

W12 BALL-BEARING-MOUNTED HEADSTOCK

SPECIFICATION

Spindle-nose thread	∅ 22.6 x 2 mm
Length of spindle-nose thread	10 mm
Cylindrical seating of spindle nose	∅ 23 mm
Spindle bore	∅ 12 mm
Maximum throughbore in standard collet	∅ 8.2 mm
Spindel internal taper	15°
Width of pulley steps	19 mm
Diameter of pulley steps	∅ 46/62/78 mm

<u>Article</u>	<u>Designation</u>	<u>Weight</u>
70-30.000	Open headstock + manual drawbar	7.100 kg
70-30.060	Open headstock + quick-closing attachment	8.550 kg
70-31.000	Closed headstock + manual drawbar	8.300 kg
70-31.060	Closed headstock + quick-closing attachment	9.750 kg

The two spindle bearings are preloaded. Consequently it will not be necessary to take up any play.

In normal conditions this preload is maintained throughout the period of lubrication of the bearings.

MAINTENANCE

Cleaning on receipt

Prior to despatch all external and internal machined faces are given a coat of special anti-rust grease.

This grease has no lubricating properties, and its presence may cause serious seizures, even several weeks after commissioning of the machine. Clean the entire unit with a chemically neutral white rag (free from chlorine or acid) soaked in paraffin.

Avoid using alcohol, car petrol (which often contains alcohol), or any other organic product that would dissolve the cellulose paint.

Then cover all bare metal faces with lubricating oil.

Lubricating the spindle bearings and the bearings of the handlever-operated quick-closing attachment

The headstock bearings and those of the quick-closing attachment are lubricated for a period of about 5 years with Klüber Isoflex LDS 18 Speciale A grease.

For any subsequent treatment of the bearings with this grease use preferably the immersion method and select a clean, dust-free location for this purpose.

1. Immerse the bearings in a receptacle filled with 1.1.1 tri-ethane chloride and leave them in this for 1 to 2 hours to allow the old coat of grease to dissolve.

(In the absence of tri-ethane chloride oil of turpentine may be used).



2. Fill a second receptacle with 1.1.1 tri-ethane chloride and shake the bearings in this without turning the races the one against the other.



3. Immerse the thus cleaned bearings in a solution of 70% 1.1.1 tri-ethane chloride and 30% Klüber Isoflex LDS 18 Speciale A.



After evaporation of the solvent the solution, penetrating the smallest crevices, ensures a uniform and lasting coat of grease.

Lubrication by oil gun

The bearing cage 70-30.609 and the pivot of the fork 70-30.612 incorporate nipples for injecting oil by gun.

Once a week inject a few shots of oil through these nipples.

Use a good mineral oil of about 2.5° E / 50° C (for example MOBIL DTE Oil Light).

DISMANTLING THE HEADSTOCK

To lubricate or replace the bearings, the headstock must be dismantled.

Proceed as follows :

1. Unhook the belt in the base.
2. Loosen the two eccentrics 70-2.007 and 70-2.008 (in the closed headstock) or 70-30.006 (on the open headstock) and withdraw the headstock from the bed.
3. Withdraw the drawbar 70-32.030.
4. Undo the screw 2000.04008, which with the aid of the ring 70-30.624, secures the sleeve of the quick-closing attachment to the spindle.

5. Undo completely the three screws 2020.06020 securing the support 70-30.604 to the headstock frame and remove the entire quick-closing attachment.
6. Undo the four screws 2020.05016 and remove the cover 70-31.021.
7. Unlock the two stop screws 2037.05010 holding the nut 70-36.031 and unscrew this.
8. Undo the three screws 2020.05010 of the baffle plate 70-31.017.
9. Remove the screw 70-31.006 of the pulley 70-31.020.
10. Drive out the spindle 70-31.016 from the rear with a plastic hammer.
11. Remove the bearings.

SETTING THE BEARING PRELOAD

The fitting of the headstock with freshly lubricated or new bearings is carried out in the reverse order to dismantling (see previous section, items 11 to 7).

Turn the nut 70-36.031 until there is no more play between the bearings.

Then preload the bearings by advancing the nut by 10/1000 mm.

The rotation corresponding to this amount of advance is calculated as follows :

$$\text{Pitch of nut} = 1 \text{ mm}$$

$$\text{Preload} = 10/1000 \text{ mm}$$

$$\text{Rotation of nut} : \frac{1 \times 360 \times 10}{1000} = \underline{3.6^\circ}$$

Measured on the circumference of the nut, this gives a movement of :

$$\frac{\varnothing 45 \times \pi \times 3.6}{360} = \underline{1.41 \text{ mm}}$$

Following this adjustment complete the fitting of the headstock. (See items 6 to 1).

SPINDLE LOCKING DEVICE

The piston 70-30.012 may be engaged in any of the holes in the side of the pulley 70-31.020 with the aid of the knurled knob 70-31.022 (or 70-37.002), thus allowing the spindle to be locked at will.

LEVER-OPERATED QUICK-CLOSING ATTACHMENT

A. Fitting and method of operation

The bush 70-30.624 of the quick-closing attachment is mounted on the end of the headstock spindle. It is locked by a key 70-30.613 and secured by the screw 2000.04008.

The support 70-30.604 is fixed to the headstock frame by means of three screws 2020.06020. When the lever is pushed to the left, its tip must locate against the screw 2000.06020. If this is not the case, unlock the nut 2101.00006 and adjust the screw 2000.06020.

To clamp the workpiece, pull the lever 70-30.612 to the right (towards you).

To unclamp the workpiece, push the lever 70-30.612 to the left.

B. Setting

1. Pull the lever 70-30.612 towards you.

2. Fit the collet in the spindle with the workpiece.

3. Clamp the workpiece lightly by screwing in the sleeve 70-30.625.

4. Push the lever 70-30.612 to the left and clamp the workpiece fully by means of the sleeve 70-30.625.

The sleeve is automatically locked in all its positions by two spring-loaded pistons 70-30.614.

C. Replacing the closing dogs

Whenever it becomes necessary to replace the closing dogs 70-30.620, it is essential to fit two parts of exactly the same number. To replace the dogs, proceed as follows :

1. Withdraw the drawbar completely with the sleeve 70-30.625.

2. Remove the circlip 2154.00112 and withdraw the bush 70-30.616 by about 1 cm in order to be able to release the two dogs from the slots in the bush.

NOTE : To avoid losing the springs belonging to the pistons 70-30.614, do not withdraw the bush 70-30.616 too far.

3. Place the new closing dogs in position.

4. Refit the circlip 2154.00112 and the drawbar.

D. Fitting the lever-operated quick-closing attachment to a headstock with a quick-closing attachment operated by a standard drawbar

Conversion of the headstock with drawbar-operated closing to a headstock with lever-operated quick closing can be carried out at any time, without difficulty, by any qualified person.

Cleaning on receipt

The lever-operated quick-closing attachment is supplied fully assembled. Prior to despatch it is given a coat of special anti-rust grease, but this must be completely removed before the machine is put into service, since it has no lubricating properties.

Fitting

1. Withdraw the drawbar 70-32.030. This cannot be used for the quick-closing attachment.
2. Place the key 70-21.874 in the slot in the headstock frame.
3. Place the key 70-30.623 in position on the shaft end 70-31.016.
4. Fit the quick-closing attachment by inserting the drawbar 70-30.602 into the spindle 70-31.016.

Make sure that the flat key 70-30.623 enters the slot in the sleeve 70-30.624.

5. Locate the support 70-30.604 against the headstock frame and place the three screws 2020.06020 in position, tightening them lightly.
6. Run the lathe at reduced speed and adjust the eccentric screws 70-30.622 of the lever 70-30.612 until the sleeve 70-30.609 remains stationary in the vertical plane.

NOTE : Any runout in the sleeve 70-30.609, however slight, can cause very rapid wear in the bearing 3062.16007.

7. On completion of adjustment lock the three screws 2020.06020 securely.
8. Lubricate the shoes. (See page 2).

3062.16007

70-30.602

70-30.606

70-30.620

70-30.625

70-30.612

70-30.612

70-30.612

70-30.612

70-30.612

70-30.612

70-30.612

70-30.612

70-30.612

non souigné pour serrage

— pour couple fermé

— pour couple ouvert

— Accessoire spécial

1. Concrete foundation and leveling

The SCHÄUBLIN lathe must be placed on a concrete foundation of sufficient depth of the foundation must be done up to the wall.

Three holes 21 mm diameter must be drilled in the foundation below the lathe base level.

The purpose of the foundation is to anchor the lathe to the ground. But if the lathe is to be used on a soft ground, it may be displaced with.

The power supply cable must be connected at point 1 on the lathe. A lead steel tube hole must be drilled above base level. The diameter is 40 mm.

2. Bolting the machine to the concrete foundation

The lathe base should be bolted to the concrete foundation (see drawing 30.050), these being provided with concrete foundation.

The lathe base is provided with 4 (4") dia. support plates.

Leveling should be carried out in the following manner:

a) Transverse leveling

From the lathe base level by means of the leveling screws.

b) Longitudinal leveling

Provision is made for leveling the lathe base by means of the leveling screws.

c) Transverse leveling

The lathe base is provided with leveling screws.

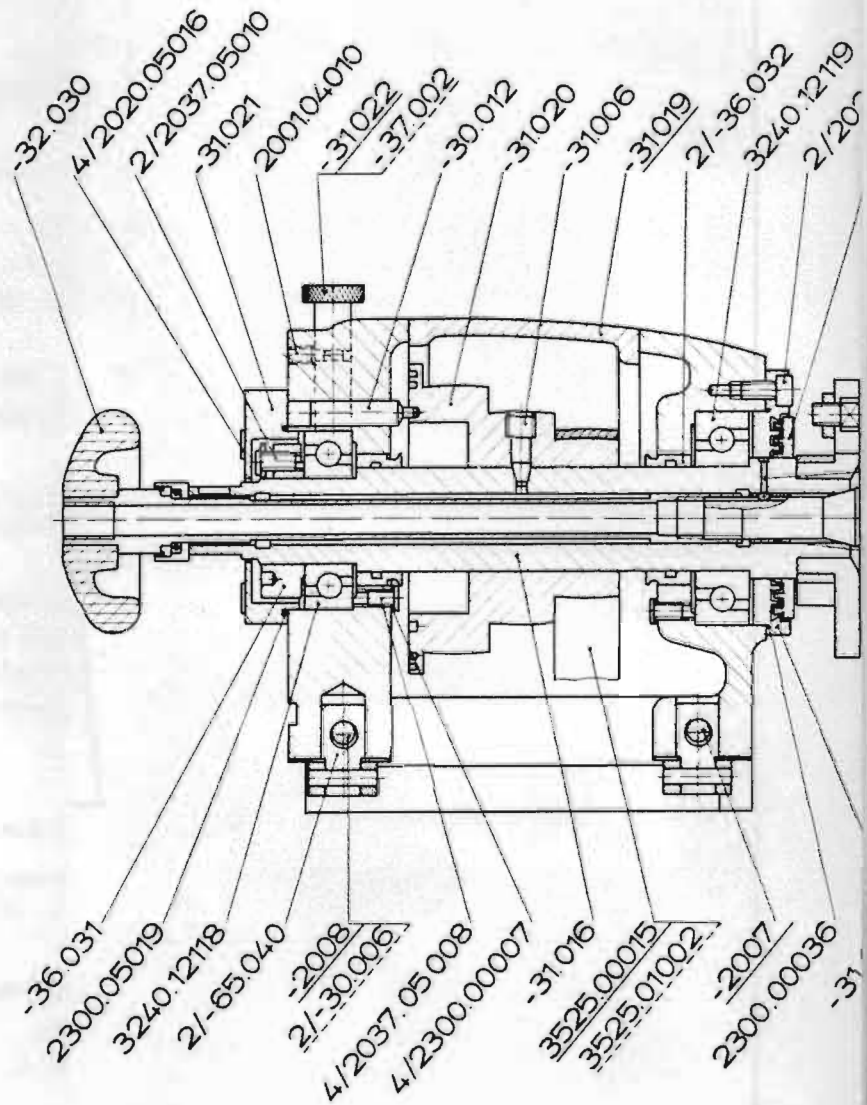
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3062.16007

-30.608

-30.606

-30.620

Ens-30.625

-30.613

2154.00112

-30.616

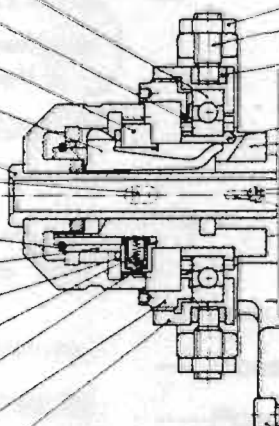
-30.619

2/2404.70316

2/-30.614

-30.605

-30.609



2/2100.00008

2/-30.622

2/-30.621

-30.607

-30.624

2000.04008

-30.615

-30.623

2000.06007

2101.00006

2000.06020

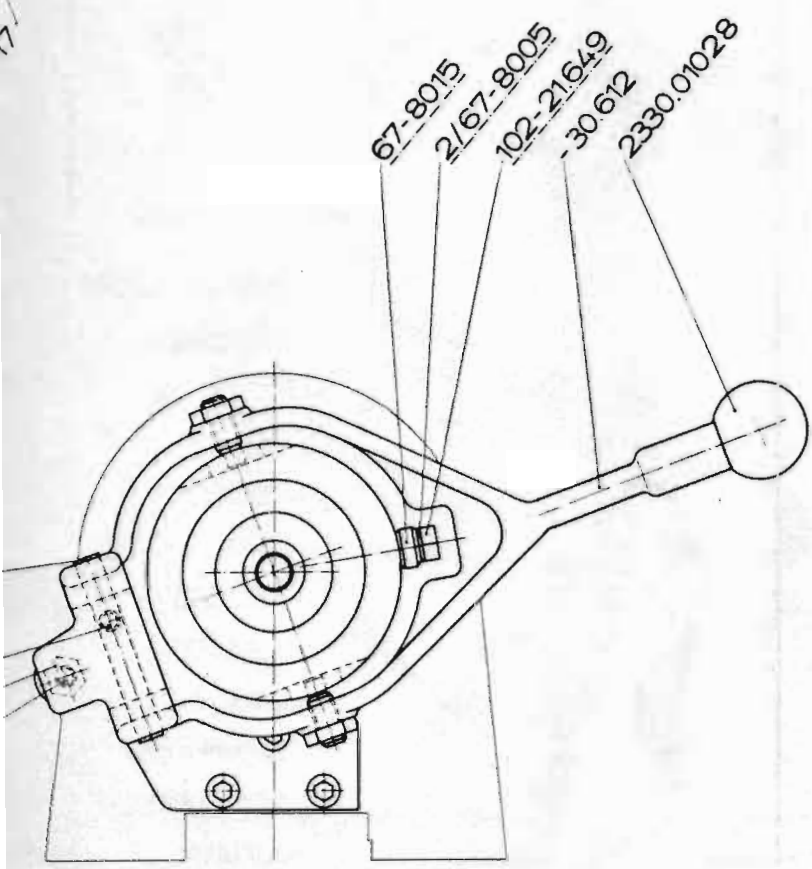
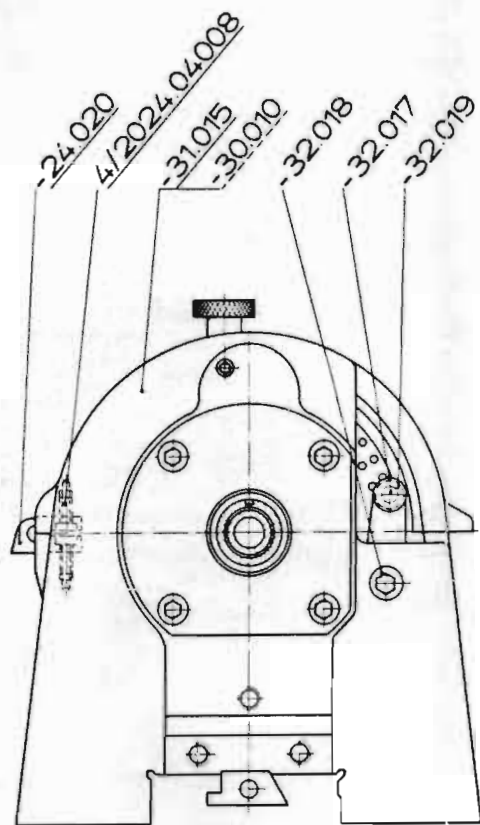
-30.604

-21.874

3/2020.06020

05010
31.018

- 25.050
- 2220.00069
- 25.001
- 7



non souligné= toute exécutions
— Pces pour pompée fermée
- - - - Pces pour pompée ouverte
- - - - Accessoire spécial

