

INSTRUCTION MANUAL FOR THE
DISK CUTTING LATHE VMS 80



21525 80501.1

Page 1 ... 91

1. Installation
2. General check of basic functions
3. Installing the cutterhead suspension and the Neumann stereo cutterhead
4. Signal connections and signal adjustments
5. Meaning and function of the controls at the operating terminal BE
6. Electrical and mechanical line-up instructions
7. Pitch and depth control

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 1 of 91

1. Installation
 - 1.1. Convenient site selection
 - 1.2. Setting up the lathe console
 - 1.3. Power supply installation
 - 1.4. Vacuum pump installation
 - 1.5. Lathe installation
 - 1.6. Console cabinet installation
 - 1.7. Operating terminal installation
 - 1.7.1. Operating terminal adjustment
 - 1.8. Inner turntable installation
 - 1.9. Vacuum chuck turntable installation
 - 1.10. Groove inspection microscope installation
 - 1.11. Chip jar installation
 - 1.12. TV monitor (optional) installation

-S.F. TEMMER-

13 NOV 79 18: 06

November 1979

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 2 of 91

2. General basic function check
 - 2.1. AC mains voltage check or adjustment
 - 2.2. First operation check

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 3 of 91

3. Cutterhead suspension and Neumann stereo cutterhead installation
 - 3.1. SA 78 cutterhead suspension installation
 - 3.2. The cutterhead suspension dash pot
 - 3.3. Chip tube connection
 - 3.4. Stylus replacement in Neumann SX cutterheads
 - 3.5. SX Neumann stereo cutterhead installation
 - 3.6. Carriage radial motion adjustment
 - 3.7. Counterbalance spring adjustment for the cutterhead suspension
 - 3.8. Chip tube adjustment
 - 3.9. Basic electrical cutterhead suspension adjustment
 - 3.10. ZA 4 He cooling system (optional) installation

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 4 of 91

4. Signal connections and signal adjustments
 - 4.1. Audio signal connections to the VMS 80
 - 4.2. Preview head distances
 - 4.3. Adjustment of preview signal level
 - 4.4. Adjustment of the phase relationship between cutting and preview signals
 - 4.5. Automatic motion control connections
- 4.5.1. ADD LAND adjustment

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 5 of 91

5. **Function of the BE operating terminal controls**

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 6 of 91

6. Electrical and mechanical alignment instructions
 - 6.1. Adjustment of varigroove
 - 6.1.1. Adjustment of the standstill of the pitch drive
 - 6.1.2. Adjustment of CAL PITCH
 - 6.2.1. Mechanical adjustment of the linear potentiometer
 - 6.2.2. Electrical alignment of the linear potentiometer
 - 6.3. Diameter calibration
 - 6.4. Leadscrew FAST / LEAD OUT RPM calibration
 - 6.5. Leadscrew MARKER / LEAD IN RPM calibration
 - 6.6. Adjustment of diameter compensation depth control
 - 6.7. Preheat duration adjustment
 - 6.8. Drop time adjustment
 - 6.9. Carriage radial motion basic adjustment

VMS 80 DISK CUTTING LATHE
INSTRUCTION MANUAL

Page 7 of 91

7. Pitch and depth control
 - 7.1 Basic pitch and basic depth
 - 7.2 Varigroove control
 - 7.3 Priview signal processor
 - 7.4 Lateral pitch control rest space utilisation
 - 7.5 Pitch control derived from the lateral component
 - 7.6 Groove depth control
 - 7.7 Intentional change of groove spacing and depth