

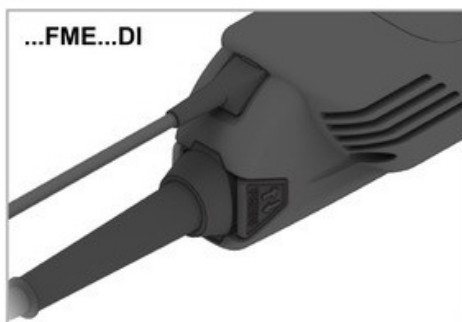
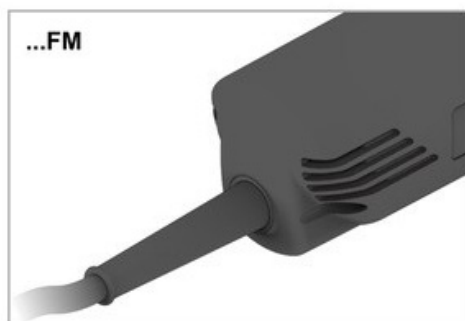
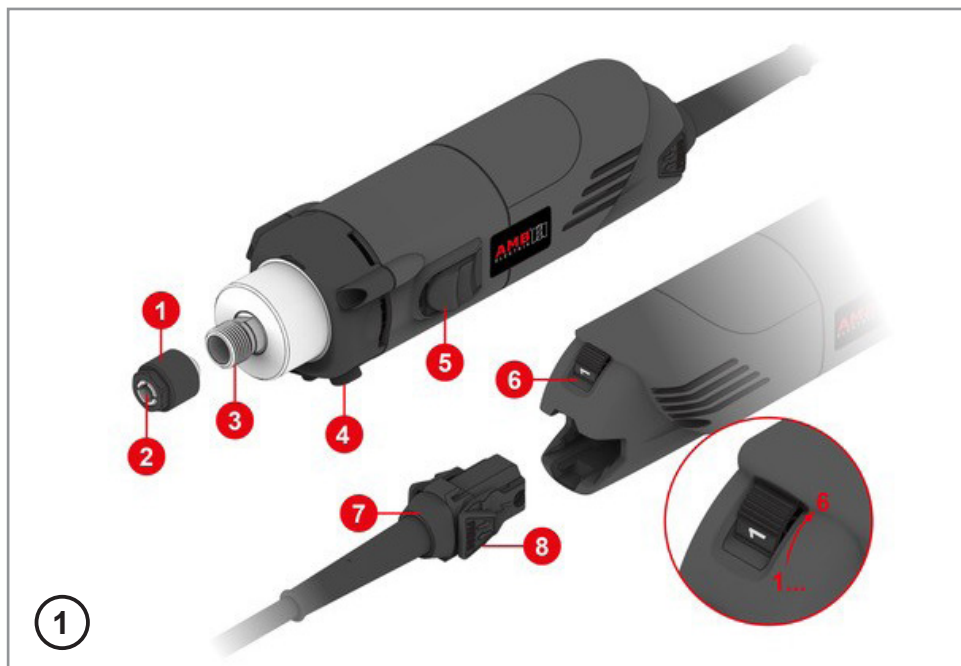


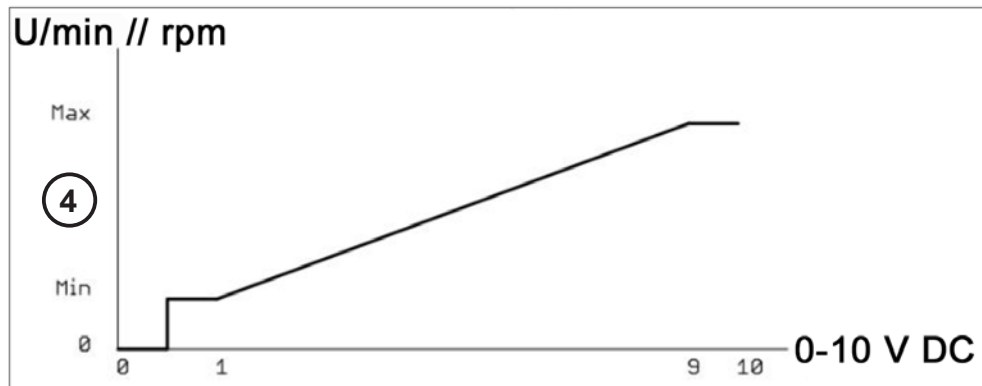
<https://www.amb-elektrik.de/downloads>

530 FME	(230V)
800 FME	(230V)
800 FME-Q	(230V)
1050 FME-1	(230V)
1050 FME-P	(230V)
1400 FME-P	(230V)
1050 FME-1 DI	(230V)
1050 FME-P DI	(230V)
1400 FME-P DI	(230V)
5300 FM	(110V)
8000 FME-Q	(110V)
8000 FME-Q DI	(110V)



Operating Instructions Milling and Grinding Motor





1. Symbols and abbreviations

The symbols used in these instructions and, if applicable, on the power tool are intended to draw your attention to possible hazards when working with this power tool. You must understand the meaning of the symbols/instructions and act accordingly in order to use it more efficiently and safely. The safety warnings, notes and symbols are not a substitute for accident prevention measures in accordance with regulations.

Symbole

Note particularly important for safety. Always follow them, otherwise serious injury may result.



Warning of dangerous electrical voltage = unplug from mains



Warning of hot surface



For a potentially hazardous situation which, if not avoided, could result in personal injury or property damage



Wear hearing protection



Wear protective gloves



Application instructions and other useful information

2. Safety instructions

Read the general safety instructions (in the separately enclosed booklet) and instructions. Failure to comply with the safety notes and instructions may cause electric shock, fire and/or serious injury.

Residual risks: Although the operating instructions for our power tools contain detailed instructions on how to work safely with the tools, every power tool involves certain residual risks that cannot be completely ruled out even with protective devices.

Therefore, always operate power tools with the necessary care.

Intended use

The built-in milling and grinding motor is intended for milling and grinding work on wood, plastic and aluminium components. The unit has no restart protection and may therefore only be operated in a fixed installation (e.g. CNC gantry or milling stand) according to EU regulation. Hand-held or hand-guided use is therefore not permitted under EU law.

Requirements for the user

The unit may only be operated, serviced and maintained by authorised, instructed personnel. This person must have read and understood the operating instructions and the safety instructions.

3. Device description

1	1	Union nut
	2	Collet chuck
	3	Spindle
	4	Spindle lock
	5	On/off switch
	6	Speed control dial
	7	Mains cable module
	8	Mains cable module lock

Unit versions

2	... FM	Milling motor without speed control
	... FME	Milling motor with speed control (rotary wheel on housing)
	... FME...	Milling motor with plug-in mains cable module
	... FME... DI	DI Milling motor with external speed control

4. Commissioning



Before using the appliance, check whether the mains voltage and mains frequency indicated on the type plate correspond to the data of your mains supply. If necessary, plug the mains cable module into the appliance.



The power tool is double insulated; for this reason, an earth conductor is unnecessary. Furthermore, the appliance is radio and TV interference-free as well as interference-resistant.

Mains cable

If the mains cable is damaged during work, unplug it immediately. Damaged mains cables must not be used. They must be replaced immediately by a specialist.

Mains cable module

Mains cable module with patent quick-release fastener. Plug the mains cable module 7 into the socket provided at the end of the housing. The plug must click into place. Only use the mains cable module for AMB power tools (Kress power tools up to year of manufacture 2018). Do not attempt to operate other tools with it. Damaged mains cable modules must not be used. They must be replaced immediately with a new mains cable module. To remove the mains cable, press the two locking buttons 8 and pull the cable module 7 out of the unit housing. Only use original AMB mains cable modules.

The following additional functions are integrated in all units with the type designation ...FME...:

Full-wave electronics

The speed at no-load and load is kept constant and ensures uniform cutting performance.

Additional function overheating protection

In case of impermissible overheating, the unit automatically reduces the speed until the unit is sufficiently **abcooled**.

Additional function soft start

The start-up current limitation reduces the inrush current. As a result, the motor does not abruptly rev up to the preselected speed. This can extend the service life of the machine.

Electronic overload protection

If the load on the motor is too high, the integrated motor monitoring reduces the speed of the milling motor. The machine must then be unloaded - it is best to remove it briefly from the workpiece at - so that full power is available again. As a remedy, reduce the feed rate in the programme. If these indications are ignored, the machine automatically switches to snooze mode. Here the motor rotates at low speed so that the built-in fan can dissipate the great heat and protect the motor from damage.

Clamping the tools

1

I The collet must engage in the union nut with an audible click.

3

II The spindle 3 of the milling and grinding motor is equipped with a ground collet 2 to hold the tools. A spindle lock makes it easier to tighten and loosen the union nut 1. If the tools are clamped too tightly, it is advisable to apply a second open-end spanner directly to the spanner flat of the collet chuck 3 instead of the spindle lock. After milling operation, the tool and the union nut may be hot.

III To clamp the tool, lock the spindle 3 by pressing in the locking button 4.

IV Use an open-end spanner to tighten the union nut 1. When unclamping the tool, the spindle 3 is again locked. Use the open-end spanner to loosen the union nut 1 with one turn. After further turns, the tool can be removed.



After inserting the tool, carry out a test run at maximum speed and make sure that no persons are within reach of the rotating tool. Damaged tools usually break during this test period.

Switching on/off

1

Push the on/off switch 5 forward to switch on the tool. Press the tilted front edge of the on/off switch 5 to switch off the machine.



After switching off, the tool continues to run for a short time. The milling motor may only be dismantled or a tool change carried out at absolute standstill.

Preselecting the speed (option)

On units with setting wheel 6, the speed can be set with the setting wheel 6 depending on the range of application.



In general, the speed should be set so that chips are produced during milling and not just dust. If necessary, reduce the speed until visible chips form. Please observe the speed specifications of the milling cutter manufacturer when using the respective tool.

On units with control cable instead of the setting wheel, the speed can be set with an analogue 0-10 V DC signal depending on the range of application.

Please note: Even if the motor is switched on at the on/off switch, it will not start until it receives a signal from the control at the gantry.

Once the motor is connected to the gantry, the speed can be controlled continuously between the minimum and maximum speed of the unit from the gantry.



The characteristic curve of the control voltage over the speed follows the path as shown.

The detailed settings you need to make depend on the portal or the software used.

Please contact the portal manufacturer directly for further information.

Changing tools



Switch the machine off at the on/off switch before making machine settings or changing accessories or putting the machine away. This precaution prevents the machine from starting accidentally.



Wear protective gloves when changing tools. The insert tool may heat up during prolonged operations. The cutting edges of the tools used are sharp.

Changing collets



Loosen the union nut 1 and remove the tool with suitable cut protection (caution: risk of injury).

Standard collet

Unscrew the union nut 1 with the collet 2. Press the collet 2 together at the through slot with your thumb and index finger. Tilt the collet 2 down and remove it from the union nut 1.

Collet ER...

Unscrew the union nut 1 with the collet 2. First tilt the collet 2 in the direction of the marking on the union nut 1 and then out sideways. Caution! Slightly unscrew union nut 1 to protect the thread on spindle 3, but never tighten it if no tool is used. Collet 2 could be compressed too much and damaged in the process.

For more tips and tricks, see the AMB-ELEKTRIK YouTube channel



Running-in of spindle main bearings



During the production process of the bearings, a precisely defined amount of lubricant is metered into the cage of the bearing. This "batch" is distributed in the bearing during the so-called running-in phase. In the factory, the motors run for about two minutes for the high-current test. However, this is usually not enough to distribute the grease cleanly.

For the models with ER collet chuck system, there is also the fact that the additional seal also has to apply itself to the collet chuck - i.e. run in.



In concrete terms, this means that each motor heats up to about 60-80°C at the factory and during the first run at the end user.

II Rarely, heating up to 95°C can be observed (a slight smell of plastic may even be noticeable). As soon as the motor has cooled down again, the temperature should settle down to 45-60°C.

5. Technical data

type	530 FME	5300 FME	800 FME	800 FME-Q	8000 FME-Q
voltage	230	110	230	230	110
frequency Hertz	50-60	50-60	50-60	50-60	50-60
power consumption amp	2.4	5.0	3.6	3.6	7.3
Input power watts	530	530	800	800	800
Power output watts	270	270	420	420	420
idle speed min.	29,000	29,000	10-29,000	10-29,000	10-29,000
speed at nominal load	15,000	15,000	25,000	25,000	25,000
weight kg	1.3	1.3	1.4	1.4	1.4
protection class	II	II	II	II	II
collet holder	standard	standard	standard	standard	standard

type	1050 FME-1	1050 FME-P	1400 FME-P..
voltage	230	230	230
frequency Hertz	50-60	50-60	50-60
power consumption amp	4,8	4,8	6,7
Input power watts	1050	1050	1400
Power output watts	600	600	800
idle speed min.	5-25.000	5-25.000	5-25.000
speed at nominal load	24.800	24.800	24.800
weight kg	1,7	1,7	1,7
protection class	II	II	II
collet holder	standard	ER16	ER16 / ER20

type	1050 FME-1 DI	1050 FME-P DI	1400 FME-P DI..
voltage	230	230	230
frequency Hertz	50-60	50-60	50-60
power consumption amp	4,8	4,8	6,7
Input power watts	1050	1050	1400
Power output watts	600	600	800
idle speed min.	3,5-25.000	3,5-25.000	3,5-25.000
speed at nominal load	24.800	24.800	24.800
weight kg	1,7	1,7	1,7
protection class	II	II	II
collet holder	standard	ER16	ER16 / ER20

6. Maintenance, service and disposal

Maintenance and cleaning

Unplug the power tool before carrying out any work on it.

Always keep the power tool and the ventilation slots clean.

Regularly wipe down plastic parts accessible from the outside with a cloth without detergent.

Blow the dust out of the fan after each work. This increases the service life of your appliance.

Replacing carbon brushes

We recommend having worn carbon brushes replaced by an authorised customer service centre.

Disposal

Raw material recycling instead of waste disposal. The appliance, accessories and packaging should be recycled in an environmentally friendly manner. Plastic parts are marked for recycling by type. Do not dispose of power tools in household waste. According to the European Directive on Waste Electrical and Electronic Equipment and its implementation in national law, used power tools must be collected separately and recycled in an environmentally sound manner.

7. Noise and vibration

Noise

The A-weighted noise level of the unit is typically:

Sound pressure level (LpA) 78 dB(A)

Sound power level (LwA) 89 dB(A)



Measurement uncertainty K 3 dB

The noise level when working can exceed 85 dB(A).

Vibration

Triaxial vibration emission value

Milling m/s^2 5.0

Uncertainty of measurement K m/s^2 1.5

The vibration level given in these instructions has been measured according to a measurement method standardised in EN60745 and can be used for tool comparison.

The vibration level may vary according to the use of the power tool and may in some cases be higher than the value given in these instructions. The vibration exposure could be underestimated if the power tool is regularly used in such a way.

Note: For an accurate estimation of the vibration exposure during a specific working period, the times when the tool is switched off or running but not actually in use should also be taken into account.

This can significantly reduce the vibration exposure over the entire working period.

8. Warranty

1. this power tool has been carefully inspected, tested and has been subjected to a strict quality control.

2. we guarantee to remedy free of charge any defects in the power tool which have occurred within 24 months from the date of sale to the end user and which are due to a material or manufacturing defect. For some countries, individual special regulations apply with regard to the warranty conditions. We reserve the right to repair defective parts or replace them with new ones. Replaced parts become our property.

3. Improper use or treatment as well as the opening of the device by unauthorised repair centres will void the warranty. Excluded from the warranty are: Mechanical damage due to falling etc., damage due to ingress of water or other liquids, cut and damaged cables, motor damage and mechanical damage due to improper overloading, wearing parts such as carbon brushes, motors, mains cables, collets, accessories in general (cutters).

For details of the various appliance wearing parts, please visit www.amb-elektrik.de or contact one of our service centres.

4. Warranty claims can only be accepted if defects (including transport damage) are reported immediately. The guarantee period is not extended by the performance of guarantee services.

5. Should you ever make a claim under the guarantee, please send the original purchase receipt together with the appliance to us or to the responsible service centre.

6. The warranty obligations assumed by us shall not affect any further claims of the claims of the buyer - in particular the right to rescission, price reduction or the or assertion of claims for damages are excluded.

7. However, the buyer shall be entitled to choose between a reduction of the purchase price or cancellation of the contract if we are unable to remedy any defects within a reasonable period of time.

8. Claims for damages pursuant to §§ 463, 480 para. 2, 635 BGB (German Civil Code) due to the absence of warranted characteristics shall not be excluded.

9. The provisions of points 7 and 8 shall only apply to the Federal Republic of Germany.



(DE) CE Konformitätserklärung

Wir erklären in alleiniger Verantwortung, dass dieses Produkt mit den folgenden Normen oder normativen Dokumenten übereinstimmt: siehe CE
Technische Unterlagen bei: siehe TF

(EN) CE Declaration of conformity

We declare under our sole responsibility that this product is in conformity with the following standards or standardization documents: see CE
Technical file at: see TF

(FR) CE Déclaration de conformité

Nous déclarons sous notre propre responsabilité que ce produit est en conformité avec les normes ou documents normalisés: voir ce CE
Dossier technique auprès de: voirce TF

(IT) CE Dichiarazione di conformità

Assumendone la piena responsabilità, dichiariamo che il dotto è conforme alle seguenti normative ed ai relativi documenti: vedere CE
Facicolo tecnico presso: vedere TF

(ES) CE Declaracion de conformidad

Declaramos bajo nuestra sola responsabilidad que este producto está en conformidad con las normas o documentos normalizados siguientes: ver CE
Expediente técnico en: TF

(PT) Declaração de conformidade CE

Declaramos à responsabilidade exclusiva que este produto está em conformidade com as seguintes normas ou documentos normativos: Veja CE
Processo técnico em: veja TF

(NL) CE Konformiteitsverklaring

Wij verklaren op eigen verantwoording, dat dit produkt voldoet aan de volgende normen of normatieve documenten: zie CE
Technisch dossier bij: TF

(SE) CE Konformitetsförklaringen

Vi intygar och ansvarar för att denna produkt överensstämmer med följande normer och dokument: se CE
Teknisk tillverkningsdokumentation finns hos: se TF

(FI) CE Todistus standardin mukaisuudesta

Todistamme täten ja vastaamme yksin siitä, että tämä tuote on alluueteltujen standardien ja sardoimisasiakirjojen vaatimusten mukainen: katso CE
Tekninen tiedosto kohdasta: katso TF

(GR) CE Δήλωση συμδατικότητα

Δηλώνουμε υπευθύνως ότι το προϊόν αυτό είναι κατασκευασμένο σύμφωνα με τους εξής κανονισμούς ή κατασκευαστικές συστάσεις: βλέπε CE
Τεχνικός φάκελος απο: βλέπε TF

(HU) CE-Egyenlőségnyilatkozat

Teljes felelősségünkkel igazoljuk, hogy ez a termék az alábbi normáknak vagy az ezen normákat alátámasztó dokumentumoknak megfelel: lásd a CE-nél
Technikai dokumentáció: lásd TF-nél

(PL) Oświadczenie o zgodności norma bezpieczeństwa CE

Niniejszym oświadczamy na nasza wyznaczona odpowiedzialność, że niniejszy produkt spełnia wymogi następujących norm lub dokumentów normatywnych: zob. CE
Dokumentacja techniczna: zob. TF

(RO) Declarație de conformitate

Declarăm pe propria răspundere că acest produs este în conformitate cu următoarele standarde sau alte documente normative: vezi CE
Documentație tehnică la: vezi TF

(BG) CE декларация за съвместимост

На собствена отговорност декларираме, че този продукт съответства на следните норми или нормативни документи: виж CE
Подробни технически описания ири: виж TF

(RU) Сертификат соответствия CE

Мы заявляем со всей ответственностью, что данное изделие соответствует нормам следующих нормативных документов: смотри CE
Техническая документация у: смотри TF

(CZ) CE Prohlášení o shodě

Prohlašujeme, že výrobce posoudil shodu výrobku s technickými požadavky na el.bezpečnost a EMC a jsou v souladu s normami: viz CE
Technická dokumentace u: viz TF

(SK) CE deklarácia o zhode

deklarujeme, že tento produkt je v súlade s nasledujúcimi štandardmi dokumentov, vid' CE
Súbor technickej dokumentácie sa nachádzajú na adrese: vid' TF

CE: EN 60745-1, EN 60745-2-3
EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3
EN 62233
2006/42/EG, 2011/65/EU, 2014/30/EU, 2014/35/EU

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