

Festool GmbH  
Wertstraße 20  
D-73240 Wendlingen  
Tel.: +49 (0)7024/804-0  
Telefax: +49 (0)7024/804-20608  
[www.festool.com](http://www.festool.com)

**FESTOOL**

(D)	Originalbetriebsanleitung - Tauchsäge	6
(GB)	Original operating manual - Plunge-cut saw	14
(F)	Notice d'utilisation d'origine- Scie plongeante	21
(E)	Manual de instrucciones original - Sierra de incisión	29
(I)	Istruzioni per l'uso originali - Sega ad affondamento	37
(NL)	Originele gebruiksaanwijzing - Inval-cirkelzaagmachine	45
(S)	Originalbruksanvisning - Sänsksåg	53
(FIN)	Alkuperäiset käyttöohjeet - Upotussaha	60
(DK)	Original brugsanvisning - Dyksav	67
(N)	Originalbruksanvisning - Dykksag	74
(P)	Manual de instruções original - Serra de incisão	81
(RUS)	Оригинальное руководство по эксплуатации - Погружная пила	89
(CZ)	Originál návodu k obsluze - Ponorná pila	97
(PL)	Oryginalna instrukcja eksploatacji - Zagłębiarka	104

**TS 55 REBQ**  
**TS 55 REQ**  
**TS 55 RQ**



# Original operating manual

1	Symbols .....	14
2	Safety instructions .....	14
3	Intended use.....	16
4	Technical data .....	16
5	Machine features.....	17
6	Operation.....	17
7	Settings .....	17
8	Working with the machine .....	18
9	Service and maintenance.....	19
10	Accessories .....	20
11	Environment.....	20
12	EU Declaration of Conformity .....	20

The specified illustrations appear at the beginning of the Operating Instructions.

## 1 Symbols

### Symbol Significance

-  Warning of general danger
-  Risk of electric shock
-  Read operating instructions and safety notices!
-  Wear ear protection.
-  Wear protective gloves.
-  Wear a dust mask.
-  Wear protective goggles.
-  Disconnect from the power supply!
-  Do not dispose of as domestic waste.
-  Direction of rotation of saw and the saw blade
-  Saw blade dimensions
  - a ... Diameter
  - b ... Locating bore
-  Tip or advice
-  Handling instruction

### Symbol Significance

-  Safety class II
- 2 Safety instructions**
- 2.1 General safety instructions**
-  **WARNING!** Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- Save all warnings and instructions for future reference.**
- The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.
- 2.2 Machine-related safety instructions**
- 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.
- b. **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
- 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.
- 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.
- 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.
- 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.
- 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.
- h. **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were spe-

cially designed for your saw, for optimum performance and safety of operation.



i. Wear suitable protective equipment such as ear protection, safety goggles, a dust mask for work which generates dust, and protective gloves when working with raw materials and when changing tools.

### **Kickbacks 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;
- 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;
- 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.

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.

- 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.
- 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.
- 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 a saw blade binds, it may walk up or kickback from the work-piece as the saw is restarted.
- 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.

- e. **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
- 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.
- g. **Use extra caution when sawing into existing walls or other blind areas.** The protruding blade may cut objects that can cause kickback.

### **Guard function**

- a. **Check guard for proper closing before each use. Do not operate the saw if guard does not move freely and enclose the blade instantly. Never clamp or tie the guard so that the blade is exposed.** If saw is accidentally dropped, guard may be bent. Check to make sure that guard moves freely and does not touch the blade or any other part, in all angles and depths of cut.
- 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.** Guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.
- c. **Assure that the base plate of the saw will not shift while performing the “plunge cut” when the blade bevel setting is not at 90°.** Blade shifting sideways will cause binding and likely kick back.
- d. **Always observe that the guard is covering the blade before placing 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.

### **Function of the guide wedge [5-4]**

- a. **Use the correct saw blade for the guide wedge.** To ensure that the guide wedge functions properly, make sure the blade core of the saw blade is thinner than the guide wedge and that the tooth width is greater than the thickness of the guide wedge.
- b. **Do not operate the saw if the guide wedge is bent.** Even the slightest problem can cause the protective cover to close more slowly.

### **2.3 Emission levels**

Levels determined in accordance with EN 60745 are typically:

Sound pressure level

 $L_{PA} = 89 \text{ dB(A)}$ 

Noise level

 $L_{WA} = 100 \text{ dB(A)}$ 

Measuring uncertainty allowance

 $K = 3 \text{ dB}$ **CAUTION****Operating noise****Damage to hearing**

► Use ear protection!

Vibration emission value  $a_h$  (vector sum for three directions) and uncertainty K measured in accordance with EN 60745:

**Vibration emission level (3 directions)**Cutting wood  $a_h < 2,5 \text{ m/s}^2$ Cutting metal  $a_h = 2,8 \text{ m/s}^2$ Uncertainty  $K = 1,5 \text{ m/s}^2$ 

The specified emission values (vibration, noise)

- are used to compare machines.
- They are also used for making preliminary estimates regarding vibration and noise loads during operation.
- They represent the primary applications of the power tool.

Increase possible for other applications, with other insertion tools or if not maintained adequately. Take note of idling and downtimes of machine!

**2.4 Aluminium processing**

When processing aluminium, the following measures must be taken for safety reasons:

- Install an upstream residual-current circuit breaker (FIG, PRCD).
- Connect the machine to a suitable dust extractor.
- Regularly remove dust deposits from the motor housing.
- Use a aluminium saw blade.
- Close the viewing window/chipguard.



Wear protective goggles.

- When sawing panels, they must be lubricated with paraffin but thin-walled profiles (up to 3 mm) can be sawed without lubrication.

**3 Intended use**

Plunge-cut saws are intended to be used for sawing wood, materials similar to wood, plaster and cement-bonded fibre materials and plastics. When fitted with special saw blades for aluminium offered by Festool, these machines can also be used for sawing aluminium.

Only saw blades with the following specifications may be used: Saw blade diameter 160 mm, cutting width 2,2 mm, location hole 20 mm, max. standard blade thickness 1,8 mm, suitable for speeds up to 9500 rpm. Never use abrasive wheels in the machine.

The machine is designed and approved for use by trained persons or specialists only.

- **Festool electric power tools must only be installed on work tables provided by Festool for this purpose.** If the tool is installed in another, or self-made, work table, it can become unstable and result in serious accidents.

The user is liable for improper or non-intended use.

**4 Technical data**

Portable circular saw	TS 55REBQ, TS 55REQ	TS 55RQ
Power	1200 W	1050 W
No-load speed	2000 - 5200 rpm	6500 rpm
Max. speed <sup>1</sup>	7300 rpm	
Inclination	-1° to 47°	-1° to 47°
Cutting depth at 0°	0 - 55 mm	0 - 55 mm
Cutting depth at 45°	0 - 43 mm	0 - 43 mm
Saw blade dimensions	160x2,2x20 mm	160x2,2x20 mm
Weight (without mains cable)	4,5 kg	4,4 kg
Safety class	/II	/II

<sup>1</sup>. Max. possible speed with faulty electronics.

## 5 Machine features

- [1-1] Adjustable jaws
- [1-2] Angle scale
- [1-3] Rotary knobs for angle adjustment
- [1-4] Handles
- [1-5] Lever for changing blades
- [1-6] Switch-on lock
- [1-7] On/Off switch
- [1-8] Extractor connector
- [1-9] Release buttons for undercuts  
-1° to 47°
- [1-10] Speed control (not TS 55RQ)
- [1-11] Mains power cable
- [1-12] Split scale for cutting depth stop (with/  
without guide rail)
- [1-13] Cutting depth adjusting screw for resharpened saw blades
- [1-14] Cutting depth stop
- [1-15] Cut indicator
- [1-16] Viewing window / chipguard
- [1-17] Splinterguard

## 6 Operation



### WARNING

#### Unauthorised voltage or frequency!

##### Risk of accident

- The mains voltage and the frequency of the power source must correspond with the specifications on the machine's name plate.
- In North America, only Festool machines with the voltage specifications 120 V/60 Hz may be used.



Always switch the machine off before connecting or disconnecting the mains power cable!

Connecting and detaching the mains power cable [1-11] see Fig. [2].

Slide the switch-on lock [1-6] upwards and press the on/off switch [1-7] (press = ON / release = OFF).



Pressing the switch-on lock unlocks the plunging mechanism. The saw unit can then be moved downwards. This causes the saw blade to emerge from the protective cover.

## 7 Settings



### WARNING

#### Risk of injury, electric shock

- Always pull the mains plug out of the socket before performing any type of work on the machine!

#### 7.1 Electronics

The machine (TS 55 REBQ/ TS 55 REQ) features full-wave electronics with the following properties:

##### Smooth start-up

The electronically controlled smooth start-up ensures that the machine starts up jolt-free.

##### Constant speed

The motor speed remains constant through electronic control to ensure a uniform cutting speed even when under load.

##### Speed control

You can regulate the speed steplessly within the speed range using the adjusting wheel [1-10] (see Technical data). This enables you to optimise the cutting speed to suit the surface (see table 1).

##### Temperature cut-out

The machine power supply is limited and the speed reduced if the motor exceeds a certain temperature. The machine continues operating at reduced power to allow the ventilator to cool the motor quickly. If the machine temperature exceeds the maximum permitted value for longer periods, the machine switches off completely after approx. 40 seconds and can only be switched on again once the motor has cooled sufficiently.

##### Current limiting

Current limiting prevents excessive current consumption under extreme overload, which can lead to a decrease in the motor speed. The motor immediately restarts after the load is removed.

##### Brake

The TS 55REBQ is fitted with an electronic brake. When the saw is switched off, the saw blade slows to a stop electronically within approx. 2 seconds.

#### 7.2 Adjusting the cutting depth

The cutting depth can be adjusted to between 0 – 55 mm on the cutting depth stop [3-1]:

The sawing unit can now be pressed down to the set cutting depth.



Cutting depth without guide rails  
max. 55 mm



Cutting depth with guide rail FS  
max. 51 mm

### 7.3 Adjusting the cutting angle

**between 0° and 45°:**

- Unscrew the rotary knobs [4-1].
  - Swivel the sawing unit to the desired cutting angle [4-2].
  - Tighten the rotary knobs [4-1].
- ① Both positions (0° and 45°) are set at the factory and can be readjusted by the after-sales service team.

 When making angled cuts, slide the viewing window/splinterguard to the highest position!

**to undercut -1° and 47°:**

- Swivel the saw unit to the end position (0°/45°) as described above.
- Pull out the release button [4-3] slightly.
- Pull release button [4-4] as well for -1° undercuts.

*The saw unit engages in the -1°/47° position.*

- Tighten the rotary knobs [4-1].

### 7.4 Changing the saw blade



#### CAUTION

##### Hot and sharp tools

##### Risk of injury

- Do not use insert tools that are blunt or defective.
- Wear protective gloves.

- Before changing the saw blade, set the machine to the 0° position and select the maximum cutting depth..
- Fold over the lever [5-2] to its end position.
- Push up the switch-on lock [5-1] and push down the saw unit until it engages.
- Loosen the screw [5-5] using the Allen key [5-3].
- Remove the saw blade [5-7].
- Insert a new saw blade.



The rotational direction of the saw blade [5-8] and machine [5-6] must be the same!

- Insert the outer flange [5-9] so that the pin engages in the recess on the inner flange.
- Tighten the screw [5-5] firmly.
- Fold back the lever [5-2].

### 7.5 Fitting the viewing window/splinterguard [6]

The **viewing window** (transparent) [6-1] provides a view of the saw blade and optimises dust extraction.

With 0° cuts, the **splinterguard** (green) [6-2] also improves the quality of the cutting edge of the sawn-off workpiece on the upper side.

- Insert the splinterguard [6-2].
  - Screw the rotary knob [6-3] through the long hole in the splinterguard.
- ① Make sure that the nut [6-4] is seated securely in the splinterguard.

 **Use only knob that comes with your plunge-cut saw.** The knob of an other saw may be too long and block the blade.

You must bed in the splinterguard before using it:

- Set the machine to maximum cutting depth.
- Set the machine speed to 6.

### 7.6 Dust extraction



#### WARNING

##### Dust hazard

- Dust can be hazardous to health. Always work with a dust extractor.
- Always read applicable national regulations before extracting hazardous dust.

A Festool mobile dust extractor with an extractor hose diameter of 27 mm or 36 mm (36 mm recommended due to the reduced risk of clogging) can be connected to the extractor connector [1-8].

## 8 Working with the machine

 Please observe all mentioned safety informations and the following rules when working:

- Only guide the machine against the workpiece when it is switched on.
- Check the installation fixture prior to use and do not use the machine if the fixture does not function correctly.
- Always secure the workpiece in such a manner that it cannot move while being processed.
- Always hold the machine with two hands at the handles [1-4] when performing work. This re-

duces the risk of injury and is a prerequisite for precise work.

- Always push the machine forwards **[9-2]**, never draw the machine towards yourself.
- Adapt the fast-feed speed to prevent the cutters on the saw blade from overheating and prevent plastic materials from melting during cutting.
- Make sure that all rotary knobs **[4-1]** are tightened before starting work.
- Do not use the machine when the electronics are faulty because the machine may operate at excessive speeds. An absence of the smooth start-up function or speed control indicates that the electronics are faulty.

 For work that generates dust, wear a dust mask.

## 8.1 Sawing along the scribe mark

The cutting indicator **[7-2]** displays the cutting line for 0° and 45° cuts (without guide rail).

## 8.2 Cutting sections

Place the machine with the front part of the saw table on the workpiece, switch the machine on, press it down to the preset cutting depth and push it forward in the cutting direction.

## 8.3 Sawing cut outs (plunge cuts)



In order to avoid kickbacks, the following instructions must be observed without fail when plunge cutting:

- Always place the machine with the rear edge of the saw table against a fixed stop.
- When working with the guide rail, place the machine against the kickback stop FS-RSP (accessory) **[9-4]** clamped to the guide rail.

### Procedure

- Position the machine on the workpiece and push up against a stop (kickback stop).
- Switch on the machine.
- Push down the machine slowly to the preset cutting depth and then push forwards in the cutting direction.

*The markings **[7-1]** indicate the absolute front and the absolute rear cutting points of the saw blade (dia. 160 mm) when using the saw at maximum cutting depth with the guide rail.*

## 8.4 Plaster and cement-bonded fibre boards

Due to the high build-up of dust, use of a cover ABSA-TS55 (accessory) mounted to the side of the protective cover is recommended.

## 9 Service and maintenance



### WARNING

#### Risk of injury, electric shock

- Always disconnect the mains plug from the socket before performing maintenance work on the machine!
- All maintenance and repair work which requires the motor housing to be opened must only be carried out by an authorised service workshop.



**Customer service and repair** only through manufacturer or service workshops: Please find the nearest address at: [www.festool.com/service](http://www.festool.com/service)



Only use original Festool spare parts! Order No. at: [www.festool.com/service](http://www.festool.com/service)

The machine is equipped with special carbon brushes. If they are worn out, the power is interrupted automatically and the machine comes to a standstill.

#### Observe the following instructions:

- To ensure constant air circulation, always keep the cooling openings in the housing unobstructed and air accessible.
- Use an extractor on all the openings of the machine to remove wood chips and splinters.

## 9.1 Resharpened saw blades

The cutting depth of resharpened saw blades can be adjusted accurately using the adjusting screw **[8-1]**.

- Adjust the cutting depth stop **[8-2]** to 0 mm (with guide rail).
- Unlock the saw unit and push downwards until it reaches the stop.
- Turn in the adjusting screw **[8-1]** until the saw blade touches the workpiece.

## 9.2 Saw table wobbles

- ① The saw table must be on an even surface when adjusting the cutting angle.

If the saw table wobbles, the setting must be performed again (**Chapter 7.3**).

## 10 Accessories

The order numbers of the accessories and tools can be found in the Festool catalogue or on the Internet under "www.festool.com".

In addition to the accessories described, Festool also provides a comprehensive range of system accessories that allow you to use your machine more effectively and in diverse applications, e.g.:

- Parallel stop, table widener PA-TS 55
- Side-mounted cover, false joint ABSA-TS 55
- Kickback stop FS-RSP
- Parallel stop FS-PA and guide extension FS-PA-VL
- Multifunction table MFT/3
- Compact Module System CMS-GE with CMS-TS-55-R

### 10.1 Saw blades, other accessories

In order to saw different materials quickly and cleanly, Festool offers saw blades for all applications that are specially designed for your Festool portable circular saw.

### 10.2 Guide system

The guide rail enables you to make clean, accurate cuts while simultaneously protecting the surface of the workpiece from damage.

In conjunction with the extensive range of accessories, exact angled cuts, mitre cuts and fitting work can be completed with the guide system. The option of attaching the guide rail securely using clamps [9-5] ensures safer working conditions.

- ▶ Adjust the guide play between the saw table and the guide rail using the two adjustable jaws [9-1].

#### **Bed in the splinterguard [9-3] before using the guide rail for the first time:**

- ▶ Set the machine speed to 6.
- ▶ Place the machine at the rear end of the guide rail together with the complete guide plate.
- ▶ Switch on the machine.
- ▶ Push down the machine slowly to the max. preset cutting depth and cut along the full length of the splinterguard without stopping.

*The edge of the splinterguard now corresponds exactly to the cutting edge.*

## 11 Environment

 **Do not dispose of the device in household waste!** Recycle devices, accessories and packaging. Observe applicable national regulations.

**EU only:** In accordance with European Directive on waste electrical and electronic equipment and implementation in national law, used electric power tools must be collected separately and handed in for environmentally friendly recycling.

**Information on REACh:** [www.festool.com/reach](http://www.festool.com/reach)

## 12 EU Declaration of Conformity

Plunge-cut saw	Serial no.
TS 55 REBQ	498500, 500898, 500602
TS 55 REQ	498875, 500900, 500604
TS 55 RQ	498521, 500905, 500606

Year of CE mark: 2011

We declare under sole responsibility that this product complies with all the relevant requirements in the following directives, standards and normative documents:

2006/42/EG, 2004/108/EG (until 19.04.2016), 2014/30/EU (from 20.04.2016), 2011/65/EU, EN 60745-1:2009, EN 60745-2-5:2010, EN 55014-1:2006+A2:2011, EN 55014-2:1997+Corrigendum 1997+A1:2001+A2:2008, EN 61000-3-2:2006+A1:2009+A2:2009, EN 61000-3-3:2013.

**Festool GmbH**

Wertstr. 20, D-73240 Wendlingen, Germany



Dr. Johannes Steimel

Head of Research, Development and Technical Documentation

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