d) Always observe that the guard is covering the blade before placing the saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.		N/A
8.14.1.101.6	Additional safety instructions for all saws with riving knife		--
	Riving knife function		--
	a) Use the appropriate saw blade for the riving knife. For the riving knife to function, the body of the blade must be thinner than the riving knife and the cutting width of the blade must be wider than the thickness of the riving knife.		N/A

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Adjust the riving knife as described in this instruction manual. Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.		N/A
	c) Always use the riving knife except when plunge cutting. The riving knife must be replaced after plunge cutting. The riving knife causes interference during plunge cutting and can create kickback.		N/A
	d) For the riving knife to work, it must be engaged in the workpiece. The riving knife is ineffective in preventing kickback during short cuts.		N/A
	e) Do not operate the saw if the riving knife is bent. Even a light interference can slow the closing rate of a guard.		N/A
8.14.2a)	Addition: 101) Instructions not to use any abrasive wheels		P
	102) For saws with riving knife the instruction shall include the following:		N/A
	- instruction to ensure that the riving knife is adjusted so that the distance between the riving knife and the rim of the blade is not more than 5 mm, and the rim of the blade does not extend more than 5 mm beyond the lowest edge of the riving knife.		N/A
	– information about the allowed range of saw blade body thickness and the tooth set of the blade.		N/A
	103) Instructions to use only blade diameter(s) in accordance with the markings.		P
	104) Instruction to identify the correct saw blade to be used for the material to be cut		P
	105) Instruction to use only saw blades that are marked with a speed equal or higher than the speed marked on the tool.		P
8.14.2 b)	Addition: 101) Information regarding the maximum depth of cut		P
	102) Instructions for the blade changing procedure		P
	103) Instruction how to check the function of all blade guard operations.		P
	104) Information regarding what materials can be cut. Instructions to avoid overheating the blade tips and, if cutting plastics is permitted, to avoid melting the plastic.		P
	105) Instruction on the correct use of the dust collection system.		P
	106) Instruction to wear a dust mask.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
8.14.2 c)	101) Instructions how to properly clean the tool and guarding system.		P
17	ENDURANCE		--
17.101	Guarding system – Longevity		--
17.101.1	To provide sufficient endurance for extended use, the guarding system shall have a longevity of 50 000 operating cycles.		P
	The saw is to be set for 0° bevel angle with the base plate in horizontal position and the blade removed. The lower guard, or the guarding system as shown in Figure 104, is retracted from the fully closed position to the maximum open working position and then released. This sequence is repeated at a rate not less than 10 cycles per minute.		P
17.101.2	The test and measurement is carried out at maximum depth of cut and 0° bevel angle. The saw is held or secured with the base plate in a horizontal position, the upper guard being at the top.		P
	Without any restoration or cleaning, the lower guard as shown in Figures 101, 102 and 103, or the guarding system as shown in Figure 104, is retracted fully and then allowed to close. The closing time from the fully open position to the fully closed position shall not exceed 0,3 s.		P
	Measured closing time (s) :	CS230N: 0,156 s CS200: 0,153 s	P
17.101.3	For saws using a lower guard as shown in Figures 101 and 102, the lower guard is retracted fully and then allowed to close. Without any alteration, the final position of the lower guard in both cases shall be in contact with the lower guard stopper and shall not change as a result of moving the base plate to a minimum depth-of-cut setting and the guarding shall comply with the requirements of 19.102.3.		P
	For saws using a lower guard as shown in Figure 103 or a guarding system as shown in Figure 104, the lower guard or the guarding system is fully retracted, released and then shall lock in the blade covering position.		N/A
17.102	Guarding System-Resistance		--
17.102.1	The guarding system shall be resistant against environmental and foreseeable dust accumulation.		P
	During the tests, ventilation in the test area is permitted providing that air flow does not influence the distribution of dust within the tool.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
17.102.2	For a saw intended to cut wood based materials in accordance with 8.14.2 b) 104):		N/A
	1 000 cuts through each of the materials and in the order as specified below:		N/A
	Crosscutting soft wood		N/A
	Thickness of the material (mm).....:		N/A
	Crosscutting plywood with a minimum of 5 layers		N/A
	Thickness of the material (mm).....:		N/A
	Cutting standard medium density fibreboard (MDF) having a density between 650 kg/m ³ and 850 kg/ m ³ .		N/A
	Thickness of the material (mm).....:		N/A
	The cross sectional area of each cut is at least 30 mm x D		N/A
	D (mm).....:		N/A
	Cross sectional area (mm ²).....:		N/A
	Tool subjected to humidity treatment test for 24h		N/A
	Relative humidity (93 ± 3) %		N/A
	Temperature (20 - 30 °C ± 2K)		N/A
	The saw shall comply with the test of 17.101.2		N/A
	Measured closing time (s)		N/A
	The saw shall comply with the test of 17.101.3		N/A
17.102.3	For a saw intended to cut materials such as plastic, ferrous metal or masonry in accordance with 8.14.2 b) 104):		P
	Plastics: 1 000 cuts through PVC		N/A
	The cross sectional area of each cut is at least 0,012 x D ²		N/A
	D (mm).....:		N/A
	Cross sectional area (mm).....:		N/A
	Ferrous metals: 200 cuts through soft steel		P
	The cross sectional area of each cut is at least 0,13 x D ^{1,46} in mm ²		P
	D (mm).....:	CS230N: 230mm; CS200: 200 mm	P
	Cross sectional area (mm ²)	CS230N: 365 mm ² ; CS200: 297 mm ²	P
	Masonry: 500 cuts through masonry fibreboard		N/A
	Thickness of the material (mm).....:		N/A

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	The cross sectional area of each cut is at least 30 mm x D		N/A
	D (mm).....:		N/A
	Cross sectional area (mm).....:		N/A
	Tool subjected to humidity treatment test for 24h		P
	Relative humidity (93 ± 3) %	93	P
	Temperature (20 - 30 °C ± 2K)	25	P
	The saw must comply with the test of 17.101.2		P
	Measured closing time (s)	CS230N: 0,168 s CS200: 0,173 s	P
	The saw must comply with the test of 17.101.3		P
18	ABNORMAL OPERATION		--
18.8	Replacement of Table 4		N/A
19	MECHANICAL HAZARDS		--
19.1	Replacement: Moving and dangerous parts other than the rotating blade shall be so positioned or enclosed to provide adequate protection against personal injury. The guarding of rotating blade is covered in 19.1.101.		P
19.1.101	Additional: Saws shall be so guarded as to minimise the risk of accidental access to the rotating blade. Guarding systems shall not be removable without the aid of a tool.		P
	There are four commonly used guarding systems for saws, as shown in Figures 101, 102, 103 and 104. Guarding systems can be designed with the blade on the right or on the left side of the saw. These guarding systems shall comply with the requirements of 19.101 and 19.102. Each one of these guarding system types can be designed with or without the riving knife (item 6 in the figures).		P
	- If a guarding system is designed with a riving knife, it shall meet the additional requirements of Annex AA.		N/A
	- If a guarding system is designed without a riving knife, it shall meet the additional requirements of Annex BB.		P
	Compliance is checked by inspection.		P
19.3	This sub-clause is not applicable.		N/A
19.101	Guarding above the base plate		--

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
19.101.1	For saws using a guarding system as shown in Figures 101, 102 and 103, the upper guard shall meet the requirements of 19.101.2.		P
19.101.2	Specific requirements		--
19.101.2.1	Apertures in the guarding system above the base plate, unless otherwise specified in 19.101.2.2 to 19.101.2.5, shall be designed to prevent contact with the cutting edge zone of any specified blade diameter in accordance with the marking required by 8.3.		P
19.101.2.2	On the motor side of the upper guard, adjacent to the cutting edge zone at the front of the blade an aperture may be provided for viewing the line of the cut. This viewing aperture shall either meet the requirements of 19.101.2.1, as illustrated in Figure 106, or it shall be limited by proximity and height restrictions (see Figure 108).		P
	Proximity restriction		--
	Any unobstructed straight line distance between the cutting edge zone of any specified blade diameter in accordance with the marking required by 8.3 and the designated measuring points of the following grasping areas must be at least 120 mm:		P
	– the auxiliary handle, if provided;		N/A
	Straight line distance (mm)		N/A
	– if no auxiliary handle is provided:		N/A
	The motor casing, if the motor casing is designed as grasping area;		N/A
	Straight line distance (mm)		N/A
	The switch trigger grasping surface, if the motor casing is not designed as grasping area.		N/A
	Straight line distance (mm)		N/A
	Height restriction The maximum permissible height :		N/A
	Calculated H (mm).....:		N/A
	Measured H (mm).....:		N/A
19.101.2.3	Except as specified in 19.101.2.4, the perpendicular projection of the upper guard on to the blade shall cover at least the cutting edge zone of the smallest specified blade.		P
	The space between the upper guard and the blade diameter in accordance with the marking required by 8.3 shall be designed to prevent contact with the saw blade teeth tips of that specified blade.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	The test probe 'a' of Figure 105 shall not be able to contact the edge of the steel disc.		P
19.101.2.4	For saws having an inclinable base plate for the purpose of bevelling, the distance 'x', along any line perpendicular to the plane of the base plate between:		P
	– any plane that is parallel to the bottom of the base plate that makes contact with an upper edge of the base plate nearest to the blade, and		P
	– the edge of the lateral side of the upper guard on the side opposite to the motor and adjacent to the front cutting edge zone of the blade, as shown in Figure 109, shall not exceed:		P
	a) 38 mm for circular saws with a maximum blade diameter less than 265 mm;		P
	Measured (mm) :	CS230N: 15 mm CS200: 15 mm	P
	b) 45 mm for circular saws with a maximum blade diameter equal or greater than 265 mm;		N/A
	Measured (mm) :		N/A
	c) 55 mm for circular saws with a maximum blade diameter equal or greater than 265 mm and where the lower guard is not provided with any retracting handle and the only means for operating the lower guard is remotely from the motor side of the upper guard.		N/A
	Measured (mm) :		N/A
19.101.2.5	The cutting edge zone of the blade above the base plate shall not be accessible from the front of the saw.		P
19.101.3	Saws using a guarding system as shown in Figure 104 shall be equipped with an upper guard into which any blade with a diameter in accordance with 8.3 shall automatically retract when not in use and the time required for the blade to retract into upper guard shall be in accordance with 19.102.4.		N/A
	The upper guard shall lock the blade automatically in the closed position, when the movement of the base plate is not obstructed by the workpiece.		N/A
	The opening in the upper guard for the passage of the blade and riving knife, if any, shall comply with 19.101.2.1, as illustrated in Figure 106.		N/A
	The opening in the upper guard to allow the plunging movement of the motor shall be as small as possible.		N/A
19.102	Guarding below the base plate		--

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
19.102.1	Guarding system as shown in Figures 101 and 102		--
19.102.1.1	For saws using a guarding system as shown in Figures 101 and 102, the lower guard shall meet the requirements of 19.102.1.2 to 19.102.1.3		P
19.102.1.2	The perpendicular projection of the lower guard onto the blade shall cover at least the cutting edge zone of all specified blade diameters in accordance with 8.3, except for the blade exposure specified in 19.102.1.3 and the exposure due to the contour of the front leading edge of the lower guard lip to facilitate the opening of the lower guard.		P
19.102.1.3	When the lower guard is in the closed position and the base plate is not inclined and is set for maximum depth of cut, the blade periphery exposure angle $\angle ACB$ as specified in Figure 112 shall not exceed the value specified in Table 101:		P
	0°, if the outboard section of the base plate does not surround the blade on the side opposite the motor, or is removable, or		N/A
	the principal dimension G of the base plate, as specified in Figure 113, is less than 0,10 D		N/A
	10°, if the outboard section of the base plate surrounds the blade on the side opposite the motor and the principal dimension G of the base plate, as specified in Figure 113, is from 0,10 D to 0,15 D		N/A
	25°, if the outboard section of the base plate surrounds the blade on the side opposite the motor and the principal dimension G of the base plate, as specified in Figure 113, is greater than 0,15 D		P
	When the base plate is configured for bevel setting other than zero, it is necessary to increase the angle $\angle ACB$ to facilitate an unassisted lower guard opening.		N/A
19.102.2	For saws using a guarding system as shown in Figure 103, the lower guard in the closed position shall cover the cutting edge zone of all specified blade diameters in accordance with 8.3 and shall automatically lock in the closed position when the movement of the lower guard is not obstructed by the workpiece and allowed to close.		N/A
	The test probe 'a' of Figure 105 shall not be able to contact the cutting edge zone of the blade.		N/A
19.102.3	For saws using a guarding system as shown in Figures 102 and 103 equipped with a riving knife, the lower guard of which needs to allow for the passage of the blade, riving knife and its holder, the apertures in the lower guard shall be kept as small as possible.		N/A

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	The test probe 'a' of Figure 105 shall not be able to contact the cutting edge zone of the blade with diameter D as illustrated in Figure 106, with the saw adjusted to the most unfavourable depth-of-cut setting.		N/A
19.102.4	For saws with a diameter D less than 210 mm, the closing time of the lower guard shall not exceed 0,2 s.		P
	Measured time (s)..... :	CS200: 0,157 s	P
	For saws with a diameter D of 210 mm and above, the closing time of the lower guard in seconds, shall be less than the numerical equivalent of D, expressed in metres, but not more than 0,3 s.		P
	Calculated closing time s) :	CS230N: 0,23 s	P
	Measured time (s)..... :	CS230N: 0,163 s	P
19.103	Base plate		--
19.103.1	The diameter of the blade D (mm)..... :	CS230N: 230 mm CS200: 200 mm	P
	The dimension of F (mm)..... :	CS230N: 52 mm CS200: 43 mm	P
	The dimension of G (mm) :	CS230N: 44,5 mm CS200: 43,0 mm	P
	Following requirements are fulfilled:		P
	$F > 0,2 D$		P
	$G > 0$		P
19.103.2	The base plate dimensions and the weight distribution of the saw shall be such that it does not cause blade binding.		P
19.104	Flanges		--
	The outer diameter of the contact surface shall be not less than 0.15 D.		P
	Calculated (mm) :	CS230N: 34,5 mm CS200: 30 mm	P
	Measured (mm) :	CS230N: 50 mm CS200: 50 mm	P
	At least one of the flanges shall be locked or keyed to the output spindle.		P
	The overlap of the clamping area of the two flanges shall be at least 1,5 mm wide.		P
	Measured overlap (mm) :	CS230N: 8,5 mm CS200: 8,5 mm	P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
19.105	Handles		--
	Saws with a maximum blade diameter larger than 140 mm shall have at least two handles.		P
	For saws with a mass less than 6 kg, the motor casing may be considered as a second handle. In this case, the motor casing shall be suitably shaped.		N/A
	Saw mass (kg)..... :	CS230N: 7,1 kg CS200: 6,0 kg	N/A
19.106	Blade changing		--
	Provision shall be made to enable the operator to replace the blade without difficulty and without having to remove guards, e.g. spindle lock, flats on the outer flange or other means specified in the instructions as required by 8.14.2..		P
20	MECHANICAL STRENGHT		--
20.1	Addition: The lower guard or the guarding system shall comply with the tests in 17.101.2 and 17.101.3.		P
20.3	Replacement: A circular saw set at 0° bevel angle shall withstand being dropped three times in total on a concrete surface from a height of 1 m.		P
	Saws using a guarding system as shown in Figures 101, 102 and 103 are set for maximum depth of cut. An impact to the lower guard or the riving knife shall be avoided. This may be accomplished by removing the riving knife and by fixing the lower guard in a fully retracted position or removing the lower guard.		P
	Saws using a guarding system as shown in Figure 104 are tested in the fully blade covering position. An impact to the base plate shall be avoided.		N/A
	If the riving knife and the lower guard were removed, they shall be reinstalled without altering the condition of saw, prior to any evaluation of the circular saw.		N/A
21	CONSTRUCTION		--
21.18.1.1	Addition: Circular saws are regarded as tools with a risk associated with continued locked-on operation.		P
21.18.1.2	Replacement: Circular saws are regarded as tools with a risk associated with inadvertent starting. The power switch trigger and lock-off devices, if any, shall be so located, designed or guarded that inadvertent operation is unlikely to occur.		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	The travel from “off” to “on” of the part of the power switch actuator that has the greatest travel shall not be less than 6,4 mm or		N/A
	Two separate and dissimilar actions must be necessary before the motor is switched on. It shall not be possible to achieve these two actions with a single grasping motion or straight line motion.		P
21.35	This clause of Part 1 is applicable.		P
21.101	The saw, without use of any attachments or modification, shall be designed so that it cannot be used as a stationary tool in the inverted position.		P
ANNEX I	MEASUREMENT OF NOISE AND VIBRATION EMISSIONS		--
I.2	Noise test code (grade 2)		--
I.2.4	Installation and mounting conditions of the power tools during noise tests		--
	Circular saws are held and used as specified in I.2.5.	Refer to part 1	N/A
I.2.5	Operating conditions		--
	Circular saws are tested under load observing the conditions shown in Table I.101.	Table I.101 not applicable as this product is only for cutting metal	N/A
	Circular saws with speed setting devices shall be adjusted to the settings to cut the workpiece material required in the test.		N/A
I.3	Vibration		--
I.3.3.2	Location of measurement		--
	Figure I.101 shows the positions on the main handle and the auxiliary handle, if applicable.		P
I.3.5.3	Operating conditions		--
	Circular saws intended to cut wood are tested under load observing the conditions shown in Table I.101.		N/A
	Circular saws intended to cut metal are tested under load observing the conditions shown in Table I.102.		P
	Circular saws with speed setting devices shall be adjusted to the settings to cut the workpiece material required in the test.		N/A
I.3.6.1	Reported vibration value		--
	If more than one operating mode was measured, the result a_h for each operating mode applicable must be reported:		P
	mean vibration “cutting wood” $a_{h,W}$ = :		N/A
	mean vibration “cutting metal” $a_{h,M}$ = :	See 6018732.50A	P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
I.3.6.2	Declaration of the vibration total value (instruction manual)		--
	The vibration total value a_h of the handle with the highest emission and the uncertainty K shall be declared		P
	for saws for cutting wood the value of $a_{h,W}$, with the work mode description "cutting wood";		N/A
	$a_{h,W} = \dots\dots\dots$:		N/A
	for saws for cutting metal the value of $a_{h,M}$, with the work mode description "cutting metal".		P
	$a_{h,M} = \dots\dots\dots$:	See 6018732.50A	P
ANNEX K	BATTERY TOOLS AND BATTERY PACKS		--
K.1	Addition: All clauses of this Part 2-5 apply unless otherwise specified in this annex.		N/A
K.8.14.1.101.1	Safety instructions for all saws Replacement of item e): e) Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting tool may contact hidden wiring. Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electric shock.		N/A
ANNEX AA	ADDITIONAL REQUIREMENTS FOR SAWS WITH A RIVING KNIFE		N/A
ANNEX BB	ADDITIONAL REQUIREMENTS FOR LOWER GUARDS FOR SAWS WITHOUT A RIVING KNIFE		--
BB.20	Mechanical strength		--
BB.20.101	The lower guard, or the guarding system as shown in Figure 104, shall be resistant to abuse.		P
	Compliance is checked by the following tests to be performed with a new saw sample with a 2 mm thick steel disc with diameter D fitted. D (mm) $\dots\dots\dots$:	CS230N: 230 mm CS200: 200 mm	P
	The saw is set to 0° bevel angle.		P
	Saws using a guarding system as shown in Figures 101, 102 and 103 are set for maximum depth of cut.		P
	Saws using a guarding system as shown in Figure 104 are tested in the fully blade covered position.		N/A
	The saw, with its lowest point 1 m above a concrete surface, is dropped twice as follows:		P

IEC 62841-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	a) oriented with the lower guard being at bottom, so that the saw will strike the concrete floor with the base plate parallel to the floor;		P
	b) oriented so that the saw will strike the concrete floor in a hand carrying position.		P
	After completion of each drop as specified above, the saw shall then comply with the tests of 17.101.2 and 17.101.3.		P

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