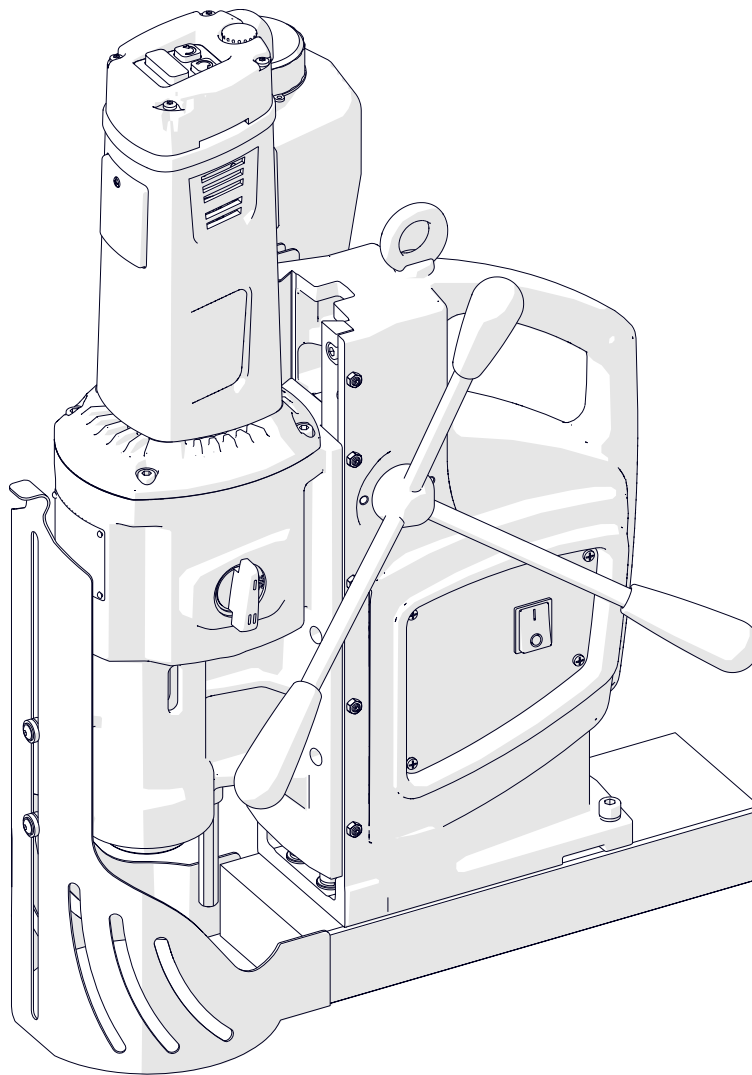




The tools of innovation.

OPERATOR'S MANUAL

DRILLING MACHINE WITH ELECTROMAGNETIC BASE D500XT



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1. GENERAL INFORMATION

1.1. Application

The D500XT is a drilling machine designed to drill holes with diameters of up to 130 mm (5.12") by using annular cutters. The machine can also drill holes with diameters of up to 47 mm (1.85") by using twist drill bits.

The machine can change the direction of rotation. This allows thread cutting by using a tap chuck.

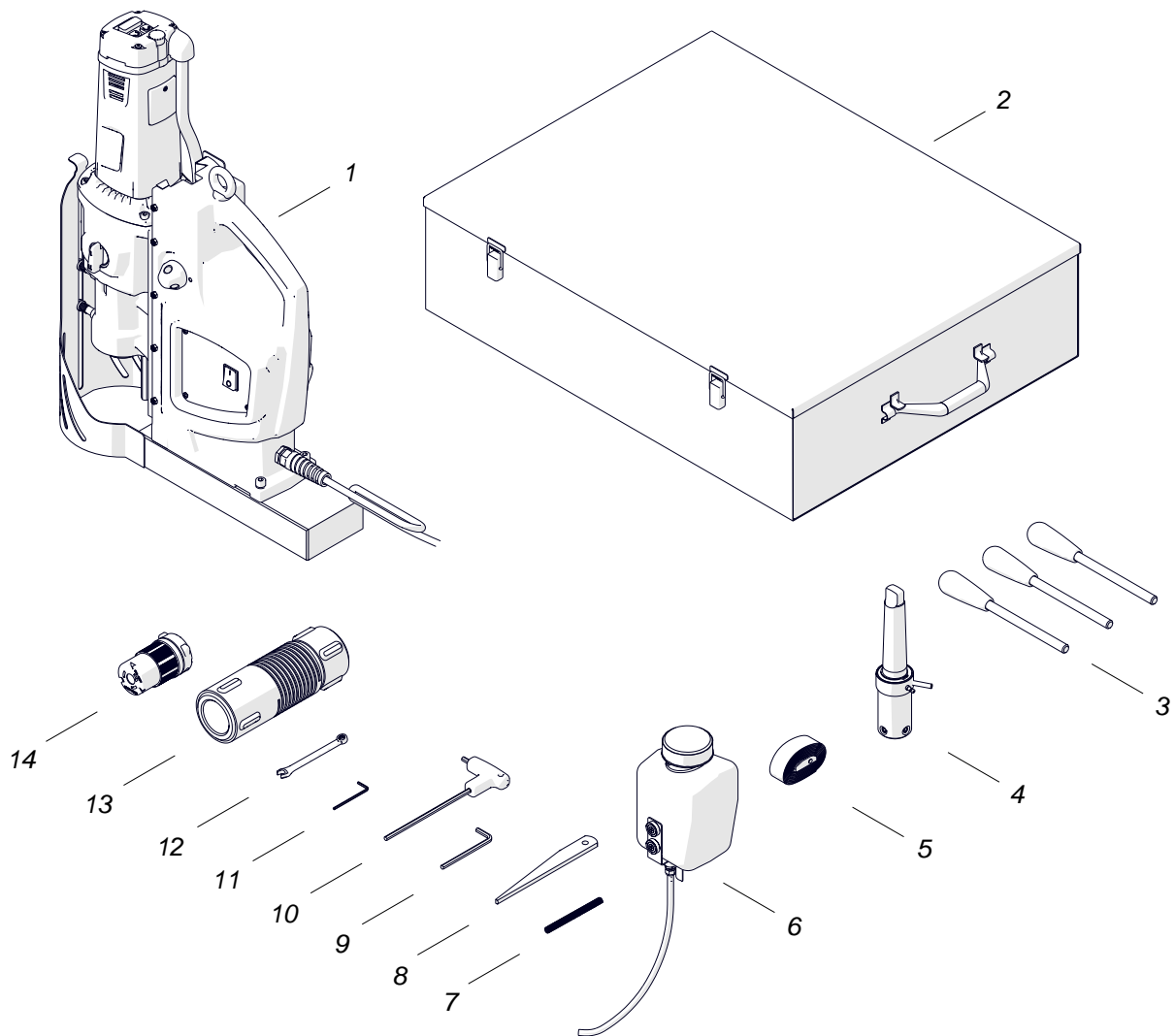
The electromagnetic base clamps the machine to ferromagnetic surfaces. This makes sure that the operator is safe and the machine works correctly. A safety strap protects the machine from falling in case of a clamping loss.

1.2. Technical data

Voltage	1~ 220–240 V, 50–60 Hz 1~ 110–120 V, 50–60 Hz
Power	2300 W
Spindle shank	MT4
Tool holder	19 mm (3/4") Weldon
Maximum drilling diameter with an annular cutter	130 mm (5.12")*
Maximum drilling diameter with a twist drill bit	47 mm (1.85")
Maximum drilling depth with an annular cutter	100 mm (3.94")
Maximum tap size	M42 (1-5/8")
Clamping force (surface with the thickness of 25 mm and roughness $R_a = 1.25$)	25,000 N
Electromagnetic base dimensions	105 mm × 315 mm × 50 mm 4.1" × 12.4" × 2"
Stroke	260 mm (10.2")
Rotational speed under load	55–85 rpm (gear I) 100–150 rpm (gear II) 200–300 rpm (gear III) 350–520 rpm (gear IV)
Minimum workpiece thickness	10 mm (0.4")
Protection class	I
Noise level	More than 85 dB
Required ambient temperature	0–40°C (32–104°F)
Weight	31 kg (68 lbs)

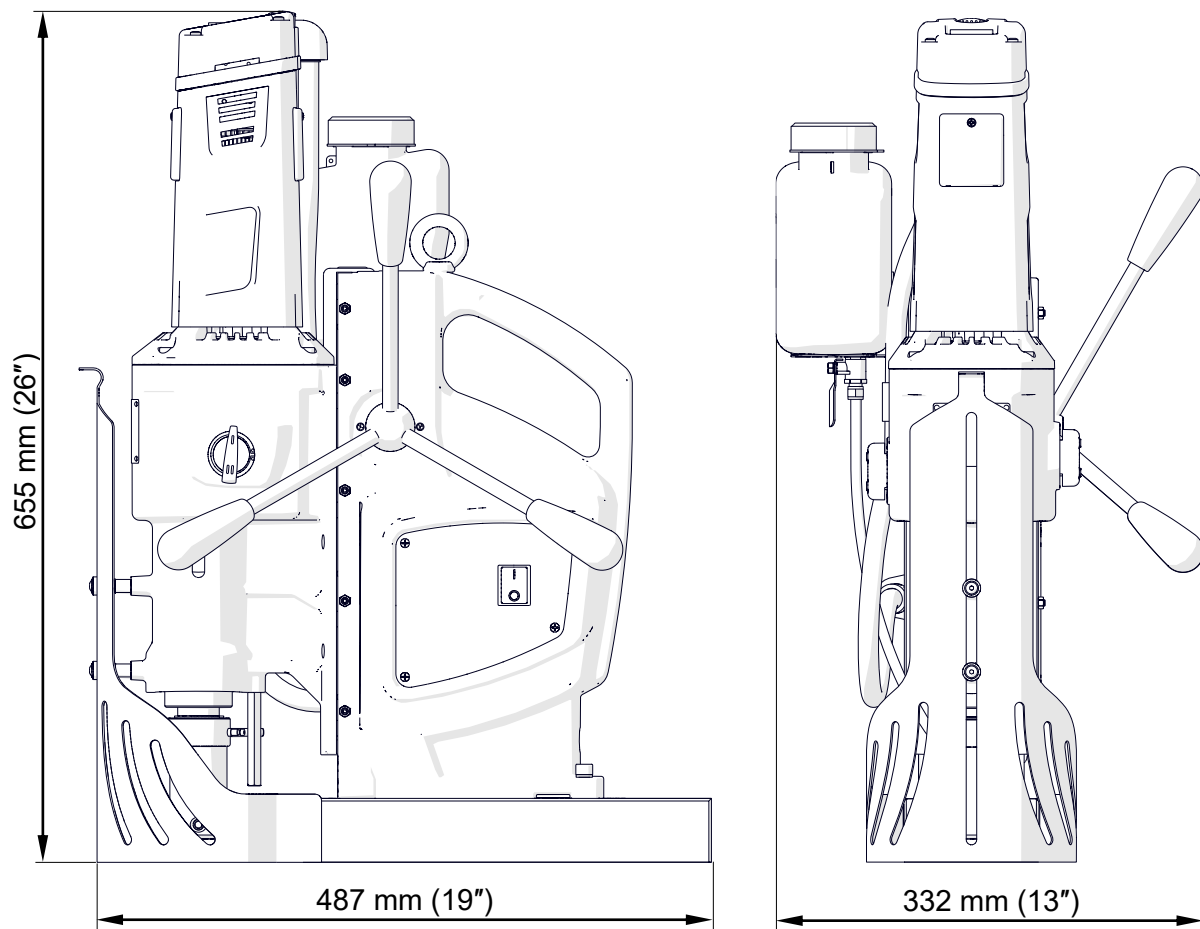
* If more than 60 mm (2.36"), use an MT4 arbor with 32 mm Weldon tool holder (UCW-583-13-00-00-0).

1.3. Equipment included

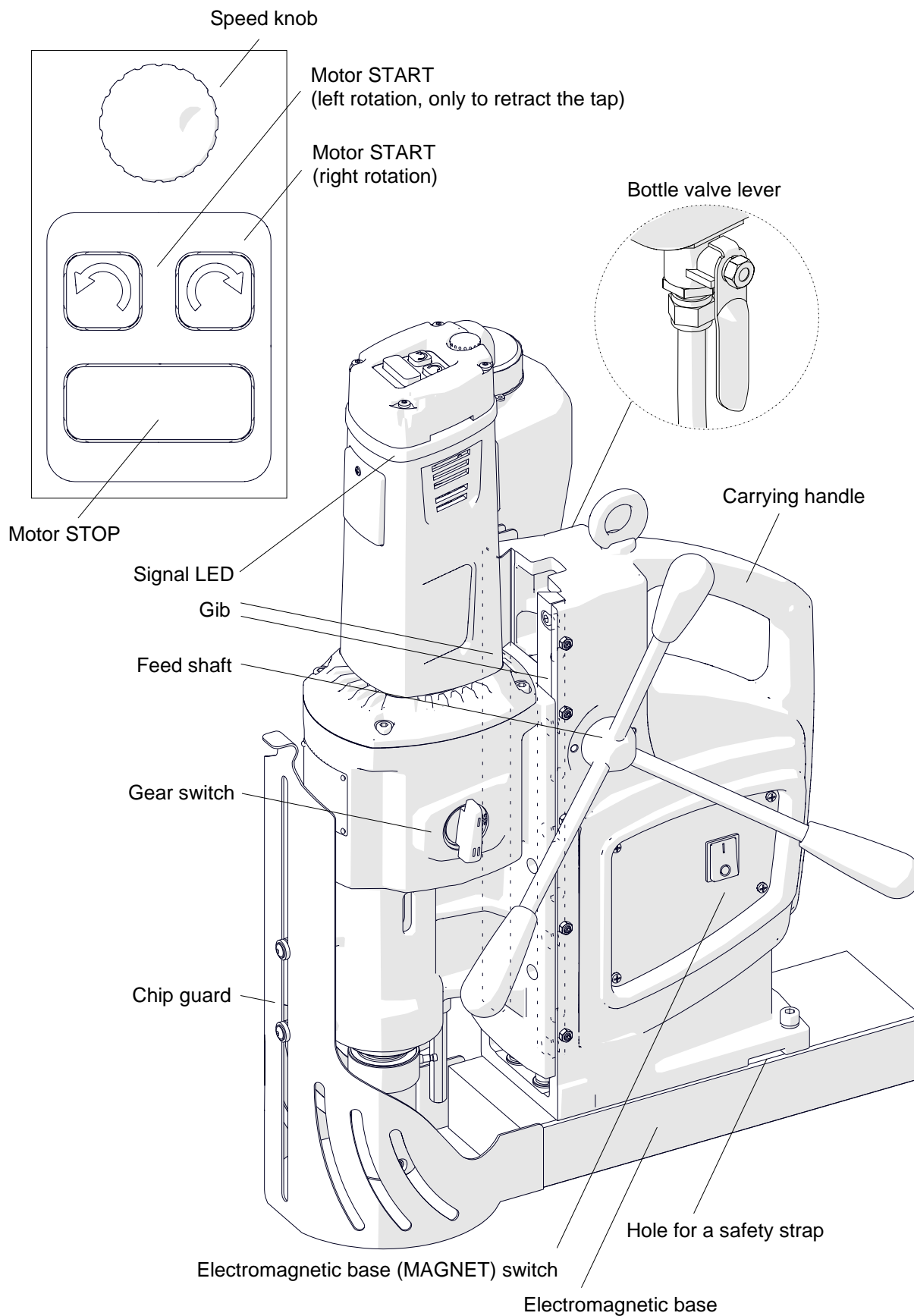


1	Drilling machine	1 unit
2	Metal box	1 unit
3	Handle	3 units
4	MT4 arbor with 19 mm (3/4") Weldon tool holder	1 unit
5	Safety strap	1 unit
6	Cooling system	1 unit
7	Protective spring for cooling hose	1 unit
8	MT3 drift	1 unit
9	5 mm hex wrench	1 unit
10	5 mm hex wrench with a handle	1 unit
11	2.5 mm hex wrench	1 unit
12	8 mm combination wrench	1 unit
13	Tool can	1 unit
14	Locking connector (only in 115 V version)	1 unit
–	Operator's Manual	1 unit

1.4. Dimensions



1.5. Design



2. SAFETY PRECAUTIONS

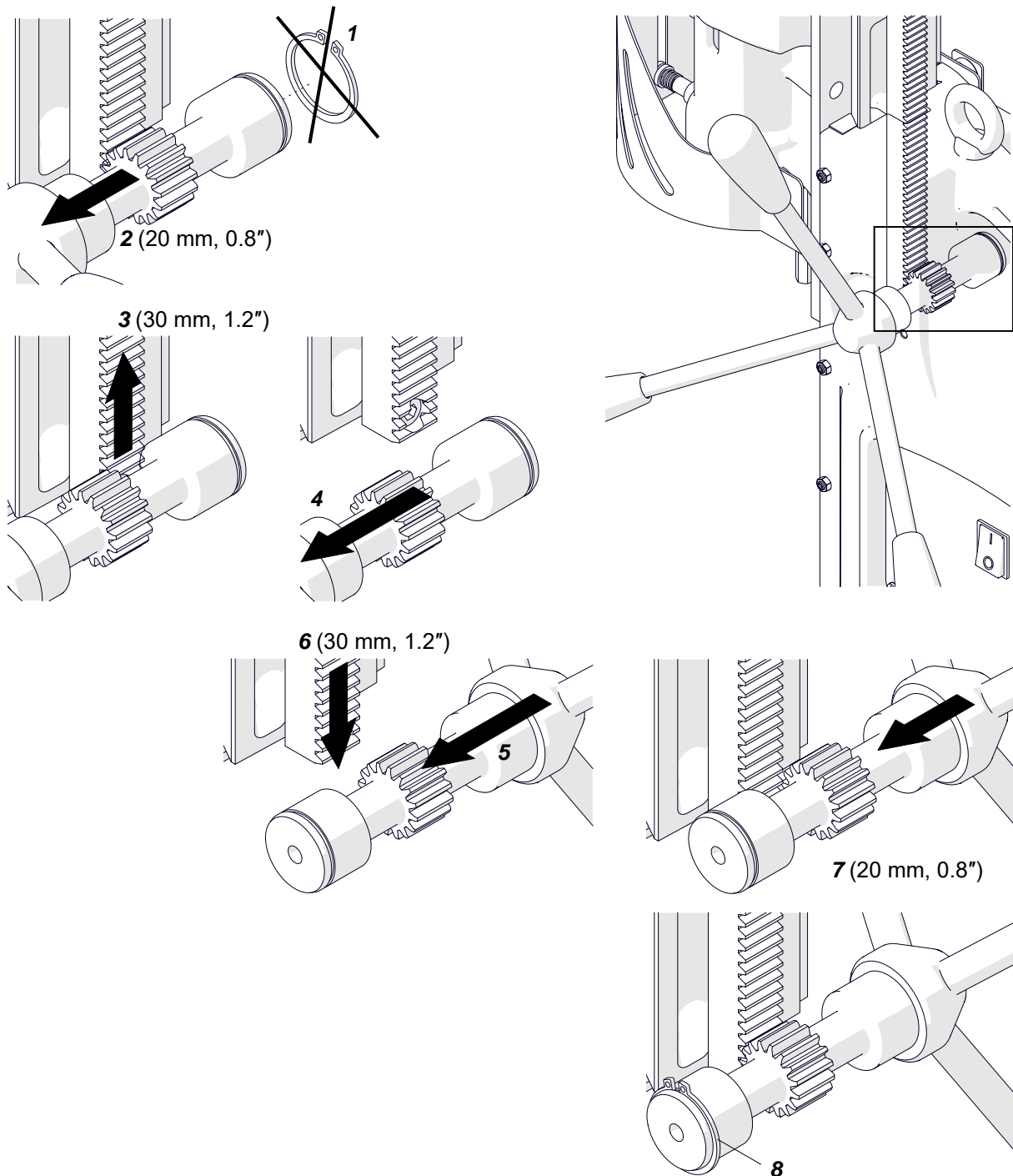
1. Before use, read this Operator's Manual and complete a training in occupational safety and health.
2. Use only in applications specified in this Operator's Manual.
3. Make sure that the machine has all parts and they are genuine and not damaged.
4. Make sure that the specifications of the power source are the same as those specified on the rating plate.
5. Connect the machine to a correctly grounded power source. Protect the power source with a 16 A fuse for 230 V or a 32 A fuse for 115 V. If you are going to work on building sites, supply the machine through an isolation transformer with class II protection only.
6. Let only qualified electrician do the connection to the 115 V power source.
7. Set the MAGNET switch to 'O' before you move the machine. Use carrying handle to move the machine.
8. Do not carry the machine by the power cord and do not pull the cord. This can cause damage and electric shock.
9. Keep untrained bystanders away from the machine.
10. Before each use, ensure the correct condition of the machine, power source, power cord, plug, control panel, and tools.
11. Before each use, make sure that no part is cracked or loose. Make sure to maintain correct conditions that can have an effect on the operation of the machine.
12. Keep the machine dry. Do not expose the machine to rain, snow, or frost.
13. Do not stay below the machine that is put at heights.
14. Keep the work area well lit, clean, and free of obstacles.
15. Make sure that the tool is correctly attached. Remove wrenches from the work area before you connect the machine to the power source.
16. Do not use tools that are dull or damaged.
17. Unplug the power cord before you install and remove tools. Use protective gloves to install and remove tools.
18. Use annular cutters without the pilot pin only when you drill incomplete through holes. Do not use arbors without a spring.
19. Do not make holes/threads whose diameter or depth differ from those specified in the technical data.
20. Do not use near flammable materials or in explosive environments.

21. Do not use on surfaces that are rough, not flat, not rigid, or have rust, paint, chips, or dirt.
22. Do not use if the gibs are adjusted incorrectly.
23. Do not use if there is no grease on the gibs.
24. Use the safety strap to attach the machine to a stable structure. Put the strap through the hole in the machine body. In the horizontal position, attach the strap to the carrying handle. Do not put the strap into the buckle from the front.
25. Use eye and ear protection and protective clothing. Do not use loose clothing.
26. We do not recommend work on workpieces thinner than 10 mm (0.4"). The clamping force depends on the workpiece thickness and is much lower for thin plates.
27. Each time before you put the machine on the workpiece, rub the workpiece with coarse-grained sandpaper. Make sure that the bottom of the base is in full contact with the workpiece.
28. Do not touch chips or moving parts. Do not let anything catch in moving parts.
29. After each use, remove chips and coolant from the machine and the tool. Do not remove chips with bare hands.
30. Unplug the power cord before you do maintenance or install/remove parts.
31. Repair only in a service center appointed by the seller.
32. If the machine falls, is wet, or has any damage, stop the work and immediately send the machine to the service center for check and repair.
33. Do not leave the machine when it operates.
34. If you are not going to use the machine, remove the tool from the holder. Then, remove the machine from the work area and keep it in a safe and dry place.
35. If you are not going to use the machine for an extended period, put anti-corrosion material on the steel parts.

3. STARTUP AND OPERATION

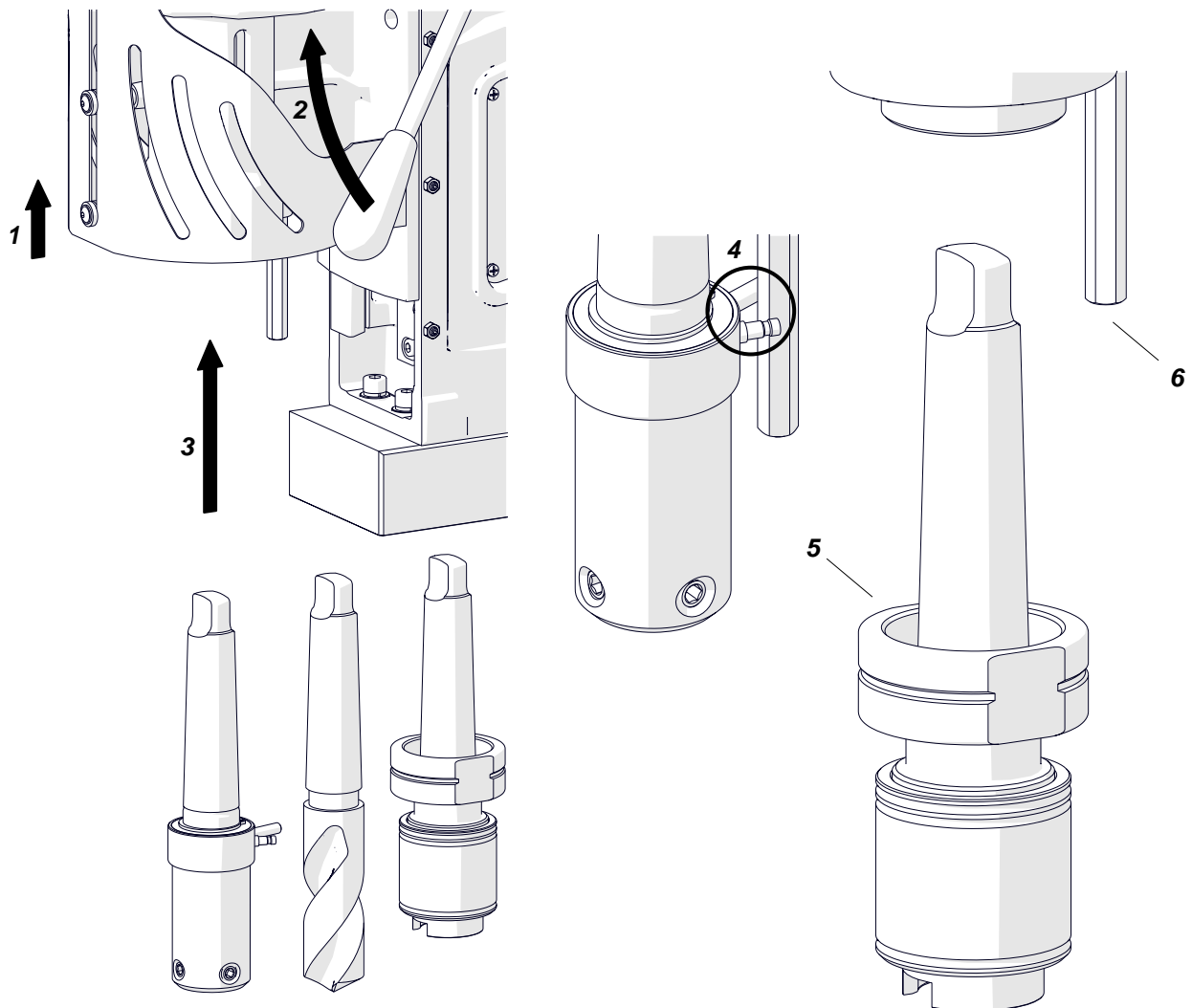
3.1. Installing the handles

Attach the handles to the feed shaft. You can install the shaft so that the handles are on the opposite side of the machine. To do this, lift the motor to the maximum and continue in the sequence that follows.

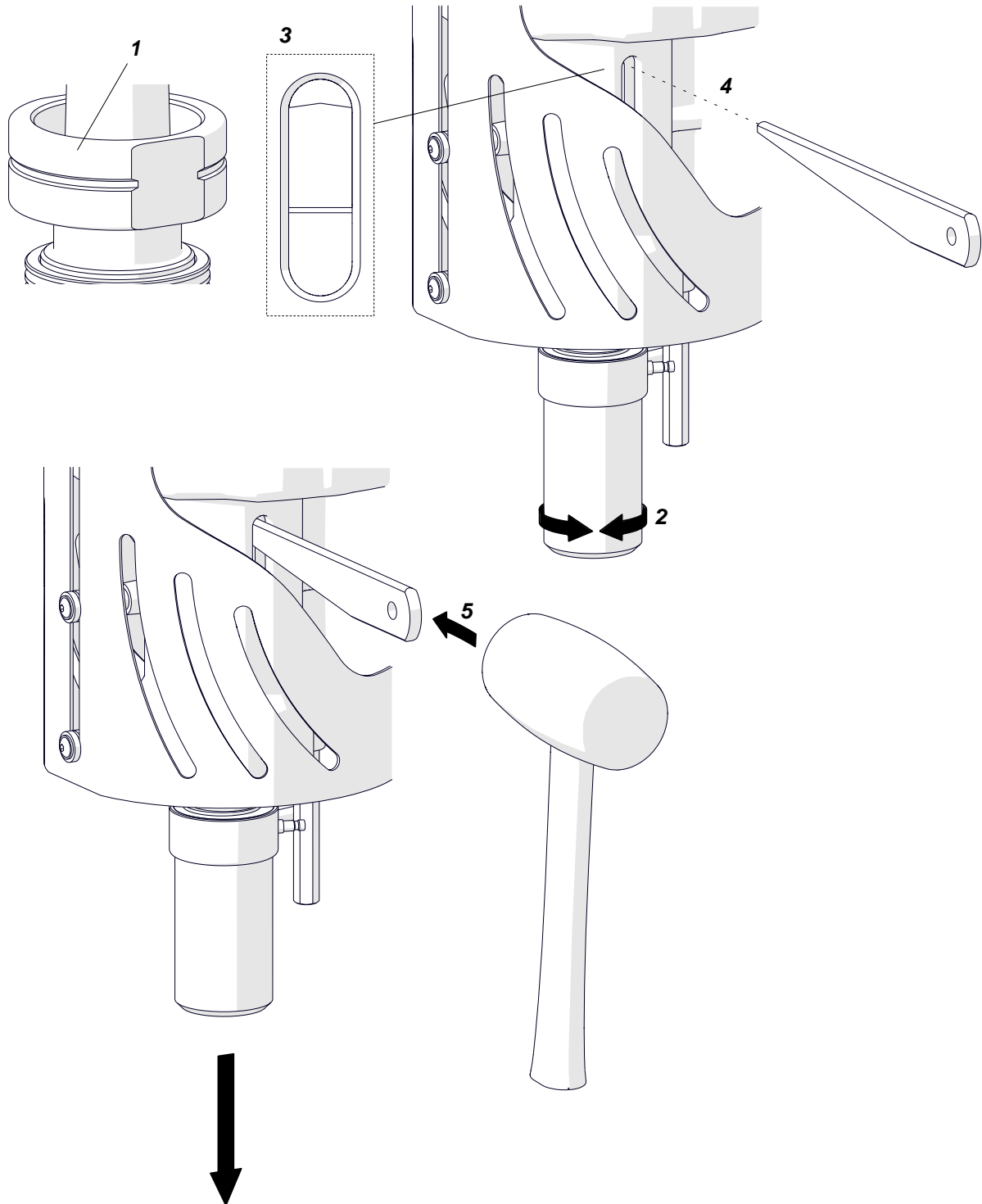


3.2. Installing and removing the arbor, MT4 twist drill bit, or tap chuck

Unplug the power cord and lift the chip guard (1). Rotate the handles to the right (2) to lift the motor. Use a dry cloth to clean the spindle and the arbor (drill bit, tap chuck). Use gloves to put the arbor (drill bit, tap chuck) into the spindle (3). Make sure that the stop rod is between the pin and the fitting (4). If the arbor (tap chuck) has a nut (5), tighten the nut to the spindle. Before you install an MT4x60 mm tap chuck, remove the stop rod (6).



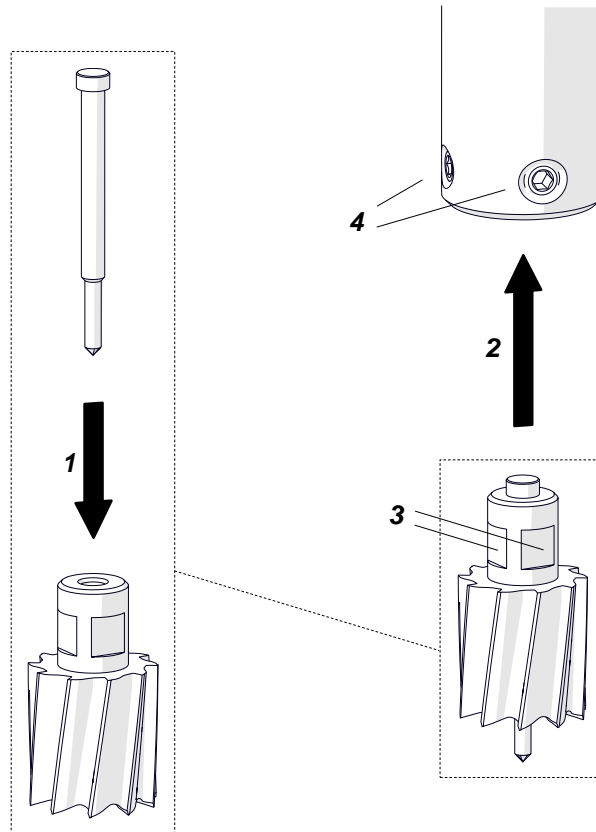
To remove the arbor (drill bit, tap chuck), continue as follows. If the arbor (tap chuck) has a nut (1), remove the nut. Next, lift the motor and rotate the spindle (2) to align the holes in the spindle and gearbox (3). Put the drift into the hole (4). Next, hold the carrying handle with one hand and hit the drift with a mallet (5).



3.3. Installing and removing the annular cutter

Install the arbor as described before. Use gloves to put the correct pilot pin into the annular cutter (1). Use a dry cloth to clean the cutter. Put the cutter into the arbor (2) to align the flat surfaces (3) with the screws (4). Use the 5 mm hex wrench to tighten the screws.

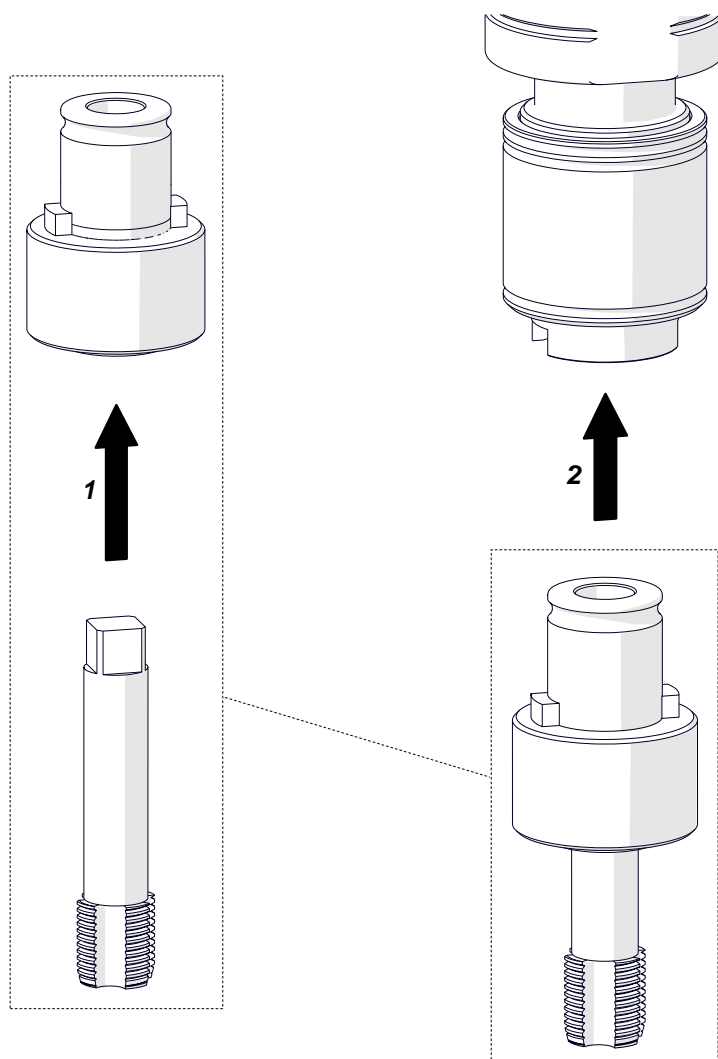
To remove the cutter, loosen the screws (4) with the 5 mm hex wrench.



3.4. Installing and removing the screw tap

Install the tap chuck as described before. Next, put the screw tap into the correct adapter (1). Install the adapter into the tap chuck (2).

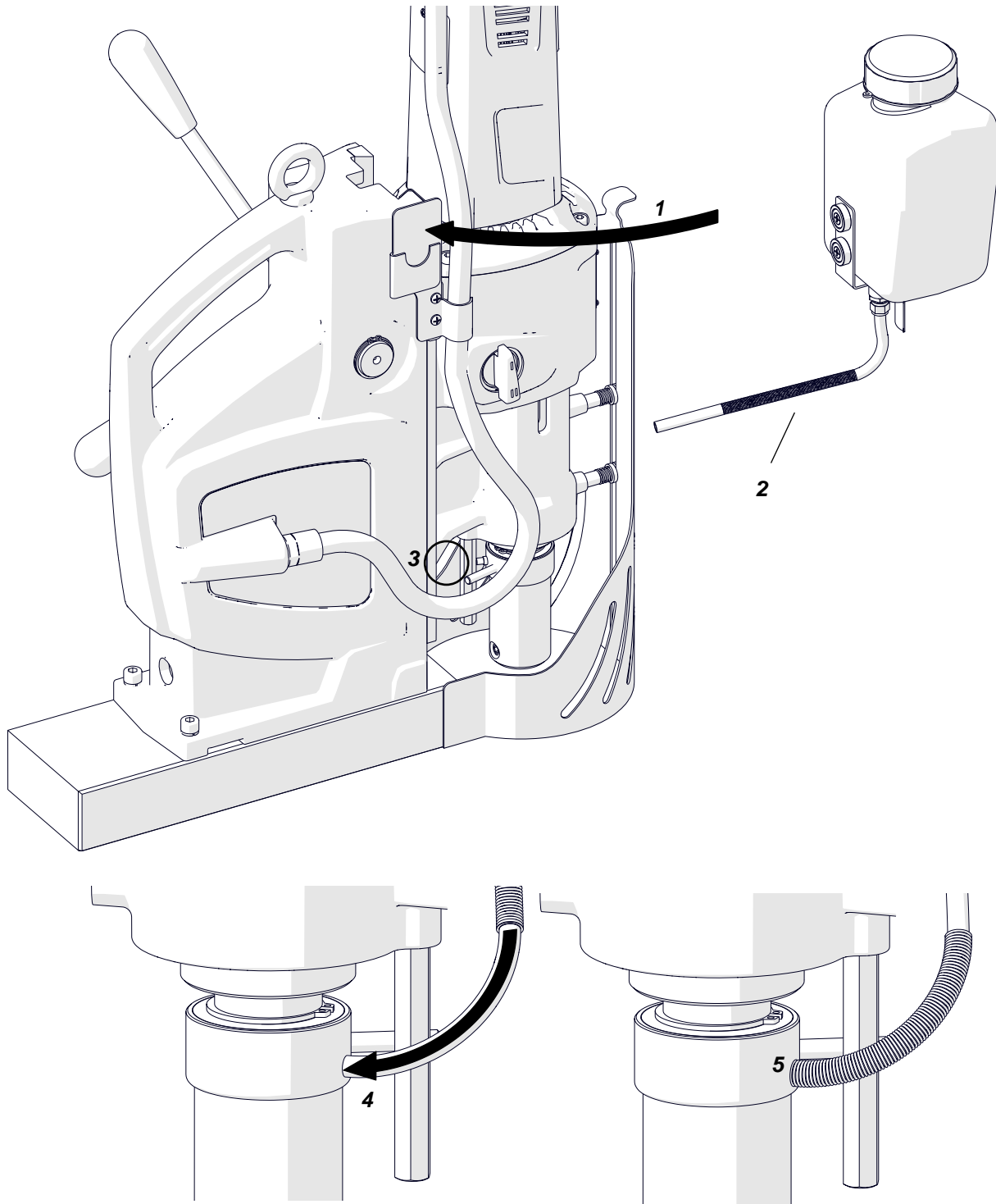
To remove the screw tap, unlock it and remove from the adapter.



3.5. Installing and removing the cooling system

Attach the bottle to the bracket (1). Put the hose with the spring (2) between the stop rod and the body (3). Then, attach the hose to the fitting and move the spring to the arbor (4, 5).

To remove the bottle, continue in reverse sequence.



3.6. Preparing

Before use, clean steel parts, including the MT4 socket, from anti-corrosion material used to preserve the machine for storage and transport.

Attach the handles to the feed shaft. You can install the shaft so that the handles are on the opposite side of the machine.

Apply a thin layer of grease to the gibs.

Select the annular cutter, drill bit, or screw tap that matches the required hole diameter. When you drill holes with diameters of 18–32 mm (0.71–1.26") by using twist drill bits, select two bits: with 70% and 100% of the required diameter. When you drill holes with diameters of 32–47 mm (1.26–1.85") by using twist drill bits, select three bits: 18 mm and with 80% and 100% of the required diameter.

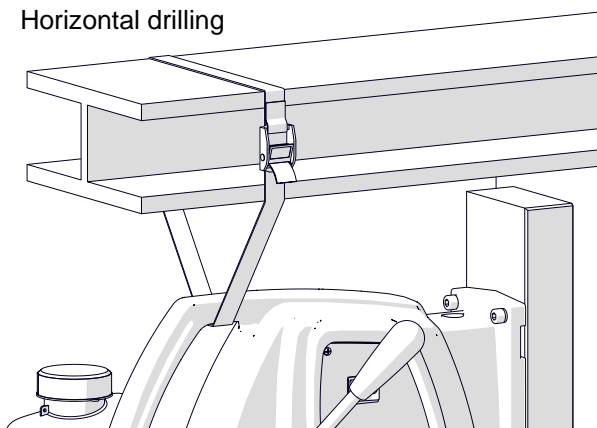
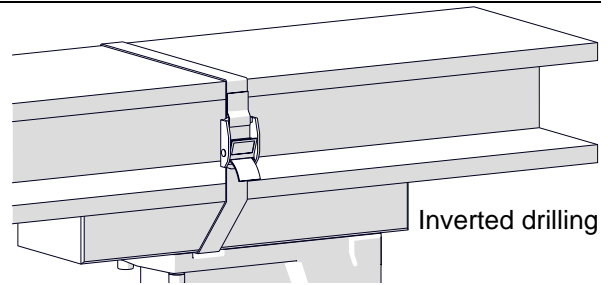
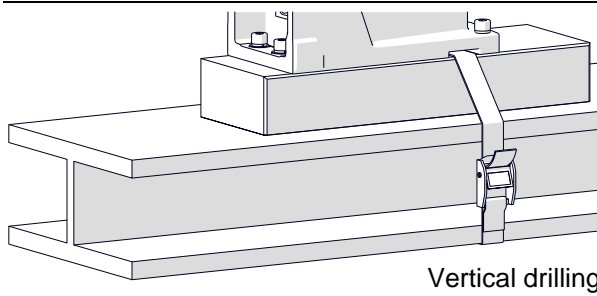
Use a dry cloth to clean the spindle, arbor (drill bit, tap chuck), and cutter. Then, as described before, install the arbor (and then the cutter), drill bit with the smaller diameter, or tap chuck (and then the screw tap with adapter).

Put the machine on a flat ferromagnetic workpiece with the thickness of at least 10 mm (0.4"). Make sure that there is no rust, paint, chips, or dirt. They decrease the clamping force. The force will be lower also if the surface is thin, rough, not flat, not rigid, the voltage is lower than required, or the bottom of the base is worn.

Connect the machine to the power source. To connect the machine to a 115 V power source, use the locking connector. Refer to the instructions included with the connector.

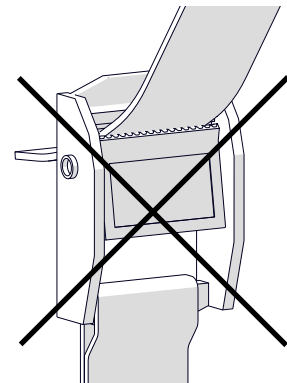
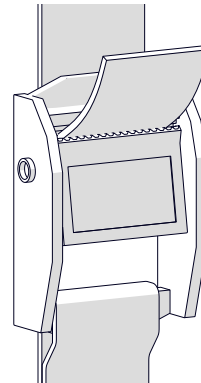
Set the MAGNET switch to 'I' to turn on the clamping. Some types of steel (non-ferromagnetic) do not conduct magnetic flux so the machine cannot clamp onto them.

Use the safety strap to prevent fall and injury if the machine loses the clamping. Attach the machine to a stable structure by putting the strap through the hole in the machine body. In the horizontal position, attach the strap to the carrying handle. Make sure that the strap is tight and not twisted. If the machine comes loose from the workpiece and hangs on the strap, replace the strap. Do not put the strap into the buckle from the front.



CORRECT ✓

INCORRECT



Rotate the handles to the left to put the tool above the workpiece.

When you use an annular cutter, install the cooling system and fill it with coolant. Do not use only water as the coolant. But you can mix water and drilling oil. Then, make sure that the cooling system works correctly. To do this, lightly loosen the bottle cap and use the lever to open the valve. Then, rotate the handles to the left to apply a light pressure on the pilot pin. The coolant should fill the system and start flowing from the cutter.

The cooling system works by gravity. Thus, in the horizontal position, rotate the bottle. In the inverted position, use coolants under pressure or in the form of spray or paste.

3.7. Drilling

Use the gear switches to set the gear based on the table that follows.

Tool	Hole diameter		Rotational speed* [rpm]	Gear switches setting
	[mm]	[in]		
HSS annular cutter	12–21	0.47–0.83	350–520 (gear IV)	
	22–37	0.87–1.46	200–300 (gear III)	
	38–72	1.50–2.83	100–150 (gear II)	
	73–130	2.87–5.12	55–85 (gear I)	
TCT annular cutter	12–27	0.47–1.06	350–520 (gear IV)	
	28–47	1.10–1.85	200–300 (gear III)	
	48–85	1.89–3.35	100–150 (gear II)	
	86–130	3.39–5.12	55–85 (gear I)	
Twist drill bit	15–22	0.59–0.87	200–300 (gear III)	
	22–32	0.87–1.26	100–150 (gear II)	
	32–47	1.26–1.85	55–85 (gear I)	

* For a sharp tool and mild steel with a strength $R_m < 500 \text{ N/mm}^2$ (70,000 psi), such as St0 (S185), St3S (S235JR), or St4W (S275JO).

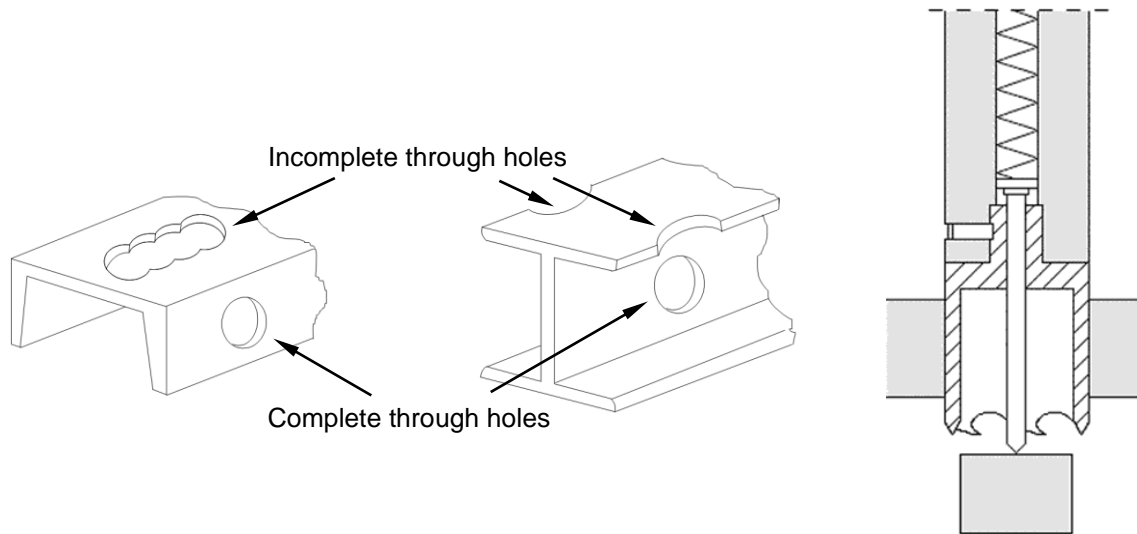
Steel with a strength $R_m \geq 500 \text{ N/mm}^2$ (70,000 psi), such as St5 (E295), 18G2A (S355N), or 45 (C45), requires lower speeds. If the speed is too high or too low for the workpiece strength and the type/diameter of the tool, the tool will wear faster or be unable to drill the hole.

Press to start the motor. Rotate the handles to the left to put the tool into the workpiece. Use the speed knob to set a speed sufficient for the actual process conditions. Set the speed knob near the maximum.



When the annular cutter goes through the workpiece, the slug core is pushed out with a large force.

When you use an annular cutter, drill only through holes. For incomplete through holes do not use the pilot pin.



Keep the machine in the same position until the hole is made.




When you use a drill bit, drill holes with diameters of 18–32 mm (0.71–1.26") in two steps. First, use the drill bit with the 70% diameter of the required diameter to drill a hole. Then, keep the machine in the same position, and drill again with the drill bit that matches the required diameter.

When you use a drill bit, drill holes with diameters of 32–47 mm (1.26–1.85") in three steps. First, use the drill bit with the diameter of 18 mm to drill a hole. Then, keep the machine in the same position, and drill again with the drill bit with the diameter of 80% of the required diameter. Finally, drill again with the drill bit that matches the required diameter.

If you are going to drill holes deeper than 50 mm (2"), retract the tool above the workpiece as often as possible. This allows chips to be removed from the hole. If the grooves of the tool are clogged, turn off the motor and use a brush to clean them.


After you get to the depth of 40 mm (1.6"), retract the tool above the workpiece as often as possible. Then, manually apply the coolant from the bottle into the drilling area.

The table that follows shows the meaning of the LED colors.

Color	Meaning	Description
Green is on	Strong surface.	Ready to work.
Green flashes	Weak surface.	We do not recommend work.
White is on	Normal work.	–
Blue flashes	Near overload.	Do not increase the feed speed. This can cause emergency stop.
 Red is on	 Overheat.	 Immediately retract the tool from the workpiece! Operate with no load for 2–4 minutes to let the temperature of the motor decrease.
Blue is on	Emergency stop. Overload.	Make sure that the tool is sharp. Make sure that the motor speed and the feed are correct. Use coolant. Retract the tool from the workpiece, press STOP, and then start again.
Violet is on	Emergency stop. Machine tilt/vibrations or the surface not stable.	Make sure that the surface is stable and its thickness is at least 10 mm (0.4"). Press STOP and then start again. If the motor does not operate, contact the service center.
Red changes to blue	Emergency stop. Voltage drop.	Make sure that the power source is correct. Press STOP and then start again.
Red changes to green	Emergency stop. Worn brushes.	Replace the brushes. Let the motor operate with no load for 20 minutes. If the motor does not operate, contact the service center.



The green color is indicative only. It does not make sure that the machine will always be in contact with the surface. Thus, in each position protect the machine with the safety strap.

If an overload occurs, the machine stops. The overload can be caused by not enough cooling, dull tool, too fast feed, or too slow speed. Then, to start the machine again, retract the tool from the workpiece, press STOP and then .





After the hole is made, retract the tool from the workpiece, and press STOP to turn off the motor. Before you move the machine, set the MAGNET switch to 'O' to turn off the base.

After the work is finished and the motor turned off, set the gear switches to the opposite position. Then, turn on the motor and let it operate for a while with no load to improve lubrication. Next, turn off the motor and the base, and then unplug the power cord. Clean the machine and the tool, and then remove the machine from the work area.

Tighten the bottle cap, close the valve, and then press the pilot pin to remove the coolant that remains in the cooling system. Before you put the machine into the box, remove the bottle, and use gloves to remove the tool from the holder.



3.8. Thread cutting

Install the screw tap and use the gear switches to set the gear based on the table that follows.

Screw tap size	Rotational speed* [rpm]	Gear switches setting
M8 – M24	100–150 (gear II)	 
5/16" – 15/16"		
M27 – M42	55–85 (gear I)	 
1" – 1-5/8"		

Rotate the handles to the left to put the tap above the hole for the thread. If the diameter of the hole is too small, cutting may not be possible because of too much milling resistance.

Apply oil on the cutting part of the tap to prevent seizure and increase durability.

Press  to start the motor. Set the speed knob near the minimum. Then, rotate the handles to the left to put the tap into the hole. Use the handle to guide the tap down until the thread is cut. After the cutting with the tap is finished, press STOP to turn off the motor. Then, press and hold  and use the handle to guide the tap up to prevent damage to the thread.

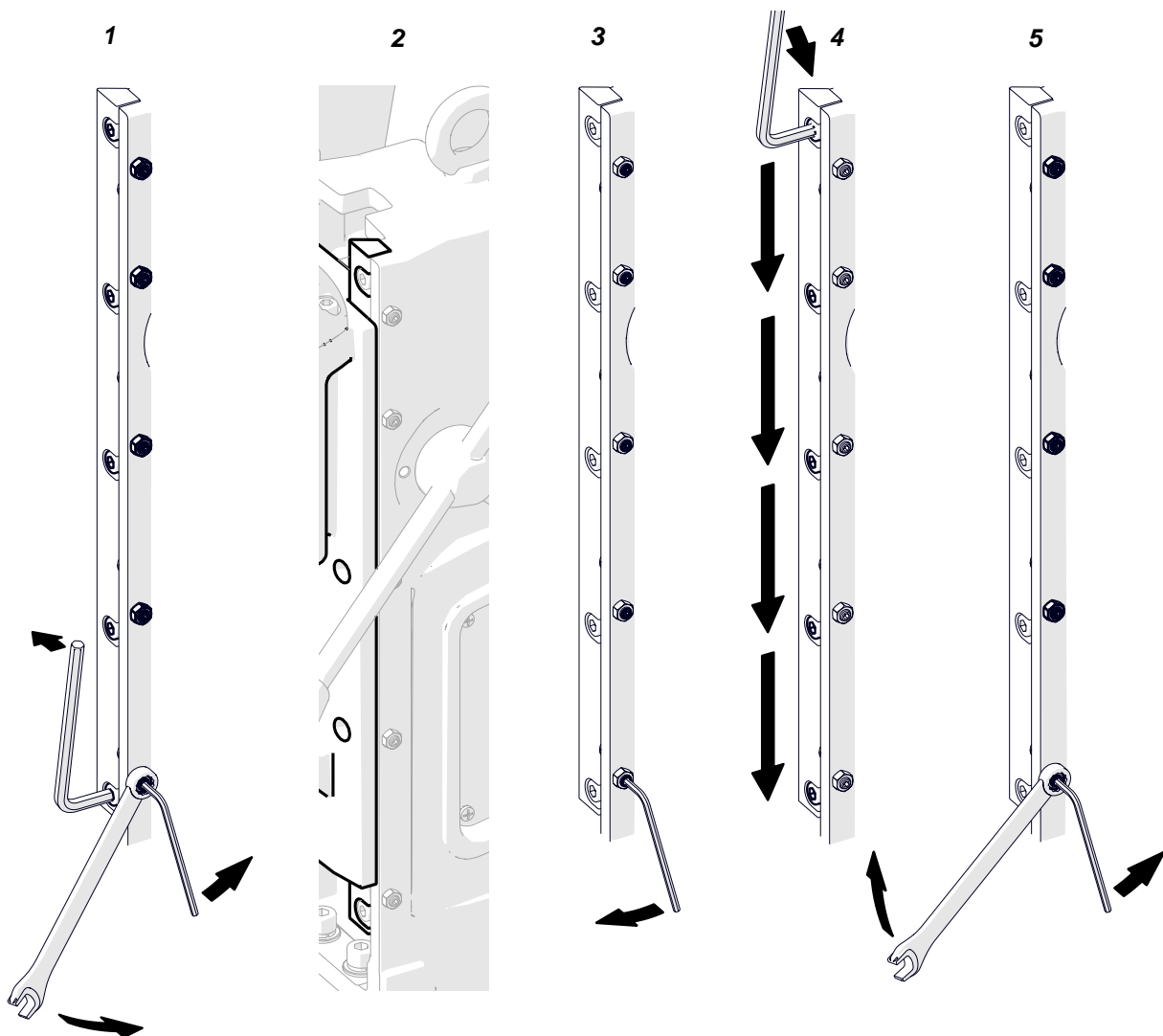
After the work is finished and the motor turned off, set the gear switches to the opposite position. Start the motor and let it operate for a while with no load to improve lubrication. Next, turn off the motor and the base, and then unplug the power cord.

If the workpiece is very hard or the screw tap is worn, thread cutting may not be possible. When this happens we recommend that you cut the thread with manual taps (entering tap and bottoming tap).

3.9. Adjusting the gibs

Every 50 work hours, make sure that the gibs are correctly adjusted. To do this, move the motor up and down and make sure that it moves smoothly.

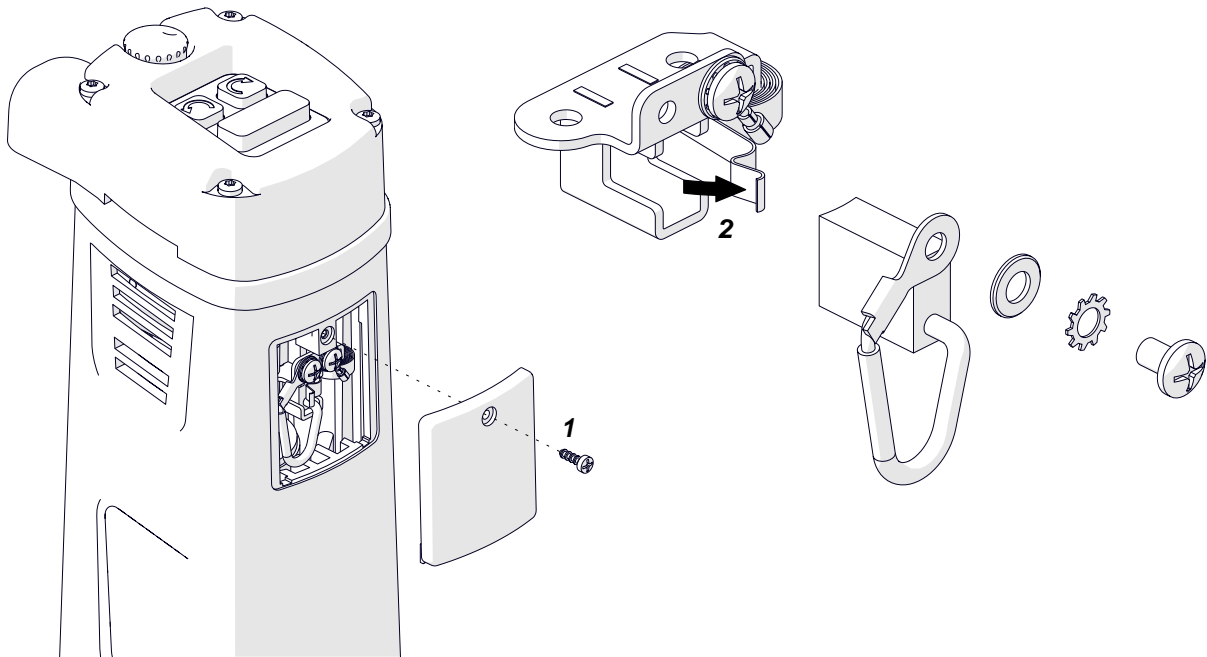
To adjust the gibs, apply a thin layer of grease on them. Then, use the 8 mm combination wrench, the 2.5 mm hex wrench, and the 5 mm hex wrench to loosen the nuts and screws (1). Put the motor so that the slider is in the center of the gibs (2). Then, lightly tighten the screws (3) so that they touch the gib. Move the motor up and down and adjust the screws (3) so that the travel is smooth. Next, tighten the screws (4) and then tighten the nuts (5).



3.10. Replacing the motor brushes

Every 100 work hours, check the condition of the brushes. To do this, unplug the power cord and remove the cover (1). Lift the spring (2) and remove the brush. If the brush is shorter than 5 mm (0.2"), replace the two brushes with new ones.

Install in reverse sequence. Then, let the motor operate with no load for 20 minutes.

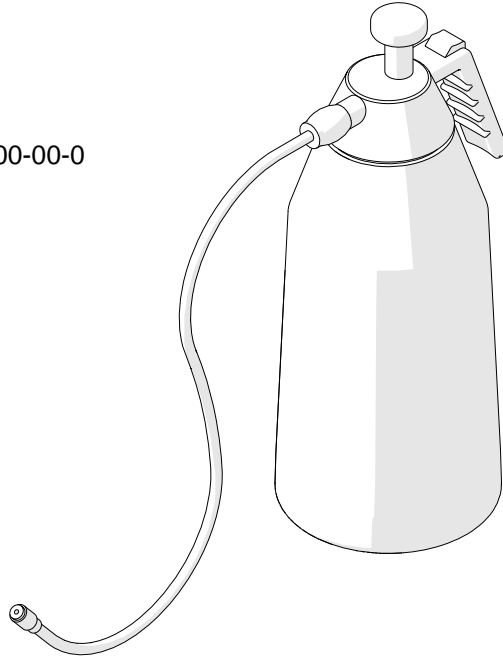


4. ACCESSORIES

4.1. Pressure cooling system

Capacity of 2 liters.

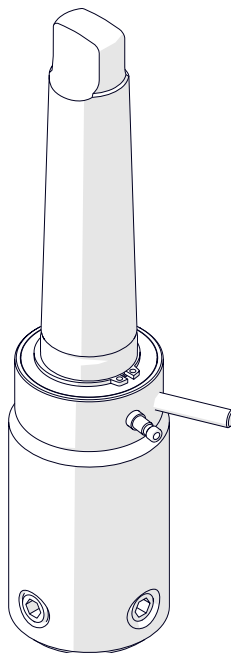
Part number:
UKL-0440-16-00-00-0



4.2. Arbor MT4 × 32 mm Weldon

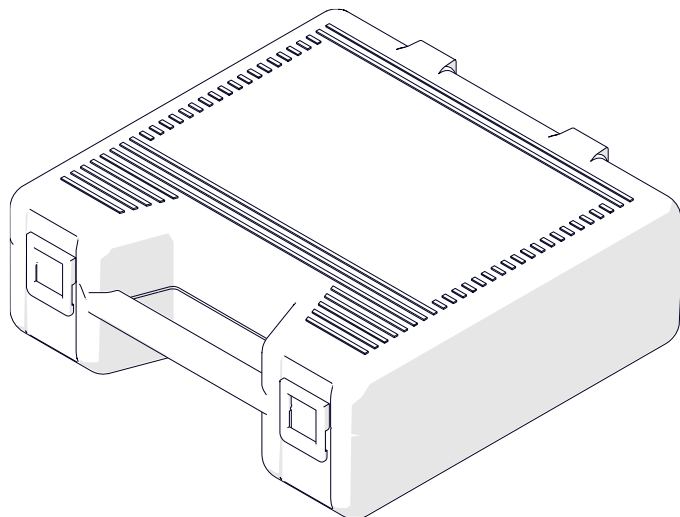
Required when drilling diameter is more than 60 mm (2.36").

Part number:
UCW-0583-13-00-00-0

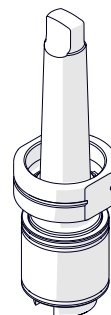


4.3. MT4 tap chuck × 31 mm with adapter

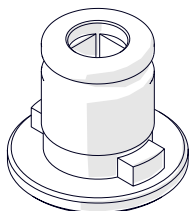
For screw taps with sizes from M8 to M20 and from 5/16" to 7/8". Install the chuck in the spindle. To cut threads in blind holes, use adapters with a clutch.



Part number (box, tap chuck, coolant 85 ml / 3 oz):
OPR-0584-09-00-00-1

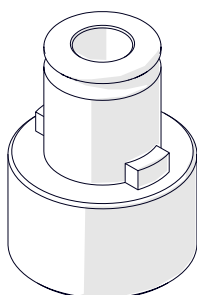


Requires an adapter that matches the size of the screw tap.



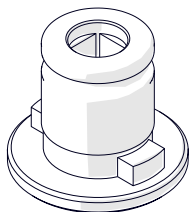
Screw tap size (metric)	Adapter Ø31 without clutch	Adapter Ø19 without clutch
M8	WKL-000072	WKL-000069*
M10	WKL-000073	WKL-000070*
M12	WKL-000074	WKL-000071*
M14	WKL-000075	—
M16	WKL-000076	—
M18	WKL-000077	—
M20	WKL-000078	—

* Requires a 31×19 mm reduction adapter (RDC-000008)



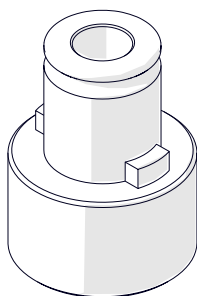
Screw tap size (metric)	Adapter Ø31 with clutch	Adapter Ø19 with clutch
M8	WKL-000100	WKL-000095*
M10	WKL-000101	WKL-000098*
M12	WKL-000102	WKL-000099*
M14	WKL-000103	—
M16	WKL-000104	—
M18	WKL-000105	—
M20	WKL-000106	—

* Requires a 31×19 mm reduction adapter (RDC-000008)



Screw tap size (imperial)	Adapter Ø31 without clutch	Adapter Ø19 without clutch
5/16"	WKL-000173	WKL-000167*
3/8"	WKL-000174	WKL-000168*
7/16"	WKL-000175	WKL-000169*
1/2"	WKL-000176	WKL-000170*
9/16"	WKL-000177	WKL-000171*
5/8"	WKL-000178	—
11/16"	WKL-000179	—
3/4"	WKL-000180	—
13/16"	WKL-000181	—
7/8"	WKL-000182	—

* Requires a 31x19 mm reduction adapter (RDC-000008)

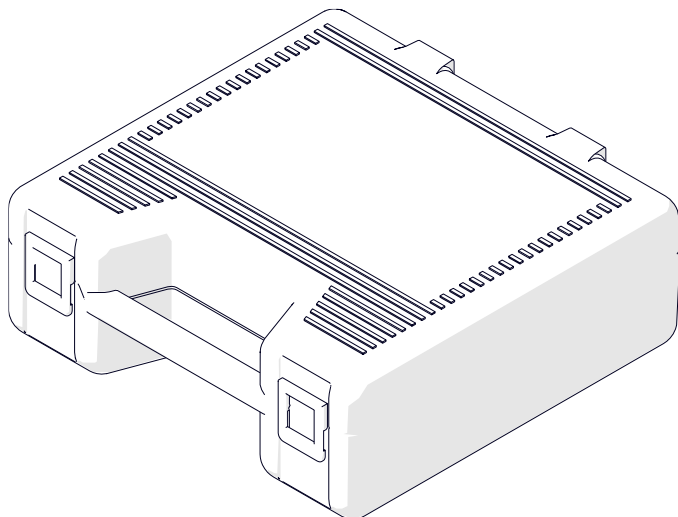


Screw tap size (imperial)	Adapter Ø31 with clutch	Adapter Ø19 with clutch
5/16"	WKL-000139	WKL-000133*
3/8"	WKL-000140	WKL-000134*
7/16"	WKL-000141	WKL-000135*
1/2"	WKL-000142	WKL-000136*
9/16"	WKL-000143	WKL-000137*
5/8"	WKL-000144	—
11/16"	WKL-000145	—
3/4"	WKL-000146	—
13/16"	WKL-000147	—
7/8"	WKL-000148	—

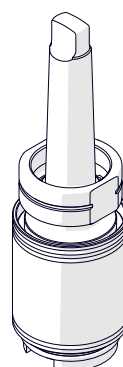
* Requires a 31x19 mm reduction adapter (RDC-000008)

4.4. MT4 tap chuck × 48 mm with adapter

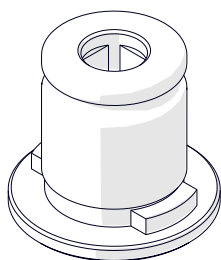
For screw taps with sizes from M14 to M30 and from 5/8" to 1-1/4". Install the chuck in the spindle. To cut threads in blind holes, use adapters with a clutch.



Part number (box, tap chuck, coolant 85 ml / 3 oz):
OPR-0584-04-00-00-1



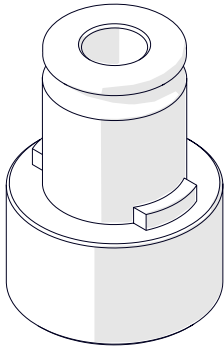
Requires an adapter that matches the size of the screw tap.



Screw tap size (metric)	Adapter Ø48 without clutch	Adapter Ø31 without clutch	Adapter Ø19 without clutch
M8	—	WKL-000072*	WKL-000069**
M10	—	WKL-000073*	WKL-000070**
M12	—	WKL-000074*	WKL-000071**
M14	WKL-000079	WKL-000075*	—
M16	WKL-000080	WKL-000076*	—
M18	WKL-000081	WKL-000077*	—
M20	WKL-000082	WKL-000078*	—
M22, M24	WKL-000083	—	—
M27	WKL-000084	—	—
M30	WKL-000085	—	—

* Requires a 48×31 mm reduction adapter (RDC-000010)

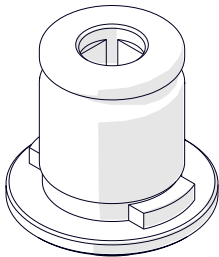
** Requires a 48×19 mm reduction adapter (RDC-000009)



Screw tap size (metric)	Adapter Ø48 with clutch	Adapter Ø31 with clutch	Adapter Ø19 with clutch
M8	—	WKL-000100*	WKL-000095**
M10	—	WKL-000101*	WKL-000098**
M12	—	WKL-000102*	WKL-000099**
M14	WKL-000107	WKL-000103*	—
M16	WKL-000108	WKL-000104*	—
M18	WKL-000109	WKL-000105*	—
M20	WKL-000110	WKL-000106*	—
M22, M24	WKL-000111	—	—
M27	WKL-000112	—	—
M30	WKL-000113	—	—

* Requires a 48x31 mm reduction adapter (RDC-000010)

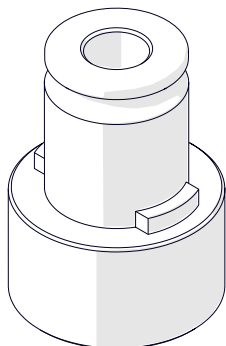
** Requires a 48x19 mm reduction adapter (RDC-000009)



Screw tap size (imperial)	Adapter Ø48 without clutch	Adapter Ø31 without clutch	Adapter Ø19 without clutch
5/16"	—	WKL-000173*	WKL-000167**
3/8"	—	WKL-000174*	WKL-000168**
7/16"	—	WKL-000175*	WKL-000169**
1/2"	—	WKL-000176*	WKL-000170**
9/16"	—	WKL-000177*	WKL-000171**
5/8"	WKL-000183	WKL-000178*	—
11/16"	WKL-000184	WKL-000179*	—
3/4"	WKL-000185	WKL-000180*	—
13/16"	WKL-000186	WKL-000181*	—
7/8"	WKL-000187	WKL-000182*	—
15/16"	WKL-000120	—	—
1"	WKL-000121	—	—
1-1/8"	WKL-000122	—	—
1-1/4"	WKL-000123	—	—

* Requires a 48x31 mm reduction adapter (RDC-000010)

** Requires a 48x19 mm reduction adapter (RDC-000009)



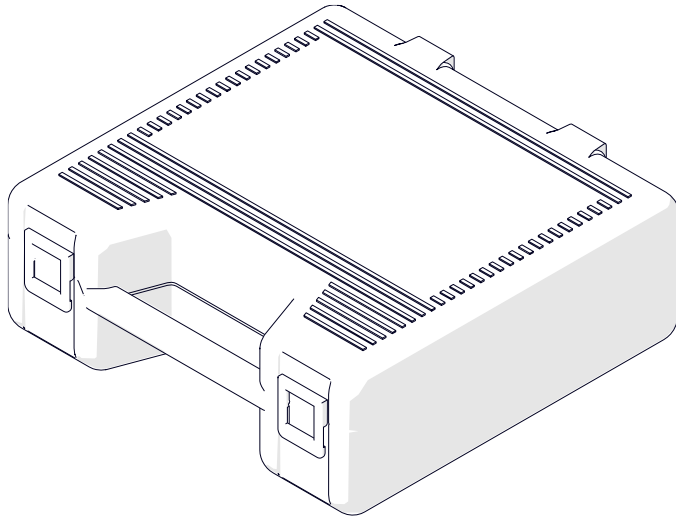
Screw tap size (imperial)	Adapter Ø48 with clutch	Adapter Ø31 with clutch	Adapter Ø19 with clutch
5/16"	—	WKL-000139*	WKL-000133**
3/8"	—	WKL-000140*	WKL-000134**
7/16"	—	WKL-000141*	WKL-000135**
1/2"	—	WKL-000142*	WKL-000136**
9/16"	—	WKL-000143*	WKL-000137**
5/8"	WKL-000149	WKL-000144*	—
11/16"	WKL-000150	WKL-000145*	—
3/4"	WKL-000151	WKL-000146*	—
13/16"	WKL-000152	WKL-000147*	—
7/8"	WKL-000153	WKL-000148*	—
15/16"	WKL-000154	—	—
1"	WKL-000155	—	—
1-1/8"	WKL-000156	—	—
1-1/4"	WKL-000157	—	—

* Requires a 48x31 mm reduction adapter (RDC-000010)

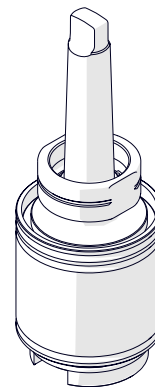
** Requires a 48x19 mm reduction adapter (RDC-000009)

4.5. MT4 tap chuck × 60 mm with adapter

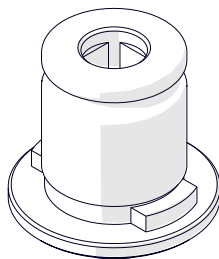
For screw taps with sizes from M24 to M42 and from 7/8" to 1-5/8". Install the chuck in the spindle. To cut threads in blind holes, use adapters with a clutch.



Part number (box, tap chuck, coolant 85 ml / 3 oz):
OPR-0584-07-00-00-1



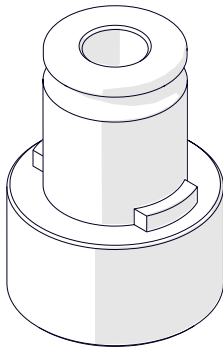
Requires an adapter that matches the size of the screw tap.



Screw tap size (metric)	Adapter Ø60 without clutch	Adapter Ø48 without clutch	Adapter Ø31 without clutch
M8	—	—	WKL-000072**
M10	—	—	WKL-000073**
M12	—	—	WKL-000074**
M14	—	WKL-000079*	WKL-000075**
M16	—	WKL-000080*	WKL-000076**
M18	—	WKL-000081*	WKL-000077**
M20	—	WKL-000082*	WKL-000078**
M22, M24	—	WKL-000083*	—
M24	WKL-000086	WKL-000084*	—
M27	WKL-000087	WKL-000085*	—
M30	WKL-000088	—	—
M33	WKL-000089	—	—
M36	WKL-000090	—	—
M42	WKL-000091	—	—

* Requires a 60×48 mm reduction adapter (RDC-000012)

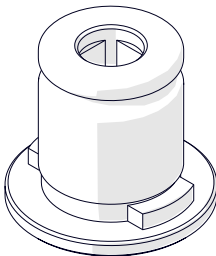
** Requires a 60×31 mm reduction adapter (RDC-000011)



Screw tap size (metric)	Adapter Ø60 with clutch	Adapter Ø48 with clutch	Adapter Ø31 with clutch
M8	—	—	WKL-000100**
M10	—	—	WKL-000101**
M12	—	—	WKL-000102**
M14	—	WKL-000107*	WKL-000103**
M16	—	WKL-000108*	WKL-000104**
M18	—	WKL-000109*	WKL-000105**
M20	—	WKL-000110*	WKL-000106**
M22, M24	—	WKL-000111*	—
M24	WKL-000114	WKL-000112*	—
M27	WKL-000115	WKL-000113*	—
M30	WKL-000116	—	—
M33	WKL-000117	—	—
M36	—	—	—
M42	—	—	—

* Requires a 60x48 mm reduction adapter (RDC-000012)

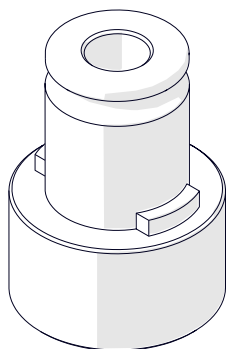
** Requires a 60x31 mm reduction adapter (RDC-000011)



Screw tap size (imperial)	Adapter Ø60 without clutch	Adapter Ø48 without clutch	Adapter Ø31 without clutch
5/16"	—	—	WKL-000173**
3/8"	—	—	WKL-000174**
7/16"	—	—	WKL-000175**
1/2"	—	—	WKL-000176**
9/16"	—	—	WKL-000177**
5/8"	—	WKL-000183*	WKL-000178**
11/16"	—	WKL-000184*	WKL-000179**
3/4"	—	WKL-000185*	WKL-000180**
13/16"	—	WKL-000186*	WKL-000181**
7/8"	WKL-000124	WKL-000187*	WKL-000182**
15/16"	WKL-000125	WKL-000120*	—
1"	WKL-000126	WKL-000121*	—
1-1/8"	WKL-000127	WKL-000122*	—
1-1/4"	WKL-000128	WKL-000123*	—
1-3/8"	WKL-000129	—	—
1-1/2"	WKL-000130	—	—
1-5/8"	WKL-000131	—	—

* Requires a 60x48 mm reduction adapter (RDC-000012)

** Requires a 60x31 mm reduction adapter (RDC-000011)

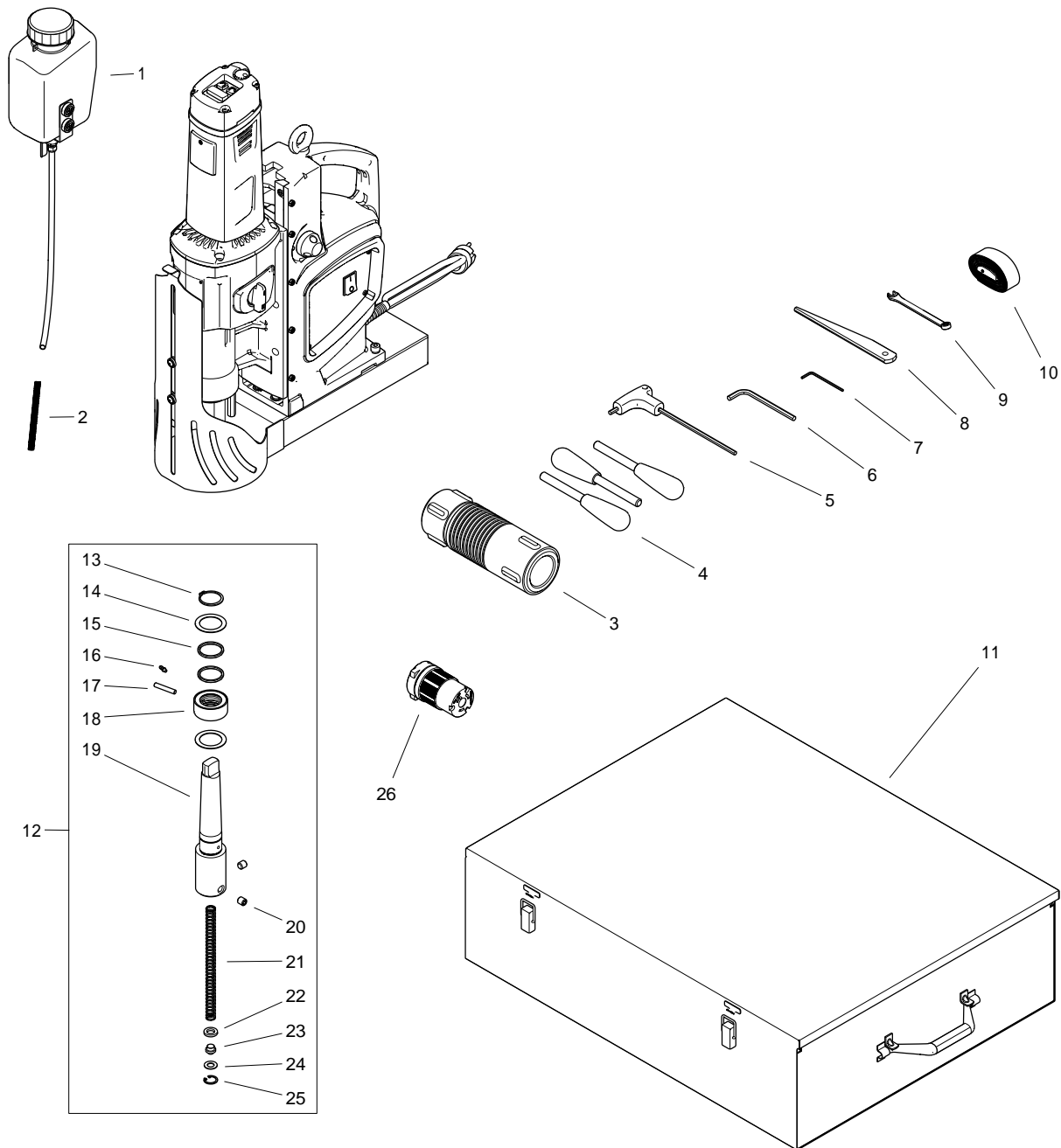


Screw tap size (imperial)	Adapter Ø60 with clutch	Adapter Ø48 with clutch	Adapter Ø31 with clutch
5/16"	—	—	WKL-000139**
3/8"	—	—	WKL-000140**
7/16"	—	—	WKL-000141**
1/2"	—	—	WKL-000142**
9/16"	—	—	WKL-000143**
5/8"	—	WKL-000149*	WKL-000144**
11/16"	—	WKL-000150*	WKL-000145**
3/4"	—	WKL-000151*	WKL-000146**
13/16"	—	WKL-000152*	WKL-000147**
7/8"	WKL-000158	WKL-000153*	WKL-000148**
15/16"	WKL-000159	WKL-000154*	—
1"	WKL-000160	WKL-000155*	—
1-1/8"	WKL-000161	WKL-000156*	—
1-1/4"	WKL-000162	WKL-000157*	—
1-3/8"	—	—	—
1-1/2"	—	—	—
1-5/8"	—	—	—

* Requires a 60x48 mm reduction adapter (RDC-000012)

** Requires a 60x31 mm reduction adapter (RDC-000011)

5. EXPLODED VIEWS AND PARTS LISTS

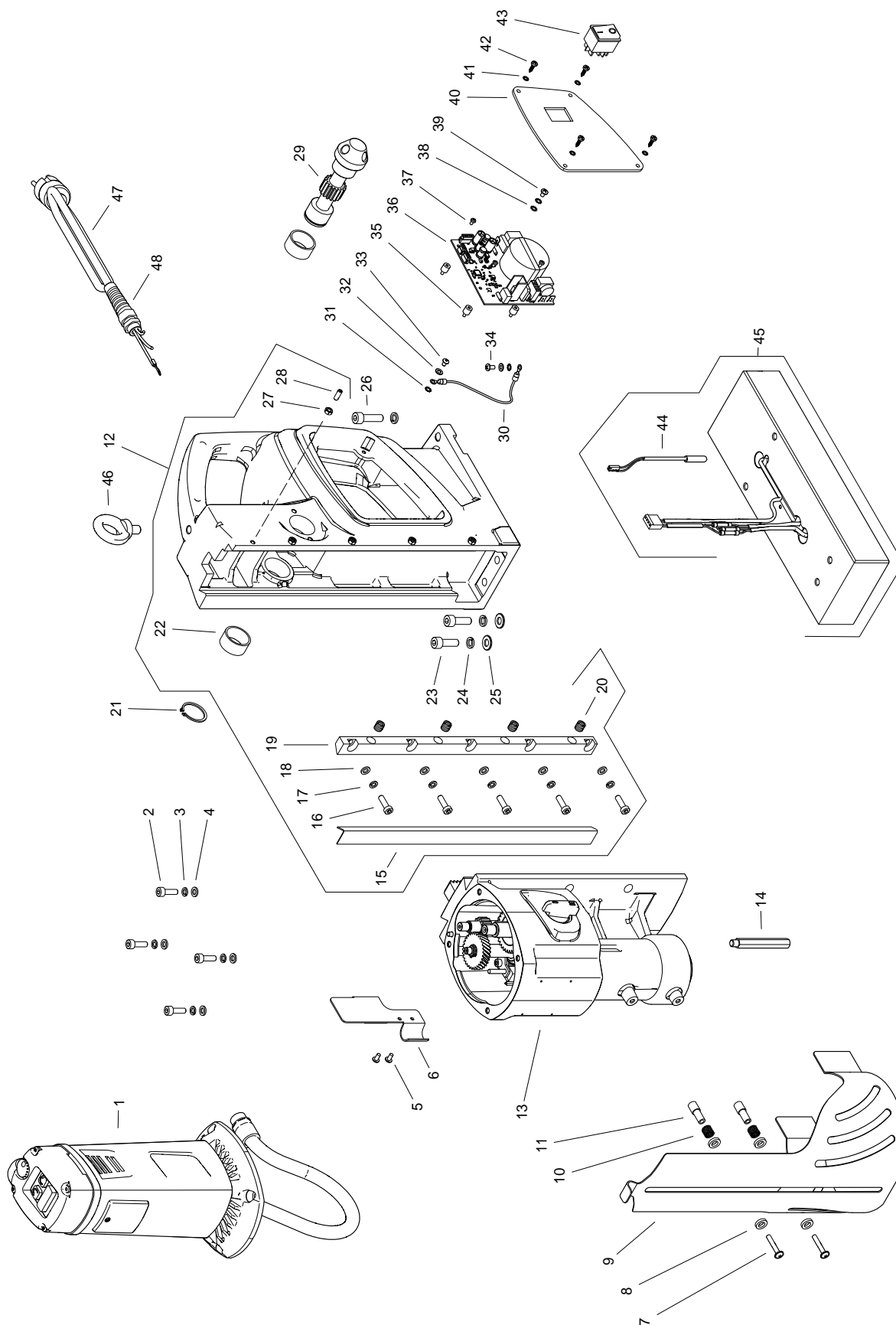


ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	UKL-0563-07-00-00-0	COOLANT BOOTLE ASSY	1
2	OSL-0399-17-00-00-0	SAFETY SPRING	1
3	OPK-000001	TOOL CAN	1
4	DZW-0178-09-00-00-0	SPOKE HANDLE ASSY	3
5	KLC-000037	5 MM HEX WRENCH WITH HANDLE	1
6	KLC-000009	6 MM HEX WRENCH	1
7	KLC-000005	2.5 MM HEX WRENCH	1
8	KLN-0103-00-00-00-0	WEDGE MT3	1
9	KLC-000003	8 MM COMBINATION WRENCH	1
10	PAS-000008	SAFETY STRAP 500	1
11	SKR-0583-12-00-00-0	METAL BOX ASSY	1

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ITEM	PART NUMBER	DESCRIPTION	Q-TY
12	UCW-0583-14-00-00-0	ARBOR ASSY AMT4-C-19 4-4	1
13	PRS-000023	EXTERNAL RETAINING RING 32z	1
14	PDK-0583-13-03-00-0	WASHER	2
15	PRS-000299	O-RING 32.2x3	2
16	KNC-0234-00-10-00-0	CONNECTOR 4x11.5	1
17	PRT-0151-06-13-00-2	ROD L=35	1
18	TLJ-0583-13-02-00-0	COOLING SLEEVE	1
19	KRP-0583-14-01-00-0	ARBOR BODY AMT4-C-19 4-4	1
20	WKR-000032	HEX SOCKET SET SCREW WITH FLAT POINT M10x10	2
21	SPR-0563-20-02-00-0	SPRING	1
22	USZ-0220-00-04-00-0	WASHER	1
23	WYP-0154-00-02-00-0	PLUNGER	1
24	PDK-0139-00-04-00-0	WASHER 18.8x10x1	1
25	PRS-000009	INTERNAL RETAINING RING 19w	1
26	ZLC-000299	LOCKING COUPLING (115 V ONLY)	1



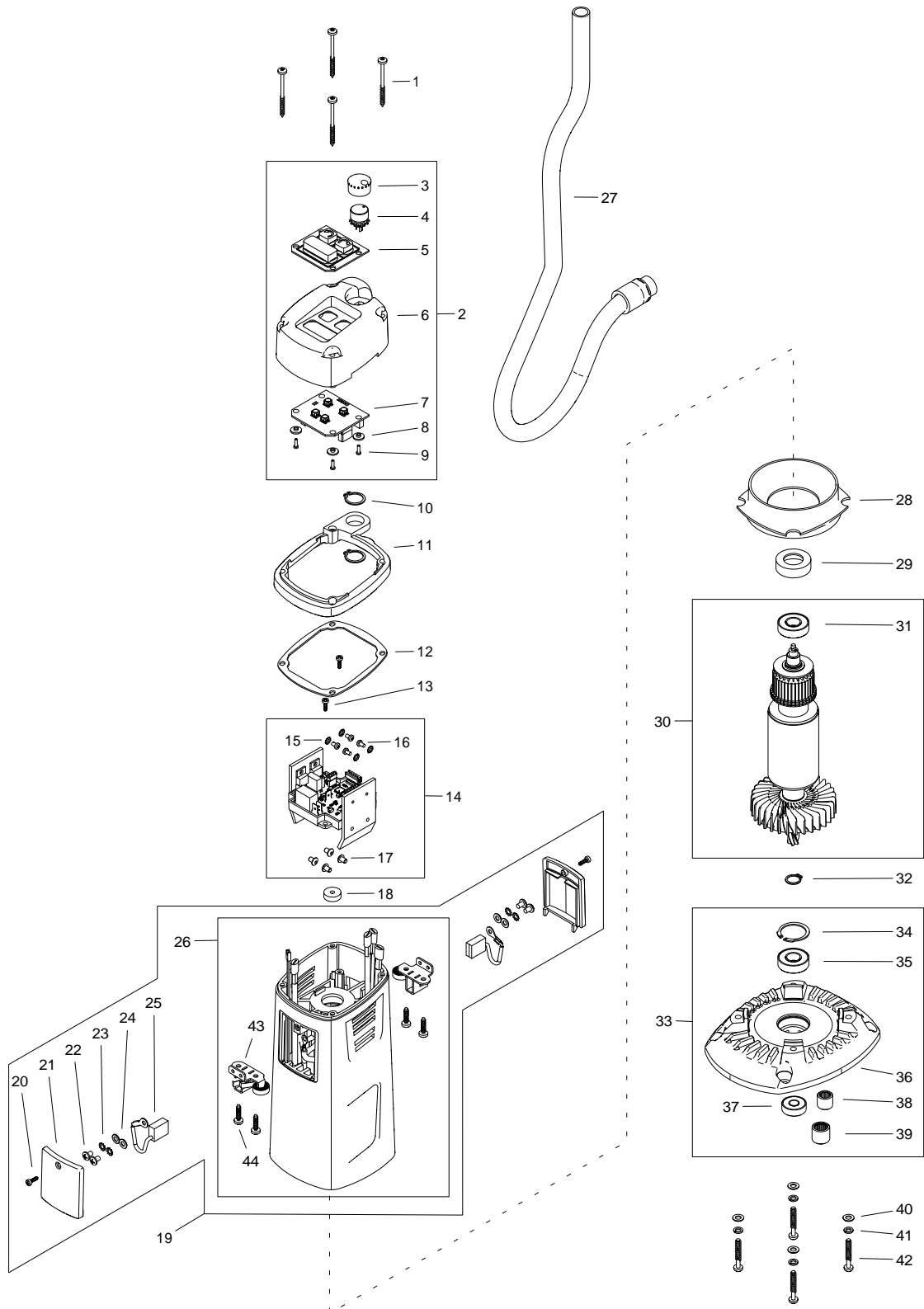
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	SLN-0583-01-00-00-0	MOTOR – 115V	1
1	SLN-0583-01-00-00-1	MOTOR – 230V	1

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ITEM	PART NUMBER	DESCRIPTION	Q-TY
2	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
3	PDK-000046	SPRING WASHER 6.1	4
4	PDK-000136	SMALL ROUND WASHER 6.4	4
5	WKR-000193	CROSS RECESSED PAN HEAD SCREW M4x8	2
6	NKD-0563-06-00-00-0	COOLANT BOOTLE BRACKET	1
7	WKR-000531	HEX SOCKET ROUND HEAD SCREW WITH FLANGE M5x35	2
8	PDK-000151	NYLON WASHER 8.1x14x3	4
9	OSL-0583-08-00-00-0	GUARD	1
10	SPR-000030	PUSH SPRING	2
11	TLJ-0563-04-00-00-0	SLEEVE	2
12	KRP-0583-03-01-00-0	BODY ASSY	1
13	ZSP-0583-02-00-00-0	GEARBOX ASSY	1
14	PLC-0143-03-06-00-3	STOP ROD	1
15	LST-0583-03-01-03-0	GIB	1
16	SRB-000304	LOW HEAD SOCKET CAP SCREW M6x20	5
17	PDK-000046	SPRING WASHER 6.1	5
18	PDK-000136	SMALL ROUND WASHER 6.4	5
19	LST-0583-03-01-02-0	ADJUSTABLE GIB	1
20	SPR-000043	SPRING 1.6x8x14.5	4
21	PRS-000019	EXTERNAL RETAINING RING 28z	1
22	TLJ-000010	SELF-LUBRICATING SLEEVE 28x32x16	2
23	SRB-000153	HEX SOCKET HEAD CAP SCREW M8x25	2
24	PDK-000051	SPRING WASHER 8.2	4
25	PDK-000022	ROUND WASHER 8.4	2
26	SRB-000155	HEX SOCKET HEAD CAP SCREW M8x30	2
27	NKR-000015	HEX NUT M5	5
28	WKR-000410	HEX SOCKET SET SCREW WITH FLAT POINT M5x14	5
29	WLK-0563-14-00-00-0	PINION SHAFT	1
30	WZK-0563-03-10-00-0	SAFETY WIRE SET (W3)	1
31	PDK-000166	EXTERNAL TOOTH LOCK WASHER 4.3	2
32	PDK-000015	ROUND WASHER 4.3	2
33	WKR-000553	HEX SOCKET BUTTON HEAD SCREW M4x6	2
34	WKR-000193	CROSS RECESSED PAN HEAD SCREW M4x8	1
35	WBR-000004	DAMPER	3
36	MDL-0583-80-03-00-0	MAGNETIC BASE MODULE – 115V (BB1)	1
36	MDL-0583-80-04-00-0	MAGNETIC BASE MODULE – 230V (BB1)	1
37	WKR-000180	CROSS RECESSED PAN HEAD SCREW M3x5	3
38	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
39	WKR-000192	CROSS RECESSED PAN HEAD SCREW M4x6	1
40	MSK-0563-09-01-00-0	PANEL PLATE	1
41	PDK-000161	EXTERNAL TOOTH LOCK WASHER 3.7	4
42	WKR-000415	CROSS RECESSED PAN HEAD SELF-TAPPING SCREW 3.5x13	4
43	PNK-000013	MAGNET SWITCH	1
44	WZK-0563-03-02-02-0	REED WIRES SET (W15)	1
45	PDS-0583-03-02-00-0	ELECTROMAGNETIC BASE ASSY (230V)	1
45	PDS-0583-03-02-00-1	ELECTROMAGNETIC BASE ASSY (115V)	1
46	SRB-000299	EYE BOLT M10	1
47	PWD-0563-16-01-00-0	POWER CORD 120V WITH STRAIN RELIEF ASSY (US)	1
47	PWD-0563-16-02-00-0	POWER CORD 230V WITH STRAIN RELIEF ASSY (EU)	1
47	PWD-0563-16-03-00-0	POWER CORD 230V WITH STRAIN RELIEF ASSY (AU)	1
47	PWD-0563-16-04-00-0	POWER CORD 230V WITH STRAIN RELIEF ASSY (INDIA)	1
47	PWD-0563-16-05-00-0	POWER CORD 230V WITH STRAIN RELIEF ASSY (UK)	1
48	DLW-000008	CABLE GLAND WITH STRAIN RELIEF PG13.5	1
49*	PWD-0563-10-00-00-0	GROUNDING WIRE SET	1

* not shown in the drawing



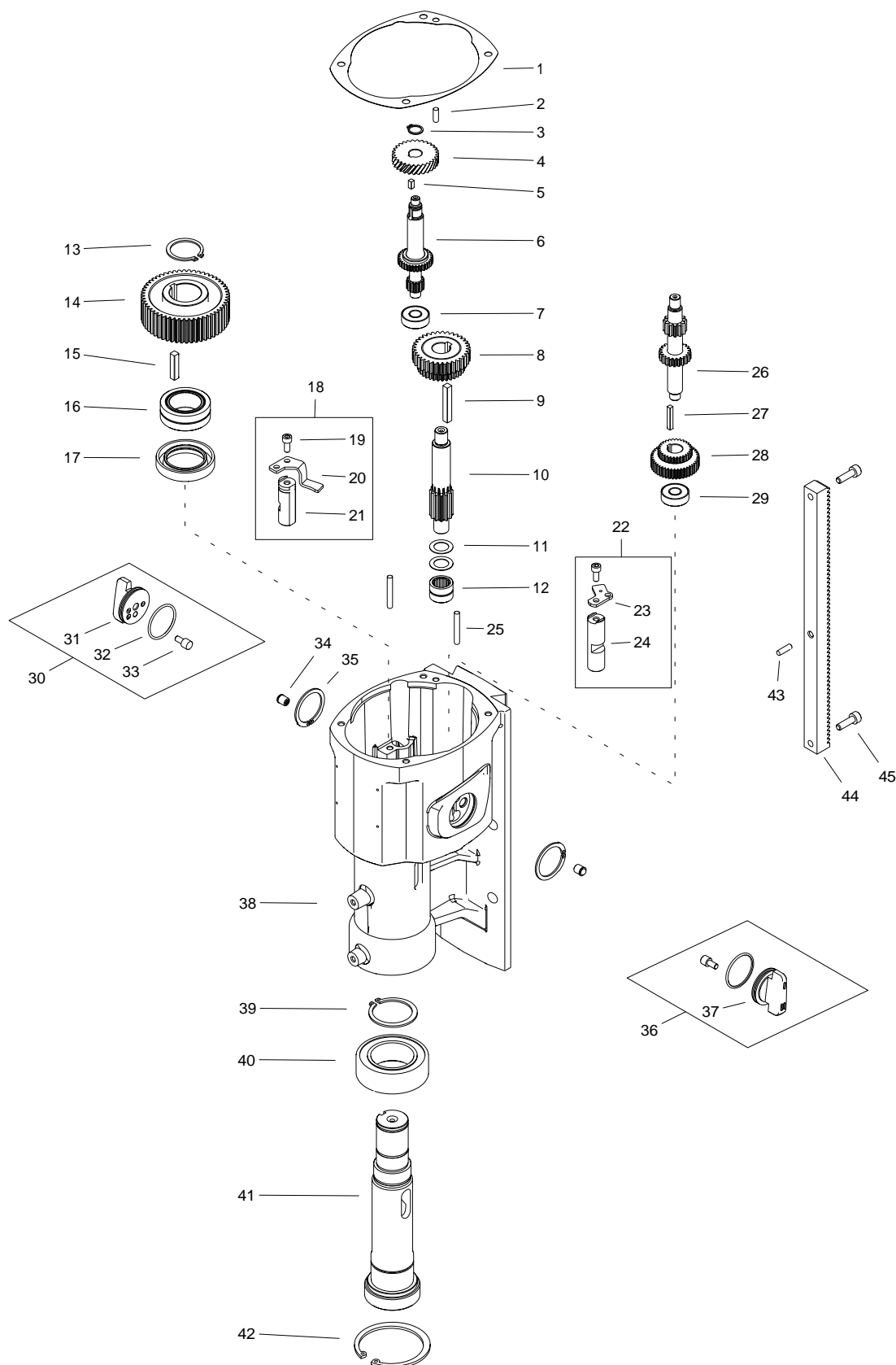
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	WKR-000529	TORX PAN HEAD SCREW 4x50	4
2	PKR-0563-01-06-00-0	STATOR COVER ASSY	1
3	PKT-0563-01-06-04-0	POTENTIOMETER KNOB	1
4	PTN-000039	POTENTIOMETER	1
5	OSL-0563-01-06-02-0	BUTTON COVER	1
6	PKR-0563-01-06-01-0	STATOR COVER	1

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ITEM	PART NUMBER	DESCRIPTION	Q-TY
7	MDL-0563-80-05-01-0	KEYBOARD MODULE (OB1)	1
8	TLJ-000151	INSULATION SLEEVE 2.6x3.9	4
9	WKR-000458	SCREW FOR PLASTIC 2.2x8	4
10	PRS-000238	EXTERNAL RETAINING RING 16z	2
11	SYG-0563-01-05-01-0	SIGNALLER	1
12	MDL-0563-80-04-00-0	SIGNALING MODULE (LB1)	1
13	WKR-000506	SCREW FOR PLASTIC 3x10	2
14	ZSP-0583-17-00-00-0	ELECTRONIC CONTROLLER SET ASSY – 115V (MB1)	1
14	ZSP-0583-17-00-00-1	ELECTRONIC CONTROLLER SET ASSY – 230V (MB1)	1
15	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
16	WKR-000180	CROSS RECESSED PAN HEAD SCREW M3x5	4
17	WKR-000292	HEX SOCKET BUTTON HEAD SCREW M4x6	4
18	IMP-000002	PULSE GENERATOR	1
19	OBD-0563-99-02-00-0	MOTOR COVER WITH STATOR ASSY – 115V	1
19	OBD-0563-99-02-00-1	MOTOR COVER WITH STATOR ASSY – 230V	1
20	WKR-000506	SCREW FOR PLASTIC 3x10	2
21	PKR-0563-01-09-00-0	BRUSH COVER	2
22	WKR-000192	CROSS RECESSED PAN HEAD SCREW M4x6	4
23	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	4
24	PDK-000016	ROUND WASHER 4.3	4
25	SCZ-000035	BRUSH – 115V	2
25	SCZ-000036	BRUSH – 230V	2
26	OBD-0563-99-01-00-0	STATOR HOUSING ASSY – 115V	1
26	OBD-0563-99-01-00-1	STATOR HOUSING ASSY – 230V	1
27	WZK-0583-01-08-00-0	MOTOR WIRE SET	1
28	OBD-0563-01-07-00-0	FAN COVER	1
29	WKL-000046	BEARING INSERT	1
30	WRN-0563-99-00-00-0	ROTOR ASSY – 115V	1
30	WRN-0563-99-00-00-1	ROTOR ASSY – 230V	1
31	LOZ-000158	BALL BEARING 12x28x8	1
32	PRS-000003	EXTERNAL RETAINING RING 12z	1
33	PKR-0583-01-02-00-0	GEARBOX COVER ASSY	1
34	PRS-000356	INTERNAL RETAINING RING 28w	1
35	LOZ-000025	BALL BEARING 12x28x8	1
36	PKR-0583-01-02-01-1	GEARBOX COVER	1
37	LOZ-000053	BALL BEARING 8x22x7	1
38	LOZ-000162	NEEDLE BEARING 10x14x12	1
39	LOZ-000176	NEEDLE BEARING 12x16x14	1
40	PDK-000017	ROUND WASHER 5.3	4
41	PDK-000044	SPRING WASHER 5.1	4
42	WKR-000525	TORX PAN HEAD TAPPING SCREW 5x30	4
43	SCT-000013	BRUSH HOLDER	2
44	WKR-000300	SCREW FOR PLASTIC 4x16	4
45*	WZK-0563-01-06-07-0	POTENTIOMETER WIRE SET (W6)	1
46*	WZK-0563-01-11-00-0	LED WIRE SET (W4)	1
47*	WZK-0563-01-12-00-0	CONTROLLER WIRE SET (W2)	1
48*	PWD-0563-01-13-00-0	BRUSH HOLDER WIRE (W14)	1
49*	PWD-0563-09-02-00-0	CONTROLLER WIRE SET (W12)	1
50*	PWD-0563-09-03-00-0	CONTROLLER WIRE SET (W13)	1

* not shown in the drawing



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	USZ-0583-02-15-00-0	BODY SEAL	1
2	KLK-000046	DOWEL PIN 5n6x14	1

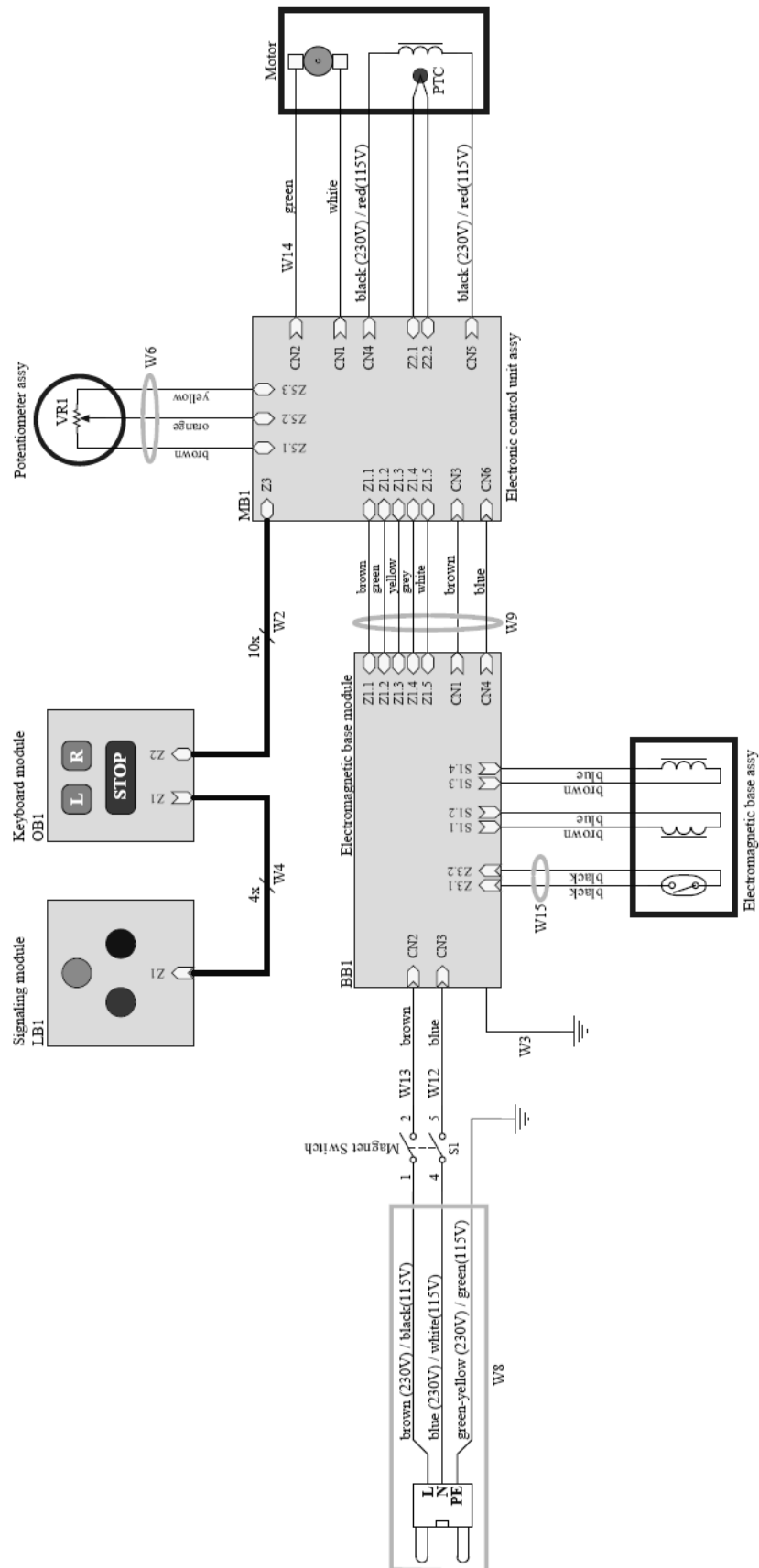
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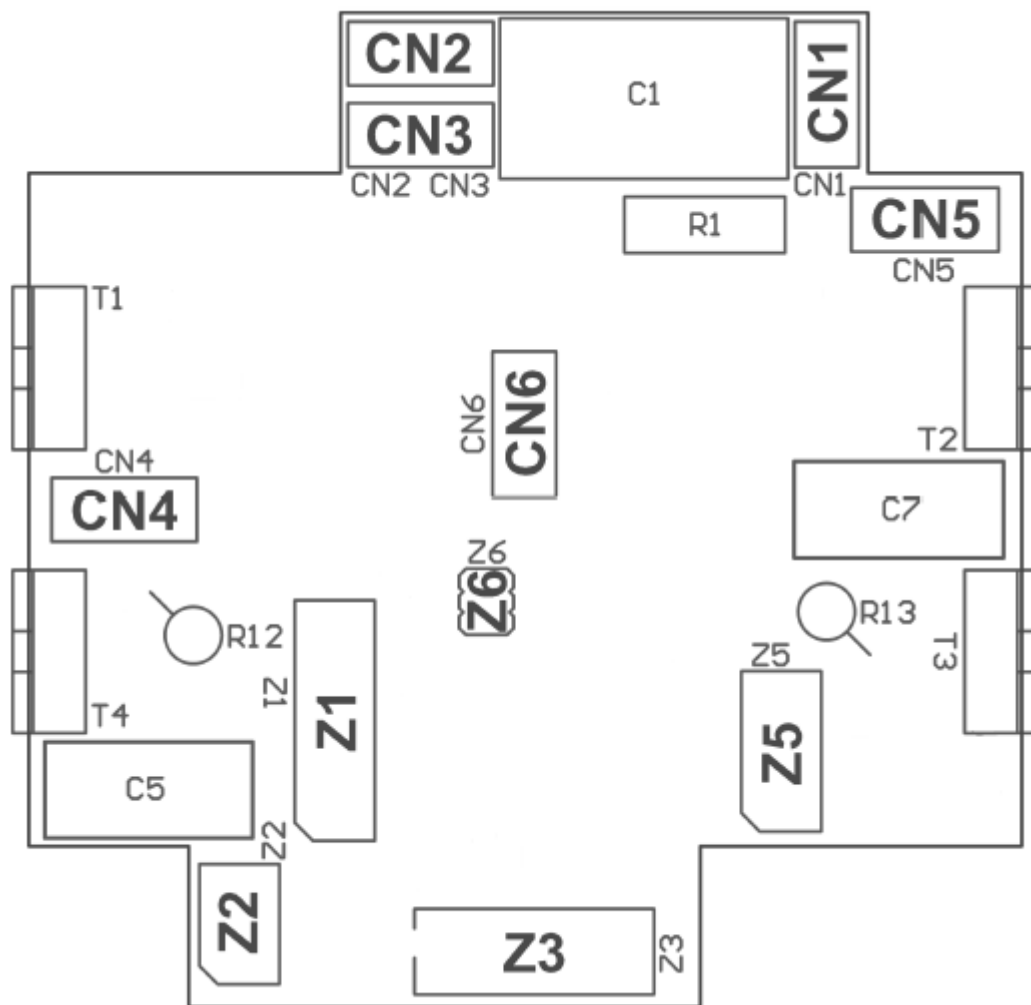
ITEM	PART NUMBER	DESCRIPTION	Q-TY
3	PRS-000003	EXTERNAL RETAINING RING 12z	1
4	KOL-0563-02-03-02-0	GEAR z29	1
5	WPS-000082	PARALLEL KEY 4x4x8	1
6	WLK-0583-02-02-00-0	PINION SHAFT ASSY	1
7	LOZ-000161	BALL BEARING 10x26x8	1
8	KOL-0583-02-04-00-0	GEAR z34	1
9	WPS-0563-02-19-00-1	KEY 6x6x40	1
10	WLK-0583-02-07-00-0	PINION SHAFT z12	1
11	PDK-0563-02-22-00-0	WASHER 14x22x0.5	1
12	LOZ-000175	NEEDLE BEARING 14x22x16	1
13	PRS-000021	EXTERNAL RETAINING RING 30z	1
14	KOL-0583-02-06-00-0	GEAR z54	1
15	WPS-0583-02-13-00-1	KEY 6x6x28	1
16	LOZ-000178	NEEDLE BEARING 30x47x17	1
17	PRS-000077	SEAL 35x55x10	1
18	WDZ-0583-02-10-00-0	SHORT SLIPPER ASSY	1
19	SRB-000078	HEX SOCKET HEAD CAP SCREW M5x12	2
20	ZCZ-0583-02-10-02-0	SHORT SLIPPER BRACKET	1
21	WLK-0583-02-10-01-0	SHORT SLIPPER SHAFT	1
22	WDZ-0583-02-11-00-0	LONG SLIPPER ASSY	1
23	ZCZ-0583-02-11-01-0	LONG SLIPPER BRACKET	1
24	WLK-0563-02-11-01-0	LONG SLIPPER SHAFT	1
25	KLK-000111	DOWEL PIN 5n6x36	2
26	WLK-0583-02-08-00-0	PINION SHAFT z12	1
27	WPS-0563-02-20-00-1	KEY 4x4x25	1
28	KOL-0583-02-03-00-0	GEAR z27, z43	1
29	LOZ-000161	BALL BEARING 10x26x8	1
30	PKT-0583-02-14-00-0	SHORT SHIFT KNOB ASSY	1
31	KRP-0583-02-14-01-0	SHORT SHIFT KNOB	1
32	PRS-000327	OS-RING 32x2	2
33	KLK-0599-02-09-02-0	KNOB PIN	2
34	ZTR-000001	BALL LOCK 8	2
35	PRS-000346	INTERNAL RETAINING RING 36w	2
36	PKT-0563-02-13-00-0	LONG SHIFT KNOB ASSY	1
37	KRP-0563-02-13-01-1	LONG SHIFT KNOB	1
38	KRP-0583-02-01-01-1	GEARBOX BODY	1
39	PRS-000139	EXTERNAL RETAINING RING 40z	1
40	LOZ-000179	BALL BEARING 40x68x21	1
41	WRZ-0583-02-05-11-0	SPINDLE	1
42	PRS-000244	INTERNAL RETAINING RING 68w	1
43	KLK-000047	DOWEL PIN 5n6x16	1
44	LST-0583-02-09-00-0	GEAR RACK	1
45	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	2
46*	SMR-000001	GREASE	1

* not shown in the drawing

WIRING DIAGRAM



ELECTRONIC CONTROL UNIT ASSY



6. DECLARATION OF CONFORMITY

Declaration of Conformity

***PROMOTECH sp. z o.o.
ul. Elewatorska 23/1
15-620 Białystok
Poland***

We declare with full responsibility that:

D500XT Drilling Machine with Electromagnetic Base

is manufactured in accordance with the following standards:

- EN 60745-1
- EN 55014-1
- EN ISO 12100

and satisfies the regulations of the guidelines: 2014/30/EU, 2014/35/EU, 2006/42/EC, 2011/65/EU, 2012/19/EU.

Person authorized to compile the technical file:

Marek Siergiej, ul. Elewatorska 23/1, 15-620 Białystok, Poland

Białystok, 21 October 2019



Marek Siergiej
CEO

7. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of Manufacturer warrants the D500XT Drilling Machine with Electromagnetic Base to be free of defects in material and workmanship under normal use for a period of 12 months from the date of sale.

This warranty does not cover tools as well as damage or wear that arise from misuse, accident, tempering or any other causes not related to defects in workmanship or material.

Serial number

Date of sale

Signature and stamp of the seller

0.03 / 24 January 2020

WE RESERVE THE RIGHT TO MAKE CHANGES IN THIS MANUAL WITHOUT NOTICE