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## Mounting Instructions

### 14xx series internal grinding attachments

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14xx internal grinding attachments provide valuable functional additions to Burr King belt grinders such as:

- extension of the belt track outward approximately 6 inches
- small diameter nose wheels for tight radii grinding
- belt tracks from ½ inch wide up to the standard belt track width of the machine
- close access to corners, radii, cavities, tubes and other part features that may be otherwise inaccessible
- reduced belt speeds for better grinding characteristics on many materials
- flexibility to mount many different Burr King nose extensions on the base attachment
- belt track and tension control via the mounted machine functions.

14xx internal grinding attachments may be mounted on any Burr King belt grinder with model numbers 562, 482, 760, and 960. The belt length required for each machine is increased by 12 inches from standard when the 14xx attachment is mounted on the machine. In example, the belt length for the model 760 is increased from 60 to 72 inches. Additionally, mounting 14xx attachment results in a reduction of belt speed to approximately 42% of the pre-mount speed. In example, mounting a 14xx attachment on a model 760 normally operating at 8000 surface feet per minute (SFPM) reduces the belt speed to approximately 3360 SFPM. If you require faster belt speed ask Burr King for the optional 4-inch diameter drive wheel. Drive wheel (P/N 412) will increase belt speed to approximately 125% of that provided by the standard 3-inch diameter drive wheel (P/N 302).

Mounting a 14xx attachment on a Burr King belt grinder requires the removal of the machine's standard contact wheel, contact wheel guard, work rest and work rest support arm, back-up platen and platen support assembly. Correctly installing the 14xx attachment provides for pinch point protection and other safety features otherwise provided by the standard machine items removed.

**Caution: Failure to mount the 14xx properly may create a safety hazard. Observe the safety instructions attached and those provided with the mounted machine.**

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#### Mounting a 14xx attachment:

Locate the parts list for the machine on which you wish to mount the 14xx. For purposes of this instruction the Burr King model 760 belt grinder is used for explanation. Models 562, 482, and 960 follow similar sequence, except some part numbers may be different, i.e. a 702 contact wheel may be a 402 contact wheel. In the case of model 960 grinders which have a two wheel system the mounting of the 14xx is similar except for the absence of the third machine wheel shown in figure. Do not discard any part that you remove from the grinder as it will be require should you desire to return the machine to its standard configuration.

1. Disconnect the machine from its main power source. Assure that no one is able to turn the power back on without your approval.
2. Slack the abrasive belt and remove it from the machine.
3. Clean the machine thoroughly (it's just a good time to do it!).
4. Remove contact wheel retaining nut and washer (P/N 727 and 726).
5. Remove the contact wheel (P/N 702).

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6. Loosen the contact wheel clamping screw (P/N 10).
7. Remove the contact wheel guard and platen assembly (P/N 703, 704b, 704a and hardware).
8. Loosen the work support clamping screw (P/N 10).
9. Remove the work support arm and work support
10. Carefully clean and lightly oil the outer diameter of the contact wheel bearing assembly (P/N 701).
11. Assure the clamping screws of the mounting bracket (P/N 1425) are loose then slide the support arm over the contact wheel bearing assembly until it stops.
12. Position the mounting bracket approximately horizontal and tighten the clamping screws.
13. Install the small drive wheel (P/N 302) on the 5/8 inch contact wheel arbor and secure it using the flange washer (P/N 1426) and the original contact wheel nut (P/N 727), tighten securely.
14. Install the belt style of your choice (must be 12 inches longer than the standard belt) as follows:
  - a. route the belt according to [figure 1](#). If your standard machine is a model 960 the process is the same except only one idler wheel exists on the model 960
  - b. assure the belt is routed such that the red pinch guards (P/N 1429) protect the pinch points (see figure 1)
  - c. tension the belt using the rear wheel handle assembly.

#### Other 14xx installation instructions:

It may be necessary to adjust the position, angle, or extension length of the 14xx arm assembly. This may be necessary because of the belt you chose, the condition of your machine, or the angle that you wish the arm to be at. Do this by:

1. loosening two set screws (P/N 1445) that secure the main pivot bar (P/N 1426) to the mounting bracket (P/N 1425)
2. rotate the forward portion of the 14xx until it is in a position suitable for your work and, such that the abrasive belt can be tensioned. Note: It may be necessary to position the pivot bar (see step 12 above)
3. securely tighten the two set screws (P/N 1445) to fix the position of the forward portion of the 14xx attachment.

Tracking the abrasive belt on the nose wheel is done by using the standard belt-tracking knob of the left side of the mounted machine. Note: The ½-inch wide small diameter extensions (P/N 1438/1439) has an additional tracking adjustment located on the left side of P/N 1438. Rotate the adjusting screw CW or CCW as required to make small tracking adjustments on this assembly. Usually once this adjustment is performed it is not often again required.

#### Tips for obtaining the best service from your 14xx attachment

1. Use good quality abrasive belts.
2. Whenever possible use pliant, flex back belts. Doing so will help in blending, particularly in tight radii, cavities, etc.
3. Use the nose wheel whenever possible as the preferred grinding site.
4. Maintain sufficient but not extreme abrasive belt tension. Normally the mounted machine rear wheel arm should be pushed back about 4 ratchet clicks past initial belt contact. Note: belts of different composition behave differently, i.e. a nylon belt will tend to stretch more than a cloth backed belt.
5. When using thick belts such as nylon web types it may be necessary to adjust the pinch guards for sufficient but not excessive clearance. **CAUTION: There should be no more than 1/8 inch clearance between the moving belt (or wheel) surface and the pinch guard.**
6. Assure that the 14xx idlers (P/N 1444) remain serviceable. The idler wheels are made of very tough urethane (or steel optional) and will provide good service life. They will, however, wear progressively. If they wear to the point that they are severely coned, tapered, out of round, or simply too small they need to be replaced. Continued use of badly worn idlers will result in excessive wear to the mounted machine's wheels since the mounted machine will override the worn idlers and wear excessively.
7. Small diameter nose wheels turn at high revolutions per minute (RPM). In example, a 9/16-inch wheel will revolve at over 20000 RPM. The nose wheel bearings are designed to operate at this speed, however, applying high radial or axial loads to the nose wheel will shorten its service life. In general,

keep applied force below 5 pounds for very small wheels. Larger wheels have larger bearings, turn slower and will tolerate higher applied loads.

8. Where heavier grinding is desired use harder and/or serrated nose wheels. Burr King can help you with the best wheel selection. Burr King can supply nose wheels from 3/8 inch to 3 inches in diameter and from 1.2 to 2 inches wide. Nose wheels require the use of the proper support extension.
9. Use different front extensions for access to close corners, cavities, or special grinding needs. Burr King can help you select the best front section for your 14xx attachment.
10. Maintain the 14xx attachment, and the mounted machine in clean, serviceable condition. Assure all pinch guards, and other guards on the attachment and mounted machine are serviceable and used.

Burr King Manufacturing will help you with all of your finishing needs. If you have an application problem, or need other assistance please contact us at any of the indicated phone numbers or at [WWW.burrking.com](http://WWW.burrking.com). Thank you for choosing Burr King products!

Figure 1: SAFETY GUARD SHOWN OPEN FOR CLARITY. **DO NOT OPERATE WITH SAFETY GUARD OPEN**

