AUTHORISED DISTRIBUTOR / DEALER

Manufacturers

SWARUP MECHANICAL WORKS

OFF. & FAC. UNIT-I:OVERLOCK BUILDING, OVERLOCK ROAD, LUDHIANA-141 003. (INDIA) TELEPHONE: 91-161-2530774, 4654981 to 84. FAX: 91-161-2533751, 4654985 FACTORY - UNIT II: B-XXX-69, KAILASH NAGAR, SHERPUR BYE-PASS, LUDHIANA-141 003. (INDIA) TELEPHONE: 4654986 to 87. FAX: 91-161-4654988 INTERNET: www.revoindia.com www.sewingnet.com E-MAIL: sales@revoindia.com

INSTRUCTION MANUAL & PARTS LIST



MODEL DA & MODEL DA-R



Heavy Duty Bag Closer Machines with Oil Pump System

REVISION NO. :- A, DOC. CODE :- REVO\DA AND DA-R\U1, EFFECTIVE FROM DATE == 01-09-09



INTRODUCTION

Congratulations on your new Revo® Portable Bag Closer Sewing Machine.

This instruction manual outlines routine maintenance tips and safety precautions to keep the machine in best possible running condition.

YEAR OF MANUFACTURE

NOTE: Difference between Model DA and DA-R Machine is in cutter mechanism. (See Page No. 31 & 32)

INDEX	PAGE
ntroduction	1
echnical Specifications	3
accessories Box Items	4
or Operator Safety	4
Varning	5
pecial Instructions	6
sefore Starting	7
Iow to Close a Paper Bag	8
hreading / Cautions When Using the Machine	9
tart	10
peration / Handling	11
faintenance / Troubleshooting	12
hread Tension Adjustment	13
ooper Installation	13
ooper Timing Adjustment	14
leedle Bar Adjustment	14
osition of Feed Dog	15
ressure of Presser Foot	15
ubrication and Maintenance	15
Guarantee	16
Viring Diagram	17
ransportation	18
torage	18
dentifying and Ordering Parts	19
General Recommendations / Customer Care	19
arts for Revo Model DAC	20
hread Tension and Cover Parts	21-22
Sushing and Oiling Parts	23-24
leedle Bar, Pressure Bar and Driving Parts	25-26
leedle Bar, Pressure Bar and Driving Parts	27-28
eed Driving and Thread Cutter	29-30
ooper Driving Parts	31-32
Aotor Parts and Handle Parts	33-34
Optional Accessories	33-34

1 2

Technical Specifications

 Speed (rpm.)
 1,600±125

 Seam
 Single Thread Chain Stitch

 Stitch Range (mm.)
 7 (fixed)

 Needle
 DB x 1 200/25 (Groz Beckert)

 Thread (synthetic or cotton)
 20/6

 Driver Motor
 75W Heavy Duty

 Belt Size
 Toothed Belt 170 XL Width 15 mm

POWER SUPPLY

Countries	Specified Volts	Frequency
Argentina, Australia, Austria, Belgium, Korea South, Malaysia, New Zealand, China, France Germany, Greece, South Africa, India, Italy United Arab Emirates, United Kingdom etc.	220 ± 10% Volts	50Hz
Belize, Brazil, Colombia, Canada, Mexico Dominican Republic, Honduras, Japan, Serbia & Montenegro, Taiwan, U.S.A. Etc.	110 ± 10% Volts	60Hz

 Power Cable
 Size 23/76 Three Core PVC Flexible

 Material Thickness
 15mm max.

 Machine Dimension (mm.)
 360(L) x 245(W) x 315(H)

 Net Weight (kg.)
 6.5

Note: The machine is capable of sewing on materials with thickness upto 15 mm, making them ideal for use on heavy and thick materials.

Accessories Box Items

S. No.	Part No.	Description	Qnty.
01	D02	Accessory Box	1 Pc.
02	D05	Needle DB x 1 200 / 25R (GROZ BECKERT) or equivalent	1 Pcs.
03	D300	Looper	1 Pcs.
04	D13	Allen Key 2.00mm	1 Pc.
05	D14	Allen Key 2.50mm	1 Pc.
06	D07	Allen Key 3.00mm	1 Pc.
07	D15	Allen Key 4.00mm	1 Pc.
08	D03	Allen Key 3 / 16	1 Pc.
09	D12	Screw Driver	1 Pc.
10	D501	Needle Lock Nut	1 Pc.
11	D16	Oil Can	1 Pc.
*12	D919	Carbon Brushes	2 Pcs.
13	D810P	Thread Cone 1000mtr.	1 Pc.

^{*} The part list is subject to change without prior notice.

For Operator Safety

Thanks you for purchasing the REVO Model DA-R Portable Bag Closer.

- This manual contains the instructions and precautions for using the Model DA-R Portable Bag Closer. Be sure to read and understand this manual before use and use the machine correctly.
- Keep this manual near the sewing machine for easy reference. Be sure to attach this manual to the machine when lending or transferring it to another person or company.
- Please order this manual from the nearest REVO office if it is lost.
- The contents of this manual are subject to change without prior notice for improvement and safety purpose.



Instructions with this mark are especially important for operator safety. Be sure to observe these marked instructions.

Hazard of Being Caught in the Machine

Be careful, when you insert a bag to be closed into the sewing machine, or your fingers may be caught in the machine between the presser foot and feed dog.

A "Hazardous" mark is attached to the machine. When sewing, be sure to support the bag with the hand from beneath the sewing head and not to touch on the machine.

When adjusting the machine or replacing parts, always disconnect the Electric Cord from the power source.

This is important in view of safety to the operator and adjuster.

WARNING

PERSONAL INJURY MAY RESULT IF THE FOLLOWING SAFETY PRECAUTIONS ARE NOT OBSERVED.

- BE SURE THE AREA SURROUNDING MACHINE IS FREE OF ALL HAZARDS SUCH AS FIRE, WATER, OIL, RUBBISH OR ANYTHING THAT CAN CAUSE INJURY.
- DO NOT OPERATE MACHINE IN AN EXPLOSIVE AREA OR UNDER WET CONDITIONS. THE MACHINE IS NOT AN EXPLOSION-PROOF TYPE NOR WATER PROOF TYPE.
- DO NOT OPERATE MACHINE BEFORE READING INSTRUCTION MANUAL.
- DO NOT OPERATE MACHINE ON VOLTAGES OTHER THAN SPECIFIED FOR THE MACHINE.
- BE SURE MACHINE IS CONNECTED TO BUILD ELECTRICAL SAFETY GROUND (EARTH).
- BE SURE POWER SUPPLY IS OFF BEFORE PERFORMING MACHINE MAINTENANCE, PARTS REPLACEMENT, ADJUSTMENTS OR CLEANING.
- DO NOT OPERATE MACHINE WHEN GUARDS AND COVERS REMOVED.
- DO NOT TOUCH KNIFE, NEEDLE, PULLEY, BELT AND MOVING PARTS WHEN MACHINE IS IN OPERATION.
- ◆ BE SURE MACHINE IS PLACED ON A SMOOTH (LEVEL) SURFACE WHEN PERFORMING MAINTENANCE, PARTS REPLACEMENT, ADJUSTMENTS, CLEANING OR STORAGE.

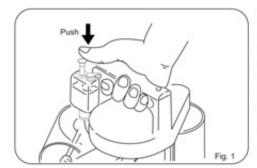
- → BE SURE THE MATERIAL TO BE SEW OR CLOSED COMPLIES WITH THE MACHINE SPECIFICATION.
- ◆ DO NOT USE SPARE PARTS OTHER THAN "REVO" GENUINE PARTS.
- USE OF THE EAR PLUG DURING OPERATING MACHINE IS ESSENTIAL.

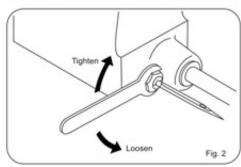


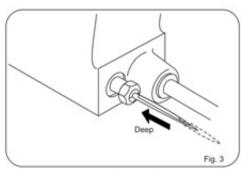
Special Instructions

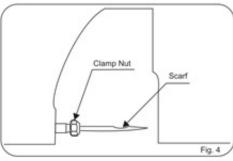
- This machine is not intended for use elsewhere bag closing application.
- This machine can be used for all Kinds of multi wall paper, jute, burlap, cotton, hessian, woven bags etc.
- Do not use this machine on Rubber coated bags.
- 4. Do not use this machine in wet conditions.
- The machine can be operated completely portable or it can be used with suspension unit with hanging hook during operating the machine. (Here picture can be used for better under standing).
- Use this machine with a minimum 4 mtrs. Length of power card.
- Do not use this machine where the material thickness is more than 15 mm.
- Do not run on three phase connection.
- Use machine under suitable lighting.
- Use suspension unit with hanging hook to avoid fatigue of operator. (See Page 33)
- 11. Use of ear plugs is essential.
- 12. Do not use machine in wet conditions.
- 13. Do not use this machine without rubber shoes.

Before Starting









OILING

Oiling is imperative to keep the machine in excellent operating condition. Fill oil tank with oil up to the maximum level mark. To begin flow of oil to the machine, push the lubricator button four times continuously before starting machine (See Fig. 1). This should dispense enough oil for continuous machine use of around four hours.

Do not run machine without oil as this could cause machine failure or break down.

NEEDLE SETTING

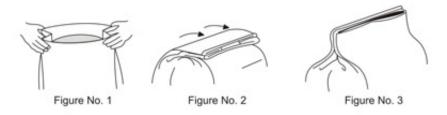
Turn the pulley until Needle Bar reaches its highest position.

Loosen Needle Bar Clamping Nut (See Fig. 2), and set Needle in the Bar as deep as it will go (See Fig. 3).

Be sure to set the Needle with concave part facing towards the Looper. Tighten Clamping Nut (See Fig. 4) to securely fit needle to avoid breakage from loosening during operation.

How to Close a Paper Bag

HOW TO CLOSE A PAPER BAG



After bag is filled, weighed and ready for closing, the operator should first reform gussets. See Fig. No. 1

Then, fold or "break" top of bag sharply over contents. See Fig. 2

Bring top of bag upright closing position. The sides should be closed together, smooth and wrinkle-free. See Fig. No.3.

Proceed with sewing operation, but sewing no more than two inches down from top of bag.

If sifting is a problem, merely tuck in the inner ply tightly over contents and proceed to sew remaining plies.

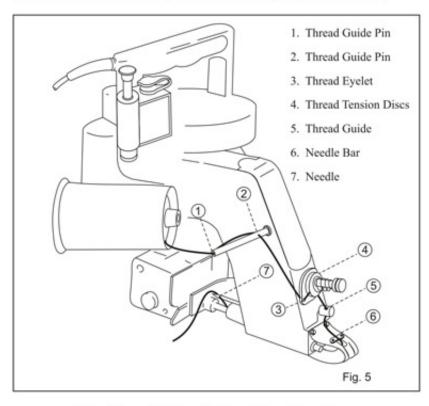
NOTE: Sufficient top is necessary to properly "break" bag.

Important! Always sew well above contents of bag. Never interfere with the feeding of the machine as it sews across the bag, by either pulling it, holding it back, or pulling up.

Threading

The machine is delivered threaded for identification.

The illustration below shows the procedure for threading the machine correctly.



Cautions When Using the Machine

Safety Precautions

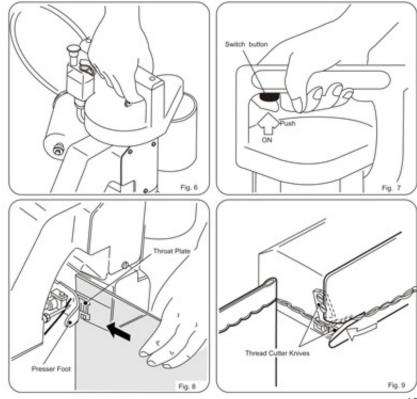
- Always turn power off before threading, oiling, and adjusting the machine or replacing parts.
- Wear safety glasses.
- Make sure, before starting the machine, that all covers and shields are in place and closed.
- Do not touch on the machine when it is running.
- Turn power off and make sure the cutter does not operate before you put your fingers under the cutter blades and the needles to adjust.

Start

Before starting, make sure that the supply voltage accords with the specification of the motor.

Hold the machine in your right hand (See Fig. 6) and place your index finger on the switch button on the handle (See Fig. 7). Hold the bag lightly in your left hand and insert bag mouth between Feed Dog and Presser Foot (See Fig. 8).

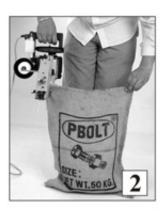
Run the machine while keeping the bag straight. Never pull or pull back the bag. To finish the closing operation, run machine off the bag two or three inches. With machine running, pull thread chain into "V" shaped slot at rear of throat plate where moving knife will automatically cut the thread chain (See Fig. 9).



Operation/Handling

- Hold the machine at the handle in your right hand.
- Support the bag slightly by your left hand and insert the edge of a bag between presser foot and feed dog.
- Push the switch button or the handle by your index finger to stitch the bag.
 A part your index finger from the push button stop to the machine.
- After stitching, the plain chain stitch with 1-2 inches in length shall be pressed down in the groove of throat plate to be cut down by knives mounted on the machine.









< Caution >

Stitch the bag synchronize with the speed of feed dog. If the bag is pulled out faster than that of feed dog. It causes mis-stitch or needle break holding of bag.

Maintenance

- Please keep in mind to handle the machine carefully and to maintain the machine in good condition.
- Thread fuzz or dust must be cleaned with air or brush on throat plate, in the groove of feed dog or around looper after the day's work.
- Wipe the area easy to rust with oil cloth.
- Check the machine for loose screws and tighten them, if any, once a month.
- Good maintenance will prolong the machine life.

Troubleshooting

If machine skips stitches or fails to chain off, the cause could be any of the following:

- 1. Improper threading or tension (see THREADING section on page 9)
- 2. Bent or incorrectly installed needle
- 3. Damaged or misadjusted looper
- 4. Excessive wear, requiring rebuilding or servicing
- Incorrect needle bar setting. To check these adjustments or replace these parts, carefully follow instruction listed below:

Do not disturb main bearing, part no. D605or looper cam, part no. D310. They are timed and set at the factory.

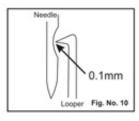
11 12

Thread Tension Adjustment

Tension is the degree of resistance the thread experiences in passing between the tension discs, part No. D113 - 2 (Page No. 22). If tension is too loose, it will cause the thread to break or will leave loose loops of thread on the bag instead of firm stitches. If tension is too tight, it will also cause the thread to break or will cause bag to pucker. In either case, the machine may not chain off. To reduce the amount of tension, turn upper tension nut, part No. D113 - 4 (Page No. 22) anticlockwise. Then turn lower tension nut, part No. D113 - 4 (Page No. 22) anticlockwise. Turn both tension nuts clockwise to tighten tension, first the lower and then the upper nut. Test on material until desired stitch appearance is obtained. Be sure to re-lock upper tension nut in both cases, ie. when reducing or increasing thread tension.

Looper Installation

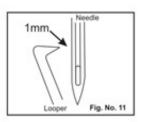
To install new or replace looper, loosen allen key screw D301-1 (page 32) from D301 (Page 32) Remove D301 (pg32) and loosen D300-1 (page 32). This will allow the looper D300 (page 32) to become loose. Replace looper and tighten D301 (page 32) on to D300 (page 24) the allen key screw D301-1 (page 32).



The point of the looper must pass through the center of the needle scarf with about 0.1mm clearance (See Fig. No. 10) between looper point and needle. The scarf is the hollowed out section just above eye of the needle. (See Fig. No. 10). Unless the looper holder and/or needle bar has moved or slipped, the looper will time up automatically. If necessary, adjust clearance between looper point and needle by loosening the looper holder clamp screw and sliding the looper holder in or out on looper shaft as required. Make sure the looper does not touch the needle in its path. See next section for needle bar adjustment.

Looper Timing Adjustment

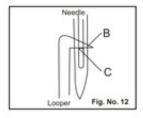
Looper timing adjustment is not required after looper has been replaced. It is only required when the looper shaft, looper cam or cam follower is replaced. Looper timing is correct when distance between looper (when furthest away) from needle is approximately 1mm



(See Fig No. 11). To adjust this distance loosen D307-1 (page 32) and D307-2 (Page 32). This will allow to turn D303 (Page 32) to adjust and set the distance of approx 0.8mm between looper (when furthest away) and needle. The point of looper must pass through centre of needle scarf with clearance of 0.1mm (See Fig. No.11)

Needle Bar Adjustment

This is required when replacing the needle bar (Part no. D500) or needle bar bushes part no. D503 & D504 (page24) Remove needle bar guard, (Part no. D101) and loosen D405 (page 26) from D405-1 (page 26) Allen screws. Adjust the height of the needle bar so the



bottom part of the looper tip is 1mm higher from the hole of the needle. Tighten D502-3 screw and fit the needle bar ground on the machine. Turn machine pulley in normal sewing direction until looper is in approximate position (as shown in Fig. No. 12) when the needle is on the up stroke. Slightly loosen clamping screw on needle bar clamp, part No. D502 - 2 (Page No. 26). Raise or lower needle bar and/or turn machine pulley to bring looper point flush with or not more than 0.5mm back from edge of the needle, (See B in Fig. No. 12), and to align bottom edge of looper flush with top of needle eye, (See C in Fig. No. 12).

Do not change looper setting. Securely lock needle bar clamp and replace needle bar guard. Check again for proper needle/looper clearance. (Fig. No.3)

Position of Feed Dog

The Length of stitch is 7mm per stitch. The rear end of the feed dog should be 2.5mm above throat plate at its highest position. To adjust height, remove DS710 (Page 30) by loosening D210-1 (Page 30) screw (3 in all). If the stitches shorten up, check the following:

- 1. Teeth on feed dog may have worn, Feed dog must then be replaced.
- Feed dog may have slipped so that the teeth protrude less than 2mm.

Merely raise the feed dog by raising the adjusting screws No. D203-1 (page 30) located on the feed carrier block. Note the set of locking nut with screws No. D203-1 (page 30) on the under side of the feed dog carrier block.

Pressure of Presser Foot

When adjusting the pressure of Presser Foot, take out Needle Bar Guard and loosen Screw of Presser Bar Connection. Move up Presser Bar to increase the pressure and down to decrease. After the adjustment, tighten the Screw firmly.

Lubrication and Maintenance

Recommended lubrication are Shell X-100, Motor Oil 10W/30, Shell Vitria Oil 31 or equivalent.

Cleaning

Clean the machine at the end of the day's work and oil the bushings, shaft etc. that are not lubricated by the lubricator. Wipe dust and other foreign matter off the Feed Dog teeth, Looper and Throat Plate eyelet where they are easily gathered. Care should be taken to keep the machine free from dust and dirt, especially when leaving it unused for some time.

Important!

When adjusting the machine or replacing parts, always disconnect the Electric Cord from the power source. This is for the safety of the operator.

CARE OF MOTOR

Brushes should be inspected at regular intervals so that wear can be detected and replaced before they are about 1/8" in length.

To remove brushes, take out two cap screws from each side of motor, when replacing brush, be sure it is replaced at the same axial position as removed. Spare brushes are provided with machine and can be purchased from us or our authorised distributors/dealers.

Motors do not operate properly unless the bearings are kept well lubricated. Ball bearings are sealed with grease sufficient for a period from one to two years, depending on the service given by the motor and temperature of the room in which it operates. To refill, remove the end caps covering the bearing and clean out the old grease before applying new grease.

Motor Protection Due to Overload/Overvoltage

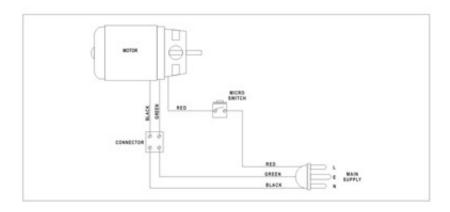
Install MCB on the power supply.

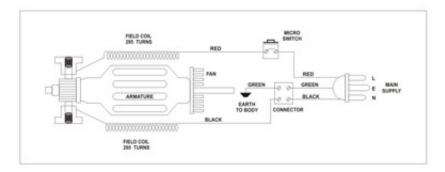
Guarantee

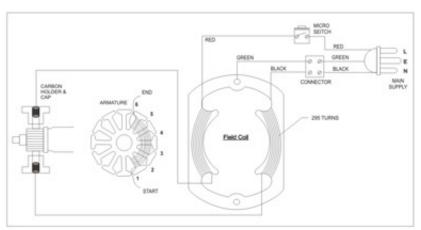
All Revo® machines are warranted against manufacturing defects for 90 days from the date of purchase.

- No Guarantee against Rubber and electrical parts.
- ♦ Accident / Broken not Cover in Guarantee

Wiring Diagram







Transportation
Store the machine in dry area. Ideal position to keep this machine is as under



Storage

Store the machine in dry area. Ideal position to keep this machine is as under





Please study this manual before operating the machine

Identifying and Ordering Parts

The parts list showing all the parts used in the machine is included in this book.

Check the list, and specify parts numbers and quantities required clearly.

Send your order to the nearest agent, distributor of one of our branch offices.

Description of each part and its number is described in this parts list. Screws and nuts for parts are shown adjacent to the relevant parts. When ordering parts, describe clearly the number with its name of part.

Contact us via E-mail, Post or Telephone. Complete contact details are given at the back page of this manual.

GENERAL RECOMMENDATIONS

The machine uses 9-ply thread, wound on 1000 Mtrs. cones. Use correct thread, taking the advise of regional distributors.

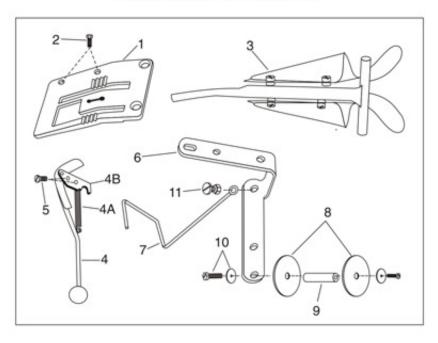
Installation of any kind is not necessary. Merely arrange a box, shelf or bracket so that, between bags, operator can conveniently set machine down or hang it up. Do not operate machine from direct current (DC) or 440 volt line unless machine has been specifically ordered for same. Machines are available with 110 & 220Volts electric powered motor.

Machine feeds automatically. Don't pull or hold it back as it feeds across the bag. Do not try to operate machine with bent or blunt needle. Do not disturb main bearing, part No. D605, or looper cam, part No. D310. They are timed and set at factory.

CUSTOMER CARE

Prompt service, supply of spares and guidance are available from our factory and our distributors. Contact us via our website www.sewingnet.com for details on your nearest stockist.

Customer Care: 09915515589

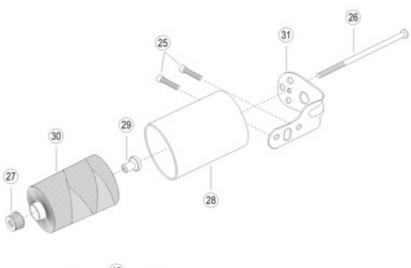


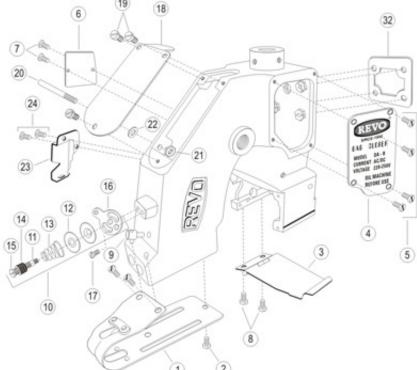
PARTS FOR TAPE BINDING ATTACHMENT REVO MODEL DAC

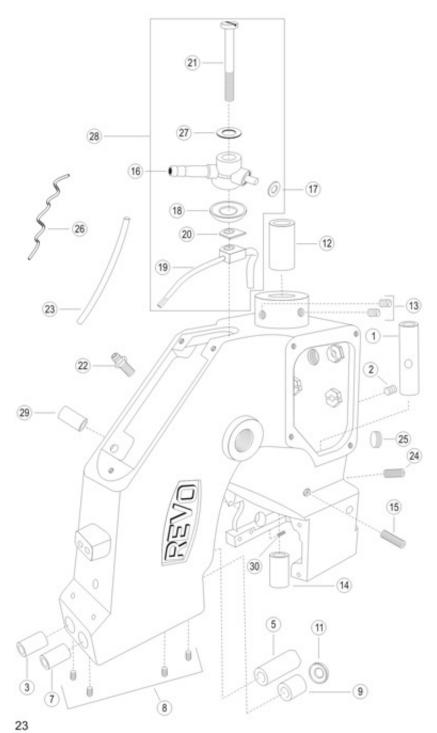
INDEX	PART NO.	DESCRIPTION	QNTY
1	C 01	Throat Plate	1
2	C 02	Bolt for C 01	2
3	C 03	Tape Folder	1
4	C 04	Cutter	1
4A	C 04-1	Cutter Spring	1
4B	C 04-2	Fix Cutter	1
5	C 05	Screw for C 04	2
6	C 06	Tape Handling Attachment	1
7	C 07	Tape Binding Hook	1
8	C 08	Tape Binder	2
9	C 09	Tape Binder Stud	1
10	C 10	Screw & Washer for C 09	2
11	C 11	Lock Nut & Bolt for C 07	1

THREAD TENSION AND COVER PARTS

6. DS104 Cover for D 7. DS104 - 1 Screw for C 8. D108 Screw for L 9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Tension Roc 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 19. D119 - 1 Screw 20. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 24. DS702 - 3 Screw for D 25. D801 Allen Bolt for D80 27. D805 Nut for D80	101 4 Practical State of the st
3. D102 Looper Cov 4. DS103 Cover Side 1 5. D103 - 1 Screw for C 6. DS104 Cover for D 7. DS104 - 1 Screw for C 8. D108 Screw for L 9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Tension Roo 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 19. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 24. DS702 - 3 25. D801 Allen Bolt f 26. D804 Screw For D 28. D805 Nut for D80	Property Name Plate Over Side Name Plate 1
4. DS103 Cover Side 1 5. D103 - 1 6. DS104 Cover for D 7. DS104 - 1 Screw for C 8. D108 Screw for D 9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Tension Roc 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Washer for D 22. D120 - 3 Washer for D 23. DS702 - 2 24. DS702 - 3 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	Name Plate over Side Name Plate 811 - 11 1 1 2 2 2 3 3 113 3 - 1 113 - 1 Base 114 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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6. DS104 Cover for D 7. DS104 - 1 Screw for C 8. D108 Screw for D 9. D109 Thread Eyel 10. D113 Tension Roc 11. D113 - 1 Tension Roc 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 19. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt fe 26. D804 Bolt, Thread 27. D805 Nut for D80	811 - 11 2
7. DS104 - 1 Screw for C 8. D108 9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Tension Roc 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 19. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt fe 26. D804 Bolt, Thread 27. D805 Nut for D80	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
8. D108 Screw for L 9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Disk for D1 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt for D80 27. D805 Nut for D80	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
9. D109 Thread Eyel 10. D113 Tension Ass 11. D113 - 1 Disk for D1 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt for D80 27. D805 Nut for D80	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
10. D113 Tension Ass 11. D113 - 1 Tension Roc 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	1 2 1 2 1 1 2 1 1 1 3 1 1 1 1 1 1 1 1 1
11. D113 - 1 Disk for D1 12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	1 2 1 2 1 1 2 1 1 1 3 1 1 1 1 1 1 1 1 1
12. D113 - 2 Disk for D1 13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	2 113 3 - 1 113 - 1 Base 114
13. D113 - 3 Spring for D 14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	3 - 1 113 - 1 Base 114 2 1 1 1 1
14. D113 - 4 Nut for D11 15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt fe 26. D804 Bolt, Thread 27. D805 Nut for D80	3 - 1 113 - 1 Base 114 2 1 1 1 1
15. D113 - 5 Screw for D 16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	113 - 1 Base 1 114 1 1 3
16. D114 Tension Set 17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	Base 1 1 1 1 1 1 3
17. D114 - 1 Screw for D 18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for D 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	114
18. DS119 Top Cover 19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for 1 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt fe 26. D804 Bolt, Thread 27. D805 Nut for D80	1 3
19. D119 - 1 Screw 20. D120 Thread Guid 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for I 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	3
20. D120 Thread Guic 21. D120 - 2 Nut for D12 22. D120 - 3 Washer for I 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	
21. D120 - 2 Nut for D12 22. D120 - 3 Washer for I 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	
22. D120 - 3 Washer for I 23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	e Rod 1
23. DS702 - 2 Thread Cutt 24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	0 1
24. DS702 - 3 Screw for D 25. D801 Allen Bolt f 26. D804 Bolt, Thread 27. D805 Nut for D80	
 D801 Allen Bolt f D804 Bolt, Thread D805 Nut for D80 	er Guard 1
 D804 Bolt, Thread D805 Nut for D80 	S702 - 2 or D800 4
27. D805 Nut for D80	or D800 4
27. D805 Nut for D80	Clumping 1
28. D807 Thread Con-	Cup 1
29. D807 - 1 Rubber Clur	
30. D810P Thread Con-	- Control of the Cont
31. D815 Thread Con-	Attachment 1
32. D906 - 3 Packing for	

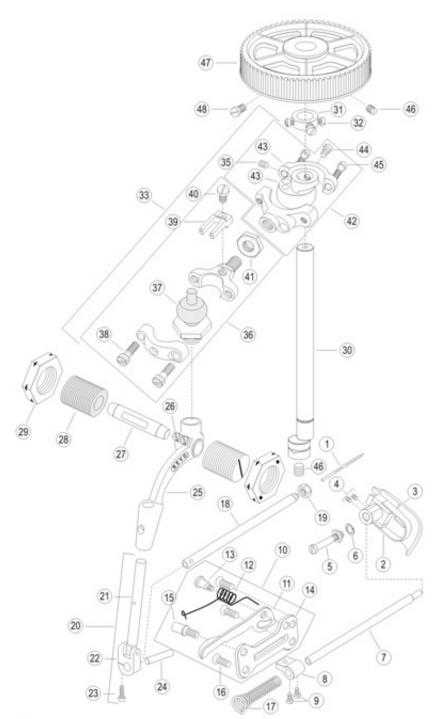






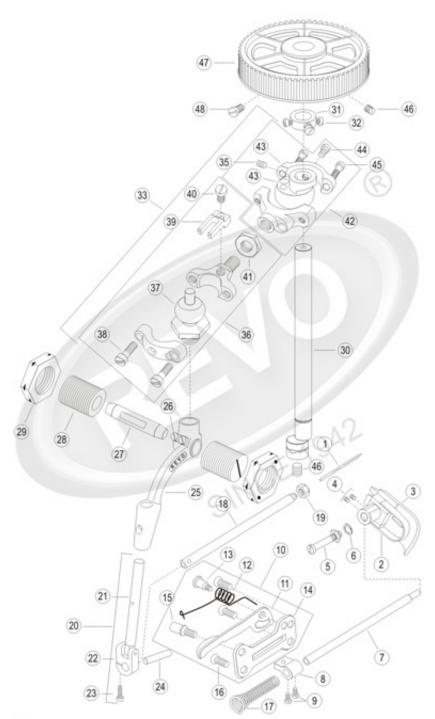
BUSHING AND OILING PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
1.	D306	Bushing for D303	1
2.	D306 - 1	Screw for D306	1
3.	D412	Bushing Pressure Bar Upper	1
4.	D412 - 1	Screw for D412	1
5.	D413	Bushing Pressure Bar Lower	1
6.	D413 - 1	Screw for D413	1
7.	D503	Bushing for D500 Upper	1
8.	D503 - 1	Screw for D503	1
9.	D504	Bushing for D500 (Lower)	1
10.	D504 - 1	Screw for D504	1
11.	D504 - 2	Seal for D504	1
12.	D601	Bushing Main Shaft (Rear)	1
13.	D601 - 1	Screw for D601	2
14.	D602	Bushing for D600 Main Shaft (Front)	1
15.	D602 - 1	Screw for D601	1
16.	D811 - 5	Oil Distributor	1
17.	D811 - 6	Washer Small for D811 - 5	1
18.	D811 - 7	Washer Big for D811 - 5	1
19.	D811 - 8	Copper Pipe	1
20.	D811 - 9	Washer for D811 - 8	1
21.	D811 - 10	Screw for D811 - 8	1
22.	D811 - 11	Oil Nipple	1
23.	D811 - 12	Pipe	1
24.	D811 - 14	Oil Preventive Screw Small	1
25.	D811 - 15	Oil Preventive Screw Big	1
26.	D811 - 16	Oil Wick	1
27.	D811 - 17	Fibre Washer for D811 - 10	1
28.	D811 - 18	Oil System Assy. Comp. Set	1
29.	DS700 - 4	Bush for DS700 - 3	1
30.	DS700 - 5	Screw for DS700 - 4	1
5293	10.000.00000 100		



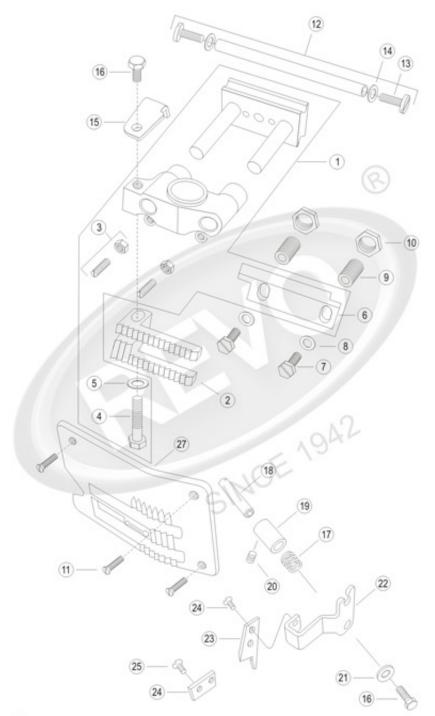
NEEDLE BAR, PRESSURE BAR AND DRIVING PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
1.	D05	Needle DB x 1 200 / 25R (GROZ BECKERT)	1
2.	DS05 - 1	Needle Guard	1
3.	D400	Pressure Foot Complete	1
4.	D400 - 1	Allen Grub Screw for D400	2
5.	D400 - 2	Hinge Bolt for D400	2
6.	D400 - 3	Nut for D400 - 2	2
7.	D404	Pressure Bar	1
8.	D405	Clamp for Pressure Bar	1
9.	D405 - 1	Allen Grub Screw for D405	2
10.	D406	Pressure Bar Lifter Lever Assy.	1
11.	D406 - 1	Lifter Lever	1
12.	D406 - 2	Spring for D406 - 1	1
13.	D406 - 3	Bolt for D406 - 1	1
14.	D406 - 4	Lifter Eyelet	1
15.	D406 - 5	Lifter Lever Stopper Stud	1
16.	D406 - 6	Screw for D406	3
17.	D414	Spring for Pressure Bar	1
18.	D500	Needle Bar	1
19.	D501	Needle Lock Nut	1
20.	D502	Clamp Needle Bar Complete	1
	2002	(available in 7.95mm and 9.50mm)	
21.	D502 - 1	Pin	1
22.	D502 - 2	Clamp	1
23.	D502 - 3	Allen Bolt for D502	i
24.	D502 - 4	Pin for D502 - 2	1
25.	D502	Needle Lever	1
26.	D505 - 1	Screw for D505	2
27.	D511	Stud Needle Lever	1
28.	D512	Bearing Cone	2
29.	D512	Lock Nut for D512	2
30.	D600	Main Shaft	1
31.	D603	Coller for D600	1
32.	D603 - 1	Screw for D603	3
33.	D605 - 1	Connecting Rod Eccentric Complete Set	1
33.	D003	(D607, D610 & D608)	1
34.	D605 - 1	Screw Set for D605 (2 D610 - 3, 2 D607 - 2)	4
35.	D606	Allen Grub Screw for D610 - 1	1
36.	D607	Bearing Rod End	1
37.	D607 - 1	Small Ball for D607	1
38.	D607 - 2	Screw for D607	2
39.	D607 - 3	Guide	1



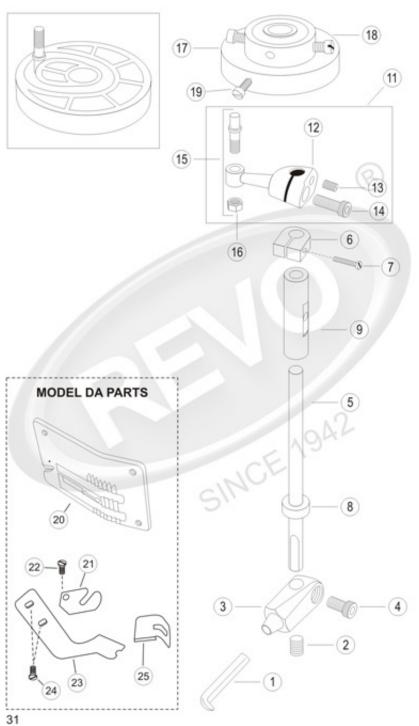
NEEDLE BAR, PRESSURE BAR AND DRIVING PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
40. 41. 42. 43. 44. 45. 46. 47. 48.	D607 - 4 D608 D610 D610 - 1 D610 - 2 D610 - 3 D811 - 13 D905 D905 - 1	Screw for D607 - 3 Lock Nut for D607 Connecting Rod Big Big Ball for D610 Screw for D610 - 1 Screw for D610 Oil Preventive Screw for D600 Pulley Machine (Timing) Screw for D905	1 1 1 1 2 1 1 2 2



FEED DRIVING AND THREAD CUTTER

INDEX	PART NO.	DESCRIPTION	QNTY.
1.	D200	Feed Dog Carrier Block Slide Complete Set	1
2.	D203	Feed Dog	1
3.	D203 - 1	Screw with Nut Adj. for D203	2 + 2
4.	D204	Screw attaching for D203	1
5.	D204 - 1	Washer for D204	1
6.	D205	Slide, Block Adjusting	1
7.	D205 - 1	Lock Bolt for D205	2 2 2 2 3
8.	D205 - 2	Washer for D205 - 1	2
9.	D206	Stud, Slide Block Adjustment Support	2
10.	D209	Lock Nut for D206	2
11.	D210 - 1	Screw for D210	3
12.	D214	Stud, Feed Dog Carrier Slide	1
		(Comp. with D214 - 1, D214 - 2)	
13.	D214 - 1	Screw for D214	2
14.	D214 - 2	Washer for D214	2 2
15.	DS700	Knife Bracket Support	
16.	DS700 - 1	Screw for DS 700	1 2
17.	DS700 - 2	Spring for knife moving	1
18.	DS700 - 3	Shaft for knife moving	1
19.	DS700 - 4	Bush for DS700 - 3	1
20.	DS700 - 5	Screw for Bush of DS700 - 3	1
21.	DS700 - 6	Washer for DS700 - 1	1
22.	DS701	Knife Bracket	1
23.	DS702	Knife Moving	1
24.	DS702 - 1	Screw for DS 702	2
25.	DS703	Knife Stationary	1
26.	DS703 - 1	Screw for DS 703	2
27.	DS710	Throat Plate	1
27.	Borro	Throw Three	100

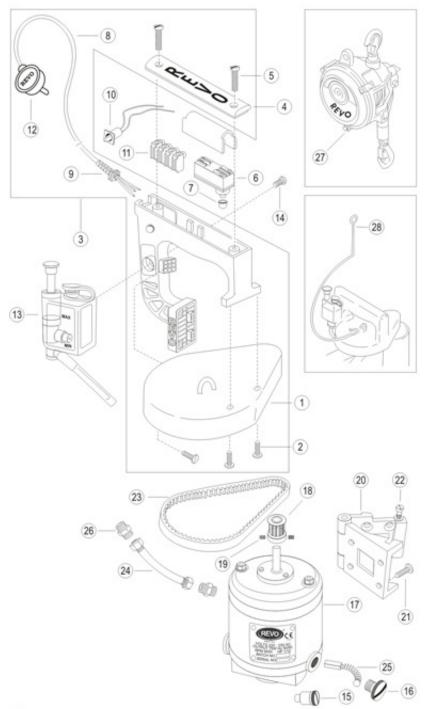


LOOPER DRIVING PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
1.	D300	Looper	1
2.	D300 - 1	Allen Grub Screw for D300	1
3.	D301	Holder, Looper	1
4.	D301 - 1	Allen Bolt for D301	1
5.	D303	Looper Shaft Complete with D305 Weld (available size 6.30mm and 7.95mm)	1
6.	D304	Collar, Looper Shaft	1
7.	D304 - 1	Screw, Clamping for D304	1
8.	D305	Collar Looper Shaft Round	1
9.	D306	Bushing for Looper Shaft	1
10.	D306 - 1	Grub Screw for D306	1
11.	D307	Arm Cam Follower (Complete with D307 - 1, 307 - 2, D308 + D309)	1
12.	D307A	Arm Cam Follower (only)	
13.	D307 - 1	Allen Grub Screw for D307	1
14.	D307 - 2	Allen Bolt for D307	1
15.	D308	Stud, Cam Follower (Complete with D309)	1
16.	D309	Nut for D308	1
17.	D310	Cam Looper Complete	1
18.	D310 - 1	Screw for D310	2
19.	D311	Screw, Cone Point for D310	1

REVO MODEL DA PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
20.	D210	Throat Plate	1
21.	D703	Knife Stationary	1
22.	D703-1	Screw for D703	1
23.	D701	Knife Bracket	1
24.	D701-1	Screw for D701	2
25.	D702	Knife Moving	1



MOTOR PARTS AND HANDLE PARTS

INDEX	PART NO.	DESCRIPTION	QNTY.
1.	D105	Guard Belt	1
2.	D105 - 1	Screw for D105	3
3.	D800	Handle Complete with Guard Belt	1
		(105, 802, 802 - 1, 105 - 1)	
4.	D802	Micro Switch Cover	1
5.	D802 - 1	Screw for D802	2
6.	D806	Micro Switch	1
7.	D806 - 3	Micro Button Guard	1
8.	D808 - 1	Wire 12 Feet Length	1
9.	D808 - 2	Handle Wire Sleeve	1
10.	D808 - 3	Indicator Bulb	1
11.	D808 - 4	Wire Connector Stick	1
12.	D809	Plug	1
13.	D811	Oil Tank	1
14.	D811 - 1	Screw for D811	1
15.	D900 - 3	Carbon Holder with Cap Contt. Type	2
16.	D900 - 4	Carbon Cap Contt. Type	2
17.	D901	Motor Intt.	1
18.	D903	Pulley Motor (Timing)	1
19.	D903 - 1	Screw for D903	2
20.	D906	Hinges Motor Mount	1
21.	D906 - 1	Screw for D906	8
22.	D908	Screw Locking for D906	2
23.	D910	Timing Belt (OPTIBELT ZR 170XL)	1
24.	DS913	Flexible Pipe	1
25.	D919	Carbon Brushes with Spring Square Type	2
26.	DS936	Nut for DS913	2

OPTIONAL ACCESSORIES

INDEX	PART NO.	DESCRIPTION	QNTY.
27.	SU	Revo Suspension Unit	1
28.	D907A	Hanging Hook	1
29.	D808	Wire (1Feet Length)	1
30.	D808C	Wire Roll (90m)	1
20000	1304.359/190999		