

**mafell**  
creating excellence



Portable circular saw

K 85 | K 85-18 | K 105 | K 105-18

Cross-cutting system

KSS 80

# The saw of the future, available now.

## Cross cuts



An ideal application for guide track L is cutting structural timber to length, with a max. cutting depth of up to 82 mm (3 1/4 in.) with the K 85 or up to 104 mm with the K 105 (4 1/8 in.), and a cross-cutting length of 370 mm (14 9/16 in.).

## Rip cuts



Ripping with a guide rail or parallel fence and an ample cutting depth. The two high-performance 18 V CAS batteries of the K 85-18 and K 105-18 combine to deliver a sustained output of 36 V.



The portable circular saws K 85 / K 105, the cordless models K 85-18 / K 105-18 and the cross-cutting systems offer compelling practical benefits for enhanced ease of use and efficiency.

#### NEW: LED work lamp



Bright LEDs illuminate a large working area. In sleep mode, a timer switches the light off after 10 seconds.

#### ErgoBalance principle



With the MAFELL ErgoBalance-Concept, our portable circular saws are optimized for all types of work. This not only enables precise work, but also optimum ergonomic guidance. This effectively prevents fatigue - despite twice the battery power.



**NEW:** With 2 CAS batteries for exceptional power, independence and thanks to the CAS battery system, nothing stands in the way of flexible use of other system partners.





# Making perfect saw cuts even easier to achieve.

## WORKING CLOSE TO THE EDGE OF NARROW MATERIAL



### It couldn't be simpler:

The new edge guide facilitates precision even in difficult cutting situations. Two scales on the arms allow the dimensions to be set exactly.

## PLUNGE CUTS



### It couldn't be simpler:

Practical 2-in-1 functionality greatly eases the execution of plunge cuts. Dispensing with a detachable riving knife, the spring-mounted FLIPP-KEIL further facilitates reliable plunge cutting.

The cordless and mains-operated variants of the K 85 and K 105 can be used to cut solid wood, panels, fiberboard, doors and worktops, as well as insulating materials.



### It couldn't be simpler:

Changing the blade is a fast, safe and easy operation. Simply press release button (1) and lift lever (2), lock pivoting guard (3) in the housing, release the flange, take out and exchange the blade, lock it in position and release lever (2).

## FAST BLADE CHANGES

Whether working close to the edge, executing perfect cross-cuts, or plunge or angle cuts, facilitating rapid blade changes, or offering an elegant solution for ad-justing the cutting depth, the portable circular saws epitomize ease of use and efficiency.

#### CROSS-CUTTING TRACK L Only included in the scope of delivery of the KSS 80



#### It couldn't be simpler:

The portable circular saw can be securely attached to the guide track to form an integral sawing unit.

One fixed and one adjustable stop allow the saw to be used for angle cuts from  $-60^{\circ}$  -  $+50^{\circ}$ . You simply push the saw against the work with the two stops on the underside of the track, operate the saw, and the job's done. The track automatically adopts the starting position once the cut has been executed.

#### BEVEL CUTS



#### It couldn't be simpler:

Perfect cutting quality, even when executing bevel cuts. The portable circular saw has been optimized for operation with the guide track. The center of gravity coincides with the underside of the guide rail and the cut is always made exactly alongside the rubber lip.



#### It couldn't be simpler:

The angle fence is easy to attach to the guide track. Simply attach, adjust and lock the adapter, and set the desired angle. The workpiece can now be cut at the exactly set angle.

#### PRECISE CUTTING RESULTS



# The K 85 / K 85-18 / K 105 / K 105-18: Welcome to the future of sawing.



**Battery charge indicator**  
Always in the picture: the battery charge can be checked at any time by pressing a button.

\*The battery packs are not included in the scope of delivery.



## Highly efficient chip removal

The chips are carried away so efficiently that the vacuum channel cannot become blocked, even when fiberboard is being cut. This benefit is especially crucial when executing plunge cuts in the fiber direction.

## FLIPPKEIL

Dispensing with a detachable riving knife, the spring-mounted FLIPPKEIL facilitates reliable plunge cutting. When the blade enters the material, it maintains the starting position initially, before automatically entering the kerf.

## LED work lamp

Bright LEDs illuminate a large area. In sleep mode, a timer switches off the lamp after 10 seconds. Clever: the LED lamp of the cordless model remains on standby for 10 minutes and activates itself when the saw is touched. With the mains-operated model, it remains on standby until the saw is disconnected from the power supply. After a prolonged period of inactivity, the lamp is switched back on by operating the switch.



## Innovative pointer

The new pointer automatically follows the machine as it is tilted. It therefore accurately tracks the actual cutting edge over a distance of 52 mm.

The portable circular saws are perfectly equipped to meet the future challenges of the woodworking trades. Not only in view of their exemplary material and build qualities, but also thanks to well-conceived user-friendliness and the compatible dual battery technology.

#### Blade changes

For a fast blade change, simply press the release button, lift the lever and lock the pivoting guard in the housing.



#### Manual retraction of pivoting guard

The pivoting guard is quickly and simply retracted from the saws' second handle. This allows the machine to be offered up easily and reliably, especially when executing bevel cuts.

#### Fast and reliable cutting depth adjustment

The 2-in-1 functionality allows the cutting depth to be set quickly and reliably. Simply release lock (1), set the cutting depth on the scale, and re-engage the lock. Plunge cuts are controlled by the same method.



#### Outstanding scale readability

Thanks to the new tilting arrangement, reading the scale is easier than ever before, from 0 to 60°.



#### Repeat stop for cutting depth

The cutting depth can be preset and locked in the range from 25 to 88 mm or 110 mm.



#### High build quality

The honeycomb design of the magnesium die-cast baseplate achieves extreme rigidity and an optimized weight profile.

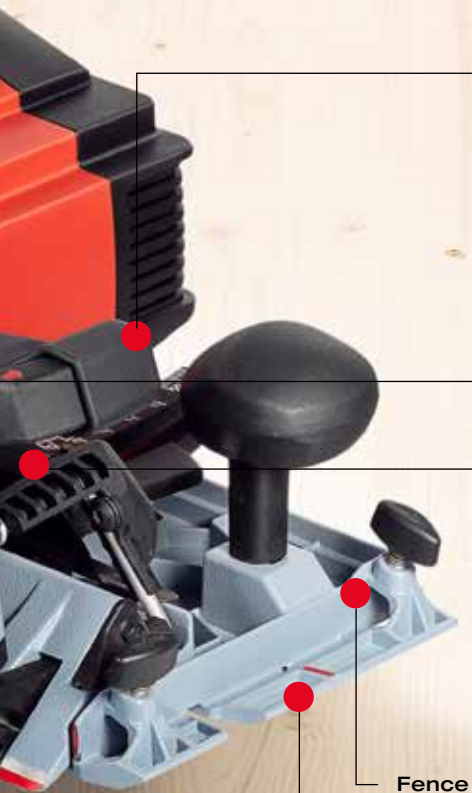


#### Perfect center of gravity

The center of gravity coincides with the underside of the guide rail. This ensures perfect cutting quality when executing bevel cuts.

#### Fence locking

When working with the parallel fence and edge guide, the four locking points and scale reference point facilitate precise adjustment.





# The KSS system: Making light work of perfect cross-cuts.

## Compatibility

The portable circular saws are equipped with a compatible baseplate. This allows the special accessory guide L to be fitted later at any time.



## Detaching the track

The quick-release catch enables you to detach the machine from the track in a single, quick action. The saw can then be used as a separate portable circular unit with all the functionality of the K 85-18 / K 85 / K 105 / K 105-18.

## Rubber lip

Serves as a marking and cutting edge for all applications in the range 0° – 60°. It also ensures clean, tear-free cuts.



For frequent cross-cuts, the guide track L in combination with the portable circular saws offers even greater ease of use. This is because the specially designed guide track L makes cross-cuts quick and clean.



#### Operating principle

You simply push the saw against the work with the two stops on the underside of the track, operate the saw, and the job's done.



#### Angle cuts

The desired angle is set using the well-positioned scale. For extra convenience, locking positions are provided for the common angles  $0^\circ$ ,  $\pm 22.5^\circ$  and  $\pm 45^\circ$ .



#### REPEAT STOP

For frequently required angles, the two repeat stops are fixed in place on the underside of guide track L.

#### Cutting length

The KSS operating principle allows a max. cross-cutting length of 370 mm.

# The MAFELL ErgoBalance principle: focusing on the user.

## MORE CONTROL

### Flexible settings

The scales, pointers and levers/locks are perfectly arranged to facilitate precise settings.



### User-friendly switch positioning

The lockout and operating switches are conveniently positioned on the handle.



### Ergonomic depth adjustment

The 2-in-1 functionality allows the cutting depth to be set quickly and reliably. Simply release lock, set the cutting depth on the scale, and re-engage the lock. Plunge cuts are controlled by the same method.



## BETTER BALANCE

### Handle shape

By sitting comfortably in the hand and offering generous contact for all the fingers, the ergonomic handle fosters relaxed and fatigue-free operation.



### Perfect center of gravity

The battery variant in particular has an ideal center of gravity for low-fatigue working – irrespective of the selected guide rail or power pack.





With the MAFELL ErgoBalanceConcept, our portable circular saws are optimized for all types of work. This not only enables precise work, but also optimum ergonomic guidance. This effectively reduces fatigue - even with the dual battery power.

Our new cordless portable circular saw in particular offers every convenience for daily use on site where mains power is unavailable. Our designers focused their attention on ergonomics and ease of use. Owing to precise analysis of the center of gravity, for example, the new saw is perfectly balanced. All thanks to the MAFELL ErgoBalance principle.

#### ENHANCED SAFETY

##### Safe blade changes

Simply pressing the release button and raising the lever automatically engages the starting lockout and sawblade lock.

##### LED work lamp – no shadow

Bright LED lamps with an afterglow effect illuminate a large working area.

##### Superior workmanship

The exceptional build quality is exemplified by neat joints, smooth edges and the gently curved shape of the housing and all controls.

# Battery technology: delivering even greater stamina.

**NEW**

## LiHD

LiHD batteries set new standards in the combination of high performance, lifetime and versatility. The high-performance cells of the LiHD batteries offer maximum power for every application.

## LiHDX

With the new tabless technology, the current is no longer transmitted via individual points, but via a full-surface connection of anode and cathode. This results in lower internal resistance and less heating of the cells for

- Even better performance
- Even longer running times and lifetime



### ENHANCED PERFORMANCE

- New cell technology in a re-engineered power pack.
- High-current busbars and enlarged contacts.
- Special copper alloy cell connectors for 3x enhanced conductivity.

### ENHANCED LIFETIME, EXTREMELY RUGGED

- Outstanding protection against internal contamination provided by full encapsulation, varnished circuit boards and the well sealed cover.
- Cells protected by rubber buffers.
- More usable energy results in less frequent charging.
- Rubberized battery pack offers non-slip stability and impact protection.

### LONGER RUNTIME

- More active material in the cells, use of high-grade materials (silver and copper).



The upgraded PowerTanks for our cordless tools feature advanced processor-controlled battery technology. A key advantage lies in continuous monitoring of all the relevant parameters of the individual battery cells, including temperature and charge. The floating battery cells are also ideally protected against mechanical influences. This ensures a prolonged lifetime and fewer downtimes.

## CAS. MAKING EVERYTHING EASY.



The battery packs are fully compatible with MAFELL's other 18 Volt power tools. In fact, they also match all the tools in the Cordless Alliance System (CAS) – the multi-vendor battery system of the leading power tool brands. CAS encompasses a huge selection of powerful cordless tools for an enormous variety of applications. Users benefit from needing fewer battery types on-site – in ideal circumstances, just one.

# Technical data / Delivery scope includes

Type	K 85-18	K 85	KSS 80
<b>Technical data</b>			
Nominal input	-	2.300 W (3.1 hp)	2.300 W (3.1 hp)
Nominal voltage	2 x 18 V	-	-
Nominal no-load speed	2.800 -5.200 rpm	2.250 – 4.400 rpm	2.250 – 4.400 rpm
Cutting depth off rail	0 – 88 mm (3 7/16 in.)	0 – 88 mm (3 7/16 in.)	0 – 88 (3 7/16 in.)
at 45°	0 – 61.5 mm (2 7/16 in.)	0 – 61.5 mm (2 7/16 in.)	0 – 61.5 mm (2 7/16 in.)
at 60°	0 – 44.5 mm (1 3/4 in.)	0 – 44.5 mm (1 3/4 in.)	0 – 44.5 mm (1 3/4 in.)
Cutting depth on rail	0 - 82 mm (1 3/4 in.)	0 - 82 mm (3 1/4 in.)	0 - 82 mm (3 1/4 in.)
Cutting length at 90°	-	-	370 mm (14 9/16 in.)
Tilt range	0 – 60°	0 – 60°	0 – 60°
Angle cuts			-60 - +50°
Weight (EPTA)	8.1 kg (17,9 lbs) (including battery)	6.8 kg (15 lbs)	8.4 kg (18,5 lbs)



## Model

## Delivery scope includes

### 91E302 Cordless Portable Circular Saw K 85-18 PURE in L-MAX

- 1 TCT saw blade  
237 x 1,8/2,5 x 30 mm  
(9 5/16 in.), AT, 12 teeth
- 1 Parallel guide fence K 85-PA
- 1 Allen key 5 mm

### 91E701 Portable Circular Saw K 85

- 1 TCT saw blade  
237 x 1,8/2,5 x 30 mm  
(9 5/16 in.), AT, 12 teeth
- 1 Allen key 5 mm
- 1 Mains cable 10 m (32.8 ft)

### 91F201 Cross-Cutting System KSS 80

- 1 TCT saw blade  
237 x 1,8/2,5 x 30 mm  
(9 5/16 in.), AT, 12 teeth
- 1 Allen key 5 mm
- 1 Parallel guide fence K 85-PA
- 1 Guide track L
- 1 Mains cable 10 m (32.8 ft)



## Ausführung

## Delivery scope includes

### 91E302 + 208171 Cordless Portable Circular Saw K 85-18 PURE in L-MAX

- 1 TCT saw blade  
237 x 1,8/2,5 x 30 mm  
(9 5/16 in.), AT, 12 teeth
- 1 Parallel guide fence K 85-PA
- 1 Allen key 5 mm
- +
- 1 Guide track L

### 91E702 Portable Circular Saw K 85 in L-MAX

- 1 TCT saw blade  
237 x 1,8/2,5 x 30 mm  
(9 5/16 in.), AT, 12 teeth
- 1 Allen key 5 mm
- 1 Parallel guide fence K 85-PA
- 1 Mains cable 10 m (32.8 ft)



Type	K 105-18	K 105
<b>Technical data</b>		
Nominal input	-	2.300 W
Nominal voltage	2 x 18 V	-
Nominal no-load speed	2.800 – 5.200 1/min	2.250 – 4.400 1/min
Cutting depth off rail	0 – 110 mm (4 5/16 in.)	0 – 110 mm (4 5/16 in.)
at 45°	0 – 77 mm (3 1/16 in.)	0 – 77 mm (3 1/16 in.)
at 60°	2 – 55 mm (1/16 - 3/16 in.)	2 – 55 mm (1/16 - 3/16 in.)
Cutting depth on rail	0 - 104 mm (4 1/8 in.)	0 - 104 mm (4 1/8 in.)
Cutting length at 90°	-	-
Tilt range	0 – 60°	0 – 60°
Angle cuts	-	-
Weight (EPTA)	9,3 kg (20,5 lbs) (including battery)	8,1 kg (17,9 lbs)



## Ausführung

## Lieferumfang

### 91D302 Cordless Portable Circular Saw K 105-18 PURE

1 Saw blade KSB-WL 280 GT HW, 280 x 2,8 x 30 mm (11 in.), T15-5, AT/FT, Wood Rip Cut  
1 Parallel guide fence K 105-PA  
1 Allen key 5 mm

### 91D201 Portable Circular Saw K 105

1 Saw blade KSB-WL 280 GT HW, 280 x 2,8 x 30 mm (11 in.), T15-5, AT/FT, Wood Rip Cut  
1 Parallel guide fence K 105-PA  
1 Allen key 5 mm  
1 Mains cable 10 m (32.8 ft)



## Ausführung

## Lieferumfang

### 91D302 + 208171 Cordless Portable Circular Saw K 105-18 PURE

1 Saw blade KSB-WL 280 GT HW, 280 x 2,8 x 30 mm (11 in.), T15-5, AT/FT, Wood Rip Cut  
1 Parallel guide fence K 105-PA  
1 Allen key 5 mm  
+  
1 Guide track L

### 91D201 + 208171 Portable Circular Saw K 105

1 Saw blade KSB-WL 280 GT HW, 280 x 2,8 x 30 mm (11 in.), T15-5, AT/FT, Wood Rip Cut  
1 Parallel guide fence K 105-PA  
1 Allen key 5 mm  
1 Mains cable 10 m (32.8 ft)  
+  
1 Guide track L

# Tools / Special accessories



**Guide rail F**

Designation	Length	Ordner No.
F 80	0.80 m (2,6 ft)	<b>204380</b>
F 110	1.10 m (3.6 ft)	<b>204381</b>
F 160	1.60 m (5.2 ft)	<b>204365</b>
F 210	2.10 m (6,9 ft)	<b>204382</b>
F 310	3.10 m (10,2 ft)	<b>204383</b>



**Connecting piece F-VS**

for joining two guide rails  
Ordner No. **204363**



**Angle fence F-WA**

Ordner No. **205357**



**Suction clamping system**

**Aerofix F-AF 1**  
with 1,3 m rail, adapters for above  
and underneath rail, flexible hose  
Ordner No. **204770**



**Flexible hose FXS L**

up to 3,2 m (10.6 ft) long  
Ordner No. **205276**



**Guide track L**

max. cutting length 370 mm  
(14 9/16 in.) Ordner No. **208171**



**End cap F-EK**

2 pieces Ordner No. **205400**



**Non-slip profile F-HP 6,8 M**

6.8 m (22.3 ft.) long  
Ordner No. **204376**



**Guide pocket**

**Guide pocket TZ-FST**  
for guide rails up to 1,6 m (5.2 ft)  
Ordner No. **095257**



**Dust bag**

Ordner No. **206921**



**Lever clamp F-SZ 180MM**

2 pieces, for fixing guide rail to  
workpiece Ordner No. **207770**



**Splinter guard F-SS 3,4M**

3.4 m (11.2 ft.) long  
Ordner No. **204375**

**Guide pocket set**  
F 80 + F 160 + F-WA + F-VS + 2 x  
F-SZ 180MM  
+ Guide pocket

Ordner No. **209592**

**Guide pocket set**  
2 x F-SZ 180 MM + 2 x F 160 +  
F-VS  
+ Guide pocket

Ordner No. **209591**



**Parallel guide fence (K 85)**

K85-PA

Ordner No. **205323**



**Roller edge guide (K 85)**

K85-UA

Ordner No. **205166**



**Parallel guide fence (K 105)**

K 105-PA

Ordner No. **212867**





**Roller edge guide (K105)**

K 105-UA

Ordner No. **210742**



**Saw blade (K 85)**

237 x 1,8/2,5 x 30 mm (9 5/16 in.),  
AT, 12 teeth, for rip cuts in wood  
Ordner No. **092590**



**Saw blade (K 85)**

237 x 1,8/2,5 x 30 mm (9 5/16 in.), AT,  
24 teeth, for rip cuts and  
cross-cutting Ordner No. **092591**



**Saw blade (K 85)**

237 x 1,8/2,5 x 30 mm (9 5/16 in.),  
AT, 56 teeth for cross-cutting in  
wood Ordner No. **092592**



**L-MAX (K 85)**

Ordner No. **095170**



**KSB-WL 280 GT (K 105)**

HW, 280 x 2,8 x 30mm (11 in.), T15-  
5, AT/FT, Wood Rip Cut  
Ordner No. **092598**



**KSB-WU 280 GT (K 105)**

HW, 280 x 2,8 x 30 mm (11 in.), T28-  
4, 3AT/FT, Wood Universal  
Ordner No. **092613**



**KSB-WF 280 GT (K 105)**

HW, 280 x 2,8 x 30mm (11 in.), T56-8,  
3AT/FT, Wood Fine Cut  
Ordner No. **092615**



**Battery-PowerTank**

18 M 99 LiHD (18 V, 99 Wh, 5,5 Ah)  
Ordner No. **094503**



**Battery-PowerTank**

18 M 144 LiHD (18 V, 144 Wh, 8 Ah)  
Ordner No. **094498**



**Battery-PowerTank**

18 M 144 LiHDX (18 V, 144 Wh, 8 Ah)  
Ordner No. **094520**



**Battery-PowerStation**

APS M, 18 V  
Ordner No. **094492**



**High-speed charger**

APS M+

Ordner No. **094509**



**Power-Set 2**

2x 18 M 99 LiHD + APS M  
Ordner No. **209599**



**Power-Set 3**

2x 18 M 144 LiHD + APS M+  
Ordner No. **209598**



**Power-Set 4**

2x 18 M 144 LiHDX + APS M+  
Ordner No. **212615**

In order to develop a better tool for carpenters, we at MAFELL often take a special approach: We change our point of view and completely reconceive the tool in essential parts. At the same time, we always keep in mind the future requirements of the woodworking trade.

From this way of thinking, paired with an outstanding material and processing quality, amazing solutions emerge again and again. For example, in terms of functionality and ease of use. It is our claim that you no longer have to think about your tools when doing your work. Simply because we at MAFELL have already done so extensively. After all, we have a common goal: the perfect job. Or in brief:

creating excellence

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