SR-2420M

Rouleuse à coulisse
SLIP ROLL
Rundbiegemaschine

www.promac.fr

BAILEIGH INDUSTRIAL

Table of Contents

INTRODUCTION

The quality and reliability of the components assembled on a Baileigh Industrial machine guarantee near perfect functioning, free from problems, even under the most demanding working conditions. However if a situation arises, refer to the manual first. If a solution cannot be found, contact the distributor where you purchased our product. Make sure you have the serial number and production year of the machine (stamped on the nameplate). For replacement parts refer to the assembly numbers on the parts list drawings.

Our technical staff will do their best to help you get your machine back in working order.

In this manual you will find: (when applicable)

- Safety procedures
- Correct installation guidelines
- Description of the functional parts of the machine
- Capacity charts
- Set-up and start-up instructions
- Machine operation
- Scheduled maintenance
- Parts lists

GENERAL NOTES

After receiving your equipment remove the protective container. Do a complete visual inspection, and if damage is noted, **photograph it for insurance claims** and contact your carrier at once, requesting inspection. Also contact Baileigh Industrial and inform them of the unexpected occurrence. Temporarily suspend installation. Take necessary precautions while loading / unloading or moving the machine to avoid any injuries.
Your machine is designed and manufactured to work smoothly and efficiently. Following proper maintenance instructions will help ensure this. Try and use original spare parts, whenever possible, and most importantly; **DO NOT** overload the machine or make any unauthorized modifications.

Note: *This symbol refers to useful information throughout the manual.*

IMPORTANT

PLEASE READ THIS OPERATORS MANUAL CAREFULLY

It contains important safety information, instructions, and necessary operating procedures. The continual observance of these procedures will help increase your production and extend the life of the equipment.

SAFETY INSTRUCTIONS

LEARN TO RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**

Follow recommended precautions and safe operating practices.

UNDERSTAND SIGNAL WORDS

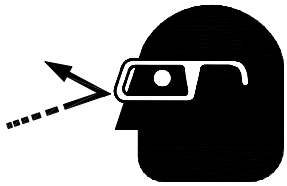
A signal word – **DANGER**, **WARNING**, or **CAUTION** is used with the safety alert symbol. **DANGER** identifies a hazard or unsafe practice that will result in severe **Injury or Death**.

Safety signs with signal word **DANGER** or **WARNING** are typically near specific hazards. General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.

SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.

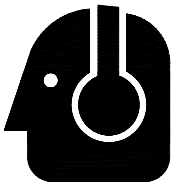
PROTECT EYES

Wear safety glasses or suitable eye protection when working on or around machinery.



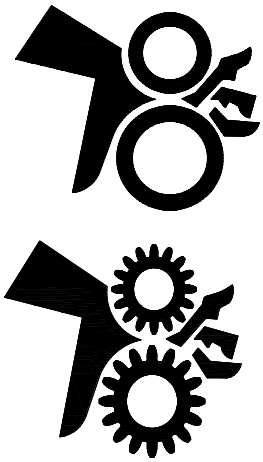
PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



BEWARE OF PINCH POINTS

Keep hands and fingers away from the rolls when the machine is in operation. Keep hands and fingers clear of any gears or mechanisms. Make sure guard is in place before operating machine.



SAFETY PRECAUTIONS

Metal working can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.
Safety equipment such as guards, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. **Always use common sense** and exercise **caution** in the workshop. If a procedure feels dangerous, don't try it.
REMEMBER: Your personal safety is your responsibility.

WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

1. **Only trained and qualified personnel can operate this machine.**
2. **Make sure guards are in place and in proper working order before operating machinery.**
3. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
4. **Keep work area clean.** Cluttered areas invite injuries.
5. **Overloading machine.** By overloading the machine you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
6. **Dressing material edges.** Before bending sheet metal, always chamfer and deburr all sharp edges.
7. **Do not force tool.** Your machine will do a better and safer job if used as intended. **DO NOT** use inappropriate attachments in an attempt to exceed the machines rated capacity.
8. **Use the right tool for the job. DO NOT** attempt to force a small tool or attachment to do the work of a large industrial tool. **DO NOT** use a tool for a purpose for which it was not intended.
9. **Dress appropriate. DO NOT** wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are

recommended when using machinery. Wear a restrictive hair covering to contain long hair.

10. **Use eye and ear protection**. Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
11. **Do not overreach**. Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
12. **Stay alert**. Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
13. **Check for damaged parts**. Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
14. **Observe work area conditions**. **DO NOT** use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. **DO NOT** use electrically powered tools in the presence of flammable gases or liquids.
15. **Blade adjustments and maintenance**. Always keep blades sharp and properly adjusted for optimum performance.
16. **Keep children away**. Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
17. **Store idle equipment**. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
18. **DO NOT operate machine if under the influence of alcohol or drugs**. Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.

TECHNICAL SPECIFICATIONS

Upper Roll Diameter	2" (50.8mm)
Minimum Forming Diameter	3" (76.2mm)
Wire Grooves	Yes – 3
Capacity (Mild Steel)	20ga. (0.9mm)
Forming Width	24" (610mm)
Power	Manual
Shipping Weight	220 lbs.(100kg)
Shipping Dimensions	44" x 15" x 21" (1118 x 381 x 534mm)

TECHNICAL SUPPORT

Our technical support department can be reached at 920.684.4990, and asking for the support desk for purchased machines. Tech Support handles questions on machine setup, schematics, warranty issues, and individual parts needs: (other than die sets and blades).

For specific application needs or future machine purchases contact the Sales Department at: sales@baileighindustrial.com, Phone: 920.684.4990, or Fax: 920.684.3944.

***Note**: The photos illustrations using in this manual are representative only and may not depict the actual color, labeling or accessories and may be intended to illustrate technique only.*

***Note:** The specifications and dimensions presented here are subject to change without prior notice due to improvements of our products.*

UNPACKING AND CHECKING CONTENTS

The Baileigh Model SR-2420M manual slip roll requires minimal assembly. After opening the crate, remove the slip roll machine and place on a bench or table capable of supporting the machines weight. Now remove the protective plastic sheeting from each roll.

***Note**: If using a razor blade or knife be careful not to scratch the rolls.*

Remove the crank handle from the lower roll shaft, turn around, and replace on the shaft so the roll pin engages the crank handle hub.

***IMPORTANT:** Before securing the machine to a table or bench, make sure the handle is free to rotate completely around, without pinching your hand or fingers.*

Cleaning

Your machine may be shipped with a rustproof waxy oil coating and grease on the exposed unpainted metal surfaces. To remove this protective coating, use a degreaser or solvent cleaner. For a more thorough cleaning, some parts will occasionally have to be removed. **DO NOT USE** acetone or brake cleaner as they may damage painted surfaces.
Follow manufacturer's label instructions when using any type of cleaning product. After cleaning, wipe unpainted metal surfaces with a light coating of quality oil or grease for protection.

WARNING: DO NOT USE gasoline or other petroleum products to clean the machine. They have low flash points and can explode or cause fire.

CAUTION: When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.

INSTALLATION

IMPORTANT:

Consider the following when looking for a suitable location to place the machine:

⚠ WARNING: Before operating the Baileigh Slip Roller, make sure it is firmly bolted to a table, bench, or the floor. If it tips over on you, it could cause severe injury or death.

- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.
- Make sure the workbench is properly reinforced to support the weight.
- The strongest mounting option is where the holes are drilled all the way through the workbench and the machine is secured with bolts, washers, and nuts.

1. Locate the Baileigh SR-2420M on your work surface.
2. Using the base as a template, mark the holes on the mounting surface.
3. Drill thru and bolt down the base. Customer to provide necessary hardware.

OPERATION

⚠ CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges. When handling large heavy sheets make sure they are properly supported.

Before using the Baileigh 2420M Slip Roll, check the mounting and adjustment of the machine. Rotate the handle and check whether the two gears have good, firm contact with each other. All three shafts should be clean and free of any metal debris.
DO NOT exceed the rated capacity on this slip roll. It has been tested at the factory to roll 20ga. (0.9mm) x 24" (610mm) wide mild steel.

The SR-2420M slip roller has three 2.00" (50.8mm) diameter rolls. (fig. 3) The two front rolls, one placed vertically above the other are clamping rolls. The top roll is fixed and the bottom roll is adjustable with two knobs (A). The rear idler roll controls the diameter of the finished piece part and is adjusted with two bolts (B). Always make sure the gap along the full length of the rolls is consistent. (fig. 2) If the rolls are not adjusted exactly parallel, the material will spiral during the rolling process, Because material springback varies with the kind of material being formed, only by test forming several pieces can the correct adjustments be made.

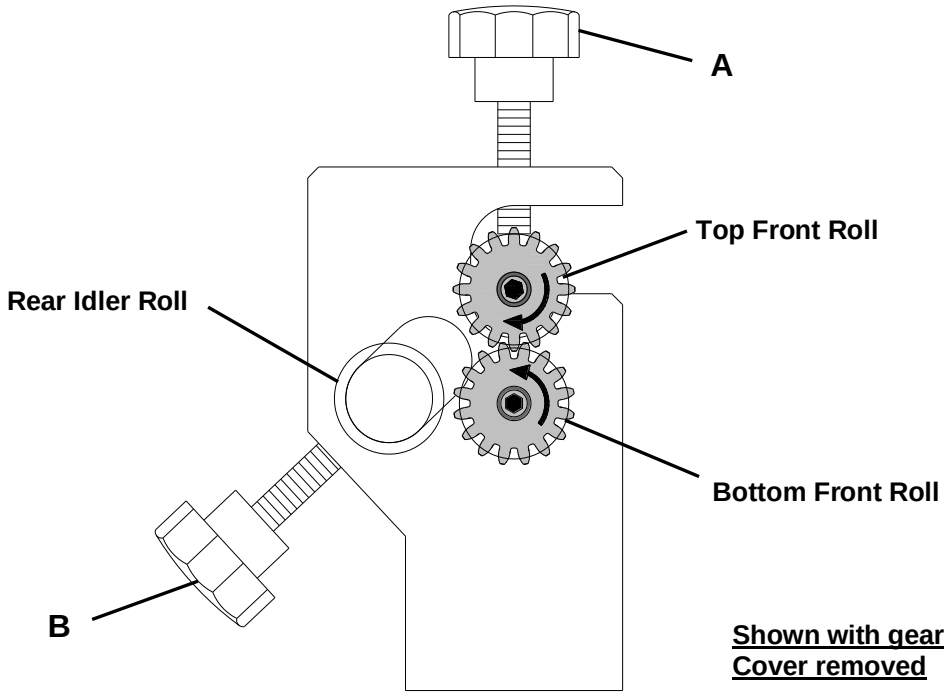
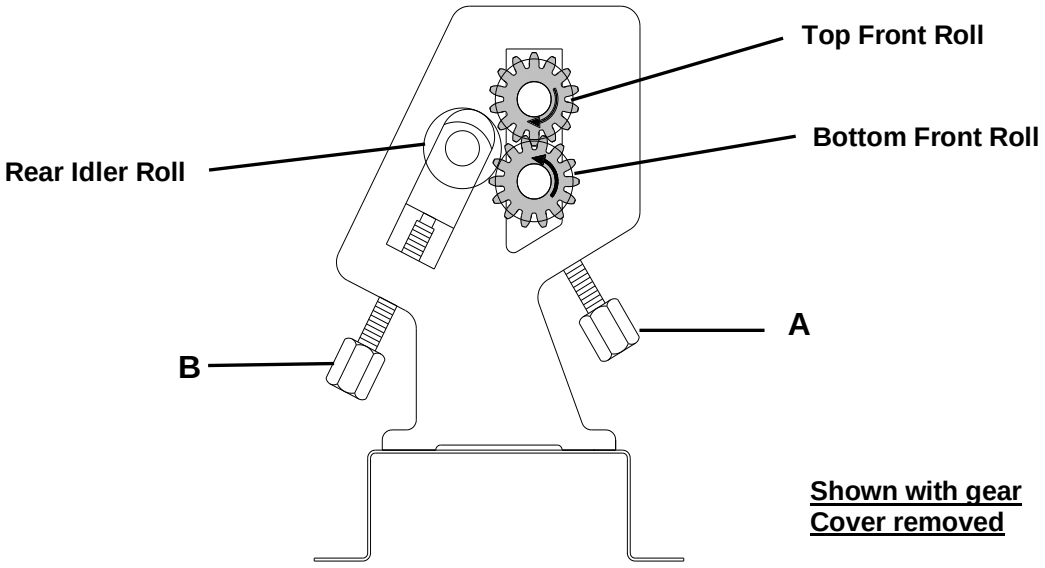


figure 2



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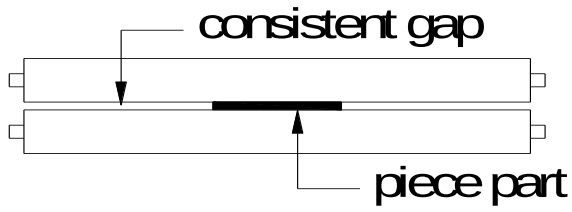


figure 3

PLATE ROLLING PROCEDURE

Determining Length of Material

LENGTH OF MATERIAL necessary to form the desired size circle is the first consideration in circle forming. To determine the approximate length of material needed use the formula: C = I x D, Where C is the circumference, I is the value of π or 3.1416, and D is the diameter. For example, to find the length of material (C or Circumference) to form a 12" (304.8mm) diameter circle, multiply 3.1416 x 12 (3.1416 x 304.8mm), the result is 37.70" (957.55mm) or the approximate length of material needed. Cut a few pieces of material to this length for test forming. Material may have to be lengthened or shortened depending upon results of the test forming run.

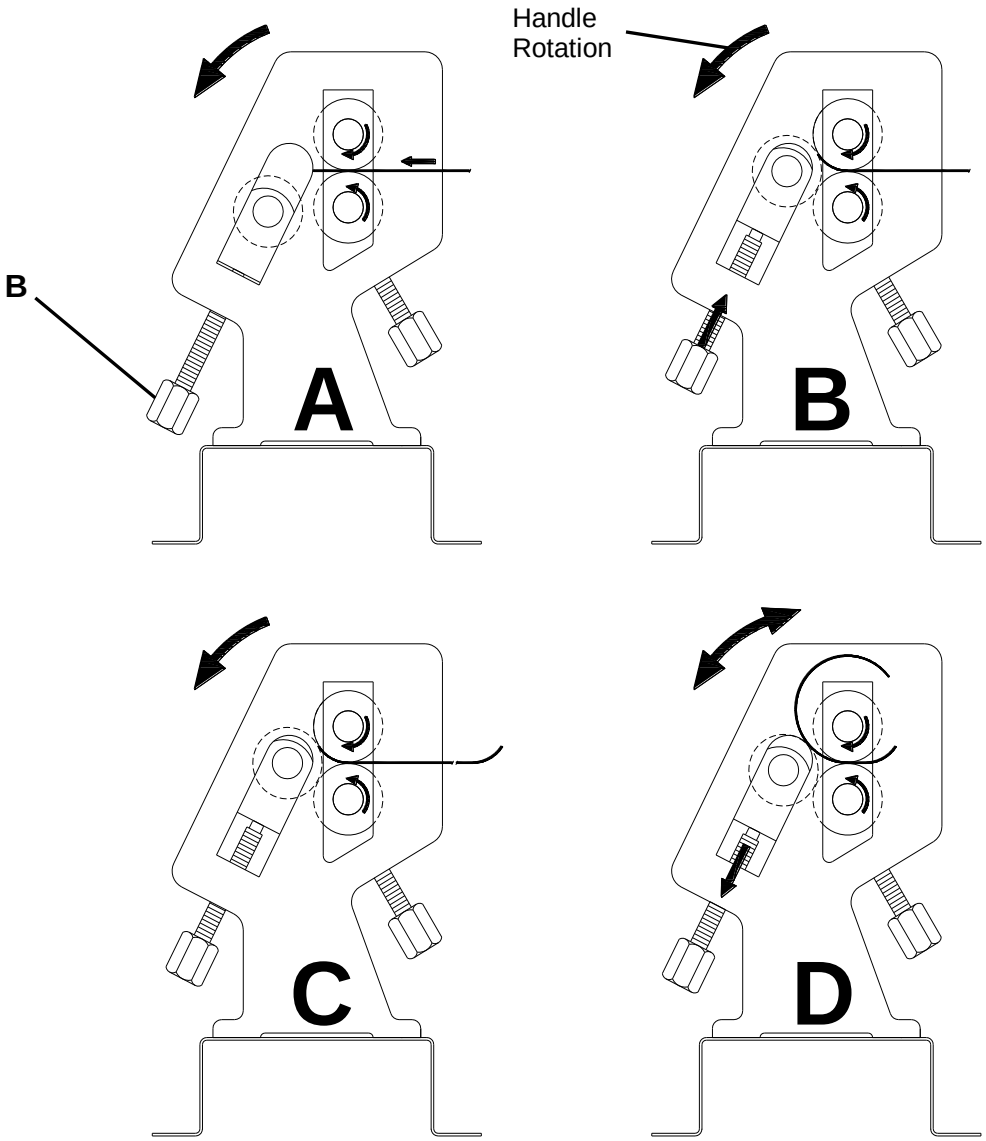
Pre-Bending and Finish Rolling

PRE-BENDING is the operation where the ends of the material are bent to the same radius as that of the finished piece. This principle is used to get the best results in full circle bending.

Before bending, do the following:

- Clean any dust or grease from the material.
- Make sure the edges of the material are free of chips and burrs.
- Check that the material is flat.
- Have a template of the finished diameter to compare with.
- Always work in the center of the rolls.

1. Load the material forward to a point as in view “A”.
2. Turn the two adjusting knobs (**B)** clockwise (**cw**) until you have an approximate radius to your finished piece. See view “B”
3. Back the piece out, turn the piece part, and repeat the above sequence for the other end. See view “C”
4. Now that you have a pre-bend on both ends, it’s time to roll the final diameter.
5. Back down the rear roller and start rolling the piece forward and reverse as shown in view “D”.
6. Start raising the rear roll gradually and continue rolling the piece forward and reverse until you have reached the finished diameter.



Removing Rolled Piece Part

1. Grasp the handle on the locking plate and pivot clockwise (**cw**) to release from the lock bolt (**C**) (fig. 4).
2. Lay back the cover to expose the roller shaft.
3. Grasp the pull handle as in (fig. 5) and pull to the right, which pivots the top roll up.
4. You can now remove the finished piece part.
5. Once removed, slide the pull handle to the left to lower the roll.
6. Rotate the cover back onto the roller shaft and secure the locking plate.
7. You are now ready to roll another piece.

figure 4

figure 5

BENDING ALLOWANCE

In order to bend sheet metal accurately, you will need to consider the total length of each bend. This is referred to as bend allowance. Subtract the bend allowance from the sum of the outside dimensions of the piece part to obtain the actual overall length or width of the piece. Because of differences in sheet metal hardness, and whether the bend is made with the grain or against it, exact allowances must sometimes be made by trial and error. However bend allowances for general use can be obtained from metal working books or from the Internet.

UNDERSTANDING SPRINGBACK

Springback, also known as elastic recovery, is the result of the metal wanting to return to its original shape after undergoing compression and stretch. After the bending leaf is removed from the metal and the load is released, the piece part relaxes, forcing the bent portion of the metal to return slightly to its original shape. The key to obtaining the correct bend angle is to over bend the metal a little and allow it to spring back to the desired angle. All metals exhibit a certain amount of spring back.

MATERIAL SELECTION

⚠ CAUTION: It must be determined by the customer that materials being processed through the machine are NOT potentially hazardous to operator or personnel working nearby.

When selecting materials keep these instructions in mind:

- Material must be clean and dry. (without oil)
- Material should have a smooth surface so it processes easily.
- Dimensional properties of material must be consistent and not exceed the machine capacity values.
- Chemical structure of material must be consistent.
- Buy certificated steel from the same vendor when possible.

Note: *Thorough cleaning of the rolls is necessary to avoid possible sliding of the material through the rolls.*

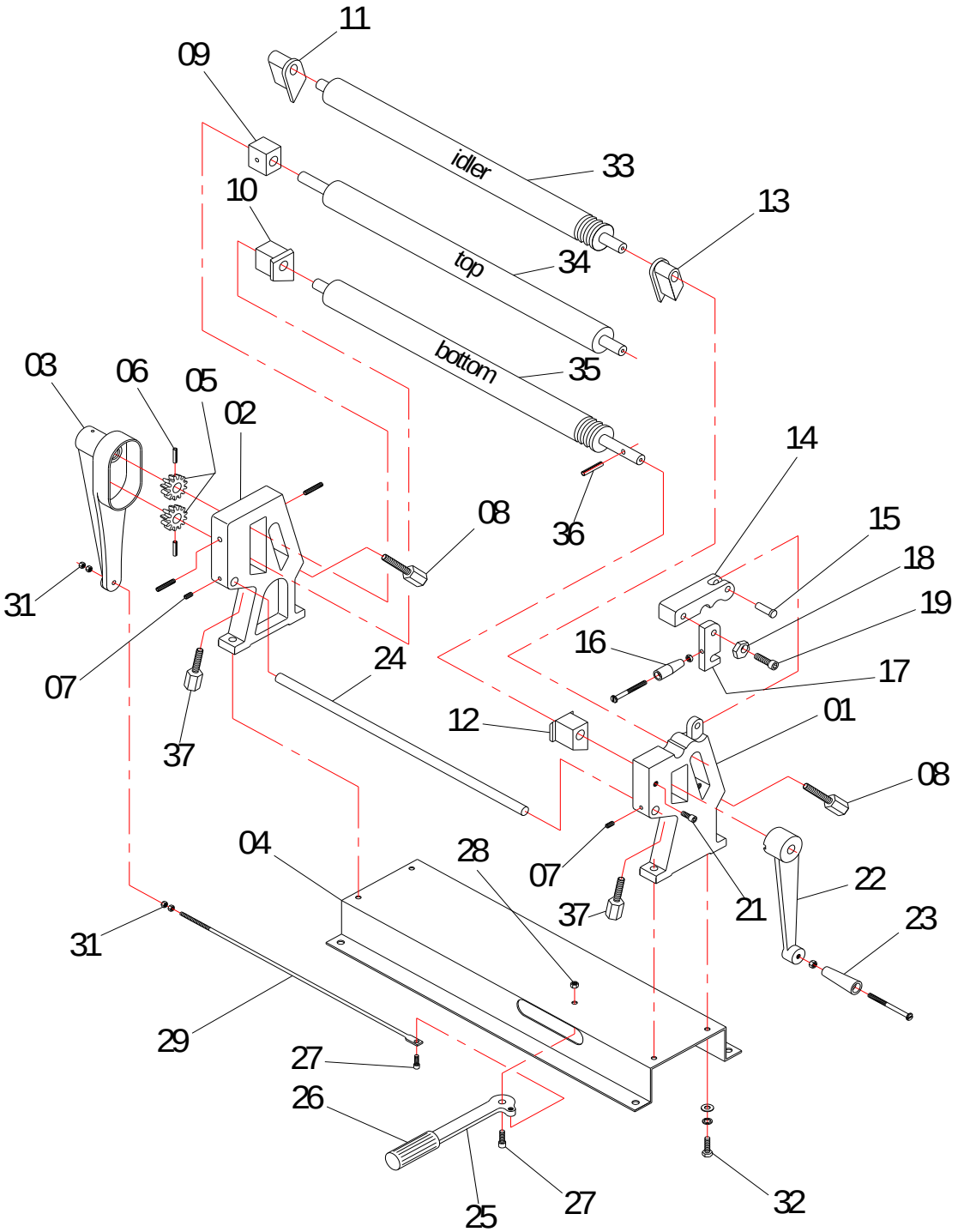
LUBRICATION AND MAINTENANCE

WARNING: Maintenance should be performed on a regular basis by qualified personnel.
Always follow proper safety precautions when working on or around any machinery.

- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.

***Note**: Proper maintenance can increase the life expectancy of your machine.*

PARTS IDENTIFICATION DRAWING



PARTS IDENTIFICATION LIST

Index No	Part No	Description	Size	Qty.
1	SR-2402M-01	Side Frame – R.H.		1
2	SR-2402M-02	Side Frame – L.H.		1
3	SR-2402M-03	Gear Guard		1
4	SR-2402M-04	Base		1
5	SR-2402M-05	Gear – 12 Tooth	.875” Bore	2
6	SR-2402M-06	Spring Pin	.187” Dia.	2
7	SR-2402M-07	Set Screw	5/16-18 x .31” Lg.	2
8	SR-2402M-08	Adjusting Screw, Rear		2
9	SR-2402M-09	Upper Block – L.H		1
10	SR-2402M-10	Lower Block – L.H		1
11	SR-2402M-11	Rear Block – L.H		1
12	SR-2402M-12	Lower Block – R.H		1
13	SR-2402M-13	Rear Block – R.H		1
14	SR-2402M-14	Cover		1
15	SR-2402M-15	Rivet		1
16	SR-2402M-16	Handle Assembly		1
17	SR-2402M-17	Locking Plate		1
18	SR-2402M-18	Cam		1
19	SR-2402M-19	Socket Head Cap Screw	3/8-16 x 1.00” Lg.	1
21	SR-2402M-21	Socket Head Cap Screw	3/8-16 x .50” Lg	1
22	SR-2402M-22	Crank Handle		1
23	SR-2402M-23	Handle Holder Assembly		1
24	SR-2402M-24	Locking Link		1
25	SR-2402M-25	Pull Handle		1
26	SR-2402M-26	Hand Grip		1
27	SR-2402M-27	Socket Head Cap Screw	M8 x 1.25 x 25mm	2
28	SR-2402M-28	Nut	M8 x 1.25	1
29	SR-2402M-29	Pull Rod Assembly		1
31	SR-2402M-31	Hex Nut	3/8-16	4
32	SR-2402M-32	Hex Bolt	3/8-16 x 1.00” Lg.	4
33	SR-2402M-33	Rear Roll		1
34	SR-2402M-34	Upper Roll		1

35	SR-2402M-35	Lower Roll		1
36	SR-2402M-36	Spring Pin	.31”Dia.	1
37	SR-2402M-37	Adjusting Screw, Lower		2

ENVIRONMENTAL PROTECTION

Protect the environment.
Your appliance contains valuable materials which can be recovered or recycled. Please leave it at a specialized institution.

This symbol indicates separate collection for electrical and electronic equipment required under the WEEE Directive (Directive 2012/19/EC) and is effective only within the European Union.

UMWELTSCHUTZ

Schützen Sie die Umwelt!
Ihr Gerät enthält mehrere unterschiedliche, wiederverwertbare Werkstoffe. Bitte entsorgen Sie es nur an einer spezialisierten Entsorgungsstelle.

Dieses Symbol verweist auf die getrennte Sammlung von Elektro- und Elektronikgeräten, gemäß Forderung der WEEE-Richtlinie (2012/19/EU). Diese Richtlinie ist nur innerhalb der Europäischen Union wirksam.

PROTECTION DE L'ENVIRONNEMENT

Protégez l'environnement !
Votre appareil comprend plusieurs matières premières différentes et recyclables. Pour éliminer l'appareil usagé, veuillez l'apporter dans un centre spécialisé de recyclage des appareils électriques.

Ce symbole indique une collecte séparée des équipements électriques et électroniques conformément à la directive DEEE (2012/19/UE). Cette directive n'est efficace que dans l'Union européenne.

WARRANTY / GARANTIE

TOOL FRANCE guarantees that the supplied product(s) is/are free from material defects and ma- nufacturing faults.
This warranty does not cover any defects which are caused, either directly or indirectly, by incorrect use, carelessness, damage due to accidents, repairs or inadequate maintenance or cleaning as well as normal wear and tear.
Further details on warranty (e.g. warranty period) can be found in the General Terms and Condi- tions (GTC) that are an integral part of the contract.
These GTC may be viewed on the website of your dealer or sent to you upon request.
TOOL FRANCE reserves the right to make changes to the product and accessories at any time.

TOOL FRANCE garantiert, dass das/die von ihr gelieferte/n Produkt/e frei von Material- und Herstel- lungsfehlern ist.
Diese Garantie deckt keinerlei Mängel, Schäden und Fehler ab, die - direkt oder indirekt - durch falsche oder nicht sachgemäße Verwendung, Fahrlässigkeit, Unfallschäden, Reparaturen oder un- zureichende Wartungs- oder Reinigungsarbeiten sowie durch natürliche Abnutzung durch den Gebrauch verursacht werden.
Weitere Einzelheiten zur Garan können den allgemeinen Geschäftsbedingungen (AGB) entnom- men werden.
Diese können Ihnen auf Wunsch per Post oder Mail zugesendet werden.
TOOL FRANCE behält sich das Recht vor, jederzeit Änderungen am Produkt und am Zubehör vor- zunehmen.

TOOL FRANCE garantit que le/les produit(s)fourni(s) est/sont exempt(s) de défauts matériels et de défauts de fabrication.
Cette garantie ne couvre pas les défauts, dommages et défaillances causés, directement ou indi- rectement, par l'utilisation incorrecte ou inadéquate, la négligence, les dommages accidentels, la réparation, la maintenance ou le nettoyage incorrects et l'usure normale.
Vous pouvez trouver de plus amples détails sur la garantie dans les conditions générales (CG). Les CG peuvent être envoyées sur demande par poste ou par e-mail.
TOOL FRANCE se réserve le droit d'effectuer des changements sur le produit et les accessoires à tout moment.