

W20 HEADSTOCK WITH SPINDLE MOUNTED ON PRELOADED BALL BEARINGS

CHARACTERISTICS

Spindle-nose thread		M 37.6 x 3 mm
Cylindrical location of spindle nose		∅ 37.97 x 10 mm
Bore through spindle		∅ 22.6 mm
Bore through standard collet		∅ 14.5 mm
Internal taper of spindle		15°
Width of pulley steps		32 mm
Diameters of pulley steps		75/100/125 mm
Type	102N-23./23.000 L	102N-24.000/24.000 L
Weight	24 kg / 32 kg	24.700 kg / 32.700 kg

- Type 102N-23.000 - Open design with key-operated closing attachment
- Type 102N-24.000 - Closed design with key-operated closing attachment
- Type 102N-23.000 L - Open design with lever-operated quick-closing attachment
- Type 102N-24.000 L - Closed design with lever-operated quick-closing attachment

The two spindle bearings are preloaded, so no adjustment for play is necessary. In normal conditions this preload is maintained throughout the period of lubrication of the bearings.

MAINTENANCE

Cleaning on receipt

On despatch the 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 the machine has been started up. Clean the entire unit with a chemically neutral white rag (free of chlorine or acid) soaked in paraffin.

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

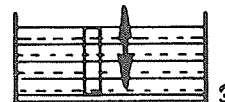
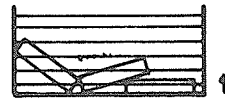
Then apply a film of lubricating oil to all parts where the metal is bare.

Lubrication of the bearings fitted to the spindle and lever-operated quick-closing attachment

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

To renew the coat of grease, use the immersion method and choose a place that is clean and free of dust.

1. Immerse the bearings in oil of turpentine and allow the old coat of grease to dissolve for 1 to 2 hours.
2. Shake the bearings in a second recipient filled with oil of turpentine, without turning the races the one against the other.
3. Dip the cleaned bearings in a solution of 70% oil of turpentine and 30% Isoflex LDS 18 Special A grease. After evaporation of the solvent the solution, by penetrating into the smallest crevices, ensures a uniform and durable coat.



Lubrication of the quick-closing attachment

The pivot of the lever 105-21.623 incorporates a nipple 2320.00021 for injection of oil by means of a gun.

Once a week apply a few shots of oil through this nipple. Use a good mineral oil of approximately 2.5° E / 50° C (for example MOBIL DTE Oil Light).

REMOVAL OF THE HEADSTOCK

To lubricate or replace the bearings, remove the headstock, proceeding as follows :

1. Unhook the belt in the base.
2. Release the two eccentrics 102-21.006 and withdraw the headstock from the bed.
3. Remove the drawbar 105-21.605.
4. Undo the screw 2020.05015, which with the aid of the ring 102-21.628 locks the sleeve of the quick-closing attachment on the spindle.
5. Completely undo the two screws 2021.08035 securing the support 105-21.622 to the headstock frame and remove the entire quick-closing attachment.
6. Unlock the two clamping screws 2037.05010 of the nut 105-23.015 and unscrew this.
7. Undo the three screws 2020.05015 and remove the cover 105-26.005.
8. Undo the four screws 2020.06018 of the baffle plate 105-26.009.
9. Remove the screw 2015.00007 of the pulley 105-23.003.
10. Drive out the spindle 105-23.004 forward with the aid of a plastic hammer.
11. Remove the bearings.

ADJUSTMENT OF THE BEARING PRELOAD

Refitting with freshly lubricated or new bearings is carried out in the reverse order of removal (see previous section, items 11 to 6).

Turn the nut 105-23.015 until there is no more play between the bearings.

From this position preload the bearings by advancing the nut 15/1000 mm.

The rotation corresponding to this advance is calculated as follows :

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

$$\text{Preload} = 15/1000 \text{ mm}$$

$$\text{Rotation of nut} : \frac{1 \times 360 \times 15}{1000} = \underline{5.4^\circ}$$

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

$$\frac{\varnothing 62 \times \pi \times 5.4}{360} = \underline{\underline{2.92 \text{ mm}}}$$

Following this adjustment complete the refitting (see items 5 to 1).

REMOVAL OF THE LEVER-OPERATED QUICK-CLOSING ATTACHMENT

To lubricate or replace the bearings, remove the lever-operated quick-closing attachment, proceeding as follows :

1. Remove the drawbar 105-21.605.
2. Undo the screw 2020.05015, which with the aid of the ring 102-21.628 locks the sleeve of the quick-closing attachment on the spindle.
3. Completely undo the two screws 2021.08035 and remove the entire quick-closing attachment from the headstock.
4. Undo the two screws 105-34.037 to release the shoes 102-36.022.
5. Undo the lock screw 105-21.626.
6. Undo the two screws 2020.06012 and remove the dog holder 105-21.607 from the sleeve.
7. Withdraw the cage 105-21.625.
8. Remove the Seeger circlip 2150.00055.
9. Replace the bearings.

Refit everything in the reverse order of removal.

REPLACEMENT OF THE DOGS FITTED TO THE QUICK-CLOSING ATTACHMENT

To replace the dogs, remove the attachment (see previous section, items 1 to 7). Then undo the two screws 2000.06015 and drive out the pins 105-21.609. Change the dogs and refit everything in the reverse order of removal.

SPINDLE LOCKING DEVICE

The piston 102-21.008 can be inserted into any of the holes in the flank of the pulley 105-23.003 by means of the knurled knob 102-22.022, thus allowing the spindle to be locked at will.

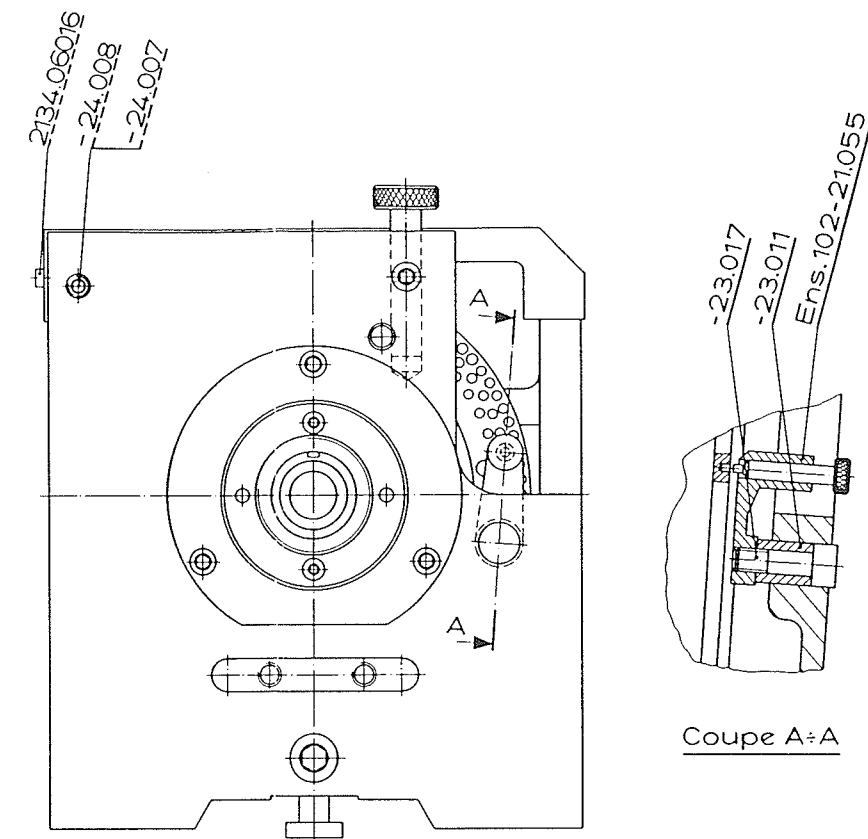
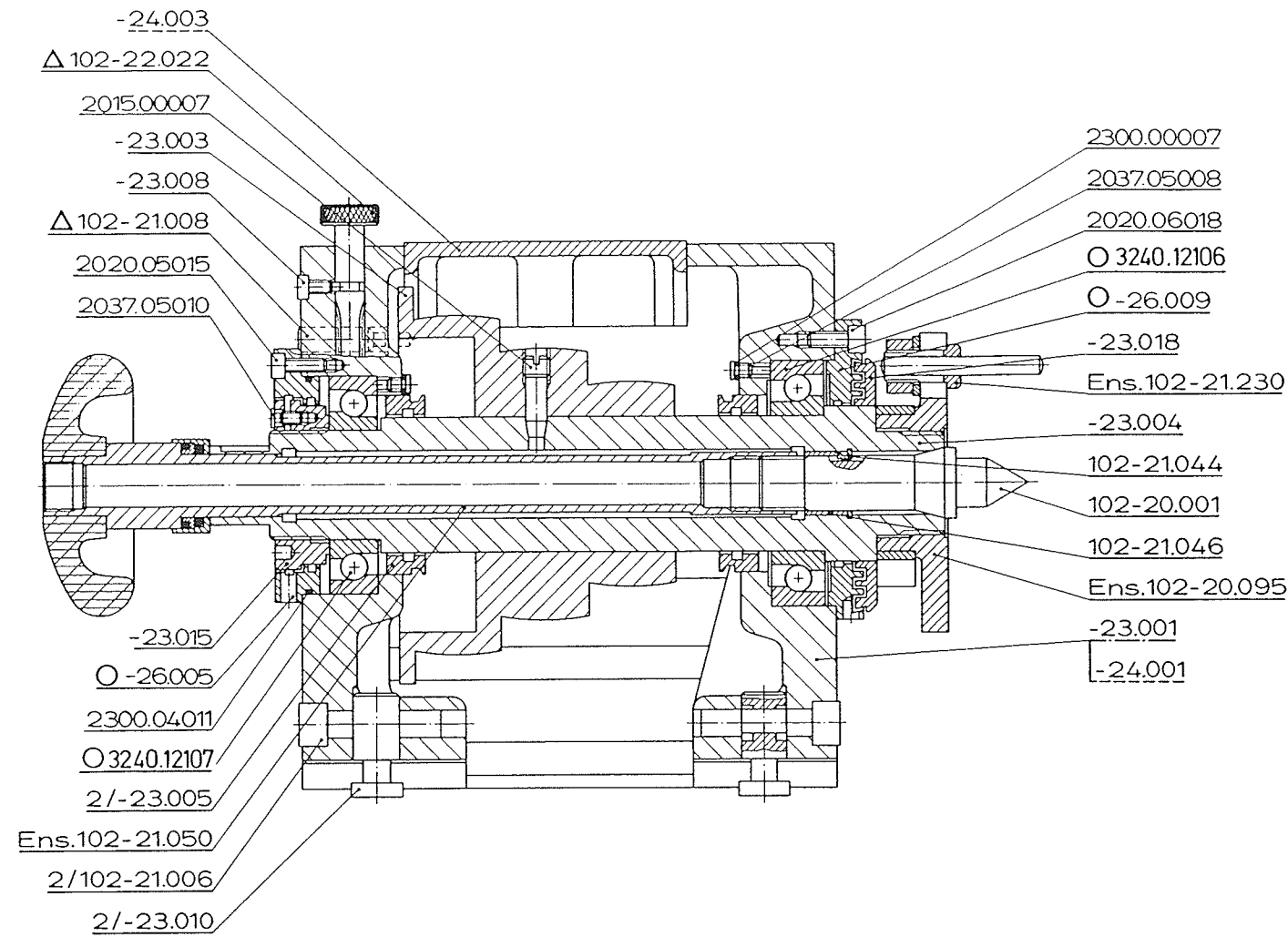
FITTING AND REMOVAL OF THE GUIDE RING 102-21.044

It is not possible to fit or remove this ring without a special tool.

This tool can be obtained on request from our representative or direct from our works.

Note :

When using the headstock on the 102N-VM leadscrew lathe, it is necessary to replace the drawbar 105-21.605 by a longer one 106-21.010.



- Pces communes à toutes les exécutions
- Pces pr ppée fermée
- Pces pr ppée ouverte
- O Graisse ISOFLEX LDS 18 SPECIAL A
- Δ Pâte ALTEMP Q NB 70

