## BG-272 Belt Grinder Bill of Materials

**Dan Comeau**

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[http://dcknives.blogspot.com/p/2-x-72-belt-grinder.html](http://dcknives.blogspot.com/p/2-x-72-belt-grinder.html)

### STEEL

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2&quot; HSS square 0.188&quot; wall (40&quot;&quot;)</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
</tr>
<tr>
<td>E</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*The wall thickness is very important!*

*Do not use common 0.125" wall*

### 1.5" HSS square 0.25" wall (32")

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Cuts (inches) 13</td>
</tr>
<tr>
<td>G</td>
<td>17</td>
</tr>
</tbody>
</table>

*Use 0.25" wall only*

*You will need to drill and tap this for a 1/4" bolt*

### Other Items

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Grinder base plate</td>
</tr>
<tr>
<td>J</td>
<td>Platen plate</td>
</tr>
<tr>
<td>K</td>
<td>Platen</td>
</tr>
<tr>
<td></td>
<td>0.125&quot; x 1.5&quot; flat bar</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4 inches</td>
</tr>
</tbody>
</table>

*Welded to top and bottom of tracking pillar*

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 pound compression spring</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Screen door chain spring works</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Work Rest</td>
</tr>
<tr>
<td></td>
<td>0.25&quot; x 4&quot; x 6&quot; flat stock</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Work rest</td>
</tr>
<tr>
<td></td>
<td>0.375&quot; x 0.75&quot; x 10&quot; bar stock</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Work rest arm</td>
</tr>
<tr>
<td>HARDWARE</td>
<td>QTY</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Adjustable Handle, 3/8&quot;-16 McMstr-Carr P/N 6271K31</td>
<td>2</td>
</tr>
<tr>
<td>3/8&quot; NC Hex nut</td>
<td>2</td>
</tr>
</tbody>
</table>

**Tracking Pillar**
- 5/16" x 1" NC Capscrew | 1 | Magic 8 Ball mount, top of tracking pillar      |
- Magic 8 Ball Shifter Knob | 1 | Element of extra coolness                      |
- 1/4" x 2" NC Carriage bolt | 1 | Tracking hinge                                 |
- 1/4" Flat Washer         | 2 | Tacked and ground for fitting hinge (E)         |
- 1/4" NC Nylon locknut    | 1 | Securing the tracking hinge                    |

**Motor Mounting**
- 1/4" x 3/4" NC Flat head bolts | 4 | Motor mounts                                   |
- 1/4" NC Nuts                | 8 | Motor mounts                                   |
- 1/4" Fender Washer          | 4 | Underside of motor foot                       |
- 1/4" Flat Washer            | 4 | Topside of motor foot                         |
- 1/4" Nylon Lock Nut         | 4 | Topside of motor foot                         |

**Miscellaneous**
- 1-1/2" Floor Glide         | 1 | Cap for tool arm                               |
- Strips of HDPE (plastic oil jug), 1" wide x 8" long | 2 | Shimming tracking pillar                       |
- 1/4" x 3/4" NC Hex Socket Capscrew | 2 | Attaching work rest arm to tool arm            |
- 1/4" x 2-1/2" NC capscrew | 1 | Making tracking adjustment knob                |

**Wheel Mounting**
- Bolts to match your wheel bearings inside diameter. | 3 | Idler wheel axles                             |
- 1/2" NC x 2-1/2" to 3" long | 3 | Idler wheel axles                             |
- 5/16" Shim                  | 2 | Cut from schedule 40 3/8" pipe                |
- 1/2" SAE Flat washer        | 2 | Securing wheels                               |
- 1/2" NC Nylon Locknut       | 2 | Securing wheels                               |
- OBM has a set with 1/2" bolts. See Blog | [http://dcknives.blogspot.com/p/2-x-72-belt-grinder.html](http://dcknives.blogspot.com/p/2-x-72-belt-grinder.html) |

**Platen**
- 1/4" x 3/4" NC Capscrew | 2 | Attaching platen to plate                     |
- 1/4" flatwasher           | 2 | Attaching platen to plate                     |
- 1/4" x 3/4" NC Capscrew | 1 | Platen plate to tool arm (arm is tapped)     |
- 1/4" flatwasher           | 2 | Attaching platen plate to tool arm            |
- 3/8" NC nut               | 1 | Welded inside tool arm                        |
- 1/4" x 3/4" NC Capscrew | 1 | Tightening platen angle adjustment            |
- 1/4" flatwasher           | 1 | Tightening platen angle adjustment            |

*From 2014 BG-272 Belt Grinder Build inspired by Alaksabearhawk.*

*Your bill of materials will vary with your build and components selected.*
*If you find an error please let me know so I can correct it.*

*Thanks,*

*Dan* [http://dcknives.com](http://dcknives.com)
BG-272 BELT GRINDER FRAME

2" HSS x 0.188" WALL (5 pcs)

1/8" sched. 40 pipe, 2" long welded

1/4" x 3/4" Hex capscrew welded for anti-static brush.

1/4" NC x 1" Flat head (4)

(BASE: 0.25' x 20' x 12"

(SPACING AS PER NEMA FOOT MOUNT DIMENSIONS.)

See Tensioning/Tracking Pillar drawing for details.

RIGHT SIDE VIEW

BG-272 BELT GRINDER FRAME

3/8" NC hex nut (2) welded over 7/16" hole.

LEFT SIDE VIEW

All measurements in inches.
3/8" NC hex nut (2) welded over 7/16" hole.

1/4" NC x 3/4" hex head

1/4" NC x 1" flat head (4) for motor mounting
(Spacing as per NEMA foot mount dimensions.)

0.25
(Base: 0.25" x 20" x 12")

12

All measurements in inches.
BG-272 FLAT PLATEN TOOL ARM

2" x 2" Idler Wheel (2)

Plate*

Adjustable Platen*

3/8" NC x 1" Hex head capscrew (1)

1/4" NC x 1" Hex head capscrew (3)

*See BG-272 Adjustable Platen and Plate drawing for detail.

(End view)

3/8 NC hex nut welded inside of HSS

1.5" HSS, 0.25" wall

Drill and tap for 1/4 NC

All measurements in inches.
BG-272 ADJUSTABLE PLATEN AND PLATE

2" ANGLE
@ 9" long

3" x 12"
0.188" stock

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