

## **MFE 40**

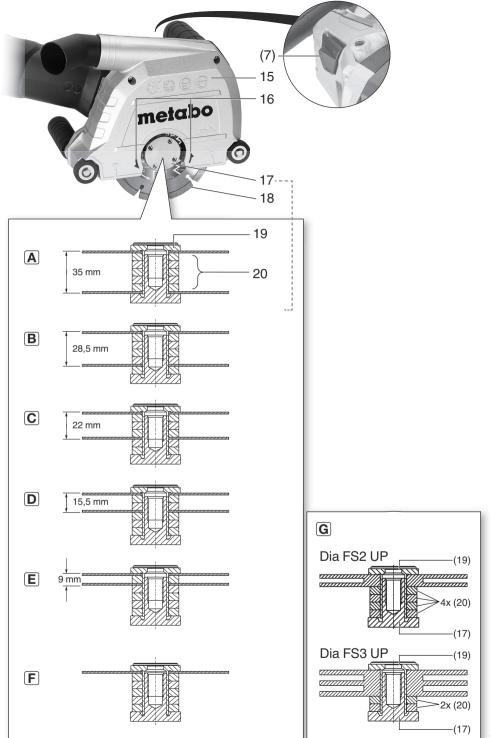




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1 14.		<b>MFE 40</b> *1) Serial-Number: 04040
D	mm (in)	125 (5)
В	mm (in)	9,0 / 15,5 / 22 ,0 / 28,5 / 35,0 ( <sup>3</sup> / <sub>8</sub> , <sup>5</sup> / <sub>8</sub> , <sup>7</sup> / <sub>8</sub> , 1 <sup>1</sup> / <sub>8</sub> , 1 <sup>3</sup> / <sub>8</sub> )
Т	mm (in)	10 - 40 ( <sup>3</sup> / <sub>8</sub> - 1 <sup>5</sup> / <sub>8</sub> )
P <sub>1</sub>	W	1900
P <sub>2</sub>	W	1120
n	/min	5000
m	kg (lbs)	4,6 (10.1)
a <sub>h</sub> /K <sub>h</sub>	m/s <sup>2</sup>	5,5 / 1,5
L <sub>pA</sub> /K <sub>pA</sub>	dB(A)	100,3 / 3
L <sub>WA</sub> /K <sub>WA</sub>	dB(A)	111,3/3

**C E** \*2) 2014/30/EU, 2006/42/EC, 2011/65/EU \*3) EN 60745-1:2009+A11:2010, EN 60745-2-22:2011+A11:2013, EN IEC 63000:2018

2021-06-25, Bernd Fleischmann
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# Original operating instructions

## 1. Declaration of Conformity

We hereby declare that these wall chasers, identified by type and serial number \*1), meet all relevant requirements of directives \*2) and standards \*3). Technical documents for \*4) - see page 3.

#### For UK only:

We as manufacturer and authorized person to Cp compile the technical file, see \*4) on page 3, hereby declare under sole responsibility that these wall chasers, identified by type and serial number \*1) on page 3, fulfill all relevant provisions of following UK Regulations S.I. 2016/1091, S.I. 2008/1597, S.I. 2012/3032 and Designated Standards EN 60745-1:2009+A11:2010, EN 60745-2-22:2011+A11:2013. EN IEC 63000:2018.

## 2. Specified Conditions of Use

The wall chaser is designed for cutting or slitting channels (chasing) in primarily mineral based materials such as reinforced concrete, masonry and paving, while firmly supported on the level surface, without water.

Do not use bonded abrasive cut-off wheels or grinding discs. Use only diamond cut-off wheels.

Materials that generate dusts or vapours that may be harmful to health must not be processed.

The user bears sole responsibility for any damage caused by inappropriate use.

Generally accepted accident prevention regulations and the enclosed safety information must be observed.

## 3. General Safety Information



For your own protection and for the protection of your power tool, pay attention to all parts of the text that are marked with this symbol!



**WARNING** – Reading the operating instructions will reduce the risk of injury.

WARNING Read all safety warnings and instructions. Failure to follow all safety warnings and instructions may result in electric shock, fire and/or serious injury.

Keep all safety instructions and information for future reference.

Pass on your power tool only together with these documents.

## 4. Special Safety Instructions

4.1 Cut-off machine safety warnings
a) The guard provided with the tool must be securely attached to the power tool and positioned for maximum safety, so the least

amount of wheel is exposed towards the operator. Position yourself and bystanders away from the plane of the rotating wheel. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.

- b) Use only bonded reinforced or diamond cutoff wheels for your power tool. Just because an accessory can be attached to your power tool, it does not assure safe operation.
- c) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- e) Always use undamaged wheel flanges that are of correct diameter for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.
- f) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
- g) The arbour size of wheels and flanges must properly fit the spindle of the power tool. Wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- h) Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute. Damaged wheels will normally break apart during this test time.
- i) Wear personal protective equipment.
  Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and shop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- j) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken wheel may fly away and cause injury beyond immediate area of operation.

- k) Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- I) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning wheel.
- m) Never lay the power tool down until the accessory has come to a complete stop. The spinning wheel may grab the surface and pull the power tool out of your control.
- n) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- Regularly clean the power tool's air vents.
   The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- p) **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- q) Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

#### 4.2 Kickback and related warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel's rotation at the point of the binding.

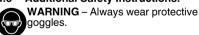
For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- c) Do not position your body in line with the rotating wheel. Kickback will propel the tool in

- direction opposite to the wheel's movement at the point of snagging.
- d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- e) Do not attach a saw chain, woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade. Such blades create frequent kickback and loss of control.
- f) Do not "jam" the wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- g) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- h) Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- i) Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- i) Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

#### 4.3 Additional Safety Instructions:





Wear a suitable dust protection mask.

Use only diamond cut-off wheels.



♠ Do not use bonded discs.



**WARNING** – Always operate with two hands.

#### en ENGLISH



Always push the machine in the stipulated direction through the material to be processed! See arrow (11) on the guard. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.

Ensure that the place where you wish to work is free of power cables, gas lines or water pipes (e.g. check using a metal detector).

The workpiece must lay flat and be secured against slipping, e.g. using clamps. Large workpieces must be sufficiently supported.

The diamond cut-off wheels must fit without play in relation to the support flange. Do not use adapters or reducers.

Diamond cut-off wheels must be stored and handled with care in accordance with the manufacturer's instructions.

Ensure that the diamond cut-off wheels are installed in accordance with the manufacturer's instructions.

Use elastic cushioning layers if they have been supplied with the grinding media and if required.

Ensure the sparks emitted during use do not pose any risk, for example, to the user or other personnel and are not able to ignite inflammable substances. Areas at risk must be protected with flame-resistant covers. Always keep a fire extinguisher on hand when working in areas prone to fire risk.

The diamond cut-off wheels continue running after the machine has been switched off.

Always wear protective goggles, dust mask, gloves, ear protectors and sturdy shoes when working with this tool.

Damaged, eccentric or vibrating tools must not be used.

Avoid damage to gas or water pipes, electrical cables and load-bearing walls (static).

Pull the plug out of the socket before making any adjustments, converting or servicing the machine.

A damaged or cracked side handle must be replaced. Never operate the machine with a defective side handle.

A damaged or cracked safety guard must be replaced. Never operate a machine with a defective safety guard.

Do not switch on the tool if parts or guard devices are missing or defective.



### Reducing dust exposure:

Some of the dust created using this power tool may contain chemicals known to cause cancer, allergic reaction, respiratory disease, birth defects or other reproductive harm. Some of these substances include: lead (in paint containing lead), mineral dust (from bricks, concrete etc.), additives used for wood treatment (chromate, wood

preservatives), some wood types (such as oak or beech dust), metals, asbestos.

The risk from exposure to such substances will depend on how long you or people nearby are exposed to them.

Do not let particles enter the body.

Do the following to reduce exposure to these substances: ensure good ventilation of the workplace and wear appropriate protective equipment, such as respirators able to filter microscopically small particles.

Observe the relevant guidelines for your material, staff, application and place of application (e.g. occupational health and safety regulations, disposal).

Collect the particles generated at the source, avoid deposits in the surrounding area.

Use suitable accessories for special work. In this way, fewer particles enter the environment in an uncontrolled manner.

Use a suitable extraction unit.

Reduce dust exposure with the following measures:

- do not direct the escaping particles and the exhaust air stream at yourself or nearby persons or on dust deposits.
- use an extraction unit and/or air purifiers.
- ensure good ventilation of the workplace and keep clean using a vacuum cleaner. Sweeping or blowing stirs up dust.
- Vacuum or wash the protective clothing. Do not blow, beat or brush.

#### 5. Overview

See page 2-3.

- 1 Lock
- 2 Trigger
- 3 Scale for depth of cut
- 4 Clamping lever for setting cutting depth
- 5 Electronic signal indicator
- 6 Marking (serves as cutting indicator of the first diamond disc)
  - 7 Spindle locking button
- 8 Extraction nozzle for dust extraction
- 9 Support wheels
- Markings show the cutting edges of the diamond cutting discs with maximum cutting depth
- 11 Arrow shows the specified thrust direction. The machine must be pushed through the material to be processed in this direction.
- 12 first handle
- 13 second handle
- 14 2-hole spanner
- 15 Safety cover
- 16 Arrows show the direction of rotation of the diamond cutting discs
- 17 Clamping nut
- 18 Diamond cutting disc
- 19 Clamping flange
- 20 Spacer rings

## 6. Initial Operation

#### 6.1 Mains connection

Before commissioning, check that the rated mains voltage and mains frequency, as stated on the type plate match your power supply.



Pay attention to a possibly short feed line and a large line cross-section of the mains cable.

# 6.2 Use / change diamond cut-off wheels, set groove width

Switch off the machine. Disconnect the mains plug!

Caution! Never press the locking button (7) when the machine is running (nor when it is slowing down)!

Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation. (See chapter 11.) See fig., page 3.

- Set max. cutting depth (see chapter6.3).

 Press the spindle locking button (7), (with the other hand) rotate the front diamond cut-off wheel (18) slowly until the spindle locking button engages perceptibly and

 with the pressed spindle locking button (7) unscrew the clamping nut (17) with the supplied 2hole spanner (anti-clockwise).

The clamping flange (19) must always be fitted onto the spindle with the sheath facing out (as shown in the pictures (A) – (F). Pay attention that the clamping flange (19), in relation to the spindle, cannot be turned.

Fit the diamond cut-off wheels and pay attention to the correct direction of rotation. The direction of rotation is specified by arrows (16) on the diamond cut-off wheels and on the guard (15).

Arrangement of the spacer rings (20) and the diamond cut-off wheels (according to desired groove width) as in the pictures (A) - (E).

Note: Using the machine with only *one* diamond cut-off wheel:

If you remove the front diamond cut-off wheel and leave only the rear wheel on the machine, the wall chaser is then suited for cutting through materials (e.g. tiles).

(See page 3, fig. F.).

Note: (see page 3, fig. G.) Use of the machine with a diamond cutting disc (see chapter 11. accessories):

To be able to attach the diamond cutting disc, you must remove the clamping flange (19) from the sundle and remove from the guard (15). Now put the diamond cutting disc on the clamping flange (19), insert from below into the guard and put onto the spindle. Pay attention that the clamping flange

(19), in relation to the spindle, cannot be turned. Put on spacer rings (20) as shown in image (G).

Lock the spindle by pressing the spindle locking button (7) and tighten the clamping nut (17) with the two-hole wrench (14) (clock-wise direction).

Carry out a test run: Set min. cutting depth (see chapter6.3). Position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no-load speed for one minute. Damaged wheels will normally break apart during this test time. Stop immediately if significant vibrations occur or if other defects are noted. If such a situation occurs, check the machine to determine the cause.

#### 6.3 Setting cutting depth

After undoing the clamping lever (4) you can set the desired cutting depth using the scale (3).

Retighten the clamping lever (4).

Note: If required, the position / the clamping force of the clamping lever (4) must be changed. To do this, pull out the lever a bit, turn the lever and lower again (see fig. A, page 2).

#### 6.4 Attaching the dust extraction

Caution! Never work without a dust extraction device. Dusts can be harmful to health!

Never work without a dust extraction device. The motor can quickly choke on stone dust.

Use a suitable Metabo vacuum cleaner.

Use only anti-static suction hoses.

To extract the stone dust generated when working with the wall chaser, put the suction hose 631370000 (4 m) onto the extraction nozzle (8).

#### 7. Use

#### 7.1 Switching on and off

Always guide the machine with both hands.

Switch on first, then guide the accessory towards the workpiece.

Avoid inadvertent starts: always switch the tool off when the plug is removed from the mains socket or if there has been a power cut.

In continuous operation, the machine continues running if it is forced out of your hands. Therefore, always hold the machine with both hands using the handles provided, stand securely and concentrate.

Avoid the machine swirling up or taking in dust and chips. After switching off the machine, only place it down when the motor has come to a standstill.

#### Torque activation:

Switching on: Slide the lock (1) in the direction of the arrow and press the trigger switch (2).

Switching off: release the trigger switch (2).

#### Continuous operation:

Switching on: Slide the lock (1) in the direction of the arrow, press the trigger switch (2) and keep it pressed. The machine is now switched on. Now slide the lock (1) in the direction of the arrow once more to lock the trigger switch (2) (continuous operation).

Switching off: Press the trigger switch (2) and release.

#### 7.2 Working With the Wall Chaser



Always guide the machine with both hands on the handles (12) and (13).

On the guard there are markings (6). The markings are in the extension of the rear diamond cutting disc and serve - when cutting grooves - as cutting indicator.

Place the wall chaser (with the motor switched on) with the support wheels (9) on the surface into which a groove is to be cut, and slowly guide down until the set cutting depth has been reached.

Then push the machine in cutting direction



Always push the machine in the stipulated direction through the material to be processed! See arrow (11) on the guard. The wheel may bind, walk up or kickback if the power tool is restarted in the , workpiece.

Once the groove is complete, switch off the tool and hold it steady until the diamond cut-off wheel comes to a stop. Never attempt to remove the cutting disc from the cut while the wheel is in motion otherwise kickback may occur.

Remove the machine from the cut. Put the machine down on its side.

You can remove the remaining strip between the two chases with the chase extraction chisel provided.

Grooves of greater depth cannot be cut into hard material (e.g. cement) in one movement.

## 8. Maintenance, Cleaning

Significantly reduced work progress and increased feed force are signs for blunt diamond cut-off wheels. Sharpen blunt diamond cut-off wheels by carrying out short cuts into abrasive materials such as sand-lime brick.

It is possible that particles deposit inside the power tool during operation. This impairs the cooling of the power tool.

The power tool should be cleaned regularly, often and thoroughly through all front and rear air vents using a vacuum cleaner. Prior to this operation, separate the power tool from the power source and wear protective goggles and a dust mask.

## 9. Overload protection

### 9.1 Safety clutch

There is an automatic safety coupling built-in to the gears of the wall chaser. This protects the operator from the high torque that may, for example, occur if the diamond cut-off wheel is canted during work. The safety coupling protects and at the same time takes the strain off the motor and the gears of the machine. When the safety coupling engages, immediately switch the motor off (do not allow the coupling to drag!),

#### 9.2 Electronic overload indicator

The electronic signal indicator (5) is on Load of the machine is too high! Reduce the feed pressure until the electronic signal indicator goes off.

## 10. Troubleshooting

electronic signal indicator (5) flashes. The restart protection is active. If the mains plug is inserted with the machine switched on or if the power supply is restored following an interruption, the machine does not start up. Switch the machine off and back on again.

The machine does not start. The

#### 11. Accessories

Use only genuine Metabo accessories.

Use only accessories that fulfil the requirements and specifications listed in these operating instructions.

#### Metabo diamond cut-off wheels:

Ø 125 mm, laser-welded, suitable for dry cutting, bore = 22.2 mm, for wall chaser MFE 40

Area of use

Order number

for hard and medium-hard materials (e.g. concrete, including reinforced concrete) 6.24541

for abrasive materials (e.g. abrasive cement, sandstone, sand-lime brick, aerated concrete and similar) 6.24641

#### Metabo cutting wheels:

Diamond cutting wheel Dia FS2 UP 6.28298 Diamond cutting wheel Dia FS3 UP 6.28299

See www.metabo.com or the catalogue for a complete range of accessories.

## 12. Repairs



Repairs to power tools must only be carried out by qualified electricians!

A defective mains cable must be replaced only with a special, original mains cable from Metabo available from the Metabo service.

Contact your local Metabo representative if you have Metabo power tools requiring repairs. See www.metabo.com for addresses.

You can download a list of spare parts from www.metabo.com.

#### 13. Environmental Protection

The generated grinding dust may contain harmful substances. Do not dispose with household trash; dispose of properly at a collection point for hazardous waste.

Observe the national regulations on environmentally compatible disposal and on the recycling of disused tools, packaging and accessories.

Only for EU countries: never dispose of power tools in your household waste!
According to European Directive 2012/19/EU on Waste from Electric and Electronic Equipment and implementation in national law, used power tools must be collected separately and recycled in an environmentally-friendly manner.

## 14. Technical Specifications

Explanatory notes on the specifications on page 4. Subject to change in accordance with technical progress.

D = Diameter of the diamond cut-off wheels

B = Groove width options

T = Adjustable depth of cut

P<sub>1</sub> = Rated input power

P<sub>2</sub> = Power output n = No-load speed

m = Weight without mains cable

Measured values determined in conformity with EN 60745.

Machine in protection class II

~ AC power

The technical specifications quoted are subject to tolerances (in compliance with the relevant valid standards).

Emission values

These values make it possible to assess the emissions from the power tool and to compare different power tools. The actual load may be higher or lower depending on the operating conditions, the condition of the power tool or the accessories. Please allow for breaks and periods when the load is lower for assessment purposes. Arrange protective measures for the user, such as organisational measures based on the adjusted estimates.

<u>Vibration total value</u> (vector sum of three directions) determined in accordance with EN 60745:

a<sub>h</sub> = vibration emission value K<sub>h</sub> = uncertainty (vibration)

Typical A-effective perceived sound levels:

L<sub>pa</sub> = Sound-pressure level L<sub>WΔ</sub> = Acoustic power level

 $K_{pA}$ ,  $K_{WA}$ = Uncertainty

The noise level can exceed 80 dB(A) during operation.



Wear ear protectors!