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**TouSuaRSi SM-20U23**

# TouSuaRSi Industrial Sewing Machine Head SM-20U23 User Manual

Model: SM-20U23

## 1. Introduction

This manual provides essential instructions for the safe and efficient operation, setup, and maintenance of your TouSuaRSi Industrial Sewing Machine Head, model SM-20U23. Designed for heavy-duty sewing tasks, this machine is suitable for both garment factories and home sewing enthusiasts. Please read this manual thoroughly before using the machine to ensure proper function and longevity.




Image 1.1: Front view of the TouSuaRSi Industrial Sewing Machine Head SM-20U23.

## 2. Safety Instructions

Always observe the following safety precautions to prevent injury and damage to the machine:

- Ensure the machine is properly grounded.
- Disconnect power before cleaning, oiling, or performing any maintenance.
- Keep fingers and loose clothing away from the needle and moving parts during operation.
- Use appropriate safety glasses when operating the machine.
- Do not operate the machine if any parts are damaged or missing.
- Keep the work area well-lit and free of clutter.

## 3. Package Contents

The TouSuaRSi Industrial Sewing Machine Head SM-20U23 package includes:

- SM-20U23 Industrial Sewing Machine Head

- Accessory Kit (specific contents may vary, typically includes bobbins, needles, screwdriver, oiler)
- User Manual (PDF version available online)

Please inspect all components upon receipt. If any items are missing or damaged, contact customer support.

## 4. Setup

The SM-20U23 is a machine head and requires a separate sewing machine table/stand and an appropriate motor for operation. These components are not included with the machine head and must be acquired separately.

### 4.1 Mounting the Machine Head

1. Carefully place the machine head onto a compatible industrial sewing machine table.
2. Align the mounting holes on the machine with those on the table.
3. Secure the machine head using appropriate bolts and nuts (not included). Ensure it is stable and level.

### 4.2 Motor Installation and Belt Connection

1. Install the motor according to its specific instructions, ensuring it is securely mounted to the table.
2. Connect the motor's drive belt to the machine's handwheel pulley. Adjust belt tension as needed.

### 4.3 Oiling the Machine

Before first use, and regularly thereafter, oil all designated oiling points. Refer to the detailed PDF manual for a diagram of oiling points. Use only high-quality sewing machine oil.

### 4.4 Needle Installation

1. Ensure the power is off.
2. Loosen the needle clamp screw.
3. Insert a DP*5 14# needle (or appropriate size for your fabric) with the flat side facing away from you, pushing it up as far as it will go.
4. Tighten the needle clamp screw securely.




Image 4.1: Close-up view of the needle plate and feed dogs area.

## 5. Operating Instructions

### 5.1 Threading the Machine

Follow the numbered threading path indicated on the machine. Ensure the thread passes through all tension discs and guides correctly. The manual presser foot spanner assists in clamping spools of thread.



Image 5.1: Detail of the upper thread guide and tension assembly.

### 5.2 Bobbin Winding

Engage the bobbin winder. Guide the thread from the spool pin through the tension disc and onto the bobbin. Start the machine to wind the bobbin evenly. Disengage when full.

### 5.3 Adjusting Stitch Length and Zigzag Width

The machine features clearly marked gauge chucks from 1-5 for stitch length adjustment and a zigzag width range of 0-9mm (0-0.354 inches). Use the corresponding dials and levers to set your desired stitch parameters.



Image 5.2: Detail of the stitch length and zigzag width adjustment controls.

### 5.4 Sewing Operation

1. Place fabric under the presser foot.
2. Lower the presser foot using the knee control (12mm/0.472in stroke) or manual lever (6mm/0.236in stroke).
3. Start the machine slowly, gradually increasing speed up to 2000 stitches/min as needed.
4. Use the reverse stitch switch for back-tacking at the beginning and end of seams.

## 6. Maintenance

Regular maintenance ensures optimal performance and extends the life of your sewing machine.

### 6.1 Cleaning

Periodically clean lint and dust from the bobbin case, feed dogs, and tension discs using a small brush. Disconnect power before cleaning.

### 6.2 Oiling

Follow the oiling schedule and points specified in the comprehensive PDF manual. Proper lubrication is critical for smooth operation of this cast iron machine.

### 6.3 Needle Replacement

Replace needles frequently, especially when sewing thick or dense materials, or if the needle becomes bent or dull. Using a fresh, sharp needle prevents skipped stitches and fabric damage.

## 7. Troubleshooting

This section addresses common issues you might encounter. For detailed troubleshooting, refer to the full user manual PDF.

- **Skipped Stitches:** Check needle installation (flat side correct, fully inserted), ensure needle is not bent or dull, re-thread the machine, adjust tension.
- **Thread Breakage:** Verify correct threading path, check tension settings, ensure needle is appropriate for thread and fabric, inspect for burrs on thread guides.
- **Machine Not Running:** Ensure power is connected, motor is functioning, and drive belt is properly engaged.
- **Uneven Stitches:** Check tension settings for both upper and bobbin threads, ensure proper needle and thread combination for fabric.

If problems persist, contact TouSuaRSi customer support.

## 8. Specifications

| Feature | Specification |
|---|---|
| Model | SM-20U23 |
| Maximum Speed | 2000 Stitches/min |
| Needle Type | DP*5 14# (suitable for canvas up to 4mm thick) |
| Needle Pitch | 0-5mm (0-0.197in) |
| Zigzag Width | 0-9mm (0-0.354in) |
| Presser Foot Stroke (Manual) | 6mm (0.236in) |
| Presser Foot Stroke (Knee Control) | 12mm (0.472in) |
| Product Dimensions (L x W x H) | 15.7 x 7.1 x 11.4 inches (40cm x 18cm x 29cm) |
| Item Weight | 50.7 pounds |
| Construction Material | High-quality cast iron with spraying process |




Image 8.1: Product dimensions of the sewing machine head.

## 9. Warranty and Support

For detailed warranty information, please refer to the official user manual PDF available for download or contact TouSuaRSi customer support. The manufacturer, Hanlayn, provides customer support for this product.
Official User Manual (PDF): Download Here
For further assistance, please contact your retailer or the manufacturer directly.

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