EPL SOLUTIONS, INC.

SpeedCut® Mini

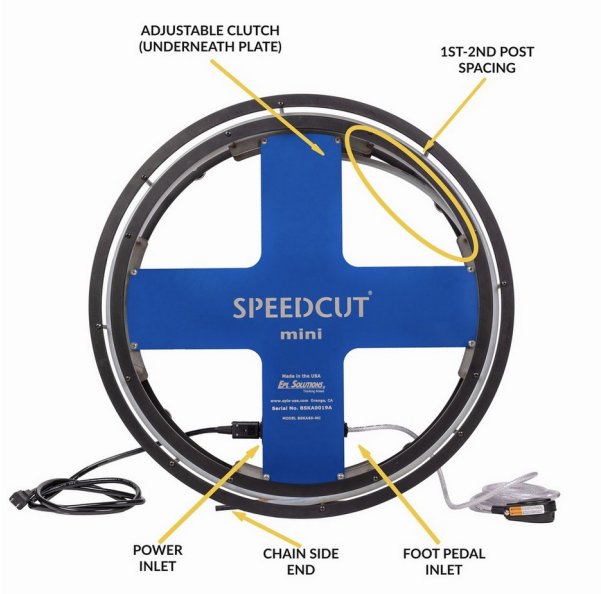
High-Speed Descaler · Setup & Operation Manual

PRODUCT	SpeedCut® Mini
USE	High-speed descaling and drain cleaning
OPERATOR	Trained operators only. PPE must be used at all times.

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IMAGE A — *SpeedCut® Mini component reference. Model may vary depending on generation.*



1 Safety Guidelines

Read this section before the machine ever leaves the truck. Every line below exists because someone learned it the hard way.

- Only trained operators should run the SpeedCut® Mini.
- Always wear safety glasses and protective gloves.
- Avoid loose clothing or jewelry that may get caught in moving parts.
- Keep the workspace clear, dry, and well-lit.
- Use only the provided power cord.
- Never operate the unit in rain or wet conditions.
- Know how to use the foot pedal, and make sure you can unplug the machine quickly if you need to.

2 Before You Begin

What's Included

- SpeedCut® Mini unit
- Power cord
- Foot pedal
- Accessory bag w/ Allen keys
- Setup & Operation Manual

Required Tools

- 30W non-detergent oil (or 0W-20 for cold climates)
- 1/8" Allen key
- 7/64" Allen key — for clutch tension adjustment (see **Section 6.1**)
- Crescent wrench
- Clean rags
- Safety PPE

Setup Area

- Choose a clean, dry, and level space.
- Ensure adequate lighting and room to feed cable.

3 Setup

1. Position the machine near the access point.
2. Plug in power and foot pedal by going underneath the drum/basket and into the electrical box.
3. Pull out 2 ft. of cable and briefly test spin without any tool attached.
4. Attach your tools or chain knockers securely (see Section 7).
5. Optional: connect low-flow water for flushing.
6. Position the camera 12" behind the tool for visibility, if available.
7. Confirm the workspace is clear, PPE is on, and no loose items are nearby.

4 Operation

- Push the cable and chain/tool into the pipe.
- Never push the cutting tool into a blockage or scale **before** pressing the foot pedal.
- Step on the foot pedal and allow the chain to spin.
- Do not force the cable forward — let the tool do the work.
- Watch the camera, if used, to monitor progress.
- After cutting, withdraw the cable slowly and wipe it clean.

If a Stall Occurs

- Immediately release the pedal.
- Pull or push off of obstruction to free the cutter.
- Allow any backspin to stop naturally.
- Refer to Troubleshooting in **Section 6**.

The Flex Rings — Why Your Cable Stays Put

The drum is fitted with flex rings that do exactly what the name says: they flex open on the side where the cable feeds out, and compress on the opposite side to keep the rest of the cable contained in the drum.

This solves a complaint common to nearly every other descaler on the market — where the cable sits loosely in the drum and can pop out. The flex rings keep your cable where it belongs.

Best practice: when pushing and pulling cable, keep it **closer to a 45° angle to the drum**. This makes it easier to feed the cable in and out.

5 Maintenance

Cable Oiling

1. Disconnect power and the foot pedal.
2. Disconnect the cable from the clutch.
3. Pull off of the cable hook.
4. Pull the entire cable from the drum.
5. Pull the cable out from the sleeve.
6. Pour oil into the chain-side opening.
7. Wipe the cable clean and insert it into the sleeve.
8. Reinsert the cable and sleeve between the 1st and 2nd post opening (see Image A on Page 1).
9. Reattach all parts and test.

> **HANDLE THE CABLE** Let the tool do the work. Feed the cable in and out **smooth and steady** — never force it forward. See Section 6.1.

> **TIP** Oil the cable frequently. It is the cheapest thing you can do to extend cable life and keep the machine performing the way it did on day one.

WATCH THE VIDEO

How to Oil the Cable

Scan to watch the full oiling procedure step by step.

6 Troubleshooting

Work the table from left to right. Most issues in the field come down to load, cable handling, or tension — and all three are in your control.

Table A — Common Issues

Issue	Possible Cause	Solution
Motor does not start	Power cord not connected	Ensure cords are connected securely
	Power source issue	Try a different outlet or reset the breaker
	Motor overheated	Unplug and let cool before retrying
	Air foot pedal not connected	Ensure air foot pedal is connected securely
Cable not spinning	Cutter jammed in scale, blockage, or broken pipe	Release the foot pedal and free the tool with a push/pull
	Broken cable	Follow steps for cable repair — see Section 8
	Set screws on clutch not tightened on cable	Tighten set screws onto cable with 1/8" Allen key
	Clutch too loose	Tighten clutch to desired tension — see 6.2
	Motor overheated	Unplug and allow the motor to cool
Motor stalls frequently	Clutch too tight	Loosen until it slips before stalling
	Tool too aggressive	Switch to a smaller tool
	Excessive water drag	Reduce water flow
Clutch activating (slipping) during normal use	Chains sized too large	Resize the chains to the pipe diameter or under — see 6.1
	Forcing or feeding the cable too fast	Ease the cable in and out and let the tool cut — see 6.1
	Clutch out of adjustment	Adjust clutch tension at the tensioning nut — see 6.1
Backspin after stall	Cable under tension	Let the cable unwind naturally
Noise or vibration	Loose parts or worn tool	Inspect fittings and replace worn components

6.1 Clutch Activating? Start Here.

The clutch is a safety device, not a failure. It is designed to slip before your chains do — so when it activates, it is telling you the machine is under more load than it should be. Do not fight it. Diagnose it.

If your clutch is activating, work through these three checks in order. See **Table B**.

Table B — Three Checks

#	Check This	The Fix
1	Your chains are set too large.	Resize the chains to fit the pipe diameter — or under. A chain that is oversized for the pipe loads the machine every rotation, and the clutch does exactly what it was built to do: it gives before the cable does.
2	You are forcing the cable.	Let the tool do the work — don't push the cable forward or feed it faster than it is cutting. Ease it in and out of the pipe and let the chains clear the line. Forcing the cable overloads the machine and trips the clutch.
3	The clutch needs adjustment.	Over time, the clutch may need to be adjusted. Loosen the 7/64 screw on the tensioning block of the clutch. Tighten the tensioning block until it reaches your desired tension. Then re-fasten the 7/64 screw.

6.2 Adjusting the Clutch — Step by Step

1. Loosen the 7/64 screw on the tensioning block of the clutch.
2. Tighten the tensioning block until it reaches your desired tension.
3. Re-fasten the 7/64 screw.

> **REMEMBER** Set the clutch so it slips before the cable fails — never the other way around. A clutch that never slips is not a stronger machine.

Still activating? Call us at **714-453-9760**. Walk us through the pipe, the chain size, and how you are feeding the cable, and we will work it out with you. We would rather spend ten minutes on the phone than have you lose a day on the job.

7 Tool Selection Guide

The right tool is the difference between descaling a line and beating on it. Match the tool to the pipe, not to the schedule.

Tool	When to Reach for It
Star carbide chain knocker	Roots and scale. General drain cleaning in cast iron, and cautiously in clay pipe. Size the chain to the pipe diameter or under.
Square carbide chain knocker	Scale, roots, and general drain cleaning. Can be used more safely in clay pipe. Size the chain to the pipe diameter or under.
Non-carbide chain knocker	Plastic pipe. Size the chain to the pipe diameter or under.
Tulip Cutter (1.5")	Punching through solid blockages.
Brush	Preparing epoxy-coated pipe surfaces.
Sandpaper	Polishing epoxy for a smooth finish.

> **BEFORE EVERY JOB** Inspect tools for wear. Worn tools take longer to clean the pipe.

Trimming Back the Sleeve

If the sleeve at the chain-side end becomes worn or you need to expose fresh cable, you can trim it back.

> **SAFETY FIRST** Disconnect the machine from power and remove the foot pedal before servicing the cable end. Wear eye and hand protection, and keep the cable end pointed away from yourself and others.

1. Remove any chains from the cable.
2. Remove the sleeve cap — thread it counterclockwise with a crescent wrench.
3. Trim back the desired length of sleeve with PVC pipe cutters or a sharp knife.
4. Reinstall the sleeve cap — start it clockwise by hand, then tighten with the crescent wrench.

> **TIP** Start the sleeve cap by hand before reaching for the wrench — it is the surest way to avoid cross-threading.

Sizing Your Chains

Chain size is measured, not eyeballed. Take a ruler or tape measure and measure from the center of the cable down to the lowest point where the chain hangs, including any carbides. That hang should be half of your pipe diameter (**Figure 7-1**).

- Example: for 4" iron pipe, you want the chain to hang **2" from the center of the cable** (half the diameter).
- To hone out the pipe instead of cleaning the full diameter, make the hang slightly shorter — e.g. **1 7/8" instead of 2"**.
- Only the point of contact with the pipe wall matters — don't worry about any other measurement.

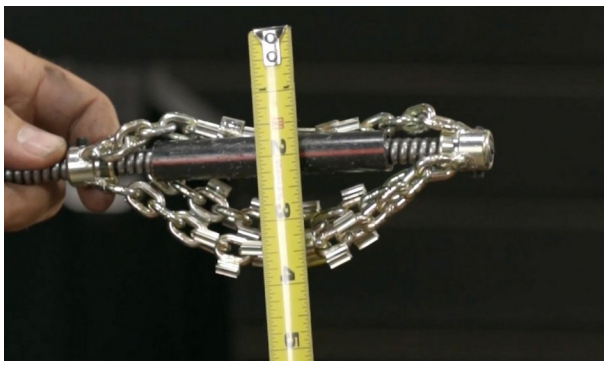


Figure 7-1 — Measure from the center of the cable to the lowest point the chain hangs — half the pipe diameter.

> **CYCLONE CHAINS** Cyclone chains cannot be adjusted for size. Always run cyclone chains with a light touch to avoid damaging the pipe. They are excellent for removing scale, but they are not meant for fine-tuning your cleaning.

WATCH THE VIDEO

Sizing Your Chains

Scan to watch how to size chains to the pipe diameter for a clean, safe cut.

8 Cable Repair

WATCH THE VIDEO

Cable Repair Walkthrough

Scan to watch the full cable repair and reassembly on video.

1. Disconnect power.
2. Pull the full cable from the drum.
3. Loosen the clutch and remove the motor/clutch end sleeve cap.
4. Pull the cable from the sleeve.
5. Trim any damaged sleeve.
6. Trim to exactly 2" of exposed cable on the motor/clutch end.
7. Grind the cable end if it is frayed.
8. Reinsert the cable and sleeve between the 1st and 2nd post opening (see Image A on Page 1).
9. Reattach all parts and test.

9 Cleaning & Storage

- Wipe the cable clean with a dry rag after use.
- Do not hose down the machine or cable.
- Store in a cool, dry place away from sunlight.
- Coil the cable loosely, without kinks.
- Cover the unit and oil occasionally if unused for long periods.

10 Quick Reference

Safety Checklist

- ✓ Wear PPE
- ✓ Foot pedal clear
- ✓ Bit secured
- ✓ Work area dry and open
- ✓ Chain sized to pipe diameter or under
- ✓ Cable fed smoothly, not forced

Quick Setup Steps

- Plug in.
- Test spin.
- Attach bit.
- Use optional water.
- Start slow and feed cable carefully.

Chains & Sizing

- Size the hang to **half the pipe diameter** (4" pipe → 2" hang); shorten slightly to hone.
- Cyclone chains: **light touch**, size not adjustable.

Clutch Activating? Three Checks

- Chains too large → resize to pipe diameter or under.
- Forcing the cable → ease it in and out, let the tool cut.
- Clutch out of adjustment → loosen the 7/64 screw, set tension, re-fasten.

11 Technical Data

Specifications for the SpeedCut® Mini. Figures are nominal; EPL may update components without notice.

Specification	SpeedCut® Mini
Pipe range	1-1/2" – 4"
Cable	5/16" (8mm) flexible shaft
Cable on drum	60 ft
Maximum reach	60 ft (no extensions available)
Speed	0 – 2,700 RPM
Power draw	~4 A (450 W)
Motor	Built-in motor
Clutch	Adjustable mechanical clutch (self-serviceable)
Power supply	110V AC
Control	Foot pedal
Weight	36 lb
Dimensions (L × W × H)	26 × 26 × 9 in
Warranty	1-year manufacturer's warranty
Origin	Designed & built in the USA

12 Maintenance Schedule

Keep the machine on a simple rhythm. Inspect the wear items before every job, and run the periodic checks on the schedule below. Replace any worn part before the next job.

Maintenance Task	Before Each Use	Monthly	Annually
Inspect cable & casing for wear	●		
Inspect tools / chains for wear	●		
Check set screws tight	●		
Oil the cable	~every 5 hrs of use		
Check all bolts & screws tight		●	
Inspect foot pedal & power cord		●	
Clean motor vents		●	
Inspect clutch operation		●	

LEGEND ● = inspect or perform at that interval. "~every 5 hrs of use" is a running-time guide, not a calendar date.

13 Support & Warranty

- 1-Year Limited Warranty.
- Covers manufacturing defects under normal use.
- Excludes misuse, improper maintenance, and unauthorized changes.
- Proof of purchase required for claims.

Returns & Repairs

- Contact support before shipping.
- Unauthorized returns may be refused.
- Charges apply for out-of-warranty repairs.

We're here to fix a problem, not sell equipment.

Putting Plumbers First. · Quality Equipment. Shared Knowledge. Problems Solved.

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