

Instruction Manual

Backstand Grinder Sanders Series Covers: BG14 and BG214

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GENERAL POWER TOOL SAFETY WARNINGS



WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN, LIQUID, OR MOISTURE.

READ AND SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

Precautions (Grinding & Power Tool Use)

Personal protective equipment (PPE)

Work area & environment

- Keep the area clean, dry, and well-lit; remove trip hazards.
- Never operate in explosive atmospheres (flammable liquids, gases, or dust).
- Keep children, bystanders, and pets away from the work zone.
- Provide adequate ventilation and, where possible, use dust collection.
- Keep a Class ABC fire extinguisher within reach and know how to use it.

Clothing & personal safety

- Tie back or cover long hair; remove jewelry and secure hoodie strings.
- Wear close-fitting clothing—no loose sleeves or dangling items near moving parts.
- Use non-slip, closed-toe footwear.

Machine & accessory checks (before powering on)

- Verify guards, tool rests, and spark deflectors are installed and adjusted correctly.
- Inspect sanding belts/pully/contact wheel for damage, cracks, or wear; replace if questionable.
- Confirm tracking and tension on belts.
- Ensure workpieces and fixtures are secure and clear of the belt/wheel path.
- Check power cords, plugs, and switches.

After use & maintenance

- Power off and unplug/lock out before changing belts/wheels or performing maintenance.
- Allow parts and accessories to stop completely and cool before handling.
- Clean the work area, empty spark/dust collectors safely, and store tools properly.
- Repair any damage before the next use.

OPERATING INSTRUCTIONS

- Stand to the side of the belt/contact wheel on start-up and allow it to reach full speed before contacting the work.
- Maintain a firm grip; keep hands and fingers clear of pinch points.
- Apply even pressure—do not force the tool or stall the motor.
- Grind on the intended surface of the accessory; avoid side-loading unless rated for it.
- Never remove guards or defeat safety devices.
- Keep sparks directed away from yourself, others, and combustibles.
- Disconnect power before making any adjustments
- Abrasive belt rotation is clockwise. If the abrasive belt is lap spliced, be sure of correct rotation Butt spliced belts are bi-directional.
- Belt tension is pre-set with tension spring (44, 38) No belt tension adjustment is needed.
- Belt changing Disconnect power. Using the tension release lever, compress the tension shaft (43, 37) and draw out (47, 41) to change or replace the belt. When finished, push the tension release lever (43, 37) to reapply belt tension.
- Belt tracking With power disconnected, hand-rotate the belt to center it; loosen hex nut (59, 53), then turn tracking knob (60, 54) in or out to "track" the belt. When the belt is correctly positioned, hold the tracking knob (60, 54) steady with one wrench and tighten hex nut (59, 53) with a second wrench.
- Examine the abrasive belt carefully before use. Never use an abrasive belt with a nicked or cut edge, crease, or handling damage.

BG14 & BG214 3" x 132" Industrial Backstand Belt Grinder – Machine Overview

Description:

The Kalamazoo Industries BG14 and BG214 are heavy-duty industrial backstand grinders engineered for demanding metalworking and foundry applications. The BG14 features a 3" x 132" belt with a 14" x 3" serrated contact wheel, delivering powerful, cool, and fast metal removal for aggressive grinding, gate and riser cleanup, deburring, and finishing. The BG214 adds dual 3" x 132" belt stations on a rugged industrial frame, giving you two 14" x 3" contact wheels and the ability to run multiple grits for maximum throughput and flexibility. Both machines are built for smooth operation, quick belt changes, long belt life, and precise control—making them ideal choices for high-production shops and steel foundries.

Intended Use:

The BG14 and BG214 backstand grinders are intended for heavy-duty industrial material removal, surface conditioning, and finishing of ferrous and non-ferrous metals. These machines are designed for applications such as gate and riser cleanup, casting preparation, deburring, descaling, and general stock removal in foundries, fabrication shops, and production environments. Their long-belt design, serrated contact wheels, and stable operating platforms make them ideal for shaping, refining, and smoothing metal components with consistent control and efficiency. Both grinders are built for continuous use in high-demand workflows where durability, accuracy, and fast abrasive changes are essential.

Key Benefits:

- Heavy-duty construction built to withstand continuous industrial grinding.
- Long 3" x 132" belt design provides cooler grinding, smoother tracking, and extended belt life.
- Serrated 14" contact wheels deliver aggressive, fast stock removal with excellent control.
- Smooth, stable operation reduces operator fatigue and improves grinding accuracy.
- Quick belt-change system minimizes downtime and keeps production moving.
- Ideal for foundry work including gate and riser cleanup, casting prep, and heavy deburring.
- Versatile material removal suitable for steel, castings, and other ferrous metals.
- High-production capability designed for demanding fabrication, foundry, and industrial environments.
- BG214 dual-belt configuration allows running multiple grits for faster workflow and increased throughput.
- Precision grinding performance ensures consistent, repeatable results across long shifts.
- Made in the USA backed by Kalamazoo Industries' reputation for quality and performance.

Setup and Installation - BG14 & BG214 Industrial Backstand Grinder

Pre-Installation Requirements

- Verify that the installation area has sufficient space for machine footprint, operator movement, and maintenance access.
- Confirm proper 3-phase electrical supply is available:

BG14: 10 HP, 3PH

BG214: 15 HP, 3PH

- Ensure incoming voltage matches the grinder's motor plate and wiring configuration.
- Inspect floor structure to confirm it can support the machine weight and vibration load.
- Prepare appropriate lifting equipment (forklift, hoist, or pallet jack).

Uncrating and Handling

- Carefully remove crating materials, keeping hardware and documentation for future reference.
- Use approved lifting points or a forklift under the machine's base—never lift by the contact wheel
 or motor.
- Inspect for shipping damage before proceeding with installation.

Positioning the Grinder

- Place the grinder on a level, stable surface to ensure proper belt tracking and smooth operation.
- Allow adequate clearance around the machine for belt changes, service access, and operator workflow.
- For the BG214, ensure both belt stations have clear operating space and unobstructed access.

Anchoring and Leveling

- Level the machine using the adjustable pads to achieve a stable operating position.
- Anchor the base to the floor if required by local safety regulations or for high-production environments.
- Recheck level after anchoring to maintain belt tracking accuracy.

Electrical Connection

- Wiring must be performed by a qualified electrician following local and national electrical codes.
- Connect to the appropriate 3-phase voltage supply (typically 220V or 440V).
- Verify correct motor rotation before belt installation—reverse phases if rotation is incorrect.

Setup and Installation – BG14 & BG214 Industrial Backstand Grinder Continued

Belt Installation & Tracking Setup

- Install the correct 3" x 132" abrasive belt for the application.
- Use the quick-release tension mechanism to mount and tension the belt.
- Adjust belt tracking knob for centered running on the contact wheel.
- Run the machine briefly to fine-tune tracking before full operation.

Guarding & Safety Checks

- Confirm all guards, shields, and covers are installed and secure.
- Check that the contact wheel, idler wheel, and tracking system rotate freely.
- Install required dust collection or spark containment systems as per shop standards.

Initial Test Run

- Start the machine and allow it to reach full speed.
- Listen for unusual vibration or noise, confirming smooth operation.
- · Test belt tracking under load and adjust as needed.

Troubleshooting

- Check belt tension and adjust as needed.
- Inspect tracking knob and collar for proper adjustment.
- Ensure pulleys and contact wheels are clean and free of debris.
- Verify belt is installed correctly and not worn or stretched.
- Crown on the idler pulley is worn (needs to be replaced)
- Contact wheel is damanged (needs to be replaced)

Excessive vibration or noise:

- Confirm grinder is securely mounted to a stable surface.
- Check belt for damage, uneven wear, or improper tension.
- Inspect contact wheel and pulleys for balance or bearing wear.
- Tighten all mounting and guard fasteners.

Poor grinding performance:

- Replace worn or glazed abrasive belt.
- Verify correct belt grit and type for the material being ground.
- Check that belt tracking is properly centered.
- Clean buildup from contact wheel and work surface.
- Check for damanaged contact wheel and or idler pully.

Preventive Maintenance

Daily:

- Inspect abrasive belt for wear, damage, or loading; replace if necessary.
- Check belt tracking and tension before operation.
- Ensure all guards and covers are securely in place.
- Clean dust and debris from around the grinder, pulleys, and motor vents.
- Verify on/off switch operates properly.

Weekly:

- Inspect contact wheel, idler wheel, and drive pulley for wear or buildup; clean as needed.
- Check fasteners and mounting bolts to ensure the machine is securely tightened.
- Inspect electrical cord and connections for signs of wear or damage.
- Confirm belt alignment and tracking knob function smoothly.

Monthly:

- Inspect motor ventilation openings and clean thoroughly to prevent overheating.
- Examine machine frame and stand for signs of vibration fatigue or loose hardware.
- Check overall grinder performance for unusual noise or vibration and address issues promptly.

General Tips:

- Always disconnect power before performing maintenance.
- Use only recommended replacement belts and parts.
- Keep maintenance records to track performance and part replacement intervals.

Technical Information - BG448 4" x 48" Industrial Belt Grinder

Models: BG14 & BG214

- Belt Size: 3" x 132" long abrasive belts
- Contact Wheels: 14" diameter x 3" wide serrated rubber wheels
- Machine Type: Industrial backstand grinder
- BG14: Single-station backstand grinder
- BG214: Dual-station backstand grinder (dual grinding heads)
- Motor & Power:
 - BG14:
 - 10 HP, 3-phase
 - Designed for heavy, continuous grinding and foundry cleanup
 - BG214:
 - 15 HP, 3-phase
 - Higher horsepower for maximum throughput and dual-station use

Electrical Requirements:

- 3-phase industrial power (commonly 220V or 440V, depending on configuration)
- Built for continuous-duty, industrial environments
- Frame Construction: All-steel, welded, heavy-duty base for rigidity and long service life
- Tracking System: Adjustable belt tracking for stable, accurate grinding
- Tension Mechanism: Quick-release belt tension system for fast belt changes
- Wheel Bearings: Industrial-grade, sealed bearings for smooth operation and long life
- Work Height: Stand-up operating height designed for control and operator comfort

Replacement Belts and Parts

Contact Kalamazoo Industries, Inc. for parts, accessories, or technical support.

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