



Mechanikeranleitung  
Instructions for mechanics  
Instructions pour mécaniciens  
Instrucciones para mecánicos  
Manuale per i meccanici

366

**DÜRKOPP ADLER AG**

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**Class 366**  
**Instructions for Mechanics**

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1. Technical data cl. 366-

Sub-class	:	-76-12	-76-12-RDAP
- Number of stitches,			
• max.	1/min.:	800	800
• ex factory	1/min.:	800	800
- Stitch length			
• forwards	mm:	10	10
• backwards	mm:	10	10
- Max. feeding length of differential			
• upper feed	mm:	-	-
• bottom feed	mm:	-	-
- Stroke of alternating feet			
• max.	mm:	-	-
• ex factory	mm:	-	-
- Max. throw width	mm:	12	12
- Cutting distance (depending on E-No.)	mm:	-	-
- Stroke of knife			
• max.	mm:	-	-
• ex factory	mm:	-	-
- Needle system	:	794	794
- Needle size (depending on E-No.)	Nm:	40-250	140-250
- Needle thread thickness			
a) Cotton	NeB:	-	-
b) Synthetic	Nm:	11/3	11/3
c) Braided thread	Nm:	18/4	18/4
- Max. bobbin capacity with b) thread	about m:	27	27
- Seam width / needle gage	mm:	-	-
(depending on E-No.)			
- Max. clearance under the sewing feet			
• when sewing	mm:	14	14
• when lifting (with NP)	mm:	14	14
- Handwheel belt pully $\emptyset$	mm:	280	280
- Pneum. working pressure bar:		-	6
- Air consumption			
NL/working cycle:		-	1

## 2. Adjustments on the sewing machine

### 2.1 Feed dog

Please note the safety instructions!

#### 2.1.1 Height of the feed dog

*Rule:*

When the feed dog is in its topmost position it should stand horizontally above the throat plate, the projection amounting approximately to one tooth height.

*Control:*

- Set zero stitch length.
- Move the feed dog by the handwheel to its topmost position.

*Correction:*

- Release the locking on the crank G/1.
- Adjust the feed dog bar L/2.

#### 2.1.2 Lifting moment of the feed dog

*Rule:*

When the needle bar is at its upper dead point the feed dog should stand in its topmost position.

*Control:*

- Set zero stitch length.
- Move the needle bar by the handwheel to its topmost position.
- Check the position of the feed dog by turning the handwheel.

*Correction:*

- Loosen f/3 screws.
- Loosen F/3 eccentric.

#### 2.1.3 Position of the feed dog in the throat plate

*Rule:*

With the stitch length being set to its maximum value, the feed dog, in front or rear position, should be equidistant to the cutout of the throat plate and laterally it should stand in the middle (fig. 4).

*Control:*

- Set maximum stitch length.
- Turn the handwheel.

*Correction:*

- Loosen k/2 screws.
- Adjust feed dog bar L/2.

#### 2.1.4 Moment of feed dog advance

**Rule:**

With the stitch length being set to its maximum value and when continuing to turn the machine out of the upper position of the thread take-up lever by operating the handwheel, the advance movement still produced by the feed dog should correspond approximately to one tooth pitch (above the throat plate level).

This advance movement ensures a better stitch tightening.

**Control:**

As described under the rule.

**Correction:**

- Loosen d/5 screws.
- Turn D/5 eccentric.

**Note:**

When the eccentric is turned 180° the machine will transport backwards.

#### 2.2 Needle rocker

Please note the safety instructions!

##### 2.2.1 Needle rocker free of play

**Rule:**

There should be no play in the movement of the needle rocker.

**Control:**

- Set the maximum throw width.
- Hold the handwheel and check whether the cam disk can be turned by hand.
- Ensure that the a/7 studs are well tightened.

**Correction:**

- Tilt the plastic cover.
- Remove a/8 screw and take the toothed belt pulley A/8 off the shaft.
- Loosen 3 studs b/8.
- Tighten the setting bearing B/8 so as to eliminate any play but also so as to ensure free movement.
- Tighten the studs b/8.
- Fit the toothed belt pulley A/8 on the shaft.

### 2.2.2 Adjusting needle rocker in relation to the stitch hole

**Rule:**

With the throw width being zero, the needle should stitch into the middle of the stitch slit.

**Control:**

- Insert new needle.
- Adjust the throw width to 0.
- Turn the handwheel.

**Correction:**

- Remove the head cover and the protective cap.
- Loosen the threaded pin k/10.
- Turn the eccentric K/12.

### 2.2.3 Timing the oscillating movement of the needle rocker

**Rule:**

The oscillating movement of the needle rocker should begin when the needle is out of the material and it should end when the needle is again in the material.

**Control:**

- Adjust the maximum throw width.
- Turn the handwheel.

**Correction:**

- Turn over the plastic cover.
- Loosen the two screws c/8 pins and turn the toothed belt pulley C/8.

### Equalizing the right and the left throw

**Rule:**

Center the stitch position so that the left and the right stitch is equidistant from the middle stitch (fig. 4).

**Control:**

- Adjust the stitch length to zero.
- Check the straight stitches and the maximum stitch width on the paper.

**Control:**

- Loosen v/11 screws.
- Adjust V/11 coulisse accordingly.

**Note:**

Correct this adjustment when proceeding to the adjustment according to 2.3.4 (Distance of the hook in relation to the needle) if the hook-needle distance is not equal when producing the left and the right stitch. If required, control also the adjustments 2.2.2.

## 2.3 Hook and needle bar

Please note the safety instructions!

### 2.3.1 Hook movement

*Explanation:*

The hook movement must be adapted to the movement of the needle bar.

*Rule:*

When the needle bar is about 3 mm from its lower dead point, the driver should be at its left inversion point (fig. 6).

*Control:*

- Move the driver to its left point of inversion.
- Push the block B/13 (ref. no. 981 15 000 2) on the needle bar against the bush and fasten by screws.  
(The needle bar may be damaged if the block is tightened excessively!).
- Turn the handwheel in the direction of rotation until the needle has reached its lowest point.
- Determine the distance between the top of the block and the bush.

*Correction:*

- Loosen screw e/3.
- Turn eccentric E/3.

### 2.3.2 Loop stroke

*Explanation:*

The loop stroke is the way of the needle from its lower dead point up to the moment when the formed thread loop is picked up by the hook.

*Rule:*

When the needle has been lifted 5 mm from its lower dead point, the hook point should be in alignment with the right side of the needle (fig. 4).

*Control:*

- Adjust the stitch width zero.
- Move the needle by the handwheel into its lowest position.
- Push the 5 mm long stroke gauge (ref. no. 981 15 001 2) on the needle bar against the bush and fasten the block (ref. no. 981 15 000 2) by screw (fig. 13).
- Remove the gauge and turn the handwheel in the direction of rotation until the block touches the bush. (Loop formation position).
- Press the hook M/14 counter-clockwise against the driver O/14 and check the position of the hook point.

*Correction:*

- Loosen n/16 screws.
- Turn N/16 shaft.

### 2.3.3 Height of the needle bar

**Rule:**

In the loop formation position the hook point should stand in the groove of the needle as deep as possible, but the hook bottom should not knock against the lower slope of the groove when, with the maximum stitch width, left and right stitches are produced (fig. 14).

**Control:**

- Adjust the maximum stitch width.
- Loosen the screws t/10.
- Shift the needle bar vertically.

### 2.3.4 Distance between the hook and the needle

**Explanation:**

- The distance between the hook and the needle cannot be adjusted continuously. It can only be regulated by adding or removing some shims (0.1 mm, 0.2 mm, 0.3 mm).
- The adjustment is required in the groove area after each change of the needle size.

**Rule:**

The distance between the needle and the hook point should amount to about 0.1 mm when, with the maximum stitch width, left and right stitches are produced. (Fig. 15.)

**Control:**

- Adjust the maximum stitch width.
- Turn the machine by hand.

**Correction:**

- Swing out the bow B/18.
- Remove the cover ring D/18, the hook G/18 and the shuttle race S/18.
- Add or remove the shims A/18.
- Remove the screw t/18 and the driver T/18.
- Add or remove the shims C/18.
- Replace the driver and the hook.

**Note:**

If the distances between the hook point and the needle are not equal when producing the stitches on the left and on the right, check the adjustments 2.2.2 and 2.2.4.

### 2.3.5 Needle guide

**Explanation:**

When sewing, the needle may be deviated, so that the thread loop can no longer be seized by the hook point.

**Rule:**

In the loop stroke position the point of the needle should touch the needle guide without being deviated.

**Control:**

Proceed as described under the rule.

**Correction:**

Loosen the screws n/18 and shift the needle guide accordingly.

**Note:**

If the adjustment is not correct, the needle may brake or skipped stitches may occur.

## 2.4 Stroke of the cloth presser foot (266-76-12)

**Explanation:**

The maximum stroke of the cloth presser foot is determined by the excentricity of the lifting lever.

**Rule:**

With the cloth presser foot being lowered, the play between the traction rod S/9 and the block R/9 should amount to about 0,5 mm.

**Control:**

With the feed dog and with the lifting lever being lowered, check the play between the traction rod S/9 and the block R/9.

**Correction:**

- Loosen r/9 screw.
- Shift R/9 block vertically.

## 2.5 Thread tension release

**Rule:**

The thread tension should be released when the cloth presser foot has been lifted.

**Correction:**

- Remove the protective sheet.
- Loosen x/12 screw.
- Swing Y/12 block.
- Loosen z/12 block.
- Modify the distance of the threaded pin v/12 in relation to the roller U/9.  
(The best power transmission will be obtained when the threaded pin v/12 is in horizontal position.)

**Note:**

If no correct adjustment can be obtained in this way, proceed as follows:

- Remove the head cover and the plate.
- Swing out the needle rocker.
- Loosen g/9 screw and
- Shift the block W/9 vertically.

## 2.6 Thread pulling spring

### 2.6.1 Spring tension

**Rule:**

Regulate the spring tension according to the type of material and thread, so that the spring O/17 operates regularly and returns again up to the stop.

**Correction:**

- Loosen t/17 screw.
- Regulate the spring tension by the washer T/17.

### 2.6.2 Spring way

**Rule:**

The spring O/17 should rest against the stop relaxed when the eye of the needle dips into the material.

**Correction:**

- Loosen r/17 screw.
- Turn the entire thread tension unit.

## 2.7 Pneumatic automatic tacking device (366-76-12-RDAP)

**Explanation:**

In case of the automatic seam tacking, the piston rod of the cylinder J/19, moving in and out, switches the stitch regulating lever from forward to reverse stitches and viceversa.

**Rule:**

Adjust the speed of the piston rod, moving in and out, so that with the stitch length being set for its maximum value the piston rod moves into its end positions gently.

**Correction:**

By means of the lower throttle adjust the speed for moving in the piston rod and by the upper throttle for moving out.

## 3. Adjustments on the Quick digital control panel

**Explanation:**

In addition to the adjustment numbers accessible to the operators there are numbers that should be called up only by the technicians. (See the adjustment number list).

The values, adjusted already before supplying the machine and adapted to the respective machine type, can be modified by the technician for optimizing the working process.

### 3.1 Programming on the technician level

Entries	Remarks/Display text (DT)
<p>1. <u>Calling up the correction mode:</u></p> <ul style="list-style-type: none"> <li>- Switch off the motor</li> <li>- Operate keys G and - simultaneously and switch on the motor</li> </ul>	<ul style="list-style-type: none"> <li>- DT: *MANUAL</li> <li>If *A SEAM or *B SEAM appears, tip P key until *MANUAL appears.</li> </ul>
<p>2. <u>Calling up the programming mode:</u></p> <ul style="list-style-type: none"> <li>- Operate G key and hold it, tip - key and release both</li> </ul>	<ul style="list-style-type: none"> <li>- DT: ENTER</li> </ul>
<p>3. <u>Calling up adjustment number:</u></p> <ul style="list-style-type: none"> <li>- Operate G key until the group of hundreds of the desired adjustment number appears</li> <li>- Tip F key until the desired adjustment number appears</li> </ul>	<ul style="list-style-type: none"> <li>- e. g. DT: *****</li> </ul>
<p>4. <u>Entering the value:</u></p> <ul style="list-style-type: none"> <li>- Increase the displayed value by + key</li> <li>- Reduce the displayed value by - key</li> </ul>	<ul style="list-style-type: none"> <li>- The newly adjusted value will remain memorized only when the adjustment number or the programming mode are abandoned. If the machine is switched off immediately after the adjustment, the old value will be maintained.</li> <li>It is possible to call up further adjustment numbers and to adjust new values.</li> </ul>
<p>5. <u>Leaving the programming mode (as under item 2):</u></p>	<ul style="list-style-type: none"> <li>- DT: *MANUAL or *A SEAM or *B SEAM</li> </ul>
<p>6. <u>Control:</u></p> <ul style="list-style-type: none"> <li>- Check the adjustments value(s)</li> </ul>	
<p>7. <u>Correct, if required:</u></p> <ul style="list-style-type: none"> <li>- Call up the programming mode</li> <li>- Tip F key or: call up the desired adjustment number by G and F keys</li> <li>- Modify the value</li> </ul>	<ul style="list-style-type: none"> <li>- See item 2.</li> <li>- The last called up adjustment number will appear.</li> </ul>
<p>8. <u>Leaving the technician level:</u></p> <ul style="list-style-type: none"> <li>- Switch off the motor.</li> </ul>	

### 3.2 Zeroing the position transmitter

**Explanation:**

Proceed to this adjustment before the first use, after mounting a new position transmitter or after fitting a new control box.

Entries	Remarks/Display text (DT)
1. <u>Calling up adjustment number 700</u> - See chapter 3.1, items 1 - 3	- DT: 700*XXXX (1st accidental figure)
2. <u>Orientation of the position transmitter:</u> - Tip the pedal forwards	- DT: 700*0000 The synchronizer has registered its position
3. <u>Adjusting the reference position:</u> - Turn the handwheel in the direction of rotation until the needle just dips into the throat plate	- DT: 700*YYYY (2nd accidental figure)
4. <u>Memorizing the reference position:</u> - Tip the pedal forwards	- DT: 700*0000
5. <u>Leaving the "technician level":</u> - Switch off the motor	

### 3.3 First and second position

**Explanation:**

When the reference point of the position transmitter has been adjusted - as described under chapter 3.2 - the values set in the factory for the first and second position are normally suitable and the machine is ready to operate. If required, the values can be modified by the technician by turning the handwheel in the same manner as the reference position.

**Rule:**

First position : The hook has safely caught the thread loop.  
Second position: the needle is in its topmost position.

**Adjustment:**

- Call up the adjustment number 702 or 703 (see chapter 3.1, items 1 - 3)
- Tip the pedal forwards
- Adjust the desired position by the handwheel
- Memorize the value: tip the pedal forwards

### 3.4 Resetting all values to the original state

**Explanation:**

All values modified by the operator by a technician can be reset to their original state, existing at the time of delivery of the machine. Only the reference point of the position transmitter (adjustment number 700) will be maintained.

Entries	Remarks/Display text (DT)
<p>1. <u>Calling up reset mode:</u></p> <ul style="list-style-type: none"> <li>- Switch off the motor</li> <li>- Lower the pedal forwards completely and hold it down, keep all the 4 operating keys simultaneously depressed and switch on the motor</li> <li>- Release the keys and the pedal</li> </ul>	<ul style="list-style-type: none"> <li>- DT: RESET +/-</li> </ul>
<p>2. <u>Reset the values:</u></p> <ul style="list-style-type: none"> <li>- Tip + key</li> </ul>	<ul style="list-style-type: none"> <li>- Note: When operating the - key the actual values will not be reset, they will be confirmed</li> <li>- DT: MANUAL</li> </ul>

**Note:**

All values regarding the machine and the operations, that do not correspond to the state of delivery, must be set once again.



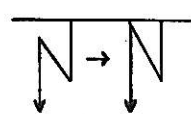


### 3.5 Error messages

**Explanation:**

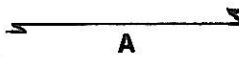

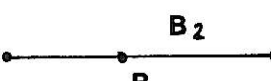
The motor control unit needs no maintenance. Should, however, disturbances occur, an error message will be displayed, permitting to locate the error source. Please note the Quick operating instructions. Contact the service technician in due time.

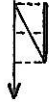



Display text	Significance
ERROR 1	Error when proceeding to the engagement. See the operating instructions.
ERROR 2	At start (position transmitter)
ERROR 3	Voltage deviation in the power supply unit
ERROR 4	EPROM defective
ERROR 6	Error on the microprocessor for the motor regulation

### 3.6 Adjustment number list

No.	Denomination	Sector	Value	Symbol / Remarks
<b>G1</b>				
101	Sewing programme offer	M A B M + A M + B	M A B	By this adjustment number it is possible to determine which sewing modes (MANUAL, A SEAM, B SEAM) can at all be called up by the key P/-.
102	Number of stitches of the initial tack - forwards	0-255	3	 See also: switch 4
103	Number of stitches of the initial tack - backwards	0-255	4	
104	Stitch compensation of the initial tack	0-16	0	 Stitch compensation at the material edge in steps of 1/16 stich.
105	Speed of the initial tack	30-640	150	The speed of the initial tack is not pedal-dependent
108	Number of stitches of the final tack - backwards	0-255	2	
109	Number of stitches of the final tack - forwards	0-255	0	 See also: No. 122
110	Speed of the final tack	30-640	150	
111	At present without function			
112	At present without function			
113	At present without function			

No.	Denomination	Sector	Value	Symbol/Remarks
114	I: STOP after A seam or B seam  II: Autom. seam end after A seam or B seam	I/II	II	STOP = Machine stop when pedal down (needle position = No. 115) Autom seam end = final tack and machine stop when pedal down.
115	I: Needle up at 114 I II: Needle down at 114 I	I/II	II	
116	Slow sewing start Number of stitches	0-9	1	So-called softstart See also: 117 and 120
117	Slow sewing start Speed	30-640	150	See also: Nr. 116 and 120
119	Extension of the needle colling (ms)	0-2550	2500	See also: switch 3
120	Slow sewing start I: ON II: OFF	I/II	II	So-called softstart  Nr. 116 and 117
121	Decorative tack I: double II: simple	I/II	I	See also: Nr. 507 and 508
122	Final tack I: double II: simple	I/II	II	See also: Nr. 108 and 109

No.	Denomination	Sector	Value	Symbol / Remarks
<b>G2</b>				
201	Seam section A number of stitches	0-255	20	
202	Seam section A Speed	100-5000	300	
203	Seam section A I: Pedal-dependent speed II: Speed selected by No. 202	I/II	II	II: The stitch counting can be stopped by heeling down the pedal completely. If the pedal is heeled down completely once again, the programmed final tack will be sewn.
<b>G3</b>				
301	Seam section B <sub>1</sub> number of stitches	0-255	10	
302	Seam section B <sub>2</sub> number of stitches	0-255	10	
303	Number of seam sections (B <sub>1</sub> + B <sub>2</sub> )	0-255	2	$\frac{(B_1 + B_2) + B + \dots}{1 \quad 2}$
304	Stitch compensation for B <sub>2</sub> backwards (309 II)	0-16	0	Stitch compensation on account of inertia of the feed resetter in steps of 1/16 stitch. See also: No. 308 and 309.
305	Seam section B speed	30-640	300	
306	Seam section B I: Pedal-dependent speed II: Speed produced by 305	I/II	II	See: Remark at no. 203
308	Seam section B I: STOP after each partial section II: Sewing of partial section without STOP	I/II	I	See: Remark at no. 114
309	I: B <sub>2</sub> forwards II: B <sub>2</sub> backwards	I/II	I	II: Only with 308 I See also: No. 304
<b>G4</b>				
402	At present without function			

No.	Denomination	Sector	Value	Symbol / Remarks
<b>G5</b>				
501	At present without function			
502	At present without function			
505	No. of stitches of initial decorative tacking/forwards	0-30	3	 See also: switches 4 and 7
506	No. of stitches of initial decorative tacking/backwards	0-30	3	 See also: switch 7
507	No. of stitches of final decorative tacking/forwards	0-30	3	
508	No. of stitches of final decorative tacking/backwards	0-30	3	 See also: No. 121
520	At present without function			
521	At present without function			

No.	Denomination	Sector	Value	Symbol / Remarks
<b>G6</b>				
605	Speed display I: ON II: OFF	I/II	II	
606	Minimum speed = 1st pedal step	30-640	70	
607	Maximum speed	100-1000	800	

No.	Denomination	Sector	Value	Symbol / Remarks								
67												
700	Zeroing the position transmitter	0-239	0	See: point 3.2								
702	1st position	0-239	85	Precise adjustment See: point 3.3								
703	2nd position	0-239	188	Precise adjustment See. point 3.3								
729	Extension of the start delay after lowering the sewing foot	0-2550	200	80 ms are always effective								
731	Time extension for the stitch regulator for normal final tacking 20 ms + ...)	0-640	50	Owing to the time extension a regular seam pattern is obtained out of different speeds.								
733	Language	GERM ENGL ITAL FREN SPAN PORT	GERM	Teh text is displayed in the languages selected.								
775	Machine stop for decorative tacking (80 ms + ...)	0-640	200									
799	Autoselect programme (Display)	1 - n n = number of machine classes, for which the drive is admitted.	3	Owing to a resistor the drive "knows" to which machine class it is connected. <table><tr><th>Value</th><th>Machine class</th></tr><tr><td>1</td><td>467-FA 767-FA</td></tr><tr><td>2</td><td>221-FA</td></tr><tr><td>3</td><td>366</td></tr></table> One adjustment is not possible!	Value	Machine class	1	467-FA 767-FA	2	221-FA	3	366
Value	Machine class											
1	467-FA 767-FA											
2	221-FA											
3	366											

### 3.7 Adjustment number register

Function	Switch No.	Adjustment number	Operator level
<u>Initial tacking</u>			
- ON / OFF	1		X
- double / single	4		X
- No. of stitches forwards		102	X
- " " " / decorative tacking		505	X
- " " " backwards		103	X
- " " " / decorative tacking		506	X
- Normal tack./decorative tack.	7		X
- Stitch compensation		104	
- Speed		105	
- Key for "tacking within the seam" on the arm head			
- F key for "tacking inversion"			
- Machine stop for decorative tacking		775	
<u>Final tacking</u>			
- ON / OFF	2		X
- normal tacking/decorat. tack.	7		X
- double / single		122	
- Final decorative tacking double / single		121	
- No. of stitches backwards		108	X
- " " " / decorative tacking		507	X
- " " " forwards		109	X
- " " " / decorative tacking		508	X
- Speed		110	
- Final tacking after A seam or B seam		114	
- F key for "tacking inversion"			
- Time extension for normal final tacking		731	
- Machine stop for decorative tacking		775	
<u>Needle positions</u>			
- 1st position (down)		702	
- 2nd position (up)		703	
- In case of STOP after A seam or B seam (114 I)		115	
- key: "Needle up/down" on arm head			X
<u>Sewing foot positions</u>			
- with the pedal discharged	8		X
- start delay after lowering the sewing foot (80 ms + ...)		729	
<u>Needle cooling</u>			
- ON / OFF	3		X
- Duration of needle cooling after STOP		119	

Function	Switch No.	Adjustment number	Operator level
<u>Softstart</u>			
- On / OFF		120	
- Number of stitches		116	
- Speed		117	
<u>Programmed seam sections</u>			
- Programme offer		101	X
- Programme choice key P/ -			X
<u>A seam</u>			
- Number of stitches		201	X
- Speed		202	
- Limited speed or firm speed		203	
- Final tacking after A seam		114	
<u>B seam</u>			
- Number of stitches B <sub>1</sub>		301	X
- Number of stitches B <sub>2</sub>		302	X
- Number of cycles (B <sub>1</sub> + B <sub>2</sub> )		303	X
- Speed		305	
- Limited speed or firm speed		306	
- STOP between B <sub>1</sub> and B <sub>2</sub>		308	
- B <sub>2</sub> backwards		309	
- Stitch compens. for B <sub>2</sub> backw.		304	
- Final tacking after B seam		114	
<u>Speeds</u>			
- Speed display		605	
- Speed pedal step 1		606	
- Maximum speed		607	
- Initial tacking		105	
- Final tacking		110	
- Softstart		117	
- A seam		202	
- Limited or firm speed for A seam		203	
- B seam		305	
- Limited or firm speed for B seam		306	
<u>Position transmitter</u>			
- Reference position		700	
- 1st position		702	
- 2nd position		703	

#### 4. Pneumatic conditioning unit

##### 4.1 Air filter and water separator (A/20)

**Explanation:**

The purpose of this unit is to separate dirt particles and water, so as to avoid obstructions and rust formation in the pneumatic system.

The plastic container is emptied automatically by a floating valve as soon as a certain water level is reached.

**Maintenance:**

Clean the filtering element at intervals of 3 months by bencine or petrol, before the compressed air pressure drops.

For cleaning, remove the filtering element as follows:

- Stop the supply of the compressed air by the stop valve
- Deaerate the pneumatic system
- Screw off the plastic container
- Screw off the filtering element

##### 4.2 Pressure reducing valve (B/20)

**Explanation:**

The purpose of the pressure reduce valve is to reduce the line pressure of 7-10 bar to the service pressure of 6 bar for ensuring constant piston speeds and cylinder forces.

If the line pressure exceeds 10 bar, install an additional pressure reducing valve.

**Rule:**

Read the adjusted pressure on the manometer.

**Correction:**

Pull the button upwards and turn it accordingly.

#### 4.3 Oil atomizer (C/20)

**Explanation:**

The purpose of the oil atomizer is to supply all mobile parts of the pneumatic system with oil, in order to reduce the wear and the friction forces and in order to avoid the corrosion.

**Rule:**

- After every 20th machine cycle 1 drop of oil should fall into the air stream.
- The oil level should not drop below the opening of the suction tube.

**Correction:**

Turn the screw in the "+" direction = for increasing the oil supply  
Turn the screw in the "-" direction = for reducing the oil supply

**Replenishing:**

- Stop the supply of the compressed air by the stop valve
- Deaerate the pneumatic system
- Turn out the screw
- Replenish up to the "max" mark. Use "ESSO Nuto H 68" oil or any other brand having the following features:

Viscosity at 40° C : 66 mm<sup>2</sup>/s  
Point of inflammation: 236° C

**Maintenance:**

Check the oil level at intervals of three months.



## **Safety Instructions**

The nonobservance of the following safety instructions can result in bodily injuries of the operator and in damages to the machine.

### **Mounting**

- The mains voltage must comply with the service voltage specified on the motor type plate.
- The drive of the machine must turn in the prescribed direction.

### **Operation**

- Use the machine only for the purpose for which it has been intended.
- Do not remove the coverings and the protective devices.
- Only the accordingly qualified persons should be allowed to start and operate the machine.
- Do not introduce the hand into the area of mobile elements while the main switch is turned on.
- Turn off the main switch for
  - threading
  - changing the sewing elements (needle, bobbin, foot, throat plate, feed dog, etc.)
  - when leaving the working place.

### **Maintenance**

- The maintenance work should be carried out exclusively by the authorized persons.
- For carrying out the maintenance work, particularly on the electrical equipment, the mains plug must be pulled out.
  - No work on live parts and equipment is permitted, except the deviations permissible according to DIN 57105 or VDE 0105.



