

# PROMAC®

07-2016

**Drill Press**  
**Säulenbohrmaschinen**  
**Perceuses à colonne**

**212**  
**212Z**



**CE**

**TOOL FRANCE SARL**

9 Rue des Pyrénées,  
91090 LISSES, France  
[www.promac.fr](http://www.promac.fr)

**CE-Conformity Declaration  
CE-Konformitätserklärung  
Déclaration de Conformité CE**

**Product / Produkt / Produit:**

Drill Press / Säulenbohrmaschine / Perceuse à Colonne

**212 / 212Z**

**Brand / Marke / Marque:**

**PROMAC**

**Manufacturer / Hersteller / Fabricant:**

TOOL FRANCE SARL, 9 Rue des Pyrénées, 91090 LISSES, France

We hereby declare that this product complies with the regulations  
Wir erklären hiermit, dass dieses Produkt der folgenden Richtlinie entspricht  
Par la présente, nous déclarons que ce produit correspond aux directives suivantes

**2006/42/EC**

Machinery Directive / Maschinenrichtlinie / Directive Machines

**2014/30/EU**

electromagnetic compatibility  
elektromagnetische Verträglichkeit  
compatibilité électromagnétique

designed in consideration of the standards  
und entsprechend folgender zusätzlicher Normen entwickelt wurde  
et été développé dans le respect des normes complémentaires suivantes

**EN ISO 12100:2010, EN12717:2001+A1:2009, EN 60204-1:2006+A1:2009,  
EN 61000-6-2:2005, EN 61000-6-4:2007+A1:2011**

Responsible for the Documentation / Dokumentations-Verantwortung / Responsabilité de Documentation:  
Head Product-Mgmt. / Leiter Produkt-Mgmt. / Resp. Gestion des Produits  
TOOL FRANCE SARL



2018-03-02 Christophe SAINT SULPICE, General Manager

TOOL FRANCE SARL, 9 Rue des Pyrénées, 91090 LISSES, France

**Warning: Failure to follow this warning can result in death or serious injury to yourself or to third persons.**

As with all machines, there are typical dangers associated with the operation and handling of this machine. Careful operation and correct handling of the machine significantly reduce the risk of accidents. If the normal precautionary measures are disregarded, risks of accident for the operator are unavoidable.

The machine was designed only for the given types of use. Do not carry out changes of the machine and do not force it to do a task for which it has not been designed.

If you have any questions about the use of this machine and if you do not find the appropriate answer in this Instructions Manual, please contact your dealer who will be able to help you.

## GENERAL SAFETY RULES FOR THE CORRECT USE OF MACHINES

1. For your own safety, first read and become familiar with the entire Instructions Manual before operating the machine. Learn the machine's applications, its operating limits and specific hazards.
2. Keep guards in place and in perfect working order, do not remove them.
3. Always connect the electrical machinery equipped with mains plug with protective contact to a socket with earth contact.
4. When using adapters without earth contact, connect directly to the earth terminal of the machine. Never start a machine that is not connected to an outlet with ground connection.
5. Always remove loose clamping levers or keys from the machine. Before turning the machine ON, systematically check that any loose parts have been removed.
6. Always keep the work area clean. Cluttered work stations and benches invite accidents.
7. Do not operate the machine in a dangerous environment. Do not use the machine in wet or damp areas and do not expose it to rain. Always keep the work area and workstation well lit.
8. Keep children and visitors at a safe distance from the machine and from the work area.
9. Secure the workshop or workroom against unauthorised access. Fit child safety devices, e.g. lockable latches, lockable main switches, etc.
10. Do not overload the machine. Its performance will be better and the operation safer if it is operated within the specified ranges without exceeding the capacities for which it has been designed.
11. Do not use tools to carry out a task for which they are not designed.
12. Wear appropriate clothing: do not wear loose clothing, gloves, neckties, rings, necklaces or bracelets and other jewellery that may be caught in moving parts of the machine. Wear non-slip footwear. Wear protective hair covering to contain long hair.
13. Always wear safety glasses. Proceed according to the accident prevention regulations. Wear also a dust mask if the drilling operation is dusty.
14. Secure the workpieces. Always use a vice or a clamping device to hold the workpiece. This is safer than using your hand and both hands are free to operate the machine.

15. Do not overreach. Keep proper footing and balance at all times.
16. Always keep the machine in good working order. To do this, keep the cutting faces sharp and clean for optimum performance. Follow the operating instructions for cleaning, lubricating and changing accessory equipment.
17. Always disconnect the machine from the mains before carrying out any maintenance work or changing machine parts such as saw blade, cutting tools, etc.
18. Only use the recommended accessories. Follow the instructions in the User Manual. The use of unsuitable accessories may cause accidents.
19. Prevent any accidental starting. Before connecting the equipment to the mains, always check that the operating switch is in OFF position ("0").
20. Never stand on the machine. Serious injuries may occur if the machine tips over or comes in contact with the cutting tool.
21. Check for damaged parts. Damaged guards or other parts should be properly repaired or replaced before further operation.
22. Never leave a running machine unattended. Always switch off the mains supply. Do not leave the machine unattended until it has come to a complete standstill.
23. Never operate the machine if you are under the influence of alcohol, medication or drugs.
24. Make sure that the machine is disconnected from the mains supply before carrying out works on the electrical system, drive motor, etc.

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## NOTES ON SAFETY AT WORK

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### Transporting the machine

1. The machine weighs up to 50kg.
2. Use suitable means of transport.
3. The machine head is very heavy, there is thus a risk of tipping over during transport!

### Work station

1. The work area must be well-lit and well-ventilated.
2. Lighting must be 300 LUX to work safely.



**Wear always safety goggles!**

### Noise level

According to Point 1.7.4.2u of the Machinery Directive 2006/42/EC

4 measurements were made when the machine was running in no-load mode:

- The microphone was placed on the operator's head at a medium height.
- The continuous noise level was below 70 dB (A).
- The maximum noise level C was always measured below 130 dB.

NOTE: during machine operation, the noise intensity varies depending on the type of materials being processed. The operator must therefore assess the intensity and equip machine users with suitable hearing protection equipment.

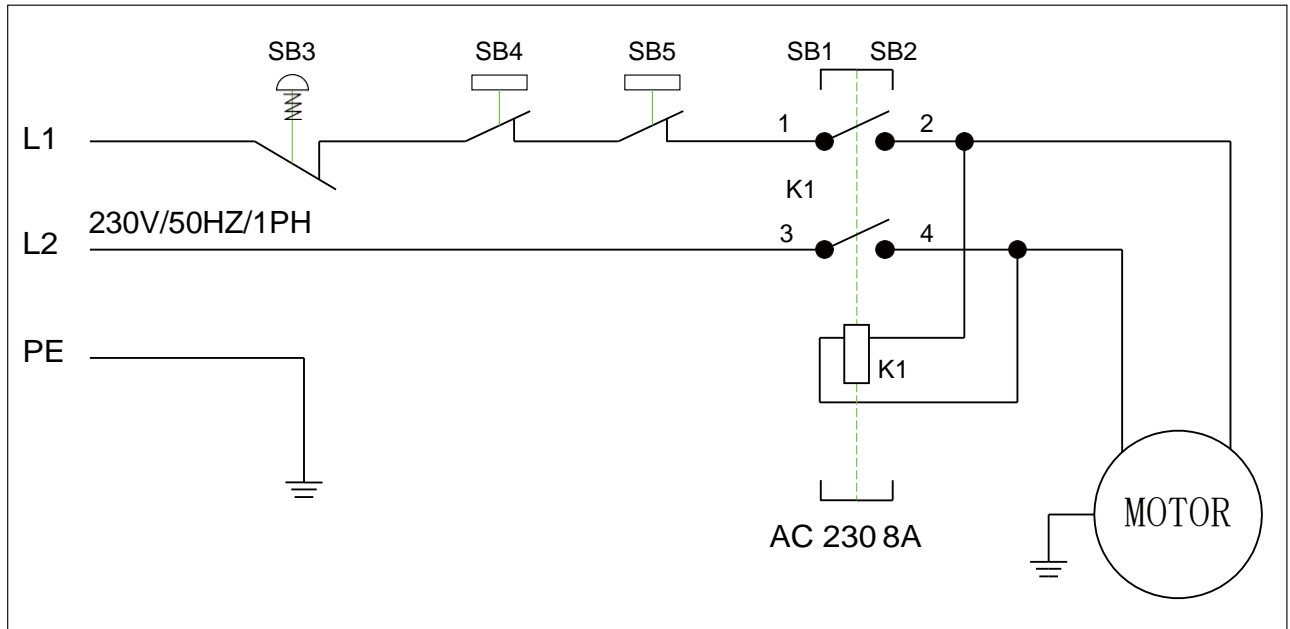
### Electrical mains connection

1. The machines model 212 and 212Z are supplied with a mains cable with plug, 230V, 50Hz. Connections as well as changes of the mains connection must be carried out by a qualified technician, in accordance with standard EN60204-1, Point 5.3.
2. The fuse protection must be at least 10.3A.
3. The exact electrical data can be found on the identification plate of the machine and in the wiring diagram, enclosed with this Manual.
4. **CAUTION:** For all maintenance or conversion works as well as repairs, the machine must be disconnected from the electrical mains (unplug the machine).
5. The yellow/green ground cable is important for electrical safety. Therefore, proceed with care to install it correctly.

## ELECTRICAL SYSTEM

The wiring diagram, 230Volt, which can also be found in the motor cover, contains all necessary information for the correct connection of your machine to the mains. If the mains connection (plug) has to be changed, this task must be carried out by a qualified technician.

## WIRING DIAGRAM



### Electrical components – Parts List

Symbol	Function	Technical Data	Parts	Remarks
L1, L2	Power plug Power cable	250V, 10-16A H05VV-F 1.5mm <sup>2</sup>	1	
K1 / SB1	“Start” Switch	AC 230V / 10A	1	KEDU, KJD-12 IEC60947-4-1
K1 / SB2	“Stop” Switch	AC 230V / 10A	1	KEDU, KJD-12 IEC60947-4-1
M	Motor	DC 230V / 0.37Kw	1	
PE	Electrical grounding			
SB3	Microswitch Cover / Emergency switch	AC 230V / 6A	1	SHINOZAKI, AZD-S11 EN 60947-5-1
SB4	Chip guard switch	AC 230V / 6A	1	Model 212Z only (France)

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**212 / 212Z**

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Drilling capacity	16mm
Attachment	MT 2
Throat depth	168mm
Spindle stroke	80mm
Speeds & speed range	5 speeds, 490-2510 min <sup>-1</sup>
Distance spindle nose-table	445mm
Distance spindle nose-base	640mm
Spindle diameter	40mm
Column diameter	73mm
Table dimensions	265 x 265mm
Motor	0.37 kW
Overall dimensions	970x320x560mm
Weight	45kg

***NOTE: Model 212Z is only available for France***

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**MACHINE DESCRIPTION**

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PROMAC drilling machines provide universal machining centres that can be used to perform a wide variety of machining tasks that would otherwise require several machines. The proper use and maintenance of your machine will guarantee safe function and high working accuracy for many years.

The machine should only be operated by trained users having entirely read and understood these operating instructions.

For this purpose and before being used, each function of the machine must be tested in “no-load” operation.

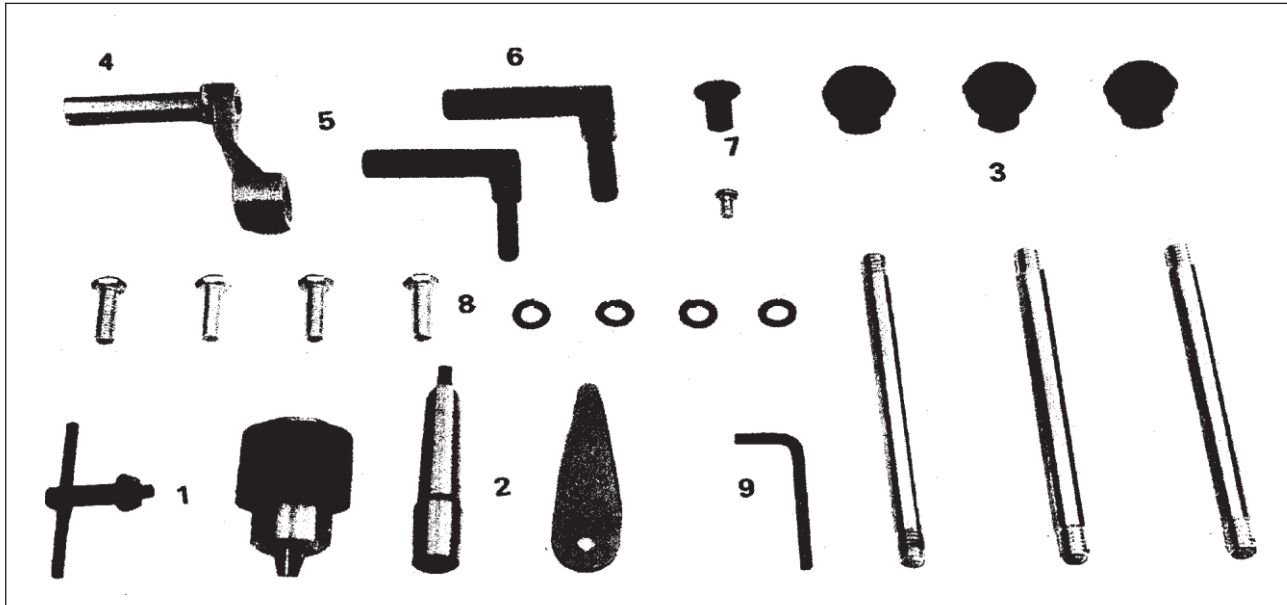
**FEATURES**

1. The design of this machine enables drilling with a wide range of tools. The machine is equipped with stepped pulleys for changing the spindle speeds.
2. The machine is precisely manufactured and can be used without limits by experienced operators due to its simple handling.
3. Direct spindle stroke movement for the drilling process.
4. The large dimensioned column gives the machine great rigidity against distortion, and ensures high working accuracy.
5. The machine head, made of grey cast iron, provides the accuracy required.

## Unpacking the machine

Unpack the machine with all its parts, and check the parts according to the list below.

- |                              |                                      |
|------------------------------|--------------------------------------|
| 1. 13mm Drill chuck with key | 6. Clamping lever                    |
| 2. Adapter MT2/B18           | 7. Turning handle                    |
| 3. Handle with rod (3)       | 8. Screw with spring lock washer (3) |
| 4. Crank                     | 9. Allen wrench                      |
| 5. Clamping lever            |                                      |

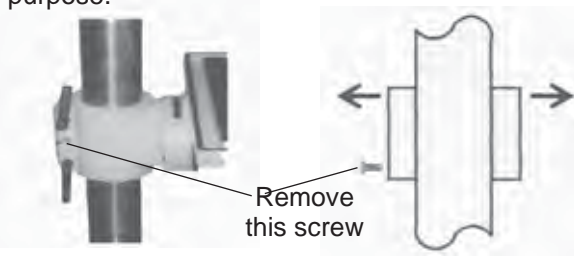


Assemble the machine as shown in the adjacent figure.

- Place the column on the base (1) and secure it with the screws and washers (1).
- Position the column flange (2) with the rack inserted (3) onto the column. Fit the crank (4) and fasten using the screw. **Please follow the Note below!**
- Fit the ring (5) and secure it with the screws.
- Fit the worktable (6) onto the flange (2).
- Screw in the clamping levers (7).
- Place the head (8) on the column and adjust to align it with the base. Tighten the screws.
- Fit the turning handles (9).
- Fit the chip guard (10).

### Note about Pos. 2:

Once the assembly of the flange is complete, remove the screw. This screw is only used for assembly purpose.



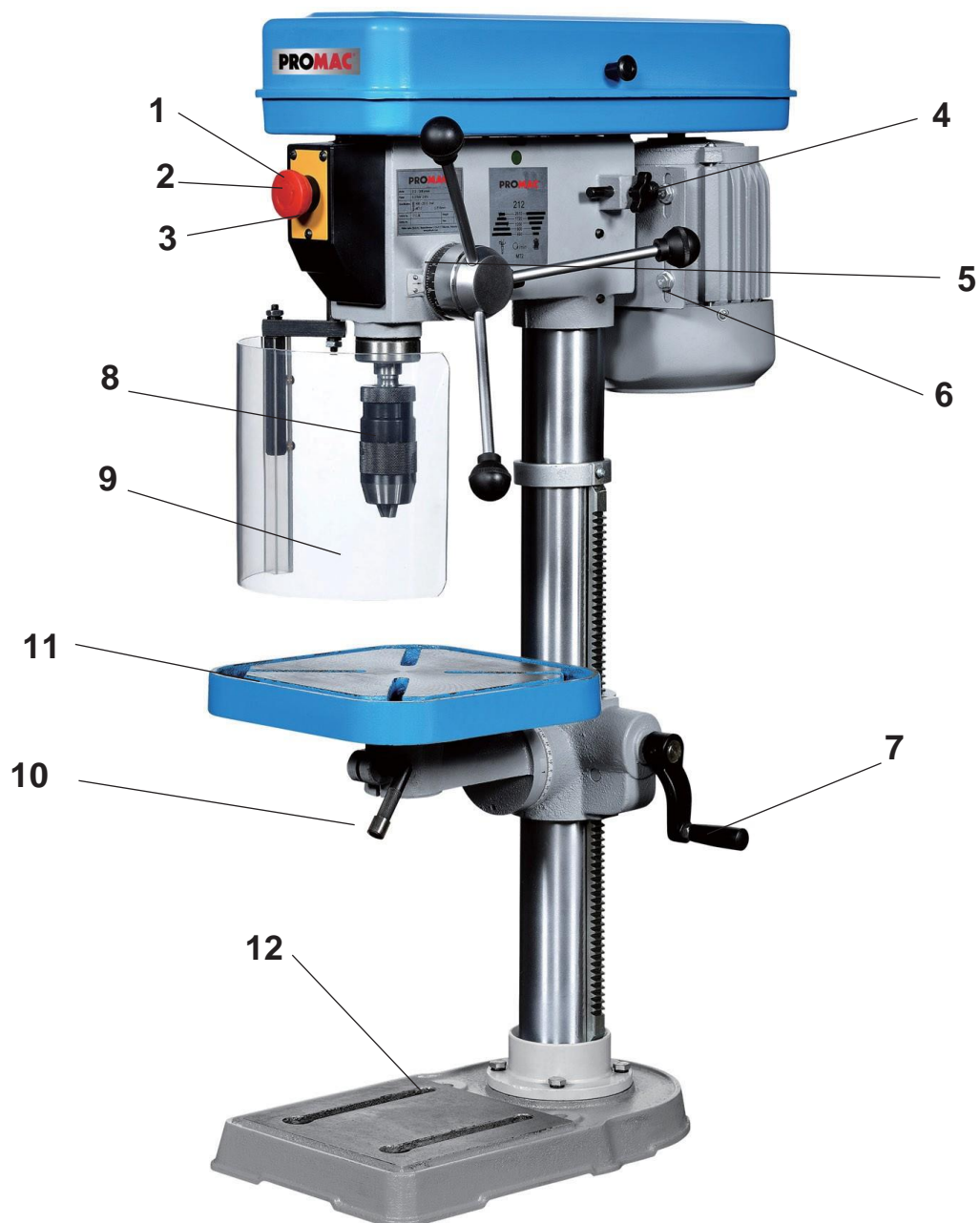
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## Main controls

212 / 212Z

1. "Start" switch
2. Emergency stop switch
3. "Stop" switch
4. V-belt tension lever
5. Depth stop
6. Spindle feed handle
7. Crank of the table
8. Drill chuck
9. Chip guard
10. Clamping lever
11. Swivel table
12. Base





The following minimum conditions are required to choose a suitable room where the equipment will be installed:

- Mains voltage and frequency in accordance with motor's specifications.
- Ambient temperature from - 10°C to + 50°C.
- Relative humidity less than 90%.

## **Anchoring the machine**

The machine must be placed on a solid concrete floor, at a minimum distance of 800mm between the rear side of the machine and the wall, and must be anchored in the ground using screws and expansion plugs or encased tie rods. Attention must be paid when levelling the machine.

## **Assembling the machine**

1. Clamp the worktable on the column.
2. Install the machine in a room/place where the ambient temperature is homogeneous. Make sure that the machine is not exposed to sunlight, otherwise there is a risk of distortion and loss of accuracy.
3. Before final connection to the mains, check that the motor rotates clockwise.
4. The Model 212 must be mounted on a stable workbench or on a pedestal base. It is essential that the workbench used for the installation is free of distortion. It should also be rigid enough to prevent any oscillation or vibration during operation.
5. The machine base has two slotted holes for the fixing screws. Before tightening the screws, check that the clamping table is aligned in the longitudinal and transverse directions in relation to the rotating work spindle. To do this, insert a dial gauge with 1/1000 reading with the corresponding attachment into the spindle and align the table accordingly. For alignment, appropriate metal foils of suitable thickness (feeler gauges) are to be inserted between the mounting level and the machine base.

## **Cleaning and lubrication of the machine**

For transport purposes, all unpainted parts of the machine are coated with an anti-corrosion grease. This protection must be completely removed before the machine is put into operation. Use petroleum or mineral oil for this purpose.

**Caution:** Do not use any kind of paint thinner, otherwise the paint on the machine will be destroyed. Make sure that rubber or plastic parts are not in contact with solvents or grease.

After cleaning, all unpainted parts should be coated with a light film of oil of medium viscosity (**PROMAC Part no. 100385**).

## **Cooling lubricant**

The Model 212 can be equipped with the coolant system PROMAC Part no. 2064. We recommend the biological cooling lubricant PROMAC Part no. 9179, container 5kg. The minimum dilution of oil in water is 5-10%.

## **Preparatory works before commissioning**

Check all parts of the machine for perfect condition and function before commissioning. As far as the relevant safety precautions and the correct operation of the machine are observed, the accuracy of the machine is ensured for a long time.

- a) Lubricate the spindle and column with **PROMAC oil Part no. 100385**.
- b) Check that the surface of the clamping table is free of dust, chips or oil residues.
- c) Check that the machining tool is sharp and properly clamped, and that the workpiece is securely clamped.
- d) Make sure that the setting of the spindle speed is not too high and that the cutting speed is appropriate for the task to be done.
- e) Make sure that everything is prepared before starting the work.

### ***NOTE: before initial operation***

- a) The V-belt is not tensioned to avoid distortion. Before use, please tension the belt as described page 17.
- b) Before operating the machine for the first time, let it run in for 1/2 hour without load at approx. 1200 rpm.

### **AFTER OPERATION**

- a) Switch off the machine and disconnect it from the mains.
- b) Unclamp the tool.
- c) Clean the machine, oil bare parts, guides and spindles.
- d) Cover the machine with a cloth to protect it from dust and dirt.



**Always wear safety goggles!**

### **ADJUSTMENT AND SETTING OF THE WORKTABLE**

- a) To raise or lower the worktable, loosen the clamping lever so that the table can be raised and lowered on the column via the rack.  
When the desired height is reached, tighten the clamping lever again to avoid vibrations.
- b) The worktable can be rotated 360° after loosening the clamping screw. Once the desired angular position has been set, tighten the clamping screw again.

### **ADJUSTMENT FOR DRILLING**

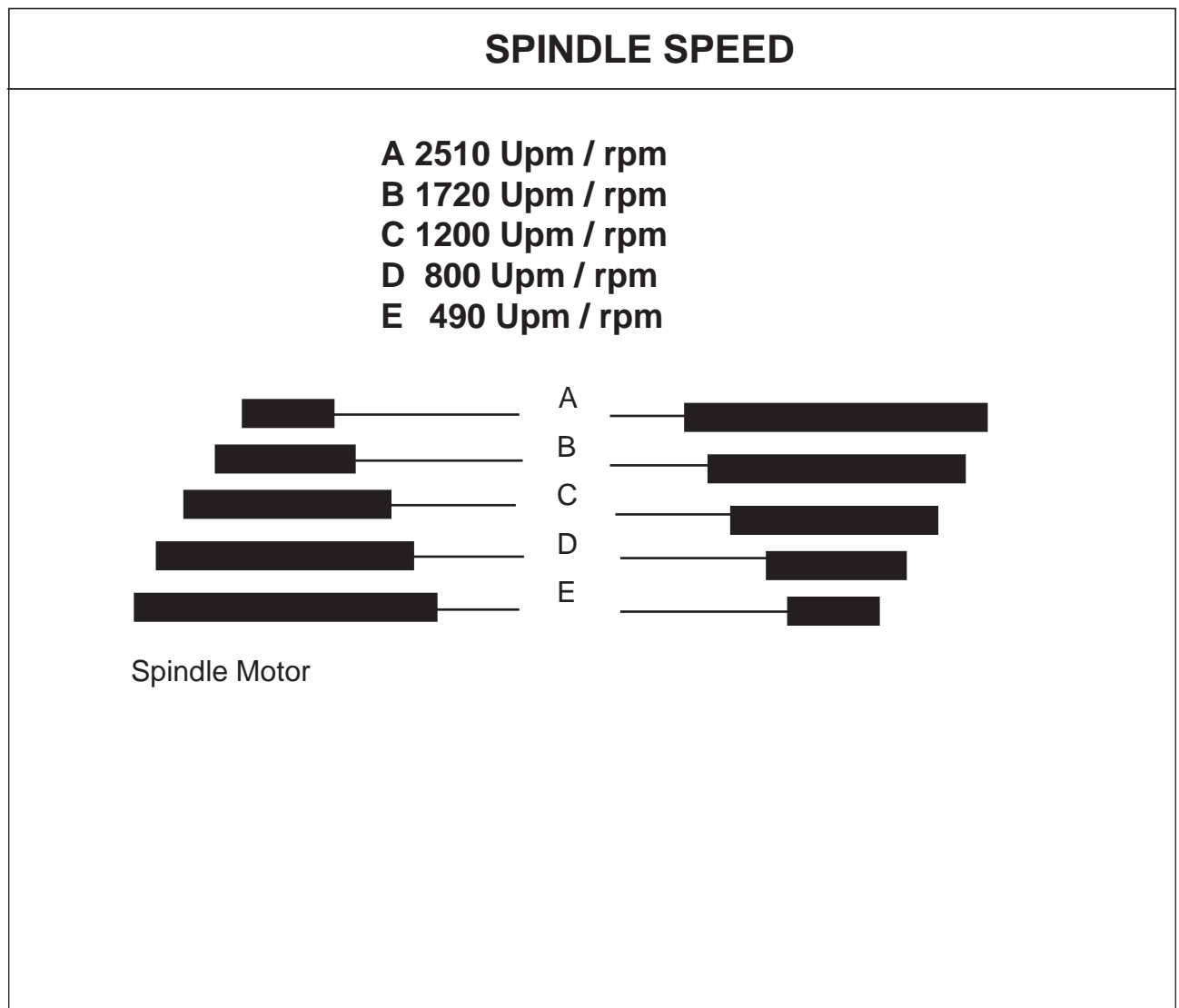
- a) Set the drilling depth using the depth stop.
- b) The drilling feed is now carried out by turning the cross handle.

### **T-SLOTS ON WORKTABLE AND BASE**

For safe working, the workpiece must always be firmly clamped on the cross table using a suitable clamping tool. The T-slots in the worktable have a dimension of 12 mm. A large selection of suitable clamping tools can be found in the **PROMAC metalworking machines catalogue**.

By shifting the V-belt, the desired speed can be set according to the table below.

1. Switch off the machine and disconnect it from the mains.
2. Open the V-belt cover.
3. Loosen the set screw.
4. Push the motor against the head housing to release the V-belt.
5. Change the V-belt position on the pulleys.
6. Tension the V-belt by means of the motor (approx. 1cm sag).
7. Close the V-belt cover and start the machine.



Below are the main maintenance operations, which can be divided into daily, weekly, monthly and half-yearly operations. Failure to carry out the scheduled operations will result in premature wear and reduced machine performance.

## Daily maintenance

- General cleaning of the machine from chips.
- Cleaning the spindle cone.
- Tool wear check.
- Check protective covers for function.

## Weekly maintenance

- General, careful cleaning of the machine from chips.
- Cleaning and lubrication of the spindle.
- Sharpening of the tools.
- Check protective covers for function and possible defects.

## Monthly cleaning

- Retighten all screws.
- Check protective covers and devices for integrity.

## V-belt maintenance

- The V-belt must run at the correct tension so that the power of the motor is transmitted to the tool optimally. **Pull out the power cable!** Open the belt cover. Loosen the tension screw and tighten or loosen the motor until the belt reaches the correct tension (approx. 10mm sag).
- To change the V-belt, loosen the tension screw, replace the V-belt and tension it as described above. Close the belt cover again!

## EXTRAORDINARY MAINTENANCE

Extraordinary maintenance must be carried out by qualified personnel. In any case it is recommended to contact your machine dealer.

The restoration of the protective covers and safety devices is also to be considered as extraordinary maintenance.

## EXTENDED MACHINE STANDSTILL

If the drill press is not used for a long time, it is recommended:

- To pull out the electrical mains plug.
- To clean the machine carefully and to preserve it sufficiently.
- If necessary, cover the machine with a tarpaulin.

## DISPOSAL

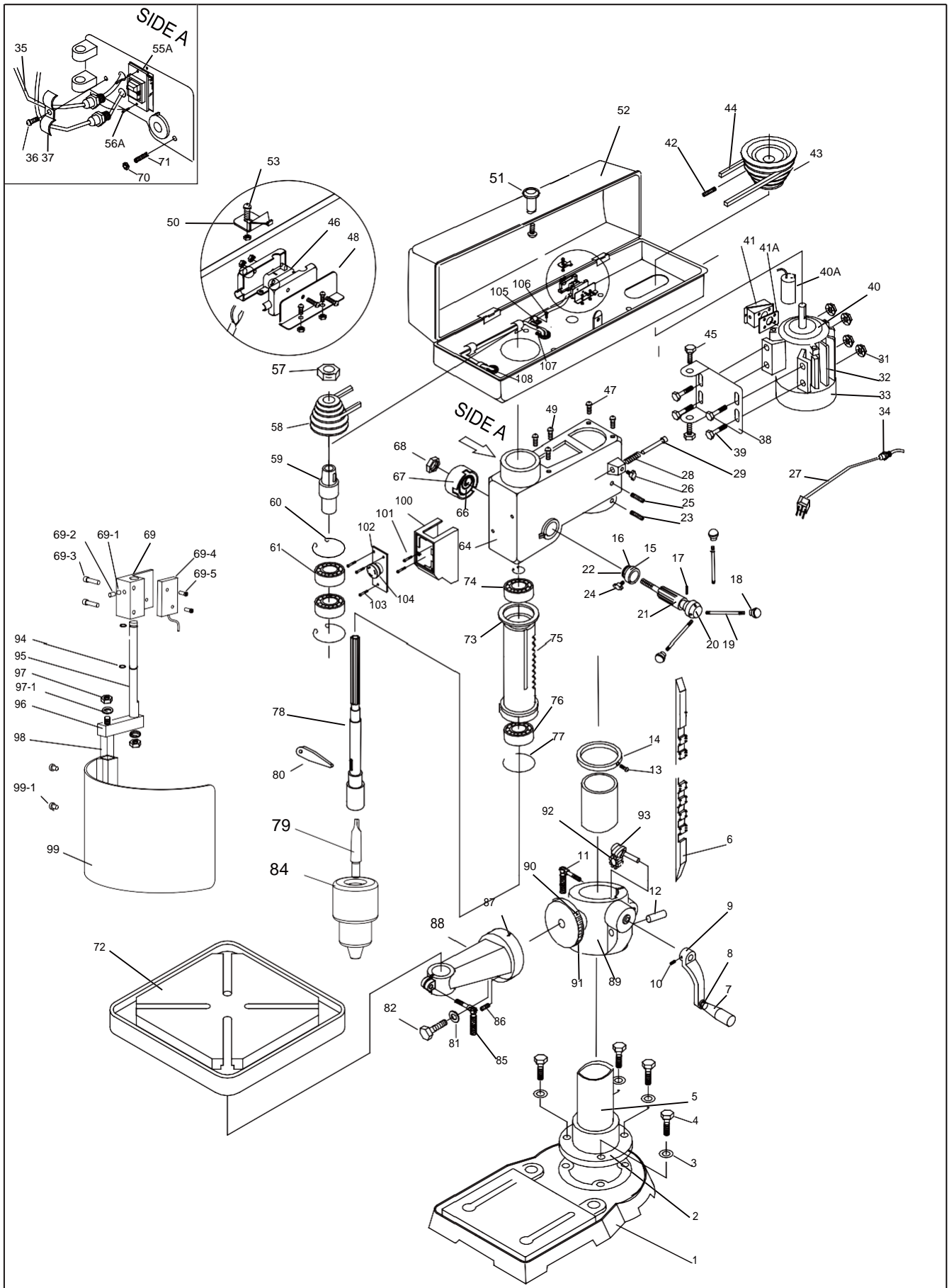
### General provisions

The final dismantling and scrapping of the machine must take into account the nature and composition of the materials to be disposed of. This means in detail:

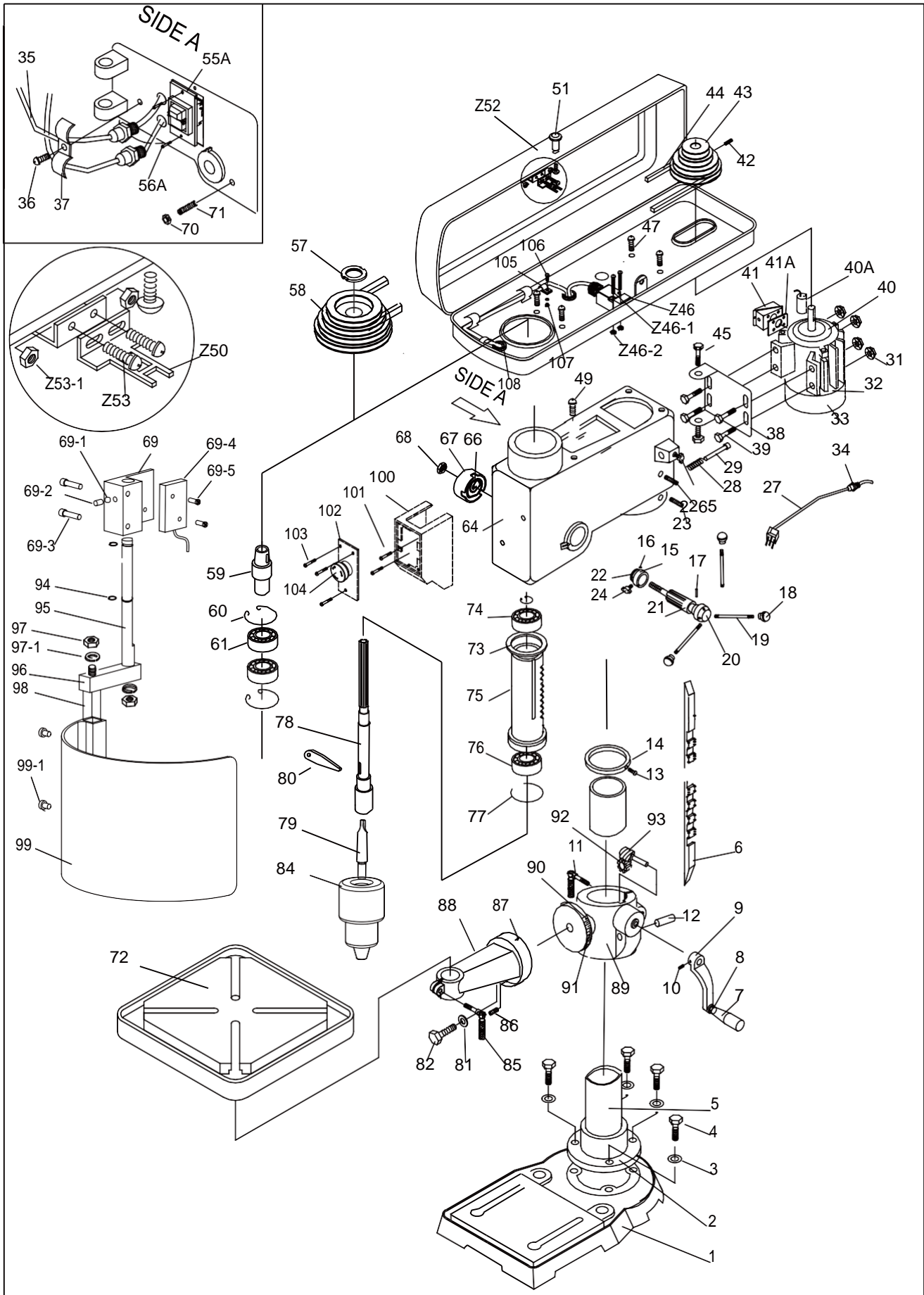
- Ferrous materials and cast iron, which however always consists only of metal, which is a secondary raw material, must be handed over to the ironworks authorised to carry out the melting, subject to the remuneration of the components contained.
- The electrical components, including power cables and electronic material that is considered to be assimilable to urban waste, can be handed over directly to the waste collection service.
- For used mineral, synthetic or mixed oils, water-soluble oils and greases, which are special waste, you must contact the Consortium for Used Oils for storage, transport and subsequent disposal.

**Note:** As the regulations and laws governing disposal are constantly revised and are therefore subject to change and new regulations, the user is advised to inform himself about the respective regulations for dismantling machine tools, which may deviate from the above-mentioned standards. In any case, the information given is to be regarded as general and purely indicative.

# EXPLODED VIEW - 212



# EXPLODED VIEW - 212Z



# SPARE PARTS LIST

212 / 212Z

1	PM-212001G	Base	52	PM-212052	V-belt guard
2	PM-212002G	Flange	Z52	PM-212052Z	Microswitch 212Z
3	PM-212003	Washer	53	PM-212053	Screw
4	PM-212004	Screw	55A	PM-210034B	Switch
5	PM-212005	Column	56A	PM-210036	Screw
6	PM-212006	Rack	57	PM-212057	Nut
7-9	PM-212007	Crank (complete)	58	PM-212058	Spindle pulley
10	PM-212010	Screw	59	PM-212059	Shaft
11	PM-212011	Clamping lever		PM-212059A	Drive taper sleeve #59~61
12	PM-212012	Shaft	60	PM-212060	Circlip
13	PM-212013	Screw	61	PM-212061	Ball bearing
14	PM-212014	Clamping ring	64A	PM-212064AG	Head housing
15	PM-212015	Scale ring	66-67	PM-212066	Return spring
16	PM-212016	Rivet			
17	PM-212017	Pin	68	PM-212068	Nut
18	PM-212018	Handle	69	PM-212069	Limit Switch Bracket
19	PM-212019	Handle rod	69-1	PM-212069A	Ball
20	PM-212020	Flange	69-2	PM-212069B	Pin
21	PM-212021	Feed shaft	69-3	PM-212069C	Screw
22	PM-212022	Scale	69-4	PM-212069D	Microswitch
23	PM-212023	Screw	69-5	PM-212069E	Screw
24	PM-212024	Control knob	70	PM-212070	Screw
25	PM-212025	Screw	71	PM-212071	Nut
26	PM-212026	Screw	72	PM-212072	Table
27	200034	Power cable	73	PM-212073	Washer
28	PM-212028	Spring	74	PM-212074	Ball bearing
29	PM-212029	Rod	75	PM-212075	Spindle guide
31	PM-212031	Nut	76	PM-212076	Ball bearing
32	PM-212032	Fan blade	77	PM-212077	Retaining ring
33	PM-212033G	Cover	78	PM-212078	Spindle
34	PM-212034	Cable clip	79	100188	Adapter
35		Cable	80	PM-212080	Wedge
36	PM-212036	Screw	81	PM-2121081	Washer
37	PM-212037	Fastener	82	PM-212082	Screw
38	PM-212038G	Motor support	84	947316CN	Quick-release chuck 16mm
39	PM-212039	Screw		947316	Quick-release chuck 16mm / 212Z
40	PM-212040G	Motor			
40A	PM 363200	Capacitor 150MFD / 250V			
41	PM-212041BG	Junction box	85	PM-212085	Lever
41A	PM-212041C	Gasket	86	PM-212086	Screw
42	PM-212042	Screw	87	PM-212087	Mark
43	PM-212043	Motor pulley	88	PM-212088G	Arm
44	PM-212044	V-belt	89	PM-212089G	Flange
45	PM-212045	Screw	90	PM-212090	Rivet
46	PM-212046	Microswitch	91	PM-212091	Scale
47	PM-212047	Screw	92	PM-212092	Gear
48	PM-212048	Switch plate	93	PM-212093	Worm screw
49	PM-212049	Screw	94	PM-212094B	Washer
50	PM-212050	Plate	95-99	PM-212102	Guard including support
51	PM-212051	Knob			

# SPARE PARTS LIST

212 / 212Z

97-1 PM-212097A Washer  
99-1 PM-212097B Screw  
99 PM-212099 Guard  
100 PM-2110021 Cover  
101 PM-210092B Screw  
102 PM-211059B Plate  
103 PM-210092B Screw  
104 PM-210091B Emergency Stop  
105 PM-210084B Fastener  
106 PM-210085B Screw  
107 PM-210086B Nut  
108 PM-210087B Cable grommet

Only for 212Z (France)

Z46-1 PM-212046Z Screw  
Z46-2 PM-212046Z-2 Nut  
Z50 PM-212050Z Plate  
Z53 PM-212053Z Screw  
Z52 PM-212052ZR Belt housing  
Z53-1 PM-212053Z-1 Nut

## Accessories

2021 Quick-clamping vice  
  
9082 Vice 75mm  
9083 Vice 100mm  
9336 T-slide 12mm





## Warranty / Garantie

TOOL FRANCE SARL guarantees that the supplied product(s) is/are free from material defects and manufacturing faults. This warranty does not cover any defects which are caused, either directly or indirectly, by incorrect use, carelessness, damage due to accidents, repairs or inadequate maintenance or cleaning as well as normal wear and tear.

Further details on warranty (e.g. warranty period) can be found in the General Terms and Conditions (GTC) that are an integral part of the contract.

These GTC may be viewed on the website of your dealer or sent to you upon request.

TOOL FRANCE SARL reserves the right to make changes to the product and accessories at any time.

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TOOL FRANCE SARL garantiert, dass das/die von ihr gelieferte/n Produkt/e frei von Material- und Herstellungsfehlern ist. Diese Garantie deckt keinerlei Mängel, Schäden und Fehler ab, die - direkt oder indirekt - durch falsche oder nicht sachgemäße Verwendung, Fahrlässigkeit, Unfallschäden, Reparaturen oder unzureichende Wartungs- oder Reinigungsarbeiten sowie durch natürliche Abnutzung durch den Gebrauch verursacht werden. Weitere Einzelheiten zur Garantie können den allgemeinen Geschäftsbedingungen (AGB) entnommen werden. Diese können Ihnen auf Wunsch per Post oder Mail zugesendet werden.

TOOL FRANCE SARL behält sich das Recht vor, jederzeit Änderungen am Produkt und am Zubehör vorzunehmen.

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Vous pouvez trouver de plus amples détails sur la garantie dans les conditions générales (CG).

Les CG peuvent être envoyées sur demande par poste ou par e-mail.

TOOL FRANCE SARL se réserve le droit d'effectuer des changements sur le produit et les accessoires à tout moment.

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