

操作说明书
Operating Instructions

All rights reserved.

Property of Dürkopp Adler and copyrighted. Reproduction or publication of the content in any manner, even in extracts, without prior written permission of Dürkopp Adler, is prohibited.

版权所有，不许翻印

版权和产权归杜克普爱华股份公司所有。未经杜克普爱华股份公司书面许可，禁止以任何方式翻印或复印本内容，包括摘要。

Copyright © Dürkopp Adler - 2017

Foreword

This instruction manual is intended to help the user to become familiar with the machine and take advantage of its application possibilities in accordance with the recommendations.

The instruction manual contains important information on how to operate the machine securely, properly and economically. Observation of the instructions eliminates danger, reduces costs for repair and down-times, and increases the reliability and life of the machine.

The instruction manual is intended to complement existing national accident prevention and environment protection regulations.

The instruction manual must always be available at the machine/sewing unit.

The instruction manual must be read and applied by any person that is authorized to work on the machine/sewing unit. This means:

- Operation, including equipping, troubleshooting during the work cycle, removing of fabric waste,
- Service (maintenance, inspection, repair) and/or
- Transport.

The user also has to assure that only authorized personnel work on the machine.

The user is obliged to check the machine at least once per shift for apparent damages and to immediately report any changes (including the performance in service), which impair the safety.

The user company must ensure that the machine is only operated in perfect working order.

Never remove or disable any safety devices.

If safety devices need to be removed for equipping, repairing or maintaining, the safety devices must be remounted directly after completion of the maintenance and repair work.

Unauthorized modification of the machine rules out liability of the manufacturer for damage resulting from this.

Observe all safety and danger recommendations on the machine/unit! The yellow-and-black striped surfaces designate permanent danger areas, eg danger of squashing, cutting, shearing or collision.

Besides the recommendations in this instruction manual also observe the general safety and accident prevention regulations!

General safety instructions

The non-observance of the following safety instructions can cause bodily injuries or damages to the machine.

1. The machine must only be commissioned in full knowledge of the instruction book and operated by persons with appropriate training.
2. Before putting into service also read the safety rules and instructions of the motor supplier.
3. The machine must be used only for the purpose intended. Use of the machine without the safety devices is not permitted. Observe all the relevant safety regulations.
4. When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) when threading, when the workplace is left, and during service work, the machine must be disconnected from the mains by switching off the master switch or disconnecting the mains plug.
5. Daily servicing work must be carried out only by appropriately trained persons.
6. Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.
7. For service or repair work on pneumatic systems, disconnect the machine from the compressed air supply system (max. 7-10 bar). Before disconnecting, reduce the pressure of the maintenance unit. Exceptions to this are only adjustments and functions checks made by appropriately trained technicians.
8. Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.
9. Work on parts and systems under electric current is not permitted, except as specified in regulations DIN VDE 0105.
10. Conversion or changes to the machine must be authorized by us and made only in adherence to all safety regulations.
11. For repairs, only replacement parts approved by us must be used.
12. Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC directives.
13. The line cord should be equipped with a country-specific mains plug. This work must be carried out by appropriately trained technicians (see paragraph 8).



It is absolutely necessary to respect the safety instructions marked by these signs.

Danger of bodily injuries !

Please note also the general safety instructions.



Description of proper use or proper application:

The **K269** is a sewing head which can be used for sewing light to medium heavy sewing material. In general, such sewing material is made up of textile fibers but also leather. Such sewing materials are used by the clothing and upholstery industry. It would also be possible to make so called technical seams with these sewing machines. However, for this application the operator of the machine(s) must have the possible dangers assessed (cooperation with Dürkopp Adler would be welcomed), as such applications are, on the one hand, relatively rare and, on the other hand, have an immensely wide range of possibilities. Depending on the results of this assessment suitable safety measures might have to be implemented.

In general, only dry sewing material may be used on this machine. The material must not exceed 10 mm (1-Needle) or 7mm (2-Needle) in thickness when compressed by the lowered needle butt. The material must not contain any hard objects as eye shields would otherwise have to be worn when operating the machine. However, such eye shields are currently not available.

In general, the seam will be sewn with sewing threads made of textile fibers in sizes of up to 20/3 NeB (cotton threads), 20/3 Nm (synthetic thread), or 30/3 Nm (covering twists). Using other threads would also require an assessment of the related possible dangers and risks in advance, and the implementation, where necessary, of suitable safety measures.

This sewing machine may only be put up and used in dry and clean rooms. Should the machine be used in other rooms which are not dry and clean, further measures may have to be taken which have to be agreed (see EN 60204-31: 1999).

As a manufacturer of industrial sewing machines we assume that operators who are at least semi-skilled will work at our products, so that it can be assumed that all standard operations and, where applicable, the dangers are known.

Noise level Lc

Workstation related emission according to DIN 45635-48-A-I-KL2

Subclass:	-73; -373	-273
Number of stitches:	1500min ⁻¹	1500min ⁻¹
Stitch length:	4,8 mm	4,8 mm
Sewing material:	2-play Skai 1,6 mm	900 g/m ² DIN 53352
Lc =	82 dB (A)	83 dB(A)

class 269

Operating instructions

Index:	Page:
1. In general	
1.1 Reference and illustration.....	5
1.2 Technical data.....	5
2. Operation and functional components	
2.1 On the sewing machine.....	6
2.2 On the stand.....	6
3. Installation	
3.1 Mounting the sewing machine.....	6
3.2 Attaching the belt guard.....	6
3.3 Attaching the position maker.....	7
3.4 Electrical connection.....	7
4. Operation the sewing machine	
4.1 Winding-on the reel.....	8
4.2 Inserting the reel in the capsule.....	8
4.3 Regulating the reel thread tension.....	8
4.4 Inserting the capsule in the hook.....	8
4.5 Attaching needle(s).....	8
4.6 Threading the needle.....	8
4.7 Regulating thread tension.....	8
4.8 Lifting presser foot.....	9
4.9 Adjusting presser foot pressure.....	9
4.10 Adjusting stitch length.....	9
4.11 Adjusting the stroke of alternating upper feed.....	9
5. Maintenance.....	10
5.1 Cleaning.....	10
5.2 Oil lubrication.....	10

1. In general

1.1 Reference and illustration

A functional element mentioned in the text gets a reference, e.g. “A” if it is illustrated in the appendix. The supplement of the reference, consisting of a fraction stroke and of a figure, e.g. A/8, indicates the respective illustration 8 in the appendix. In case of several illustrations, the respective figures with fraction strokes are added.

An electrical or pneumatic functional element bears in all technical documentation (e.g. plan of electrical or pneumatic system) the same reference (e.g. “s1” or “24.2”) as that in the text, preceding the fraction stroke.

In the attached illustration this reference stands in a circle.

Switch off the machine, if you have to operate in the motion area of function-elements (Sewing head, feeding-device, clamping table etc.).

Otherwise there could be danger of an accident!

1.2 Technical data

Class 269-with subclasses:

Subclass	:	373
----------	---	-----

-Needle system	:	134-35
----------------	---	--------

-Needle size	Nm:	130
--------------	-----	-----

-Needle clearance	mm:	-
-------------------	-----	---

-Foot stroke, max.	mm:	13
--------------------	-----	----

-Stitch length, max.	mm:	6
----------------------	-----	---

Subclass	:	273
----------	---	-----

-Needle system	:	134-35
----------------	---	--------

-Needle size	Nm:	100
--------------	-----	-----

-Needle clearance	mm:	4.8-24
-------------------	-----	--------

-Foot stroke, max.	mm:	7
--------------------	-----	---

-Stitch length, max.	mm:	6
----------------------	-----	---

2. Operating and functional components

2.1 On the sewing machine

A/1	Stitch regulating lever
B/1	Needle thread main tensioner
C/1	Needle thread pre-tension
D/1	Thread pulling spring
E/1	Thread guides
F/1	Pressure regulating screw for the presser foot
G/1	Reel
H/1	Reel thread pre-tension
J/2	Lever for lifting presser foot
K/2	Lifting lever

2.2 On the stand

A1/3	Main switch
S/3	Motor control box
K/3	Knee lever
M/3	Motor pedal
T/3	Garn reel holder
N/2	Sewing head support

3. Installation

3.1 Mounting the sewing machine

- Attach the sewing machine with the four wood-screws supplied to the table-top,(the holes are pre-drilled)
- Insert sewing head support N/2
- Attach garn reel holder T-3 and complete
- Attach chain between knee-lever K-3 and lifting lever K/2
- Mount V-belt, and if necessary, tension by swinging down the motor

3.2 Attaching belt guard

- Screw in bolt d/6
- Screw in screws f/6 with washers approx.2 turns
- Slide both halves of belt guide behind the wash ers and tighten screws(Use the access holes in the belt guard),fig.7.

3.3 Attaching the position maker

- Screw the position maker onto the hand wheel flange so that the pin on the belt guard engages in the grooves of the position, and the red marks on the flange and position maker align.
- Connect plug to socket on motor control box S/3.

3.4 Electrical connection

- Connect power-plug(Mains supply must correspond with the requirements quoted on the identification plate on the motor)
 - Switch on machine and check the direction of rotation of the hand wheel:
If rotation is incorrect, reverse polarity of plug.
- All electrical work must be carried out only by qualified personal.

4. Operation the sewing machine

4.1 Wind-on garn on the reel

- Place reel on the winder shaft
- Thread garn through the guides and the reel thread pre-tensioner H/1/4 as shown in fig. 4 and then several turns around the reel anti-clockwise
- The thread pre-tensioner should be so adjusted that the thread is evenly wound-on with the least possible tension
- Press lever g/4 against the reel
- Run machine with the presser foot raised
- The winder switches off automatically when the reel is full

4.2 Insert the reel in the capsule

- Insert the reel in the capsule, so that when the thread is pulled, the reel turns in the opposite direction to the direction of pull, fig.5
- Pull the thread through the slot under the spring D/5 and through the hole a/5

4.3 Regulating the reel thread tension

The reel thread tension can be regulated by the screw d/5.

4.4 Place the capsule in the hook

- Swing up the gate E/8 on the hook centre piece and place the capsule with the reel onto the pin of the centre piece.
- Swing back down the centre piece gate.

4.5 Attaching needle(s)

- Advance needle-bar to highest point of stroke
- Insert the needle(s) as far as possible and with the groove towards the hook

4.6 Threading the needle

- Thread the needle as shown in fig.9/10

4.7 Regulating thread tension

B/1

Note: Thread looping on the under side of the sewing material can be avoided by re-positioning the eyelet n/9/10 downwards.

4.8 Lifting presser foot

-By hand with the lever

By machines with coupled motors and pneumatic presser foot lifting
FLP 14-3, by depressing the motor pedal backwards.

-By machines with positioning system and pneumatic presser foot
lifting, FLP 14-4, by depressing the motor pedal backwards hereto,
See point 5.1 Pneumatic presser foot lifting

Note: When running the machine without sewing material, the presser foot must always be raised.

4.9 Adjusting presser foot pressure

The presser foot pressure can be regulated by the screw F/1 via the spring W/1

4.10 Adjusting stitch length

The stitch length can be adjusted by turning the knob on the stitch regulating lever A/1:

-Knob turned to the right -shorter stitch length

-Knob turned to the left -longer stitch length

-Backwards stitch -push lever upwards

4.11 Adjusting the stroke of alternating upper feed

The stroke height of the feet can be adjusted by re-setting the pullrod Z/2 in the guide track V/2.

The stroke should be adjusted to the greatest thickness of material being sewn:

Pullrod up -maximum stroke

Pullrod down -minimum stroke

Note: To avoid excessive noise, the machine should not be run at max. speed when maximum stroke is required.

5 Maintenance

5.1 Cleaning

Rule:

In case of full-shift service clean at short intervals, possibly daily, by using a brush.

Indication:

Some materials are inclined to an increased separation of fluff, finishing agents, etc., the sediments of which are quickly solidified particularly by the pushing and lifting movement of the feed dog, impeding thus the machine function.

For thorough cleaning remove also the throat plate.

At longer intervals unscrew the head cover and clean the arm head.

5.2 Oil lubrication (fig. 11)

The oil points marked by an arrow as well the outside and inside joints should be lubricated additionally, preferably when starting the work. In case of a full-shift service apply about daily 1 or 2 drops of oil. (At longer intervals remove also the upper arm cover and head cover) .

Attention:

Prior to the first operation resp. after a longer standstill of the machine all marked positions of machine must be oiled.

5.2.1 Oil qualities

Recommended is MILLCOT K 68 of ESSO or other brands with following features :

Viscosity at 40°: 65 mm²/s

Flash point: 212 °C

This oil can be obtained from the manufacturer:

1 litre - ref. no. 990 47 012 8

5 litres - ref. no. 990 47 012 9

前 言

本操作说明书用于帮助用户熟悉机器并根据推荐意见使用机器。

操作说明书中包含如何安全、正确及经济地操作机器的重要信息。按照说明书要求操作，能消除危险、降低修理成本和减少停机时间，增加机器可靠性和使用寿命。

本操作说明书是对现有的事故预防措施和环境保护国家标准的补充。

操作说明书必须始终放在机器/缝纫单元旁，便于查阅。

授权要操作本机器/缝纫单元的工作人员必须阅读和应用本操作手册。
即：

- 操作，包括装配、工作中的故障排除和清除织物垃圾
- 服务（维护、检验、修理）和/或
- 运输

用户还必须保证只有授权人员才可操作本机器。

用户必须至少每班检查一次机器有无明显损坏，对任何影响安全的变化（包括工作性能）立即报告。

用户必须确保机器操作完全正确。

切勿卸下或弃用安全装置。

如果装配、修理或维护时须卸下安全装置，则修理和维护工作完成后必须立即将安全装置重新装上。

未经授权擅自改动机器，由此造成机器损坏，制造商不承担责任。

须遵守在机器/缝纫单元上有关安全和危险的所有警示。黄黑色条框表示永久危险区域，如有遭受压伤、割伤、剪伤或碰伤的危险。

除本操作说明书的要求外，还须遵守一般安全和事故预防规则！

一般安全说明

不遵守以下安全说明会导致人身伤害或机器损坏。

1. 机器只能由充分了解操作说明书的人员调试并由受过专业培训人员操作。
2. 投入使用之前须阅读安全规则以及马达供应商的使用手册。
3. 只能按规定的用途使用机器。没有安全装置的机器不得使用。遵守所有相关的安全规定。
4. 更换标准零件（如针、压脚、针板、送料牙和梭芯）时；穿线时；离开工作场所时以及维护保养时必须关闭主开关，断开电源或拔下电源插头。
5. 日常保养只能由经过相应培训的人员进行。
6. 修理、调换零件和特殊维修只能由技术人员或经过专业培训的人员进行。
7. 气动系统保养和修理时，应把机器同压缩空气供应系统（最高压力 7-10 bar）断开。断开前，降低维修装置的七压。经过专业培训的技术人员仅对机器进行调整和功能检查的情况例外。
8. 对电气设备的有关工作必须由电气技术人员或经过专业培训的人员进行。
9. 不允许在通电情况下对零件和系统进行工作。DIN VDE 0105 中有具体规定的情况除外。
10. 机器的转换和变更必须经过我们的授权且只有遵守所有的安全准则情况下进行。
11. 修理时只能使用经我们批准的替换零件。
12. 在证实整个缝纫单元符合 EC 条例之前，严禁使用缝纫机。
13. 电源线必须配有与具体所在国规定相应的电源主插头。
这项工作必须由经过专业培训的技术人员进行（见第 8 段）。



绝对有必要遵守标有这些标志的安全说明
防止人身伤害！
还请注意一般安全说明



正确使用或正确应用说明

CL269 机头可用于缝纫轻薄至中厚面料。一般而言，这些面料由纺织纤维组成，也包括皮革。这些面料应用于制鞋和制革工业。使用这种缝纫机头还能缝纫所谓的技术线缝。然而在这一应用场合，客户必须评估可能产生的风险，（上工申贝 非常愿意与之合作）。因为一方面这类应用相对而言非常少见；另一方面，它又具有变化巨大的多样性。根据对这一风险评估的结果可能必须采取相应的安全预防措施

一般而言，该缝纫机头只能缝纫干燥面料。当放下针夹头抵住面料时，面料厚度绝不能超过 10mm9 单针）或 7mm（双针）。机器运转时面料中决不能含有任何硬物，否则缝纫机头必须另外配备眼睛保护装置。而这种装置目前不具备。

通常线迹由纺织纤维规格达 20/3NeB(棉线)、20/3Nm(合成纤维线)或 30/3Nm(綢线)形成。如果使用其他线,则首先必须对由此可能产生的危险和风险进行评估, 在有必要的场合,必须采取适当的安全预防措施。

这类缝纫机只能在干燥和干净的室内放置和使用。如果缝纫机在不具备干燥和干净的其他场所使用, 则有必要进一步采取预先达成的预防措施 (见 EN60204-31: 1999)。

作为工业缝纫机的制造商，我们认为操作我们产品的人员至少是半熟练操作人员，所以也可以认为在应用标准操作的场合，对所处的危险是了解的。

噪音等级 Lc

有关工作场所的排放参见 DIN45635-48-A-1-KL2

机型: -73 ; -373-273

转速: 1500mi n^{-1} 1500min $^{-1}$

针距: 4.8mm 4.8mm

缝纫面料: 2 层人造革 1.6mm 900 g/m² DIN 53352

Lc= 83dB (A) 84dB (A)

目录

页号

1. 概述	
1.1 参考和说明.....	16
1.2 技术数据.....	16
2. 操作和功能部件	
2.1 关于缝纫机.....	17
2.2 关于机架.....	17
3. 安装	
3.1 安装缝纫机.....	17
3.2 安装传送带罩壳.....	17
3.3 安装定位装置.....	18
3.4 电气连接.....	18
4. 缝纫机操作	
4.1 梭心绕线.....	18
4.2 梭心管上插上梭心.....	18
4.3 调节梭心的线张力.....	18
4.4 旋梭中插入梭心管.....	18
4.5 安装机针.....	19
4.6 机针穿线.....	19
4.7 调节线张力.....	19
4.8 压脚提升.....	19
4.9 调整压脚压力.....	19
4.10 调节针距.....	20
4.11 调节交替上送料的行程.....	20
5. 维护	20
5.1 清洁	20
5.2 加润滑油	20
5.2.1 润滑油质量	20

1. 概述

1.1 参考和说明

附录中论及的功能零件若在文本也有论述则附有参考号， 如“A”。参考号的补充由斜杠和数字组成， 如 A/8 表明附录中图解 8 的对应部分。 若出现几个图解，则增加对应的斜杠和数字。

所有技术文件中论述的电动或气动功能零件（如电动或气动平面图），其参考号和文本中斜杠前标出的相同（如” s1’或 “24.2’ ）。

所附图解中这一参考号标在一个圆圈中。

如果必须在功能零件运动区域（机头，送料装置， 台板夹持件等）进行一些处理， 则请关机。

否则有造成人身伤害的危险！

1.2 技术数据

269 机型一分机型如下：

分机型	:	373
-机针系统	:	134-35
-机针尺寸	Nm:	130
-机针间隙	mm:	-
-压脚行程，最大	mm:	13
-针距，最大	mm:	6
分机型	:	273
-机针系统	:	134-35
-机针尺寸	Nm:	130
-机针间隙	mm:	4.8-24
-压脚行程，最大	mm:	7
-针距，最大	mm:	6

2. 操作和功能部件

2.1 缝纫机

A/1	针距调节杆
B/1	机针线主夹线器
C/1	机针线预张紧
D/1	拉线弹簧
E/1	导线勾
F/1	压脚的压力调节螺钉
G/1	梭心
H/1	梭心线的预张紧
J/2	抬压脚连杆
K/2	提升杆

2.2 机架

A1/3	主开关
S/3	马达控制箱
K/3	膝提杆
M/3	马达踏板
T/3	梭心架
N/2	缝纫机头支撑

3. 安装

3.1 安装缝纫机

- 用和台板一起提供的 4 个木螺钉安装缝纫机（预先钻孔）
- 插入缝纫机头支撑 N/2
- 安装梭心支架 T/3及完整的配套件
- 安装膝提杆 k/3和提升杆 K/2之间的链接件
- 安装 V 形带，如有必要，马达向下倾斜张紧 v 形带

3.2 安装传送带罩壳

- 拧入螺栓 d/6
- 拧入螺钉 f/6和垫圈约 2 圈
- 在垫圈后滑动传送带罩壳的两个半片并拧紧螺钉（利用传送带罩壳中的安装孔）

3.3 安装定位装置

- 用螺钉把定位装置安装在手轮法兰上，传送带罩壳的销子和所在位置的槽相配合， 法兰上的红色标记和定位装置的标记相对准。
- 把插头插入马达控制箱的 S/3 的插座

3.4 电气连接

- 插上电源插头（主电源必须和马达铭牌上的额定要求相符合）
- 开机检查手轮旋转方向

如果旋转方向不正确，则更换插头的接线极性。

使用电气方面的工作必须且只能由符合资质的人员进行。

4. 缝纫机操作

4.1 在梭心上绕线

- 把梭心放在绕线轴上
- 线通过导线勾和梭心预张紧夹线器 H/1/4 如图 4 所示，然后按逆时针方向在梭心上绕几圈
- 调节线的预张紧夹线器时，应使线以尽可能小的张力均匀绕线
- 压杆 g/4 抵靠梭心
- 把压脚抬起，运行机器
- 梭心绕满后绕线器自动关停

4.2 梭心管上插上梭心

- 梭心管上插上梭心，这样当线受拉时，梭心按受拉的相反方向转动， 见图 5
- 通过弹簧 D/5 之下的槽和通过孔 a/5 拉线

4.3 调节梭心线的张力

梭心的线张力可以通过螺钉 d/5 进行调节

4.4 在旋梭中放入梭心管

- 移动旋梭中心部位的梭门 E/8 并把梭心管和梭心一起放在中心部位的销子上
- 中心部位的梭门回复到原来位置

4.5 安装机针

--把针杆设置在行程的最高位置

插入机针，使机针抵靠机针孔的顶部，槽对着旋梭方向

4.6 机针穿线

--机针穿线如图 9/10所示

4.7 调节线张力

线张力可以通过机针线预张紧夹线器 C/1 和主夹线器 B/1 进行调节

注：缝纫面料背面的环形线迹可以通过向下对针眼n/9/10重新定位予以避免。

4.8 压脚提升

--用手升降压脚

由电动和气动升降压脚FLP 14-3，通过压下电机的踏板。

--配有定针位系统和气动压脚的FLP 14-4，通过压下电机的踏板。

见点5.1气动压脚升降

注意：当机器没有缝纫材料时，压脚必须一直抬起。

4.9 调整压脚压力

压脚压力可用螺丝F/1和弹簧w/1调节。

4.10 调节针距

通过转动针距调节杆 A/1 上的旋钮可以调节针距：

- 旋钮向右旋转-针距变短
- 旋钮向左旋转-针距变长
- 倒缝 -推动连杆向上

4.11 调节交替上送料的行程

压脚的行程高度可以通过重新设定导轨 V/2 上的拉杆 Z/2 进行调节
行程应该调节到将要缝纫的面料的最大厚度：

- 拉杆向上 -最大行程
- 拉杆向下 -最小行程

注： 为了避免产生过大的噪音，在要求行程最大时， 机器不应在最大速度下运行。

5 维护

5.1 清洁

规则：

在满班工作的情况下，在短时间休息时搞清洁， 可能每天一次， 清洁时使用刷子。

说明：

有些缝料上脱落的绒毛和后处理物等会越来越多， 这些沉积物尤其在送料牙进行推压和抬起运动时很快变硬， 从而阻碍机器功能。

彻底清洁时， 还应卸下针板。

在休息时间较长时，应卸下面板，清洁机头。

5.2 加油润滑（图11）

注油点由箭头标出， 铰链的内部和外部应加油润滑， 最好在开始工作时加油。 当满班工作时每天注入约1或2滴润滑油。（休息时间较长时还应卸下机壳上盖板和面板）。

注意事项：

较长时间停机之后的第一次开机之前，机器的所有注油标注之处必须进行加油润滑。

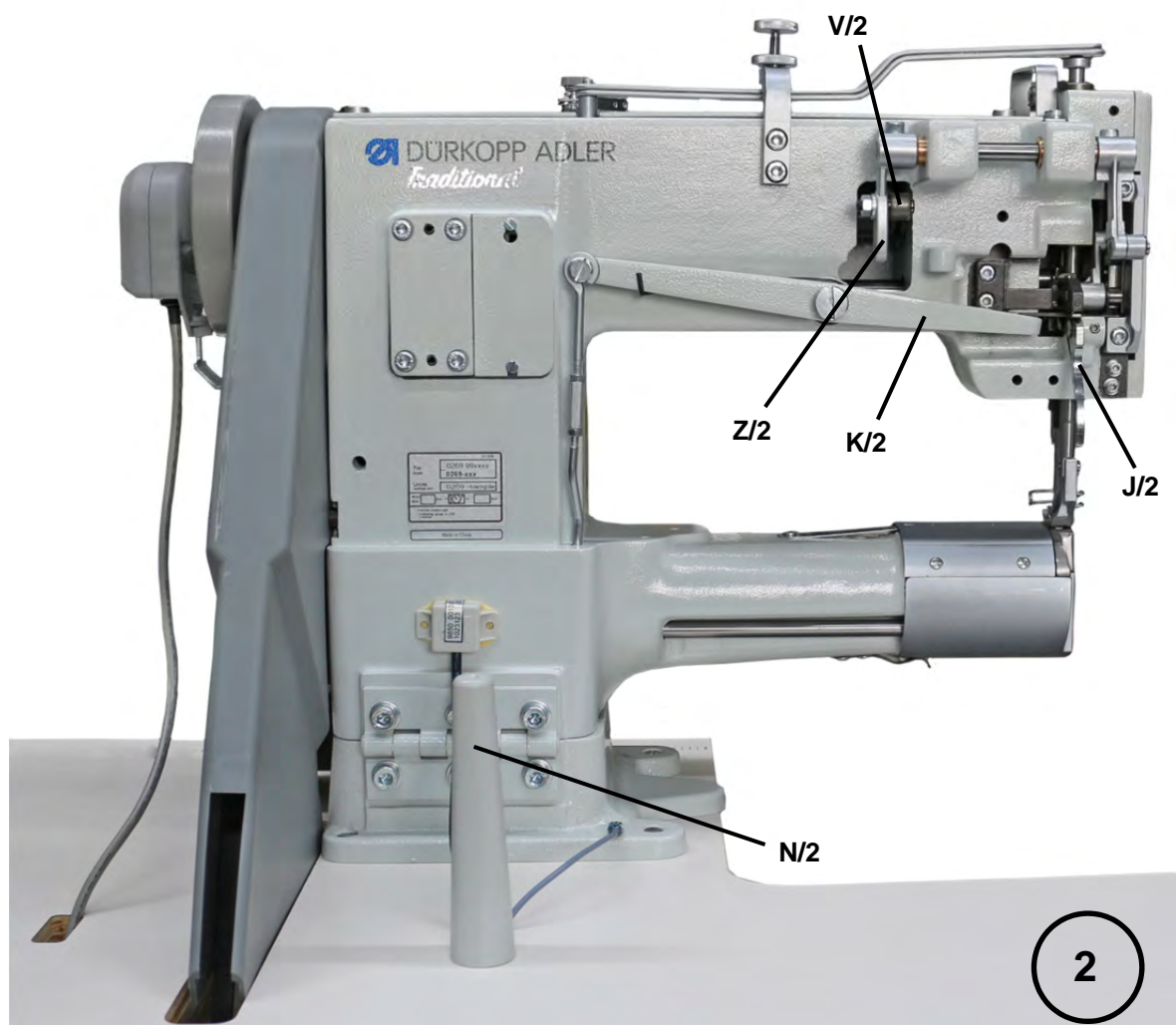
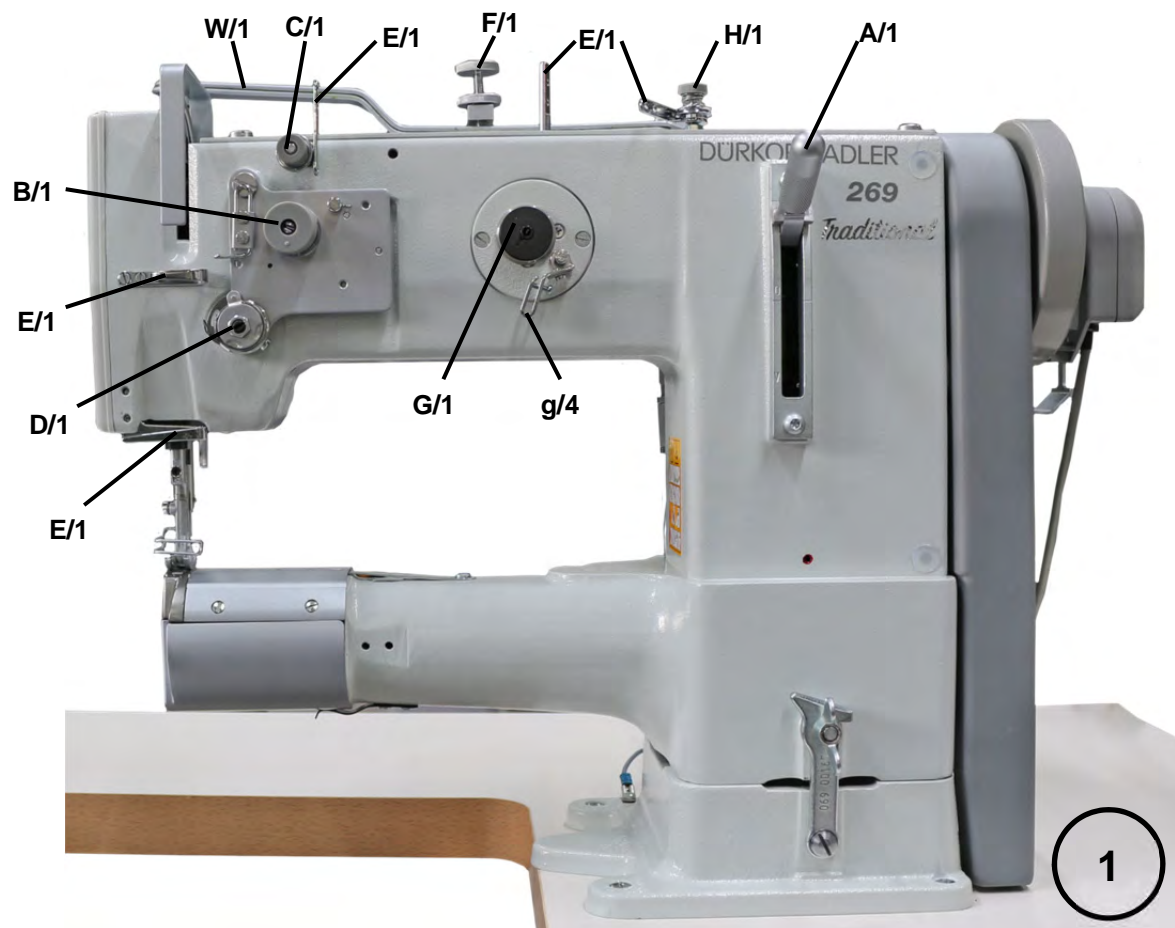
5.2.1 润滑油质量

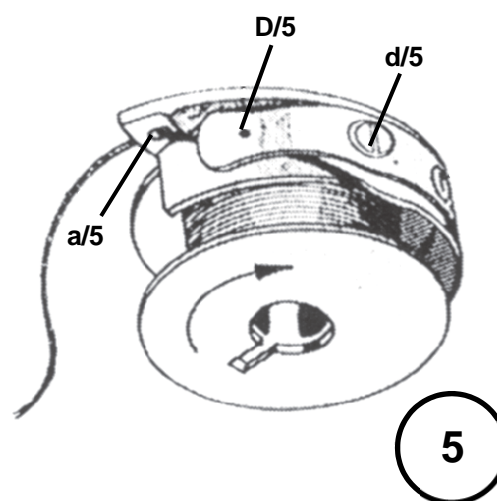
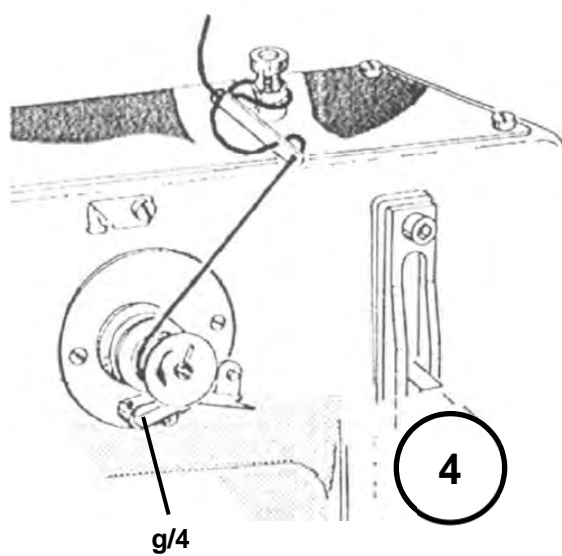
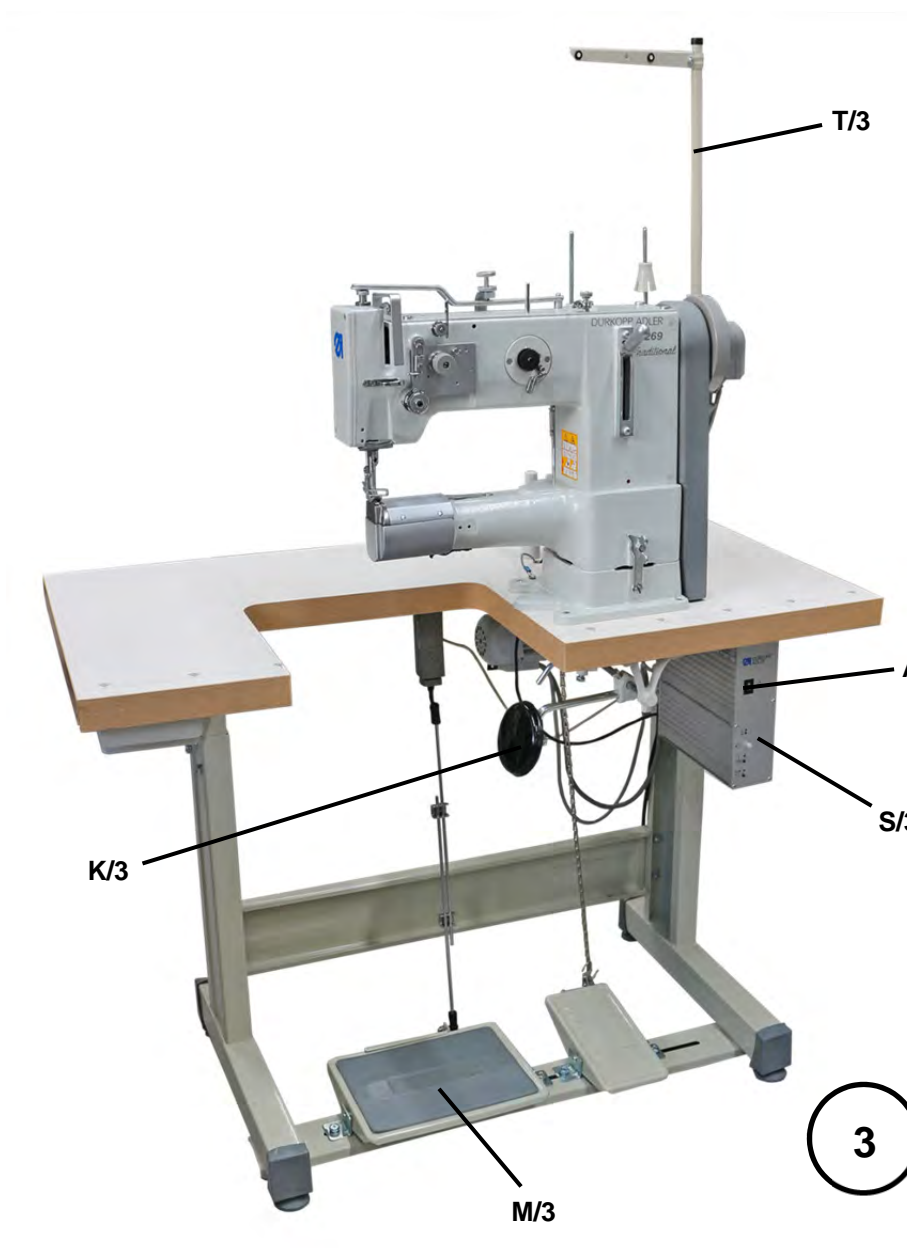
推荐的是ESSO的MILLCOT K68 或具有其以下特征的其他品牌：

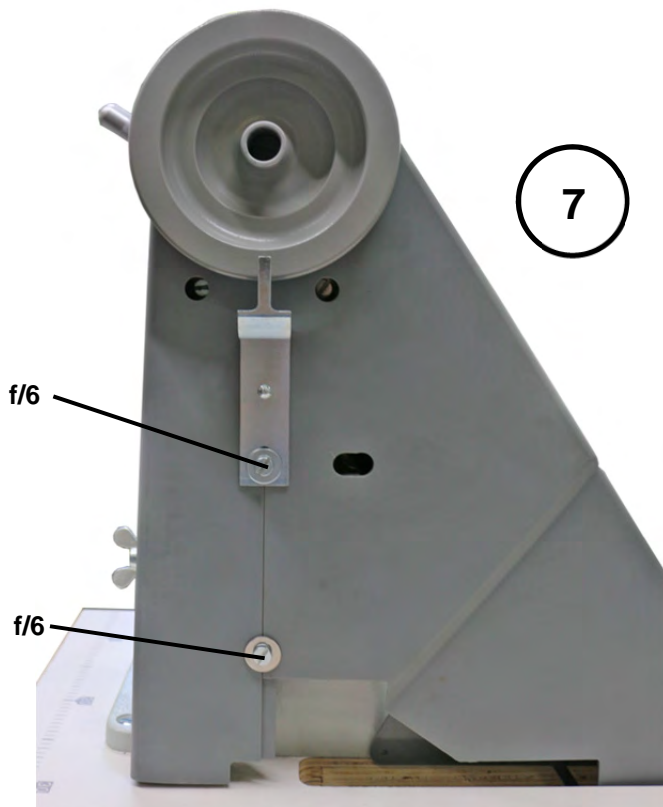
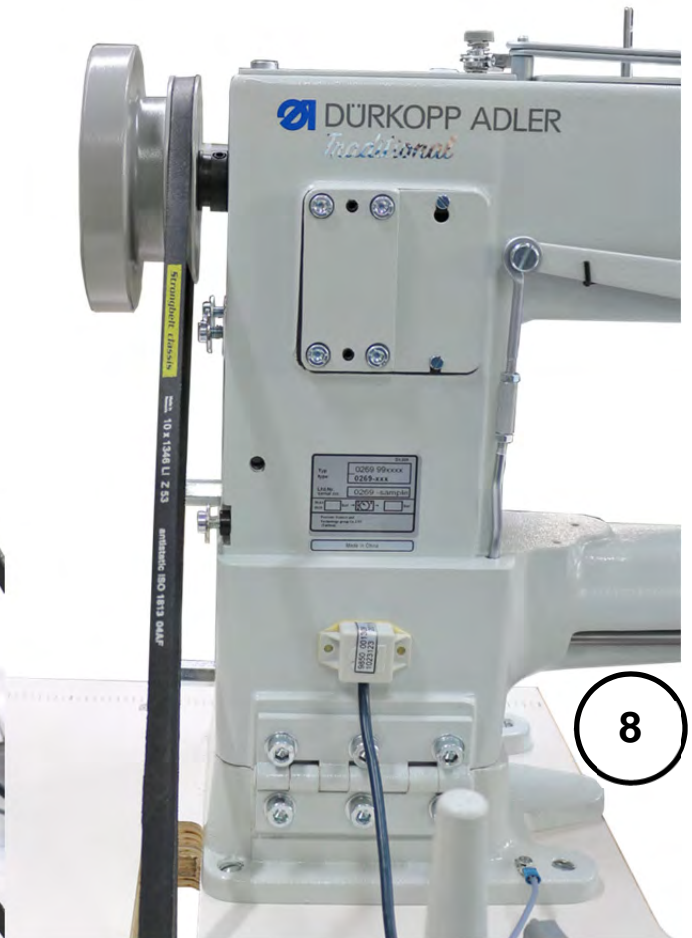
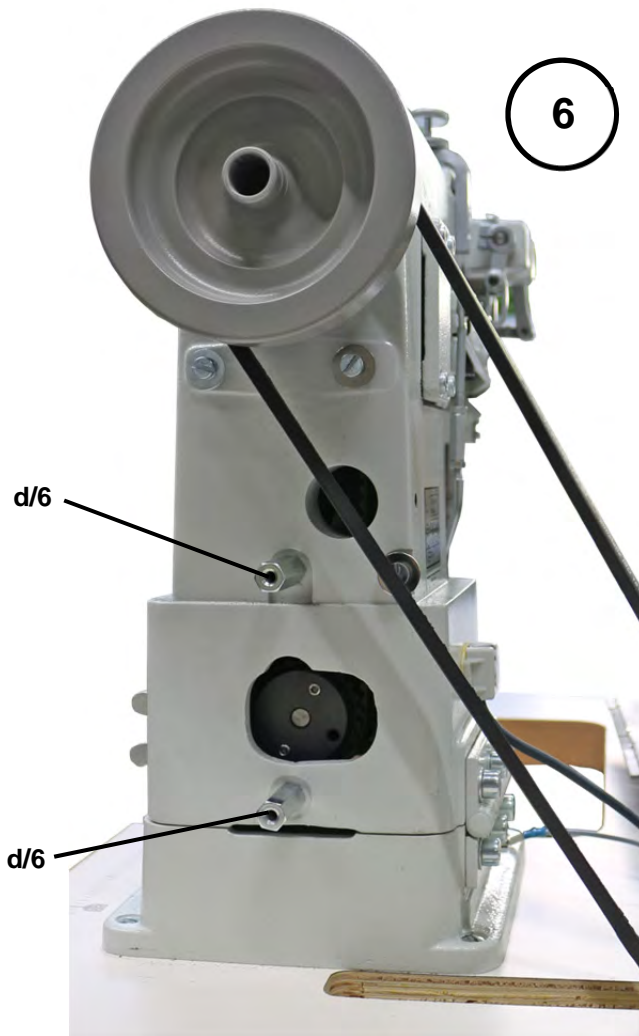
40° 时的粘度： 65mm²/s
闪点： 212℃

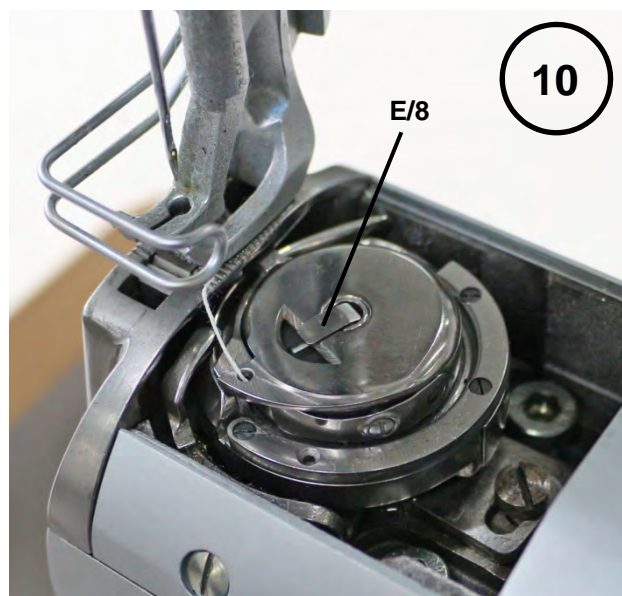
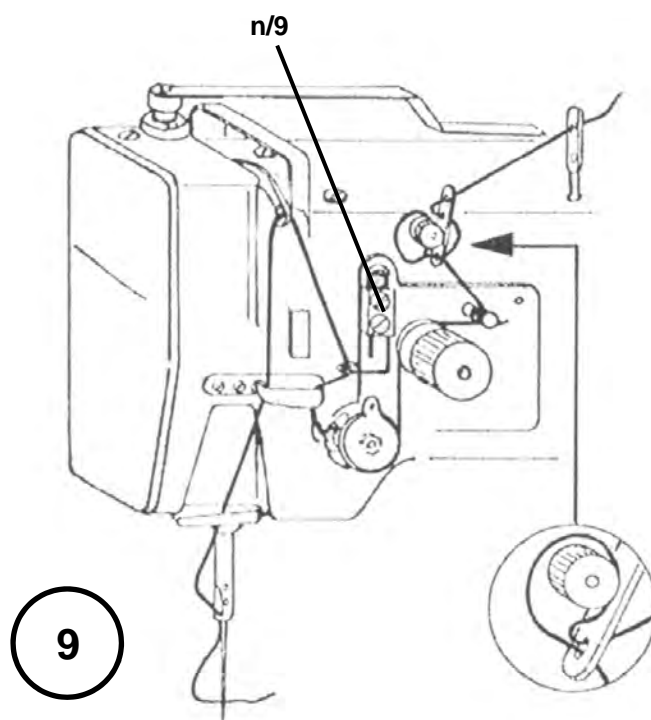
此类油可从制造商处购得：

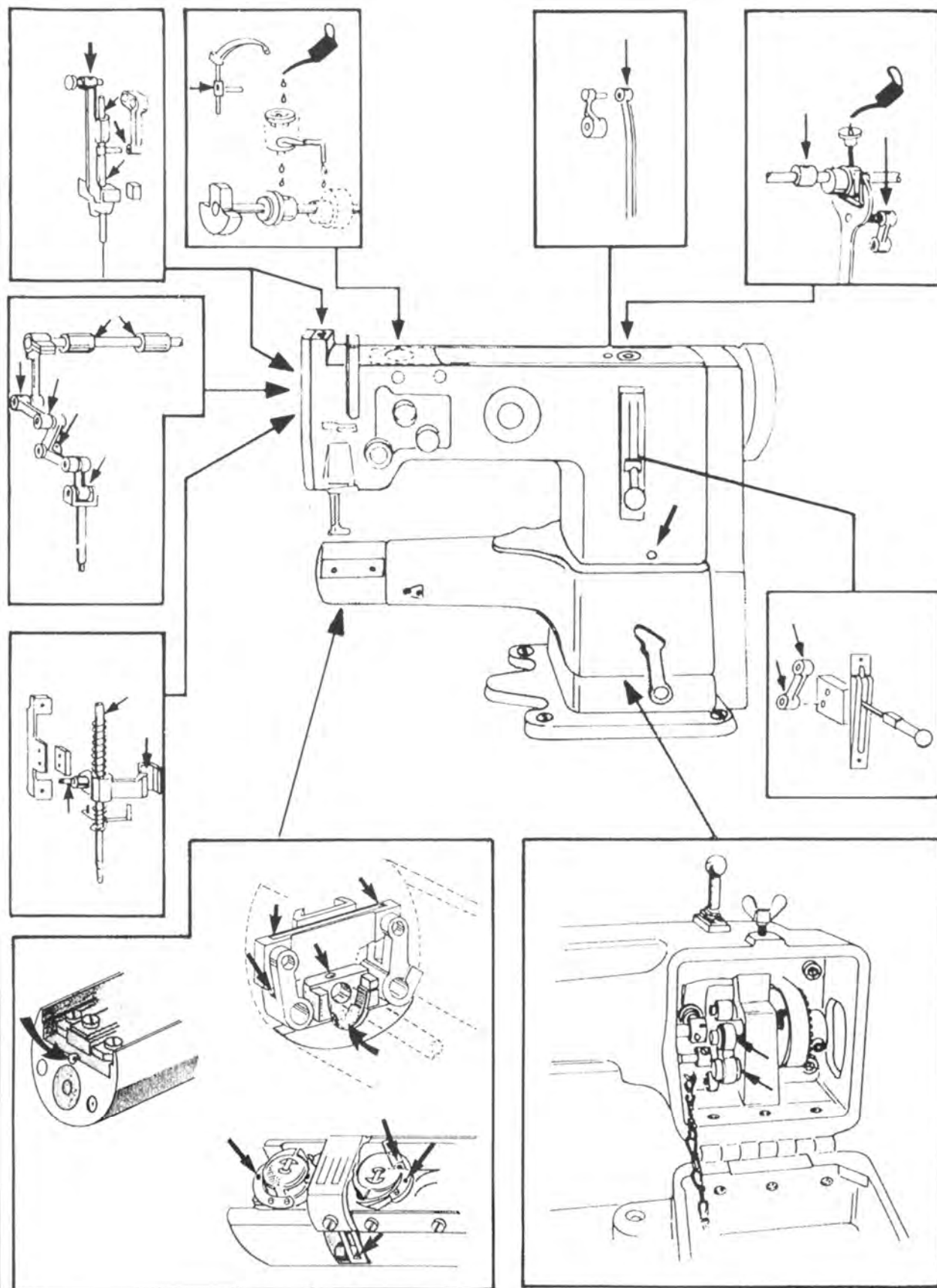
- 1升装 - 参考号 990 47 0128
- 5升装 - 参考号 990 47 0129











Contact:

DÜRKOPP ADLER AG

PO Box 17 03 51, D-33703 Bielefeld, Germany

Potsdamer Straße 190, D-33719 Bielefeld, Germany

Phone: +49 (0) 521 925 00

Fax: +49 (0) 521 925 24 35

www.duerkopp-adler.com

Manufacturer:

Precious Science and Technology

Group Corporation Limited

NO.333, Huangjiao Road

HuangYan Area Taizhou City

Zhejiang

P. R. China



DÜRKOPP ADLER AG
Potsdamer Str. 190
33719 Bielefeld
Germany
Phone: +49 (0) 521 925 00
E-Mail: service@duerkopp-adler.com
www.duerkopp-adler.com