

Installation instructions for the millie-mova

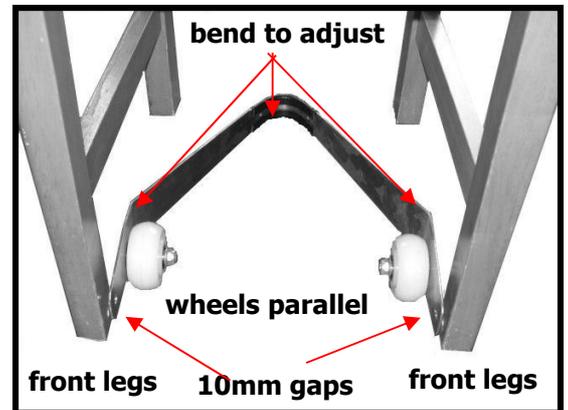
24th July 2015

Please check the contents: 1 x millie-mova including 2 rear wheels with axle tubes & 2 pivots, 1 bag containing, 2 bolts with nut, lock nut & 2 washers, 2 large screws, 2 shock cords, 2 eyes, 2 rubber washers and 2 small screws. The kit for metal leg chairs will contain bolts and ferrules for the front legs.

Tools needed – 19mm flat wood drill, ¼" drill bit (supplied), 2mm & 4mm drill bits, two 11mm spanners, 1 PZ2 and 1 PZ3 screwdriver bits and a battery power driver.

Installing the millie-mova system on a chair is straight-forward in six easy steps:

1. Start - remove any felt or Nylon sliders from the bottom of wooden leg chairs (not applicable to front leg of metal chairs). Bend the existing bends to align the frame as shown, so that the arms about 10mm inside the legs with the wheels parallel to the front-back line of the chair.

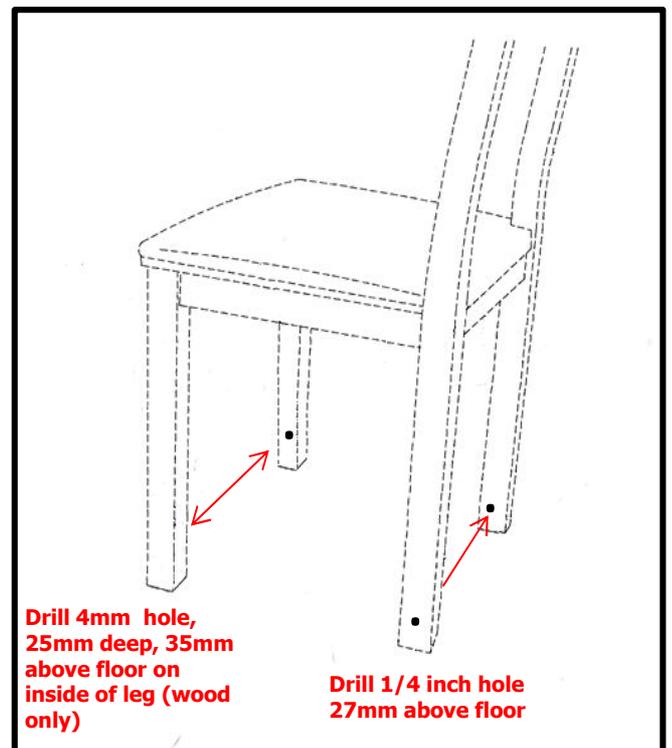


2. Front legs wood - drill a horizontal 4mm diameter hole 25mm deep on the inside of each front leg, 35mm (for armchairs see below*) from the floor.

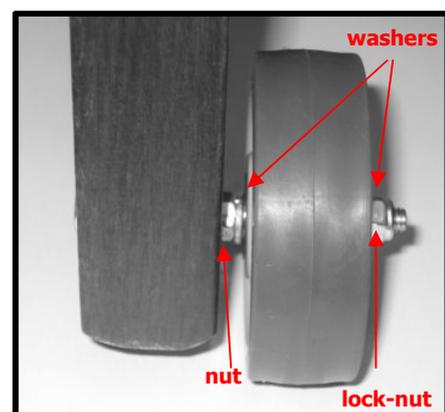
Front legs metal – drill the front legs 1/4 inch hole straight through, using the same height (35mm - **do not forget to allow for the plastic plugs & rubber ferrules**) above the floor as for the wooden chairs.

*NB – for armchairs check the pedal height is suitable before drilling! See Hints and Tips page 3.

Rear legs wood & metal - drill rear legs straight through with a ¼ inch hole 27mm above the floor. All holes should be exactly horizontal and left and right holes should be **exactly** in line with each other. NB. If the rear legs are skewed or round that is no problem – see Hints & tips page 3.

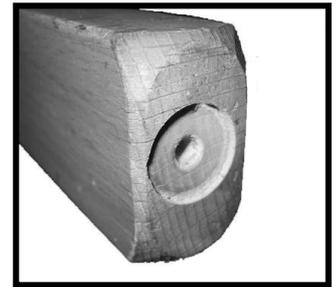


3. Rear wheels - install rear wheels as shown. Place the bolt through the hole from the outside, add the nut and tighten very firmly. Slip on the wheel, axle tube & washers plus the lock nut. Tighten the lock nut firmly (but do not to deform the axle tube). Cut bolts, if too long, and remove sharp edges. Check that the chair is "foursquare" on a flat surface. If it is not quite foursquare then adjust the depth of the holes for the front leg washers to compensate (or put a washer in the ferrules, if metal legs) – see part 4.



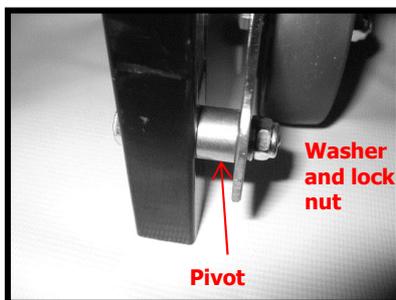
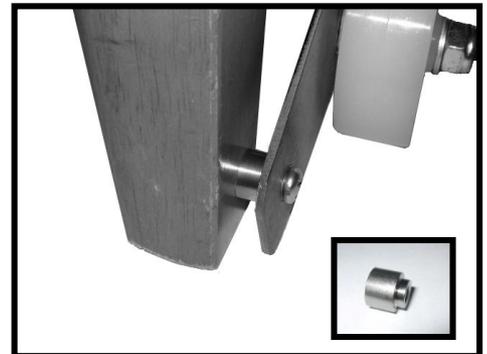
Left hand rear leg viewed from rear

4. Front leg anti-slip washers - wooden chairs - these are only really necessary where the chair will be used on a hard floor such as vinyl, laminate or wood. NB. on a deep carpet they may hinder movement. To compensate for any unevenness caused by imperfect alignment of the axle holes adjust the depth of the shallow hole for the rubber washers. **CAREFULLY** drill a vertical hole 19mm diameter approx. 2mm deep up into the centre of the **front** legs AND a pilot hole for the screw. Insert the washer into the hole and screw into the bottom of the leg. Screw in until the head of the screw is recessed slightly as shown. **Metal legs** (or if the wooden legs are too thin) - use rubber ferrules. Please ask us if these are needed. The washers/ferrules provide vital chair stability if leaned on from behind on hard floors and some carpets.

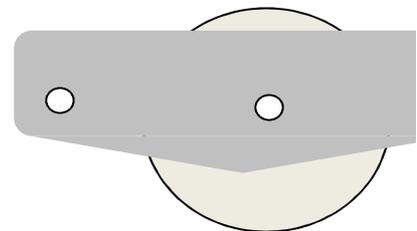


screw head 2mm recessed

5. Wooden chairs - locate the pivot into the front frame hole and drive the screw in with a **number 3 "Pozidrive"** bit (use a drill driver). **Metal legs** – secure the V frame using a ¼ inch bolt, washer and lock nut as shown below. Always use the screws and bolts supplied so that the V frame does not slip off the screw/nut. Substitute bolts must be HT (High Tensile).

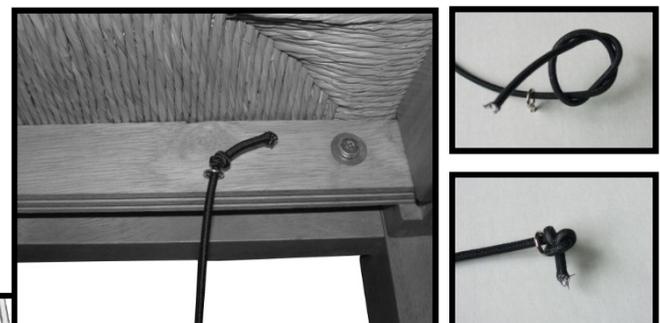


Metal leg chair

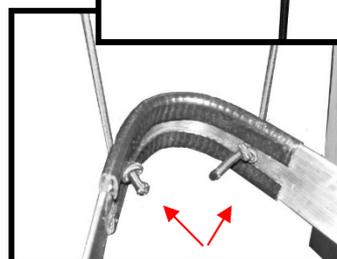


Correct way up

6. Shock cords - drill suitable pilot holes (2mm dia) in the underside of the chair seat frame. Screw in the eyes and thread the shock cord into the eyes, tying a double knot to secure (not on the eye, but as shown). Thread the other end of the cord through the hole in the rear of the V frame and secure with a single knot (do not tie together). Adjust knots so that cords are taking even strain with the front wheels just above the floor.



Tie a double knot to secure



Tie a single knot to secure

Hints and tips

If the chair has a low crossbar - If there is a crossbar lower than 100mm above the floor then place the V frame in position to check that when the unit is fitted that:

- the front wheels are just above the floor (use a couple of coins under the wheels as a gauge).
- the front leg "lift" is sufficient before the pedal touches the floor (i.e. about 20mm)

The 35mm pivot height may have to be increased to permit fitting. It **may not be possible** to fit a millie-mova system if the crossbar is below 75mm.

If the bolt for the rear legs seems too short - If the chair leg is too thick for the bolt then you can use a 14mm drill to create a shallow hole for the bolt head to sit in. See the picture here. You may have to use a screwdriver to hold the bolt head from turning, so you can tighten the nut.



Round chair legs/non-vertical chair legs -

It is easy to fit the millie-mova to this type of chair leg. The first step is to create a small flat vertical area where the pivot is to be seated. Use a 14mm flat wood drill as shown. The flat area should be created holding the drill horizontally so that the flat is vertical. This will permit the pivot or rear wheel to sit correctly.

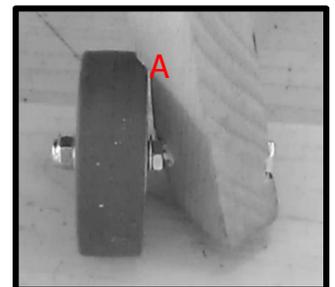


Rear Pedal (if required for larger chairs and armchairs) - Fit rear pedal as shown here using bolt, washer and Nyloc. Tighten firmly, but not so that it distorts the V frame. Only remove the black edging if necessary. Please ask us if you require a pedal. **Armchairs should have rear legs at least 7.5 inches long (190mm).**



Ski chairs - with a millie-mova system, the skis are not needed and should be removed. Just unscrew from the legs.

Skewed and/or non-vertical rear legs - drill diagonally as shown. You may need to remove a little of the leg at **A** to avoid fouling the wheel. Alternatively the wheel can be parallel to the leg by drilling at an angle. This means the wheel will not be vertical.



To Use - Please refer to the Dos and Dont's list provided.

The millie-mova is used by pushing the rear end of the device down nearly to the floor and pushing or pulling the top of the chair backrest. The maximum recommended weight is **20 Stone/130kg**. We hope the millie-mova system will be useful to you. Any problems please contact us on 01202 240999.



Correct fitting arrangement