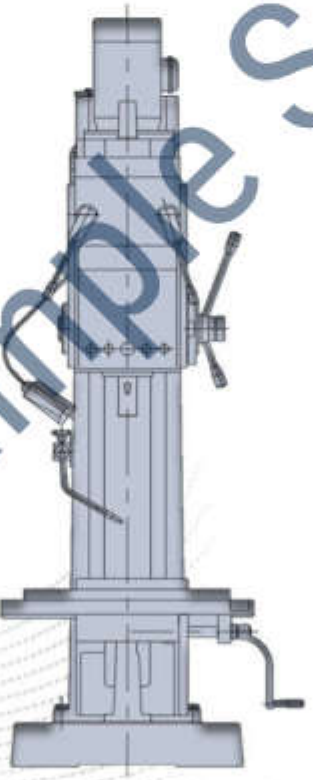
VERTICAL DRILLING MACHINE

Drill models S-Drill Pro H50

INSTRUCTION MANUAL

Please read the manual before using the machine



Maximum drilling diameter: **Ø50 mm**

Maximum axial force: **16,000 N**

Factory number: _____

Schematic designations

Emergency stop button. When you press the emergency stop button, work stops, but you must remember the moments of inertia of the moving parts of the machine.

Mandatory requirement. Failure to perform a mandatory action is a risk to human safety.

Read the instructions. Be sure to read the manual before starting operation.

Eye protection must be worn. During the operation of the equipment, flying objects/parts are formed. Mandatory eye protection is required.

Wear head protection. There is a possibility of injury to the head by objects or by hanging objects.

Be sure to use a container. Material used or formed may present a tripping or slipping hazard.

It is forbidden to touch. Any physical contact with the object of designation is prohibited. Contact with hands and other objects is prohibited.

It is forbidden to stick your hands inside. Do not insert hands or other objects into the openings. There is a risk of injury.

Do not use gloves. It is not allowed to use gloves during the operation of the equipment. The use of gloves can cause hands to be caught by moving parts of the machine.

Do not work with long hair. Long hair should be covered in a cap or bandana.

It is forbidden. It is forbidden to perform any actions marked with this sign.

1. Manufacturer's guarantees

1 In order to receive a guarantee, you need to present documents that clearly confirm the purchase of the machine from the STH company.

2 The warranty applies only to equipment defects (according to the terms of delivery) and does not cover the costs of delivery, call-out, relocation and the work of technicians, except in cases provided for by the terms of delivery.

3 The manufacturer guarantees the compliance of the product with the technical characteristics when meeting the requirements of transportation and storage, as well as operation in accordance with the requirements of the operating documents supplied with the machine.

4 The warranty period of operation is 12 months. The first day is considered the start of operation of the machine, but not more than 18 months from the moment of receipt of the machine by the buyer. The warranty period may be changed by the terms of supply (according to the terms of the supply contract).

5 The manufacturer does not bear warranty obligations when the conditions and rules of operation of the equipment, current and planned repairs are violated, as well as if the Buyer makes constructive changes to the equipment or operates the equipment in violation of safety regulations.

6 Warranty service is performed in accordance with the legislation of Ukraine and the terms of the equipment supply contract. The warranty period of equipment maintenance can be extended by agreement of the parties.

2. Security

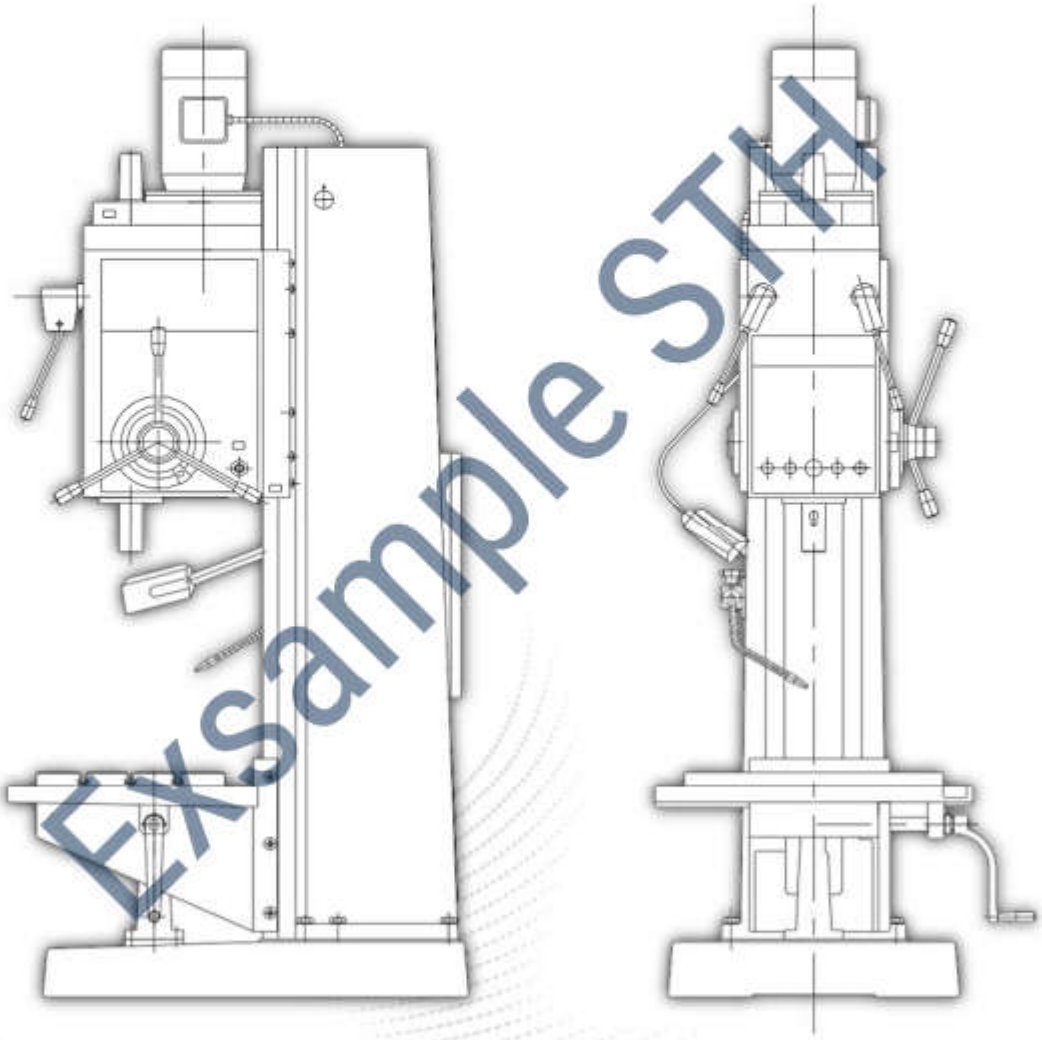
Purpose of the machine

The drilling machine is designed for drilling, countersinking, reaming, threading and other operations for processing holes in parts. The machine can be used both in production and for repair operations.

1. Parts of the equipment that can no longer be used or recycled must be transferred to a specialized department for the processing of poisonous, toxic and other non-degradable waste, such as batteries, electrical components, rubber, etc.

2. Fluid that cannot be used or reused, such as lubricant, coolant, etc. should merge into the place provided for this.

4. General appearance of the machine



Picture 4. 1 -General appearance of the machine

Vertical drilling machine models S - Drill Pro is a general-purpose machine for machining holes in various materials.

In addition to the operation of drilling holes in a solid material, the machine tool can perform operations of reaming, conical countersinking, countersinking and

7. The main characteristics of the machine

	S-Drill Pro H50
Max. drilling diameter (steel 600 MPa), mm	∅50
Max. axial force, N	16,000
Max. torque on the spindle, N×m	350
Engine power, kW	3
Spindle taper	KM5
The distance from the axis of the spindle to the guides of the bed, mm	335
Movement of the spindle sleeve, mm	250
Movement of the drilling head (manual), mm	200
The number of spindle rotation speeds (12 degrees), min^{-1}	31.5; 45; 63; 90; 125; 180; 250; 335; 500; 710; 1000; 1400
Number of feeds (9 steps), mm/rev	0.056; 0.112; 0.16; 0.224; 0.315; 0.45; 0.63; 0.90; 1.80
Reversible movement of the spindle	Manual button and automatic rotation change mode
Movement of the desktop, mm	300
Table dimensions (L x W), mm	560 x 480
Width of T- shaped groove, mm	18
The distance from the end of the spindle to the working surface of the table, mm	830
Engine power of the MOR system, kW	0.09
Productivity of the MOR system, l/min	25
Overall dimensions: • Length, mm • Width, mm • Height, mm	 1,090 950 2,530
Machine weight, kg	1,250

8. Transportation and installation

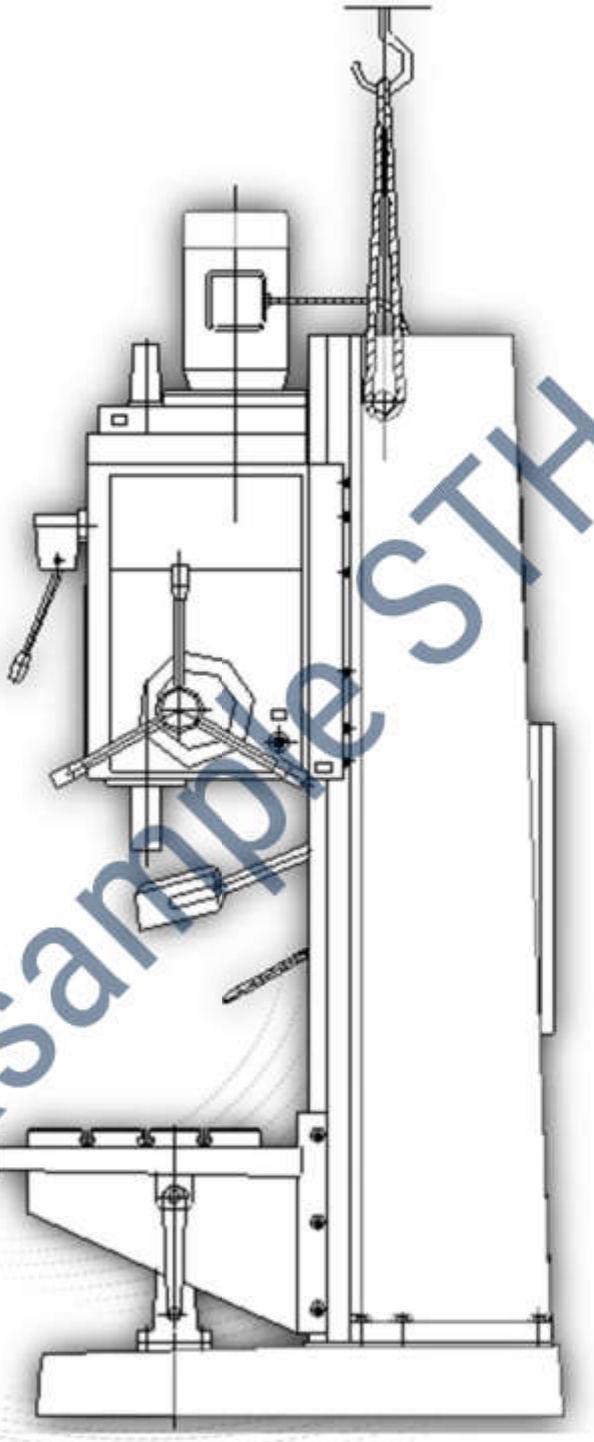
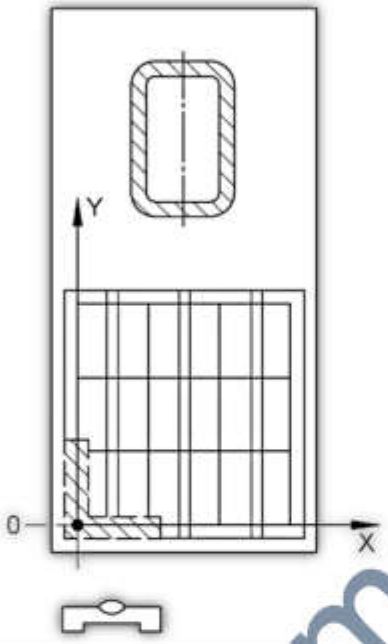
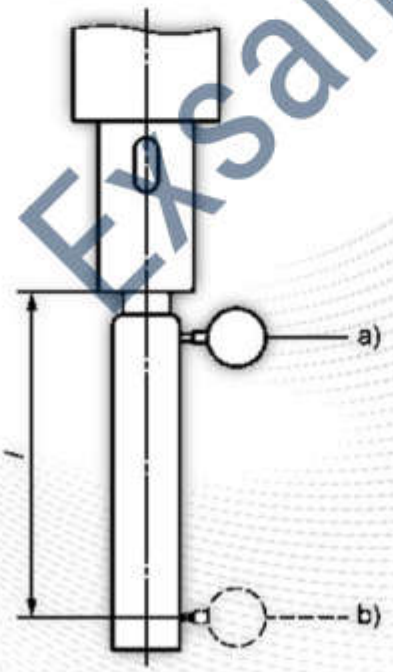
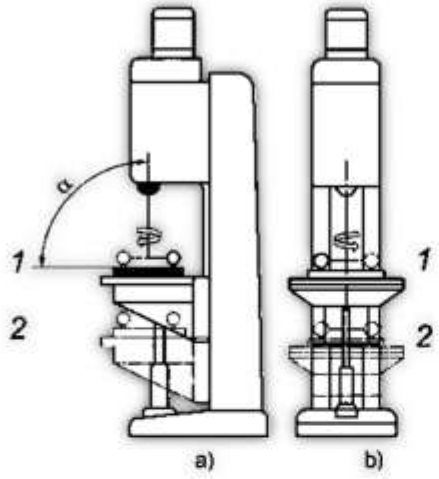
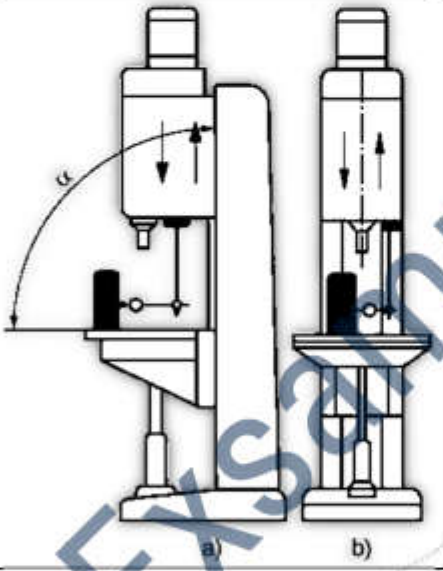
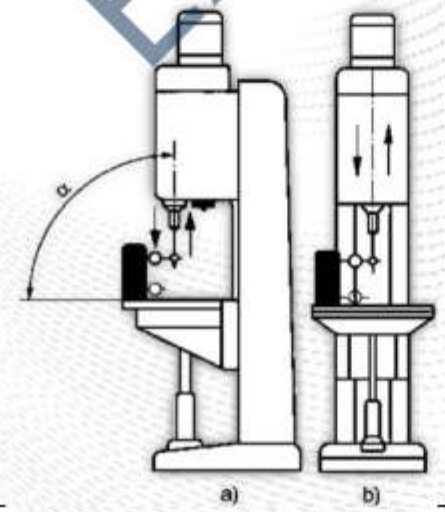


Figure 8. 1- Scheme of transportation of the machine

The transportation of the machine, after removing the packaging, must be carried out strictly according to the transportation scheme (see Figure 8. 1), the diameter of the metal rod should not be

10. Checking the machine for geometric accuracy

Inspection standard				ISO 2772
No	Picture	Inspection object	Deviation (mm)	
			Permissible, mm	Fact.
G1		longitudinal accuracy	0.030 / 300	
		transverse accuracy	0.030 / 300	
G2		Spindle beating	a) 0.02 b) 0.035 l=250	and) b)

Inspection standard				ISO 2772
No	Picture	Inspection object	Deviation (mm)	
			Permissible, mm	Fact.
G3		Perpendicularity of the axis of the spindle to the table 1-from above 2-below	1) 0.050 l= 300 α≤ 90° 2) 0.050 l = 300	1) 2)
G4		Perpendicularity of movement of the axis of the spindle to the table	a) 0.100 l = 300 α≤ 90° b) 0. 10 0 l = 300	and) b)
G5		Perpendicularity of the axis of the spindle to the table	a) 0.100 l = 300 α≤ 90° b) 0. 10 0 l = 300	and) b)

11. III exposed parts of the machine

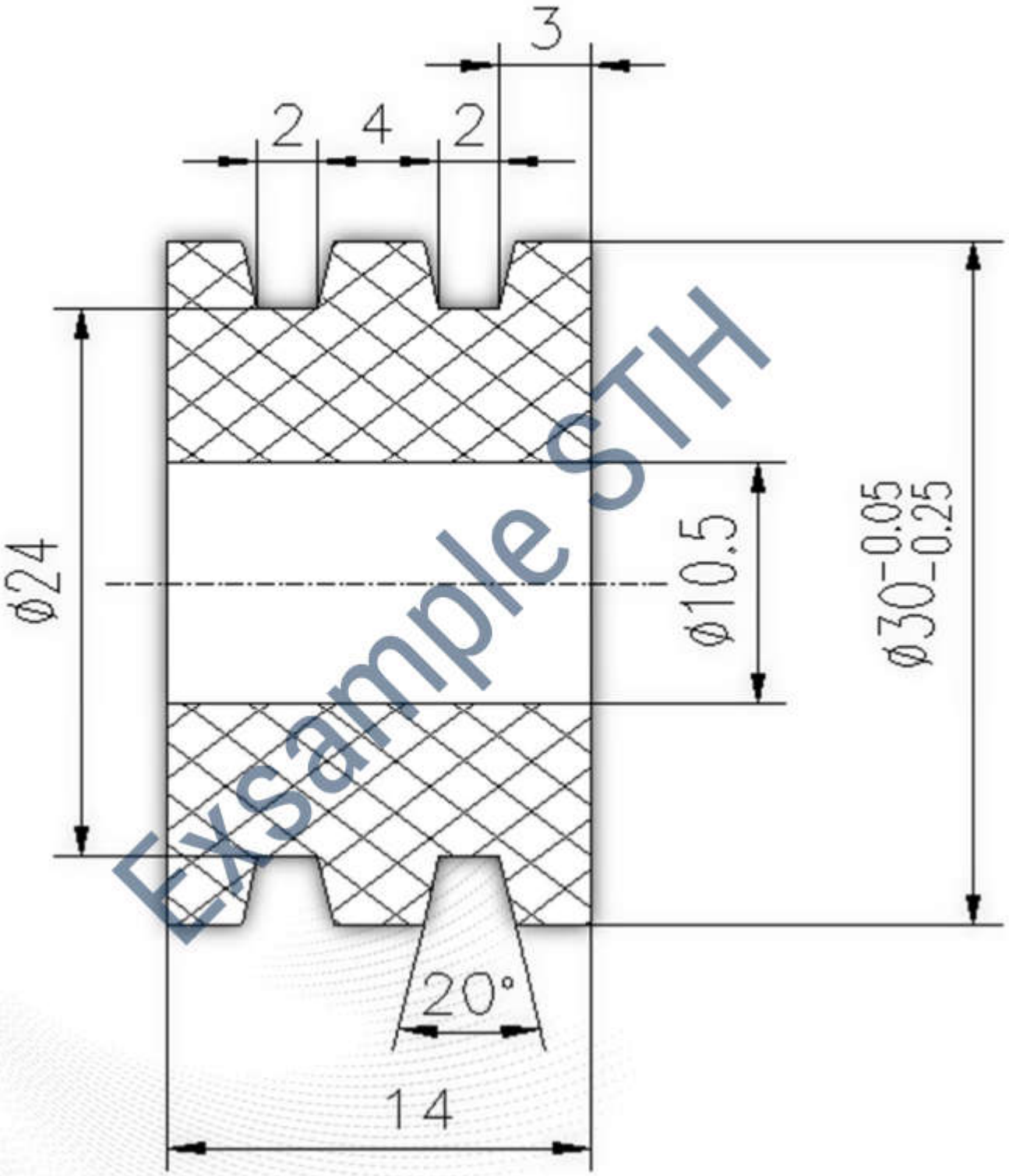


Figure 11. 1- Rubber ring