

mafell
creating excellence



Groove cutting machines
NFU 50 | NFU 50-18

Groove cutting machine NFU 50/NFU 50-18: Versatile, powerful, precise.

CUTTING DEPTH 50 MM (1 ¹⁵/₁₆ IN.)



The sheer strength and outstanding motive power of the groove cutting machines can produce cuts measuring 60 mm (2 ³/₈ in.) wide and 50 mm (1 ¹⁵/₁₆ in.) deep.

SUITABLE AS A SKEW NOTCH AND TENON CUTTER



The groove cutting machines can also be used as skew notch and tenon cutters. The online tool for calculating the settings can be accessed using the QR code or link below.



www.mafell.de/en/service/milling-depth-calculation

GUIDE L FOR NOTCHING

Timber frame construction in particular requires a large number of grooves. The NFU 50/NFU 50-18 and guide L make the perfect team for this type of work.

The groove cutting machines offer flexibility of use and are genuine all-rounders capable of executing an enormous range of timber construction tasks. An extensive range of accessories opens up further possibilities for day-to-day work.

CAS BATTERY POWER



2 CAS batteries give the NFU 50-18 exceptional power and independence. And thanks to the multi-vendor Cordless Alliance System, compatibility with other brands is assured.

LENGTHWISE GROOVES



Take grooves for service ducts, for instance, which can be machined quickly and efficiently with the expanding groove cutter available as an optional accessory.



Groove cutting machine NFU 50/NFU 50-18: A wealth of different applications

LENGTHWISE GROOVES

Grooves measuring 15,4 mm ($\frac{5}{8}$ in.) to 40 mm ($1\frac{9}{16}$ in.) can be produced using the expanding groove cutters available as an optional accessory.

Here's how it's done:

Engage the spindle lock, set the expanding groove cutter to the required width, align the F-type guide rail if using, and set to work.



TUTORIALS:



<https://nfu50.mafell.de/en/>

NOTCHING WITH GUIDE L

Accurate, quick and easy. Cross groove with guide L.

Here's how it's done:

Set the angle on guide L, position the two stops on the workpiece and cut the notch.



With its exemplary material and build quality and intelligent practical features, the NFU 50 is a versatile all-purpose machine. It enables you to save time and energy, and invest your working resources instead in getting the job done well.



BIRDSMOUTH JOINTS UP TO 45°

Here's how it's done:

Work out and set the angle and cutting depth, if necessary using our online calculation tool. Place the pair of adapters on the parallel fence, align the carpentry guide rail and make the cut.



www.mafell.de/berechnungstool



TENONS

Individual tenons can be executed effortlessly with the groove cutting machines and guide rail L.

Here's how it's done:

Set the cutting depth, adjust the angle on guide L and machine the first side of the workpiece. Then complete the second side following the same work stages.



Groove cutting machine NFU 50/NFU 50-18: Perfection in every detail.



BATTERY CHARGE INDICATOR

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

THE HIGH-PERFORMANCE MOTOR

stands for sheer strength and outstanding motive power, and its output is optimized by digital electronics.



Fig. NFU 50-18

DUST EXTRACTION

The rotating 58 mm (2 ⁵/₁₆ in.) hose connector for large volumes of dust can be positioned by means of a locking function.



DETACHING THE TRACK

The NFU can be removed from the cross-cut track at the single press of a button, allowing its use either freehand or on the guide rail.

The design of the NFU 50 is characterized by the use of extremely rugged, high-quality and precision-made parts, including the lightweight magnesium die-cast housing and impact-resistant, fiber glass-reinforced plastic components. It also features clever technical details to help you meet the rigors of the job.

DEPTH ADJUSTMENT

The 2-in-1 functionality allows the cutting depth to be set quickly and easily. Release lock (1), set the cutting depth on the scale, and re-engage the lock.



CUTTING DEPTH LOCKING MECHANISM

The cutting depth can be further secured by means of a locking lever.



SAFETY CONCEPT

The brake on the Groove cutting machines stops the motor within 3 seconds for optimum safety.

TILTS THROUGH 45°

Its layout makes the scale easier than ever to read, from 0 to 45°.



REPEAT STOP

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



Groove cutting machine NFU 50/NFU 50-18: Perfection in every detail.

EXPANDING GROOVE CUTTER

Depending on the expanding groove cutter, the groove width can be individually set from 22 ($\frac{7}{8}$ in.) to 40 mm ($1 \frac{9}{16}$ in.) or from 15.4 ($\frac{5}{8}$ in.) to 28.4 mm ($1 \frac{1}{8}$ in.).



POSITION INDICATOR NFU-PA

Using the position indicator, which can be set with reference to the scale, the right edge of the cutter can be indicated.

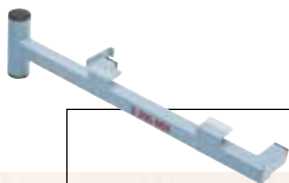


SIDE FENCE SA 625

Grooves with spacing of 62.5 cm ($24 \frac{5}{8}$ in) can be repeated as many times as necessary without the need for time-consuming marking.



An extensive range of accessories makes the job easier and speeds up working with the NFU 50. Teamed with the high-capacity extractor S 200, incorporating dust extraction unit S 35 M, it is the perfect partner for timber construction work.



MACHINE HOLDER

Machine holder S200-MH provides a safe resting place for the groove cutting machine on the high-capacity extractor.



BAYONET CATCH AND KINK PROTECTION

A vertical bayonet catch ensures a secure hose connection. Severe bending of the hose is prevented by the spiral guard.

HIGH-CAPACITY EXTRACTOR

with a maximum capacity of 200 l. The set comprises dust extractor S 35 M (Ref. No. 91C401) and the container (Ref. No. 206869).

TUTORIALS:



<https://nfu50.mafell.de/en/>

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 and accessories.



Technical data	NFU 50	NFU 50-18
Nominal voltage	230 V	2 x 18 V
Nominal power input	2300 W (3.1 hp)	-
Cutting depth at 0° with guide track	0 - 44 mm (0 in. - 1 ³ / ₄ in.)	0 - 44 mm (0 in. - 1 ³ / ₄ in.)
Cutting depth at 0° without guide track	0 - 50 mm (0 in. - 1 ¹⁵ / ₁₆ in.)	0 - 50 mm (0 in. - 1 ¹⁵ / ₁₆ in.)
Tilting range	0 - 45°	0 - 45°
No-load-Speed	5900 rpm	4.700 - 7.100 rpm
Weight with guide track	9,4 kg (20.7 lbs)	10,3 kg (22.7 lbs) including battery
Dimensions (W x L x H) with guide L	370 x 810 x 280 mm (14 ⁹ / ₁₆ x 31 ⁷ / ₈ x 11 in.)	370 x 810 x 280 mm (14 ⁹ / ₁₆ x 31 ⁷ / ₈ x 11 in.)
Cutting length with guide L	370 mm (14 ⁹ / ₁₆ in.)	370 mm (14 ⁹ / ₁₆ in.)

Ref. No	918701	91F302
Delivery specification:	1 cutter head 091901 Ø 163 x 60 mm (6 ⁷ / ₁₆ x 2 ³ / ₈ in.) 1 position indicator NFU-PA 1 parallel fence 1 side fence SA 625 207183 1 guide track L 208171 1 allen key SW 6 1 screwdriver Torx T15 1 main cable 10 m (32.8 ft.)	1 cutter head 091901 Ø 163 x 60 mm (6 ⁷ / ₁₆ x 2 ³ / ₈ in.) 1 position indicator NFU-PA 1 parallel fence 1 side fence SA 625 207183 1 guide track L 208171 1 allen key SW 6 1 screwdriver Torx T15



Guide rail

3.0 m (9.8 ft) (one part)
 3.0 m (9.8 ft)
 (2 parts + connecting piece)
 1.5 m (4.9 ft) extension

Ref. No.
200672
037037
036553

for parallel fence

Ref. No. **037195**



Pair of adapters



Angle fence F-WA

Ref. No. **205357**



Guide rail F

Designation	Length in m	Ref. No.
F 80	0.80 m	204380
F 110	1.10 m	204381
F 160	1.60 m	204365
F 210	2.10 m	204382
F 310	3.10 m	204383



Connecting piece F-VS

for joining two guide tracks
 Ref. No. **204363**



End caps F-EK

2 pieces

Ref. No. **205400**



Non-slip profile F-HP 6,8M

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



Splinter guard F-SS 3,4M

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



Guide rail bags

Guide Bag F 160
for guide rails up to 1.6 m l
Order No. **095257**

Guide rail set with bag:
2 x F 160 + F-VS + 2 x F-SZ 100MM
+ guide pocket
Order No. **209592**

Guide rail set with bag:
F 80 + F 160 + F-WA + F-VS
+ 2 x F-SZ 100MM
+ guide pocket
Order No. **209591**



Universal guide

Compound miter rail
Ref. No. **202069**



Lever clamp F-SZ 180MM

2 pieces, for fixing rail to work piece
Ref. No. **207770**



Machine holder

S200-MH Ref. No. **207164**



Roller edge guide

K85-UA

Ref. No. **205166**



Parallel fence

K85-PA

Ref. No. **205323**



Side fence SA 625

Ref. No. **207183**



Cutter head

Ø 163 x 60mm Ref. No. **091901**
(6 7/16 x 2 3/8 in.)
Reversible knives (12 required)



Cutter head

Ø 163 x 46mm Ref. No. **091902**
(6 7/16 x 2 13/16 in.)
Reversible knives (12 required)



Expanding groove cutter

Ø 163 x 22 until 40mm
(6 7/16 x 7/8 x 1 9/16 in.) Ref. No. **091899**
Reversible knives (12 required)



Expanding groove cutter

Ø 163 x 15,4 until 28,4 mm
(6 7/16 x 5/8 x 1 1/8 in.) Ref. No. **091904**
Reversible knives (10 required)



Reversible knife

14 x 14 x 2 mm Ref. No. **201927**
(9/16 x 9/16 x 1/16 in.)



Extraction hose

Ø 49mm (1 15/16 in.) with hose connector
58mm (2 5/16 in.), Ø 66mm (2 5/8 in.) bayonet
catch, static dissipative 5m (16.4 ft.)
Ref. No. **093730**



Battery-PowerTank

18 M 99 LiHD (18 V, 99 Wh, 5,5 Ah)
Ref. No. **094503**
18 M 99 LiHD (18 V, 99 Wh, 8,0 Ah)
Ref. No. **094498**
18 M 144 LiHDX (18 V, 144 Wh, 8 Ah)
Ref. No. **094520**



Power-Sets

2x 18 M 99 LiHD + APS M
Ref. No. **209599**
2x 18 M 144 LiHD + APS M+
Ref. No. **209598**
2x 18 M 144 LiHDX + APS M+
Ref. No. **212615**



Battery-PowerStation

APS M

Ref. No. **094492**



High-speed charger

APS M+

Ref. No. **094509**

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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