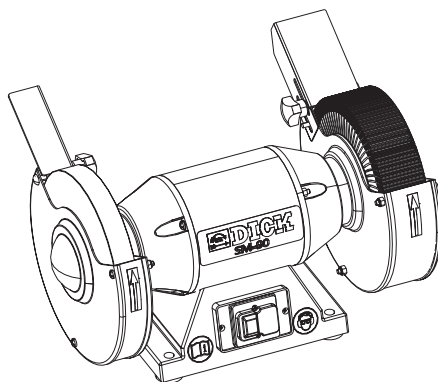
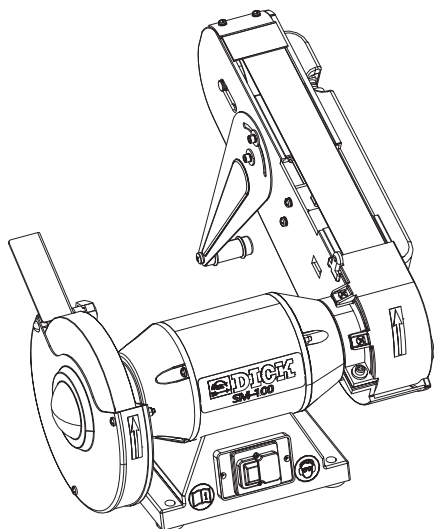




DICK

Traditionsmarke der Profis



Operating Instructions (Translation)

Belt grinding machines SM-100/-100W

Prod. no. 9 8070 000 and 6 8070 000
Prod. no. 9 8070 001

1~230 V – 50 Hz
1~115 V – 60 Hz

Lamellar grinding machine SM-90

Prod. no. 9 8080 000

1~230 V – 50 Hz

Manufacturer and customer service address

Friedr. Dick GmbH & Co. KG
Postfach 1173
73777 Deizisau
GERMANY



Feel free to visit the Friedr. Dick YouTube channel:
<https://www.youtube.com/user/FriedrDick/videos>
The videos show the operation of the Friedr. Dick machines.

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1 User Information

1.1 General

These operating instructions are part of the

- Belt Grinding Machines SM-100/-100W,
- Lamellar Grinding Machine SM-90

with the serial numbers indicated on the type plates (the type plate is located on the back of the machine).

These operating instructions must be kept within reach near the machine at all times. They contain important information for the safe, proper and economical use of the machine.

These operating instructions must have been read and understood by each person before this person may carry out the following work using the machine:

- Putting into operation
- Operation
- Servicing

NOTE



Avoid dangers and lower repair costs:

⇒ The operating instructions must be followed during all work on and with the machine.

The technical information and instructions for use in this operating instructions are up-to-date and correct on delivery of the machine. Friedr. Dick GmbH & Co. KG reserves the right to make further design developments and changes.

All directional information refers to the view of the operator.

1.2 Symbols and conventions

1.2.1 Instructions

Sequences of actions, which must be carried out in the given order are specified as a numbered list:

1. Instruction step 1.
2. Instruction step 2.

1.2.2 Lists

Lists without a particular order that have to be followed are shown as a list with bullet points or indent markings:

- Property A
 - Detail 1
 - Detail 2
- Property B

1.2.3 Courses of action

The courses of action to be taken to avoid dangers or the required further procedure are marked with an arrow or indent markings:

- ⇒ Procedure 1
 - Detail 1
 - Detail 2
- ⇒ Procedure 2

2 Scope of Supply

2.1 Package contents

- Machine
- Operating instructions
- Set of tools
- Polishing compound
- Support foot SM-100/-100W
- Grinding belt 1020 × 20 mm for SM-100W
- Declaration of Conformity

2.2 Unpacking the machine

1. Unpack the machine immediately after purchase.
2. Check whether the machine has suffered any defects or damage during transport.
 - ⇒ Keep the original box for any necessary returns in order to prevent transport damage.
3. Check the package contents to ensure that the delivery is complete.
 - ⇒ Report missing parts/defects to your specialist dealer immediately. Complaints made at a later date can no longer be recognised.
 - ⇒ Keep the invoice during the warranty period as proof of purchase.
4. In case of complaints, write to your specialist dealer, enclose the original invoice and a precise description of the defects.
5. Before returning the product, wait for the specialist dealer's reply in order to initiate the necessary steps.
 - ⇒ Friedr. Dick GmbH & Co. KG does not pay any transport costs for returns that have not been explicitly approved.

ATTENTION



DAMAGE IN CASE OF INCORRECT CONNECTION DATA

If the machine's connection data do not match those on site, the machine may be damaged.

- ⇒ Verify the connection data before putting it into operation for the first time (see Type plate).
- ⇒ Do not put the machine into operation if the connection values on site are higher.

3 Environmental Protection

NOTE



DISPOSAL

Used machines, replacement parts and packaging are made of recyclable materials.



⇒ The above materials must be disposed of (properly and in an environmentally friendly manner) on your own responsibility and in accordance with the legal regulations applicable in the relevant countries.

4 Safety

4.1 Meaning of the warnings

4.1.1 Marking of risks of injury

In these operating instructions, signal words such as **DANGER**, **WARNING** or **ATTENTION** indicate the gradation of a possible risk of injury.

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or slight injury.

4.1.2 Marking of property damage

ATTENTION indicates a potentially hazardous situation which, if not avoided, may result in property damage.

4.1.3 Marking of additional information

NOTE provides additional information and helpful tips for the safe and efficient use of the device.

4.1.4 Symbols for the safety instructions

Important or particularly useful information is highlighted using symbols so that it is readily recognised:



WARNING – indicates a warning, which must always be noted and followed.



INSTRUCTION – indicates instructions, which must be complied with for safety reasons.



NOTE, TIP – indicates general information containing user tips and useful information.



Electric shock – warns of an electric shock that may cause serious injury or even death.



Oxidising – warns of the outbreak of a fire that may lead to severe burns or even death.



Explosion – warns of an explosion that may lead to serious injuries or even death.



Read operating instructions – indicates that the operating instructions must be observed, as failure to do so may result in serious injury or even death.



Disconnect the mains plug – indicates that the mains plug must be disconnected before any maintenance or similar work is carried out.



Protect from moisture – indicates that the machine as well as the abrasive material must be protected from water, moisture and wetness.



Wear protective equipment – indicates that personal protective equipment, e.g. hearing protection and safety goggles, protective gloves or a hair net, must be worn.



4.2 Intended use

- The machines SM-90 and SM-100/-100W are designed for commercial use only and are not intended for mobile use.
- The SM-90 and SM-100/-100W machines can be used for the hand-guided dry grinding (sharpening) and polishing of cleaned knives and hoof knives.
- The machines are designed exclusively for use in dry interiors at temperatures between +15 and +25 °C.
- Only original spare parts and accessories from Friedr. Dick GmbH & Co. KG may be used.

Any other or additional use is deemed to be not as intended and therefore misuse.

- The machine must not be used, among other things, for grinding materials that produce harmful or highly flammable dusts. These include, for example:
 - Aluminium
 - Magnesium
- The machine must not be switched on or operated in a potentially explosive atmosphere.

The owner is responsible for any damage caused by misuse.

4.3 General safety instructions

WARNING



RISK OF INJURY DUE TO INCORRECT HANDLING

The incorrect handling of the machine (e.g. reaching into abrasives or polishes) may cause blunt injuries, abrasions or burns.



The machine may only be used by people who

- ⇒ have read and understood the operating instructions,
- ⇒ are familiar with the start-up, operation and maintenance of machines and the applicable accident prevention regulations,
- ⇒ recognise the dangers that occur during work and work reliably,
- ⇒ The machine may not be operated outside the given power ranges (see 5.1 Technical data),
- ⇒ Only operate the machine only for its approved uses (see 4.2 Intended use).

WARNING**RISK OF FIRE IN UNSUITABLE ENVIRONMENTS**

Moisture or water can cause a short circuit or electric shock. Flying sparks can cause flammable liquids and gases to ignite and lead to burns.



The machine may not



- ⇒ be exposed to rain or salt water,
- ⇒ be used in a damp or wet environment,
- ⇒ be used near flammable liquids or gases.

WARNING**RISK OF INJURY IN UNSUITABLE ENVIRONMENTS**

Poor or excessively dark lighting or inadequate space to work may cause injuries.

Only use the machine

- ⇒ in good lighting conditions,
- ⇒ with adequate space to work.

4.4 Information signs on the machines

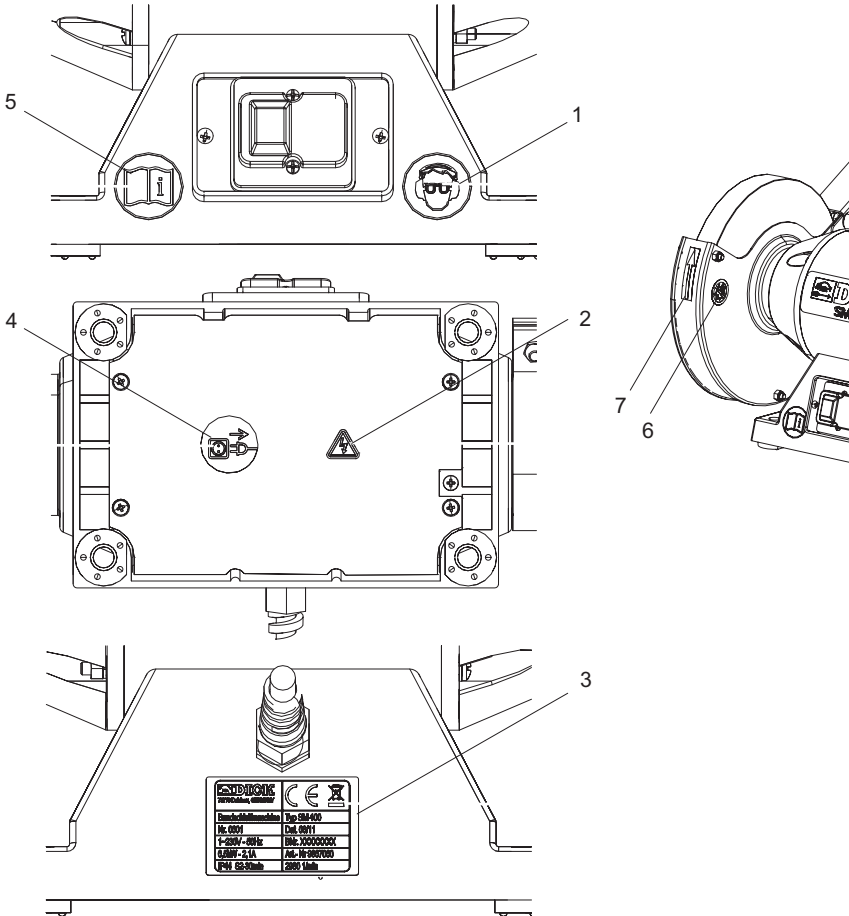


Figure 1 – Information on the machines

- [1-1]** Wear personal protective equipment (hearing protection, safety goggles, protective gloves) when working with the machine
- [1-2]** Danger! Electric shock
- [1-3]** Observe the type plate
- [1-4]** Remove the mains plug from the socket
- [1-5]** Read the operating instructions before starting up
- [1-6]** Protect against moisture
- [1-7]** Direction of rotation indicated on the cover

4.5 Covers

WARNING



RISK OF INJURY DUE TO MISSING COVERS

If the machine is operated without covers and/or protective plates, there is a risk of injury on the abrasive or the material to be ground.

⇒ Do not operate the machine until all covers and protective plates (see 5.4 Covers) are fitted to the polishing wheel, the grinding arm or the lamellar grinding wheel and are fully functional.

5 Design and function

5.1 Technical data

Motor and electrical equipment 1~230 V:

	SM-100/-100W	SM-90
Power	0.5 kW	0.37 kW
Voltage	1~230 V	1~230 V
Current intensity	2.1 A	1.7 A
Frequency	50 Hz	50 Hz
Degree of protection	IP 44	
Type of operation	S2 – 30 min	
Nominal speed at 50 Hz	2980 min ⁻¹	1450 min ⁻¹

Motor and electrical equipment 1~115 V:

	SM-100/-100W
Power	0.37 kW
Voltage	1~115 V
Current intensity	3.5 A
Frequency	60 Hz
Degree of protection	IP 44
Type of operation	S2 – 30 min
Nominal speed at 60 Hz	1725 min ⁻¹

Grinding belt/lamellar grinding wheel:

	SM-100/-100W	SM-90
Dimensions	1020 × 55 mm	∅ 200 × 50 × ∅ 16 mm
Cutting speed	$V_C = 18.7 \text{ m/s}$	$V_C = 15.5 \text{ m/s}$ with lamellar wheel ∅ 200 mm

Polishing wheel:

	SM-100/-100W	SM-90
Dimensions	ø 200 × 50 × ø 16 mm	
Cutting speed (polishing wheel ø 200 mm)	$V_C = 31.2 \text{ m/s}$	$V_C = 15.5 \text{ m/s}$

Machine dimensions / weights:

	SM-100/-100W	SM-90
Depth	500 mm ^{*)}	305 mm
Width	450 mm	435 mm
Height	330 mm ^{*)}	245 mm
Weight	14.7 kg	13.1 kg

^{*)} applies for SM-100 with 20° angle of attack of grinding wheel

Emissions sound pressure level:

Emissions sound pressure level L_{pA}	76 dB (A)
Uncertainty K_{pA}	3 dB (A)
Emissions sound pressure level L_{WA}	89 dB (A)
Uncertainty K_{pA}	3 dB (A)

Sound emissions to EN 11201 during the grinding of boning knives.

5.2 Design of belt grinding machines SM-100/-100W and lamellar grinding machine SM-90

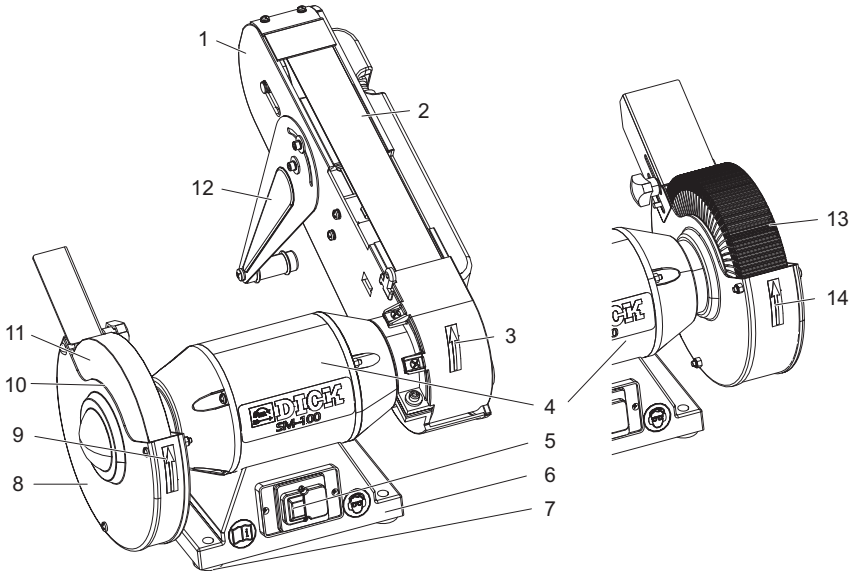


Figure 2 – Design of machines

- [2-1] Grinding arm SM-100/-100W
- [2-2] Grinding belt SM-100/-100W
- [2-3] Direction of rotation of grinding belt
- [2-4] Drive motor
- [2-5] On/off switch
- [2-6] Base
- [2-7] Machine feet
- [2-8] Polishing station
- [2-9] Direction of rotation of polishing wheel
- [2-10] Working area of polishing wheel
- [2-11] Polishing wheel
- [2-12] Support foot SM-100/-100W
- [2-13] Lamellar grinding wheel SM-90
- [2-14] Direction of rotation of lamellar grinding wheel

5.3 Function

The machines each consist of two function groups.

Belt grinding machines SM-100/-100W

The belt grinding machine consists of the grinding arm [2-1] with the grinding belt [2-2] and the polishing station [2-8] with the polishing wheel [2-11]. The polishing station is fitted on the left and the grinding arm is mounted on the right of the drive motor [2-4]. The grinding arm [2-1] is also secured by an adjustable support foot [2-12].

The SM-100W is a variant for farriers for grinding and polishing hoof knives.

Lamellar grinding machine SM-90

The lamellar grinding machine consists of the grinding station with the lamellar grinding wheel [2-13] and the polishing station [2-8] with the polishing wheel [2-11]. The polishing station is mounted on the left and the grinding station on the right of the drive motor [2-4].

For both machines

The drive motor sits on a base [2-6]. The on/off switch [2-5] and the four machine bases [2-7] are fixed to the base. The specified directions of rotation for the polishing wheel [2-9], the grinding belt [2-3] and the lamellar grinding wheel [2-14] are indicated by direction arrows on the machines.

5.4 Covers

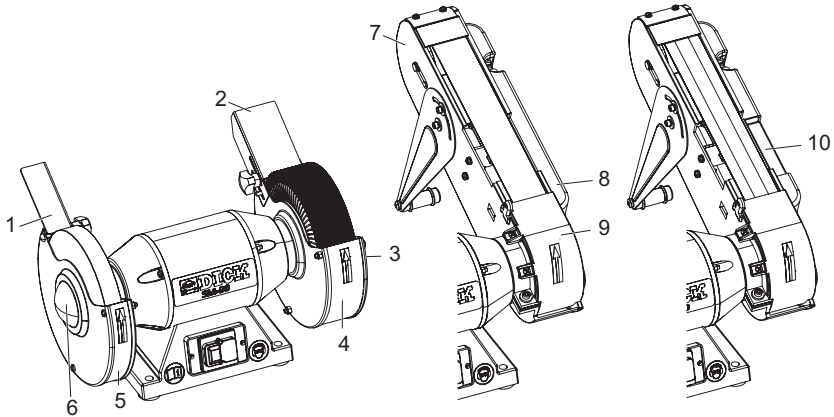


Figure 3 – Cover danger areas

- [3-1] Deflection plate, polishing wheel
- [3-2] Deflection plate, lamellar grinding wheel (SM-90)
- [3-3] Lid, lamellar grinding wheel (SM-90)
- [3-4] Guard, lamellar grinding wheel (SM-90)
- [3-5] Guard, polishing wheel
- [3-6] Lid, polishing wheel
- [3-7] Left side panel, grinding arm (SM-100/-100W)
- [3-8] Right side panel, grinding arm (SM-100/-100W)
- [3-9] Front cover, grinding belt (SM-100/-100W)
- [3-10] Protective plate (SM-100W)

6 Putting the Machine into Operation

6.1 Installing the machine

WARNING



RISK OF INJURY IN THE EVENT OF SLIPPING, FALLING OR TILTING MACHINE

A slipping, falling or tilting machine can fall on hands or feet and cause serious injury.

- ⇒ Only place the machine on a stable, load-bearing table or other base that can support the weight of the machine.
- ⇒ The stand must not be mobile or fitted with wheels or castors.
- ⇒ The machine must stand on a flat, non-slip surface and be bolted down.

WARNING



RISK OF INJURY DUE TO IMPROPER POSTURE

A posture in which you cannot keep your balance or have to bend can lead to falling onto or into the machine or to tipping over with the machine, resulting in serious injuries.

- ⇒ Always adjust the height of the base to the height of the operator to ensure work is carried out in an upright posture with a secure footing that allows balance to be maintained.
- ⇒ Keep the area around the machine free from other equipment and bulky objects.

NOTE



PROTECT THE POLISHING WHEEL AGAINST MOISTURE

The polishing wheel swells when wet and becomes unusable.

- ⇒ Store the polishing wheel in a dry place and protect it against moisture.

6.2 Installing the machines

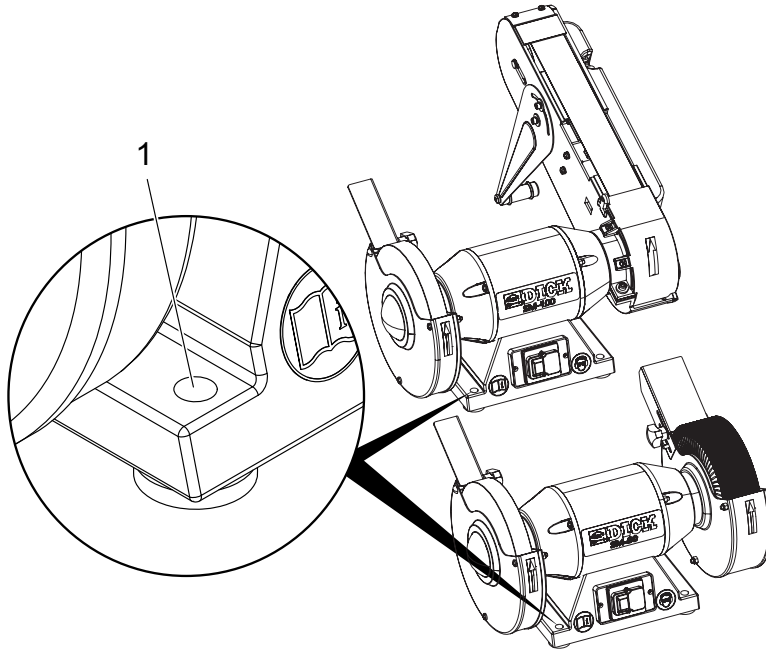


Figure 4 – Installation

[4-1] Mounting holes

The machines are firmly mounted to the surface with screws through the mounting holes [4-1] (\varnothing 10 mm).

6.3 Adjusting the machine

WARNING



RISK OF INJURY DUE TO ROTATING MACHINE PARTS

If the machine is accidentally switched on during adjustment work, there is a risk of injury due to rotating machine parts.

⇒ Disconnect the mains plug before carrying out any adjustment work.

6.3.1 Adjusting the deflection plate

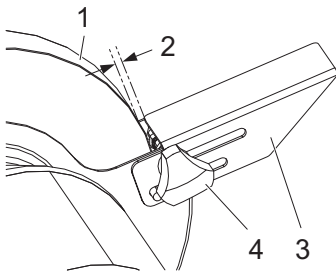
WARNING



RISK OF INJURY DUE TO ROTATING MACHINE PARTS

If there is no deflection plate or if it is too far away from the rotating machine parts, there is a risk of fingers being crushed and a risk of entanglement, e.g. of parts of clothing.

⇒ Check the distance between the deflection plate and the polishing wheel/lamellar grinding wheel each time before starting work and readjust if necessary.



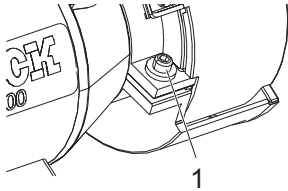
- [5-1] Polishing wheel
- [5-2] Distance (2 mm)
- [5-3] Deflection plate
- [5-4] Triangle grip screw

Figure 5 – Adjusting the deflection plate

Use the triangle grip screw [5-4] to adjust the distance [5-2] between the deflection plate [5-3] and the polishing wheel [5-1] to 2 mm.

6.3.2 Adjusting the grinding arm angle (SM-100/-100W)

The angle of the grinding arm can be adjusted before working with the machine. To adjust, proceed as follows:



[6-1] Adjusting screw

Figure 6 – Adjusting the grinding arm angle

1. Undo the adjusting screw [6-1].
2. Move the grinding arm into the required position.
3. Tighten the adjusting screw [6-1].

6.4 Installing the support foot (SM-100/-100W)

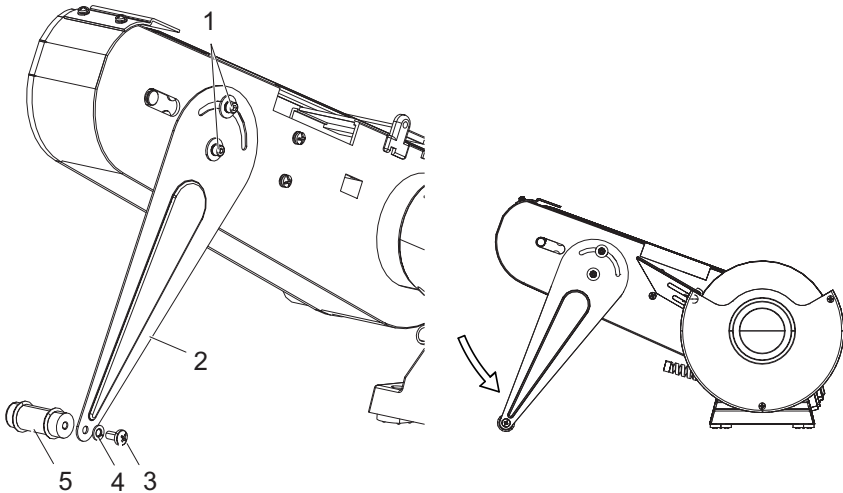


Figure 7 – Installing the support foot

- [7-1] Screws and washers
- [7-2] Support foot
- [7-3] Screw for retainer
- [7-4] Spring washer
- [7-5] Retainer

1. Screw the retainer element [7-5] with the screw [7-3] through the spring washer [7-4] to the support foot [7-2].
2. Attach the support foot to the left side panel of the grinding arm with the screws and washers [7-1], but do not tighten them yet.
3. Swing the support foot downwards (see arrow on right-side drawing), until the retainer sits on the surface.
4. Tighten the two screws [7-1].

6.5 Adjusting the belt run (SM-100/-100W)

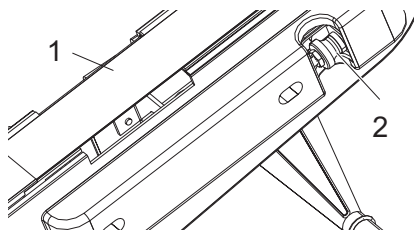
ATTENTION



DAMAGE CAUSED BY GRINDING BELT RUNNING ASKEW

A belt that runs askew will damage the housing.

⇒ Before manually switching on the machine, check the grinding belt for damage and correct run.

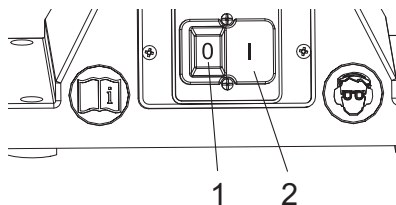


- [8-1] Grinding belt
[8-2] Adjusting screw

Figure 8 – Belt run

If necessary, use the adjusting screw [8-2] so that the belt [8-1] runs in the middle of the deflection pulley.

6.6 Controls on the machine



- [9-1] Off switch
(red, 0)
[9-2] On switch
(green, I)

Figure 9 – Switch

6.7 Switching on the grinding and honing machine

WARNING



RISK OF INJURY DUE TO DAMAGED OR INCORRECTLY MOUNTED MACHINE PARTS

Using the machine with damaged electric parts or power cables can cause injuries due to electric shocks or malfunctions. Damaged grinding belts or flaps can be flung away. Missing or damaged covers expose rotating parts and can cause injuries due to crushing and drawing in.

- ⇒ Before each use, check the machine for the proper installation and functioning of all covers/housings and for damage.
- ⇒ In addition, check the following parts for functioning and damage:
 - Grinding belt / lamellar grinding wheel,
 - Polishing wheel,
 - Power cable,
 - On/off switch.
- ⇒ Replace damaged parts before using the machine again.

CAUTION



RISK OF INJURY DUE TO THE POOR HEALTH OF THE OPERATOR

Lack of concentration, fatigue, illness, intoxication, mental disability and disabilities of the legs or arms result in an increased risk of injury.

- ⇒ People who work at the machine must be healthy and capable of concentrating.
- ⇒ Before starting work at the machine, ensure that you are in a stable position in which you can maintain your balance well.
- ⇒ When grinding and polishing, do not look away from the machine and the cutting tool.

CAUTION



RISK OF INJURY WHEN TOUCHING ABRASIVES

Touching the grinding belt, the lamellar grinding wheel, or the polishing wheel when the machine is switched on will cause injuries.

- ⇒ Do not touch any abrasives while the machine is switched on.
- ⇒ Do not use any objects to brake rotating abrasives.
- ⇒ When switched on, the machine must be inaccessible to persons not working at the machine, especially to children.
- ⇒ Before leaving the work area, switch off the machine and disconnect the mains plug from the socket.
- ⇒ Do not touch rotating machine parts.

WARNING



RISK OF INJURY DUE TO UNSUITABLE CLOTHING AND LACK OF PROTECTIVE EQUIPMENT



Rotating machine parts can catch unsuitable clothing or long hair and rotating abrasives can tear clothing. Flying abrasive particles can damage the eyes and loud machine noise can damage the ears. Sharp or hot cutting tools can cause injuries to the hands.

- ⇒ Wear tight-fitting clothing.
- ⇒ Remove jewellery.
- ⇒ Wear a hair net on long hair.
- ⇒ Wear safety goggles and hearing protection.
- ⇒ Wear suitable protective gloves.

Switch on the machine as follows:

1. Check the belt run (SM-100/-100W only – see 6.5 Adjusting the belt run (SM-100/-100W))
2. Insert the plug into the socket.
3. Press the green button **[9-2]** at the switch.
4. Compare the direction of rotation with the arrow on the cover.
 - ⇒ If the direction of rotation does not match the direction of the arrow, switch off the machine and contact the service department.
5. In case of deviations in the belt run, fine-tune it.

6.8 Switching off the machine

1. Press the red button [9-1] at the switch.
2. Wait until the grinding belt, the lamellar grinding wheel and the polishing wheel come to a standstill.

DANGER



RISK OF ELECTRIC SHOCK

If the plug is removed from the socket by pulling the power cable, the connection between the plug and cable can be damaged and is therefore a substantial source of danger.



⇒ When disconnecting the power connection, hold onto the plug, not the cable, and pull it out of the socket.

3. Pull the mains plug out of the socket.
4. Clean the machine.

WARNING



RISK OF INJURY DUE TO CARELESS SWITCHING ON

If the machine is left unattended after grinding work, there is a risk of the machine being switched on by unauthorised/careless persons.

- ⇒ After carrying out grinding work, never leave the machine unsupervised unless the mains plug has been disconnected.
- ⇒ Place the machine in a safe location to which unauthorised persons do not have access.

7 Operation

ATTENTION



DAMAGE TO ADHESIVES

Dirty cutting tools can irreparably damage the grinding belt, lamellar wheel and polishing wheel.

⇒ Only machine clean cutting tools.

CAUTION



RISK OF BURNS DUE TO HOT SURFACES

The surfaces can heat with long-term use. This can cause burns and damage the machine.

⇒ Switch off the machine after 30 minutes at the latest.

WARNING



RISK OF INJURY DUE TO INCORRECT POSITIONING

When the workpieces are positioned against the direction of rotation, the workpieces can be caught and flung from the machine.

⇒ Never apply cutting tools to the lamellar grinding wheel, grinding belt or polishing wheel against the direction of rotation.

NOTE



REDUCE EXCESSIVELY THICK CUTTING EDGE

If the cutting edge has become thicker as a result of frequent resharpening, reduce the cutting edge thickness by grinding the flat sides.

7.1 Machining cutting tools

NOTE



CUTTING TOOLS HEAT DURING THE GRINDING PROCESS

An over-heated cutting edge can anneal (loss of hardness), thereby becoming brittle and developing stress cracks.

- ⇒ Machine the cutting tool with very little pressure on the grinding belt.
- ⇒ After several grinding passes, cool down the cutting tool in a water bath.

7.1.1 Grinding cutting tools (SM-100/-100W)

Grinding zones

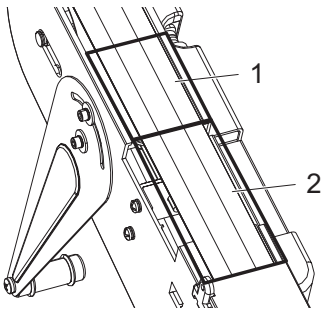


Figure 10 – Grinding zones

- [10-1] Grinding with underlay for straight grinding
- [10-2] Grinding on the free belt for convex grinding (also called crowned grinding)

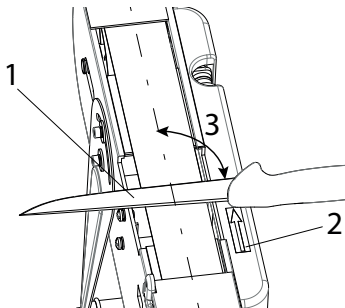
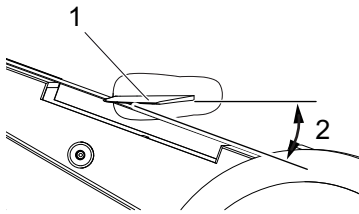


Figure 11 – Grinding a cutting tool

- [11-1] Cutting tool cutting edge
- [11-2] Direction of rotation of grinding belt
- [11-3] Right-angled alignment of the cutting tool with the grinding belt

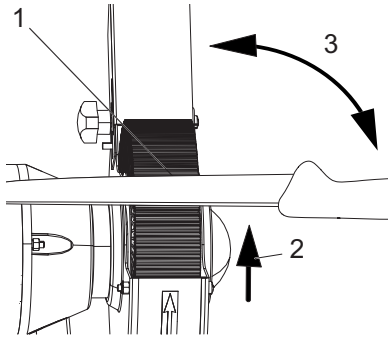


- [12-1]** Cutting tool blade
[12-2] Positioning angle for the cutting tool blade

Figure 12 – Grinding a cutting tool

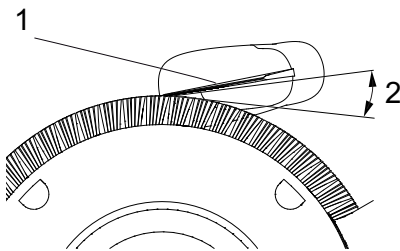
1. Clean the cutting tool before use.
2. Position the cutting tool on the machine so that the cutting edge **[11-1]** points in the direction of rotation of the grinding belt **[11-2]**.
3. Align the cutting tool horizontally so that it is positioned roughly perpendicular **[11-3]** to the grinding belt.
4. Position the cutting tool blade **[12-1]** on the grinding belt at an angle of approx. 15° **[12-2]**.
5. When grinding, grind the sides of the cutting tool alternately until a burr has formed over the entire cutting edge.

7.1.2 Grinding cutting tools (SM-90)



- [13-1] Cutting tool blade
- [13-2] Direction of rotation of the lamellar grinding wheel
- [13-3] Right-angled alignment of the cutting tool with the lamellar grinding wheel

Figure 13 – Grinding a cutting tool



- [14-1] Cutting tool blade
- [14-2] Positioning angle for the cutting tool blade

Figure 14 – Grinding a cutting tool

1. Clean the cutting tool before use.
2. Position the cutting tool on the machine so that the cutting tool cutting edge [13-1] points in the direction of rotation of the lamellar grinding wheel [13-2].
3. Align the cutting tool horizontally so that it is positioned roughly perpendicular [13-3] to the lamellar grinding wheel.
4. Position the cutting tool blade [14-1] on the lamellar grinding wheel at an angle of approx. 10° [14-2].
5. When grinding, grind the sides of the cutting tool alternately until a burr has formed over the entire cutting edge.

7.1.3 Polishing cutting tools (SM-90/-100)

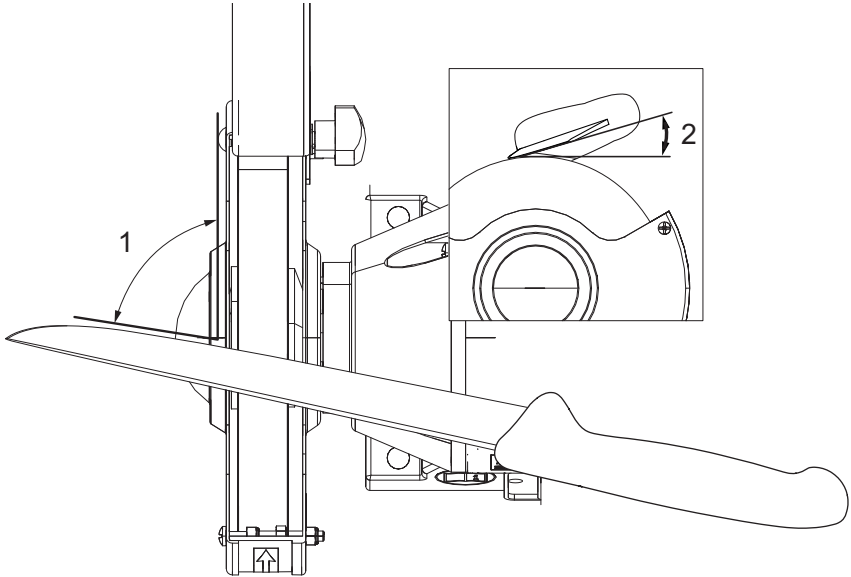


Figure 15 – Polishing a cutting tool

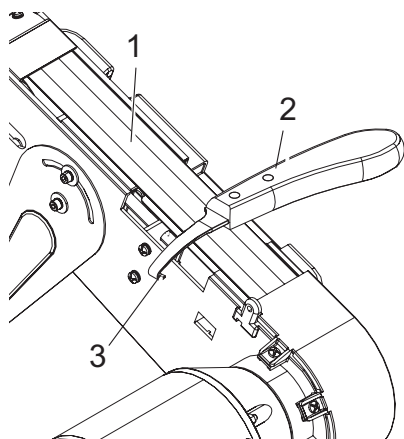
[15-1] Positioning angle slanted relative to the running direction (approx. 30° – 60°)

[15-2] Positioning angle to the polishing wheel

1. Hold the polishing compound against the running polishing wheel until the surface is covered.
2. Clean the cutting tool before use and rub it dry.
3. Position the cutting tool on the grinding machine so that the cutting edge points in the direction of rotation of the polishing wheel.
4. Position the cutting tool slanted relative to the running direction and polish the entire cutting edge.
 - ⇒ Position the cutting tool at the polishing wheel at a more obtuse angle than for grinding.
5. Polish the cutting tool alternately on both sides of the blade until the burr has been completely removed and the surface has reached the required polish.

7.2 Machining hoof knives

7.2.1 Grinding hoof knives (SM-100W)

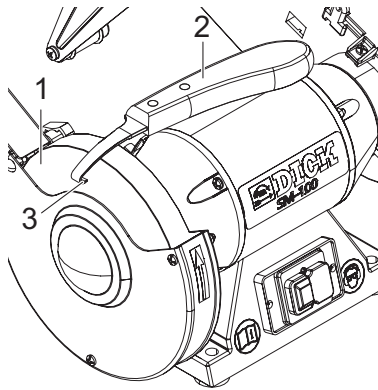


- [16-1] Narrow grinding belt
- [16-2] Right hoof knife
- [16-3] Groove of hoof knife

Figure 16 – Grinding a hoof knife

1. Clean the hoof knife before use.
2. Position the hoof knife on the machine so that the cutting edge points in the direction of rotation of the grinding belt [16-1]. The groove [16-3] points downwards.
 - ⇒ For sharpening, hold right hoof knives [16-2] with your right hand, left hoof knives with your left hand.
3. Align the hoof knife horizontally so that it is positioned roughly perpendicular to the grinding belt.
4. Position the hoof knife blade on the grinding belt at an angle of 20–25° [14-2].
5. When sharpening, grind the hoof knife blades from the beginning of the cutting edge to the beginning of the groove until a burr has formed over the entire cutting edge.
6. Turn over the hoof knife and align it parallel to the grinding belt.
7. Run the outside of the hoof knife along the cutting edge on the grinding belt, from the beginning of the cutting edge to the entire curve of the groove.

7.2.2 Polishing hoof knives (SM-100W)



- [17-1] Polishing wheel
- [17-2] Right hoof knife
- [17-3] Groove of hoof knife

Figure 17 – Polishing a hoof knife

1. Hold the polishing compound against the running polishing wheel [17-1] until the surface is covered.
2. Clean the hoof knife before use.
3. Position the hoof knife [17-2] with the groove [17-3] downwards on the grinding machine so that the cutting edge points in the direction of rotation of the polishing wheel.
4. Position the hoof knife slanted relative to the running direction and polish the entire cutting edge.
 - ⇒ Position the hoof knife at the polishing wheel at a more obtuse angle than for grinding.
5. Polish the hoof knife until the burr has been completely removed and the surface has reached the required polish.
6. Turn over the hoof knife and align it at a slant to the polishing wheel.
7. Run the outside of the hoof knife along the cutting edge on the polishing wheel, from the beginning of the cutting edge to the entire curve of the groove.

WARNING



RISK OF INJURY DUE TO THE GROOVE GETTING CAUGHT IN THE POLISHING WHEEL

Make sure that the groove does not touch the polishing wheel, as the groove can get caught, causing the hoof knife to be torn out of the user's hand.

8 Servicing and Maintenance

WARNING



RISK OF INJURIES DUE TO UNAUTHORISED OR CARELESS SWITCHING ON OR WRONG SPARE PARTS

If the machine is still connected to the mains during maintenance or repair work, there is a risk of it being switched on carelessly and causing injury. Incorrect spare parts can damage the machine or cause parts to be flung away, potentially causing serious injury.

- ⇒ Always disconnect the mains plug before carrying out any maintenance or repair work.
- ⇒ Exclusively use original spare parts from Friedr. Dick GmbH & Co. KG.

WARNING



RISK OF INJURIES DUE TO IMPROPER REPAIR WORK

Improper repairs may limit or alter the functioning and result in electric shock or serious injury.

- ⇒ Repair work on electric components may only be carried out by qualified electricians.
- ⇒ Do not carry out any unauthorised repairs or modifications.

NOTE



CHECK THAT THE PARTS HAVE BEEN FULLY INSTALLED

After finishing all repairs and servicing work, check that all dismantled parts have been completely and correctly installed, especially the covers.

8.1 Cleaning the machine

The machine must be cleaned after each work session.

1. Remove the covers [3-4], [3-5], [3-9].
2. Remove residual abraded material from the machine, e.g. using a brush.
3. Screw the covers on tightly again.

8.2 Changing the grinding belt (SM-100/-100W)

Change the grinding belt as soon as it has become blunt (interval approx. 30–50 grinding operations). To replace, proceed as follows:

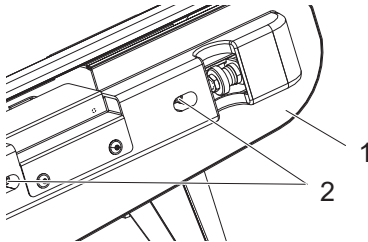


Figure 18 – Grinding arm

- [18-1] Right-hand side panel
- [18-2] Fastening screws

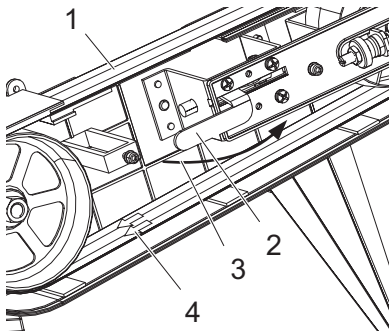


Figure 19 – Changing the grinding belt

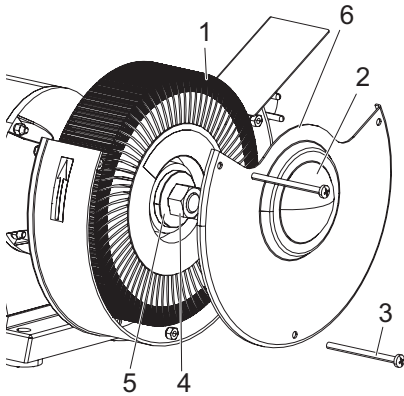
- [19-1] Grinding belt
- [19-2] Clamping lever
- [19-3] Direction: Relax the clamping lever
- [19-4] Direction of rotation indication on the grinding belt

Undo the fastening screws [18-2] of the right-hand side panel [18-1].

1. Push the side panel [18-1] to the rear and remove.
2. Push the clamping lever [19-2] in the direction of the arrow [19-3] to relax it.
3. Remove the grinding belt [19-1].
4. Put on the new grinding belt so that the direction of rotation indication on the grinding belt [19-4] matches the direction of rotation of the machine.
5. Mount the individual parts in reverse order.
6. Check the belt run and readjust if necessary.

8.3 Changing the lamellar grinding wheel (SM-90)

Change the lamellar grinding wheel as soon as its diameter has become smaller than that of the working area. To replace, proceed as follows:



- [20-1] Lamellar grinding wheel
- [20-2] Lid
- [20-3] Fastening screws
- [20-4] Lock nut
- [20-5] Flange cover
- [20-6] Working area

Figure 20 – Changing the lamellar grinding wheel

1. Undo the fastening screws [20-3] of the lid [20-2].
2. Remove the lid [20-2].
3. Unscrew the lock nut [20-4].
⇒ Attention: Left-hand thread!
4. Remove the flange cover [20-5].
5. Remove the old lamellar grinding wheel [20-1].
6. Position the new lamellar grinding wheel [20-1] so that the direction of rotation indicated on the disc matches the direction of rotation of the lamellar grinding machine.
7. Mount the individual parts in reverse order.

8.4 Changing the polishing wheel

The polishing wheel [21-5] must be changed if it is worn to below the working area [21-6]. To replace, proceed as follows:

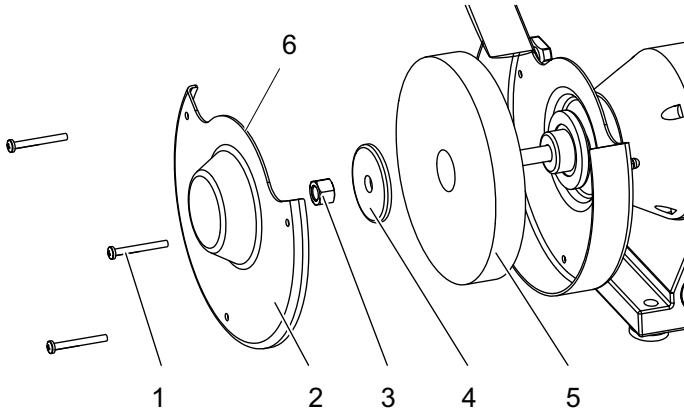


Figure 21 – Changing the polishing wheel

- [21-1] Fastening screws for lid
- [21-2] Lid
- [21-3] Mounting nut
- [21-4] Flange cover
- [21-5] Polishing wheel
- [21-6] Working area

1. Undo the fastening screws for the lid [21-1].
2. Remove the lid [21-2].
3. Undo the fastening screws [21-3] of the flange cover [21-4].
4. Remove the flange cover [21-4].
5. Replace the polishing wheel [21-5].
6. Mount the individual parts in reverse order.

ATTENTION



DAMAGE DUE TO EXCESSIVE TIGHTENING TORQUE

When tightening, apply a maximum tightening torque of 10 Nm, otherwise the polishing wheel will be damaged.

9 Spare parts

A spare parts drawing and a spare parts list are available at www.dick.de.

CAUTION



RISK OF INJURY DUE TO WRONG SPARE PARTS

The use of parts other than original spare parts poses an unpredictable risk that may result in injuries.

⇒ Exclusively use original spare parts from
Friedr. Dick GmbH & Co. KG.

ATTENTION



RISK OF INJURY DUE TO INCORRECT INSTALLATION

The improper installation of spare parts can cause injuries and damage to the device.

⇒ Repairs may only be carried out by trained specialist personnel.

When ordering spare parts, please select the parts to be replaced from the spare parts list available on the Internet, including the order number and name. Your order must include the following details:

1. Required quantities,
2. Order number,
3. Name,
4. Machine type, machine product number, serial number, year of manufacture (see type plate on the back of the machine).

Please send your order for spare parts to your specialist dealer.
You can find your specialist dealer at:

<https://www.dick.de/en/tools-for-chefs-and-butchers/dealer/>



10 EC Declaration of Conformity

Manufacturer

Friedr. Dick GmbH & Co. KG
Esslinger Str. 4–10
73779 Deizisau
GERMANY

We hereby declare in sole responsibility that the products

- Belt grinding machines – Type SM-100/-100W,
- Lamellar grinding machine – Type SM-90

with the serial numbers indicated on the type plates of the machines, conform to the following EC directives:

- EC Machinery Directive (2006/42/EC),
- EMC Directive (2014/30/EU),
- RoHS Directive (2011/65/EU).

European standards applied:

- EN ISO 12100:2010,
- EN 60204-1:2018,
- EN IEC 61000-3-2:2019,
- EN 61000-3-3:2013 + A1:2019,
- EN IEC 63000:2018,
- EN 55014-1:2017,
- EN 55014-2:2015.

The person authorised to compile technical documents at Friedr. Dick GmbH & Co. KG is Mr Steffen Uebele, Managing Director.