ONEWAY MANUFACTURING
For all your woodturning needs!

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3½", 5½", & 8" Drum Chuck Instructions

3½" Drum Chuck

This package contains:

1 pce 3-1/2" Drum Chuck Body	Part No. 3004
1 pce 3-1/2" Former / Glue Ring	Part No. 3007
1 pce Self Adhering Neoprene Ring	Part No. 3009
1 pce Removal Lever	Part No. 2574
2 pcs M5 * 16 Socket Head Cap Screw	
2 pcs M8 * 10 Set Screw	
1 pce 4mm Hex key	

Part No. 3008

5½" Drum Chuck

This package contains:

1 pce 5-1/2 Drum Chuck Body	Part No. 2954
1 pce 5-1/2" Former / Glue Ring	Part No. 2955
1 pce Self Adhering Neoprene Ring	Part No. 3001
1 pce Removal Lever	Part No. 2574
2 pcs M5 * 16 Socket Head Cap Screw	
2 pcs M8 * 10 Set Screw	
1 pce 4mm Hex key	

Part No. 2979

8" Drum Chuck

This package contains:

1 pce 8" Drum Chuck Body	Part #2968
1 pce 8" Former / Glue Ring	Part #2969
1 pce Self Adhering Neoprene Ring	Part #3002
1 pce Removal Lever	Part #2574
2 pcs M5 * 16 Socket Head Cap Screw	
2 pcs M8 * 10 Set Screw	
1 pce 4mm Hex key	

Part No. 2980

Congratulations on the purchase of your ONEWAY Drum Chuck!

The TaperLock Adaptor

Packaged Separately you will find one Taperlock Adaptor. Once installed, this adaptor provides the interface between the drum chuck and the spindle.

Adaptors are made to fit practically any spindle size. If you change lathes, all you need to do is buy a new adaptor, not a whole new Drum Chuck. The taperlock design eliminates the possibility of the adaptor loosening or separating from the chuck body in normal use or when reversing the lathe.

The first step to use your drum chuck is to install the adaptor.

Step 1 - Mounting the Adaptor

1. Wipe the inside of the taper of the drum chuck body as well as the outside of the adaptor to be sure all grit and dirt is removed.
2. Slide the adaptor into the chuck body with the holes in the adaptor lined up with the holes in the drum chuck body. (two holes will line up, and two will not)
3. Thread in the M5 * 16 socket head cap screw and with the 4mm hex key, tighten them alternately. Alternate tightening ensures that the adaptor is pulled into the taper straight.

Removing the Adaptor

1. Remove the two tightening screws and thread them into the two tapped holes of the adaptor. They now become jack screws.
2. Carefully tighten alternately until the adaptor pops loose from the taper.

Step 2 - Mounting the Drum Chuck to your Lathe

You are now ready to mount the Drum chuck assembly to your lathe. It is important that your drum chuck is put on your lathe properly. Proceed as follows:

1. After mounting the adaptor to the drum chuck, carefully screw the assembly onto your lathe spindle. It should go on smoothly without excessive play or binding.
2. Screw it all the way on until the adaptor face contacts the spindle shoulder.
3. Next, lock your spindle, and unscrew the chuck just slightly so you can give it a firm swift spin, consequently snapping the chuck home. Alternatively use the removal lever to bump the chuck home.

What are the two set screws for?

Two set screws are provided which go in the adaptor, and when tightened, attach the Drum Chuck to the spindle.

Important Notes

1. **These set screws should only be used if your lathe has a hardened spindle.**
   If you can mark your spindle with a file, then it is softer than the set screws and these screws should **not** be tightened down on the spindle.
2. **The set screws must be inserted in the adaptor to create a seal.**
   We highly recommend that if you do not have a hardened spindle, these set screws be glued in. This will ensure they do not come out after prolonged use. If you chose not to glue them in, check they are secure on a regular basis.

Step 3 - Attach the Neoprene

The next step is to attach the neoprene to the Drum Chuck body. The neoprene is used to give a superior seal between the drum chuck and your work piece.

1. Carefully peel the backing from the neoprene.
2. Centre the neoprene ring over the rim of the drum chuck (making sure the sticky side is towards the drum chuck).
3. Next, center the former on the neoprene rubber and chuck, and press together with your tailstock. Optionally, use your vacuum pump to apply pressure by sucking the former on. Adhesion will be instant whether using contact cement or the adhesive present on the neoprene supplied.

Note: After your piece of neoprene has worn out, you will need to completely remove it from the drum chuck. Do this by cleaning off the adhesive material with the appropriate removal substance.

Tip

Neoprene is supplied with this product as we believe every product should be useable right out of the box. However, we feel a better method of padding is using polyethylene foam and a spray adhesive. Polyethylene foam is used in all types of product packaging, especially for packaging electronic equipment. It is readily available from most office supplies stores, or check with any local electronics suppliers, or Moving Company (e.g. U-Haul), in the off chance thay have some they could donate to your cause. If you still prefer the Neoprene, we would happily supply it to you (relevant Part No.'s are on the front cover of these Instructions).

Removing the Drum Chuck from the Spindle

To remove the drum chuck, loosen the set screws (if being used), lock your spindle and use the removal lever provided to loosen the drum chuck off the spindle. Carefully unscrew the assembly from the spindle.

There is danger of the work piece coming loose during vacuum chucking. This may happen for the following reasons:

1. A power outage will release the vacuum holding the work piece. Do not use this system in situations when a fuse may blow, or if there is a high risk of power outage.
2. Exceeding the below capacities could cause you to push the piece off the rim while turning.
   » 5½" Drum chuck
   Minimum diameter of piece - 6"
   Be careful turning any feature larger than 5½"
   » 8" Drum chuck
   Minimum diameter of piece - 8"
   Be careful turning any feature larger than 8"

   Turning any feature larger than the diameter of the Drum Chuck or turning on the backside of the piece can lever the work piece off the chuck. When turning features larger than the diameter of the Drum Chuck, if possible, put in the tailstock while turning. This will assist the vacuum chuck. When it comes time to finish the center where the tailstock was, the tailstock can easily be removed and the piece finished. Different shapes will be more resistant to being levered off than others. It is always a good idea to physically grab a piece and try to yank it off the chuck. This will give you a good idea of how firmly a piece is being held.
3. Wood that is too porous or in any way split may make it impossible for the vacuum to hold the piece with sufficient holding power. Before loading the chuck, check that the wood is not split, cracked or otherwise weakened. Do not load damaged wood in your chuck for turning.
4. Always be very aware of the wall thickness of your work piece. Turning through thin walls, or a severe catch can cause the vacuum seal to be broken. If you hear a crackling noise, it can be the bottom getting broken by the pressure of the vacuum.
5. Be very careful when turning flat pieces. Flat pieces just sit on the face of the chuck and if unbalanced, centrifugal force will cause them to slide off. An object like a bowl will sit inside the chuck somewhat and will be much more resistant to moving from centrifugal force. Keep the speed low and use the largest chuck. Make sure the piece is flat and smooth for best results. Put in the tailstock if possible.

General Safety

As with working with any tools, a sensible approach and simple safety precautions should be followed.

1. Always wear proper clothing and face protection. Also use adequate exhaust and respiration equipment, especially when turning or sanding toxic or spalted woods, or when spraying with any liquid material.
2. Never stand in the firing line of the lathe while vacuum chucking. This will eliminate most dangers to yourself.
3. Be sure the wood is being gripped tightly by the vacuum before turning.

General Vacuum Chucking Tips

1. Use the largest chuck that fits the work piece. If a bowl is warped, it might be held better by the smaller chuck as bowls tend to be more warped up at the rim.
2. Sometimes if a piece has a hole, it can be covered with duct tape and turned safely. If you try this, use the largest piece of tape possible. If the tape overhangs the edge of the hole only a tiny bit, it can be sucked into the hole leading to a sudden loss of vacuum. Do not try putting the tape only on the same side of the piece as the vacuum chuck as the tape is much more likely to be sucked away from the work. Wrapping completely around the piece is the safest in this situation.
3. More vacuum pressure is better than less pressure. Twenty inches of mercury is a good pressure to try on pieces that are not too thin. If you think there is a possibility that a thin piece will break from excess pressure do not use a vacuum chuck until you have enough experience to be confident turning a piece with reduced pressure.
4. Always put a center mark in the bottom of a piece with a tailstock while rough turning. The tailstock can then be used to re-center the piece on the vacuum chuck quite easily. If you are having trouble centering a piece apply only a small amount of vacuum so that you can pop the piece on and off easily to make centering easier.

Version 2.1 December 2010

Manufacturers Warranty

Date Purchased: _____

This ONEWAY product is backed by a warranty period of **5 years** from the date of purchase.

The Neoprene supplied with this product, is not covered under this Warranty.

ONEWAY hereby agrees to repair or replace, any defects due to faulty material or workmanship, provided that:

1. The warranty period has not elapsed. Proof of purchase date (sales receipt etc.) is required prior to any repair taking place.
2. The product has not been altered or modified in any way.
3. The product has not been subjected to misuse, abuse, negligence, or was not used strictly in accordance with these instructions.
4. Transportation costs incurred in returning the product to ONEWAY Manufacturing is pre-paid by the customer.

This warranty does not cover any costs or damages arising directly or indirectly from the operation of this product.

No other guarantee, written or verbal, is authorized by ONEWAY Manufacturing.

Our policy is one of continuous improvement. We therefore reserve the right to change the specification and/or design without notice.