

Freedom Motors

Freedom. Flexshaft. Flexishaft. Pendant motor. Hang-up motor... Our favourite studio tool has many names!

Freedom is the brand. Pendant/Hang-up motor is the product, and technically, the flex shaft is a part of the motor.

Whatever you call it, a pendant motor will save you time (which equals money), and energy in your studio. As a jewellery maker it can help you with; refining casts and cuts, shaping, polishing and drilling metals, plastics, wood, stones, and more, stone setting, engraving, carving, making jumpings, and much, much, much more.

In this pdf we give you a rundown of what we at Metal Clay Ltd recommend for jewellery makers. We've been working with Freedom for many years, so if you have any questions do get in touch.



MOTOR + FLEX SHAFT + SPEED CONTROL + HANDPIECE = KIT READY TO GO!

When buying a Freedom you need to make a few choices. A kit consists of the items you see above; a motor, a flex shaft, a speed control, and a handpiece.

You can either choose these components yourself, or pick a complete kit ready to go. Over the next few pages we'll run through the different components, to give you a better understanding of them.

If you just want to pick from one of our complete kits, you can jump straight to the end of this pdf!

Which motor?

The motor is what drives your flex shaft and handpiece. There are 3 Foredom motors available in 230V versions, for the UK and Europe market. Here is a rundown of our recommendations for jewellery makers.



SR MOTOR

The SR motor is the best option for the majority of makers - an all-round tool that can grow with you. It has the power to do most jobs you want on most materials.

The SR has got power, reversibility, reliability, and versatility – all in one motor

Runs in forward and reverse; useful for left-handed users, symmetry, and maximising life of some attachments.

18,000RPM - 1/6HP

Available as a hang-up or bench style motor



LX MOTOR

The LX is a more specialist motor, slower with more power at lower speeds. Good option if you mainly use it for low-speed jobs like stone setting, wax modelling, or carving.

If you mainly work with the hammer handpiece H.15 this would be a good choice

Runs in forward only

5,000RPM - 1/10 HP

Available as a hang-up or bench style motor



PGX MOTOR

The PGX, the PowerGraver, is the most specialised motor for a limited set of jobs. It is a complete kit designed for stone setting, engraving, and decorative work.

The specialist H.9D handpiece, is designed for bead, prong and channel settings, and engraving/carving jobs

Runs in forward only

2,800RPM - 1/20HP

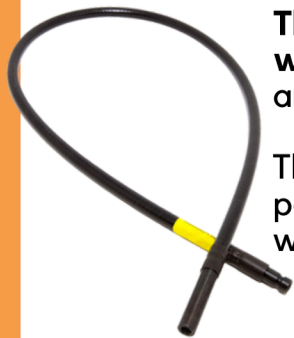
Hang-up version only

Hang-up or bench style?

The motor can be fitted with either a hanging bale or a bench base (like the image on the right). **A hang-up motor is the most common choice.** It doesn't take up bench space, but needs a hanger which can be clamped or screwed onto the side of most benches. A bench-style motor is fixed in a heavy base, to place on your bench. A hanging version can be converted to be a bench style, and vice versa.

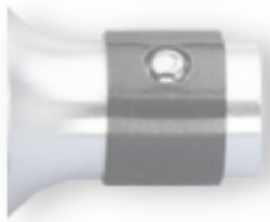


Flex shafts



The flex shaft is the black part coming out of the motor, this is what drives the handpiece. It consists of 2 parts, an inner metal shaft and a outer protective sheath.

There are three options available for the SR and LX motor - the end part that fits into the handpiece looks different on each of them. Here we cover the options from a jewellery makers perspective;



Our
choice

KEYTIP

The keytip flex is the standard version of the Foredom flex shaft, and the most common choice for the majority of users. In our view this is the best choice for a jewellery maker.

It gives you 17 different handpieces to choose from.



SLIP JOINT

The slipjoint is sometimes called European connection. We wouldn't choose this if we were getting a new Foredom flex shaft setup, as it limits you.

It narrows down your choice to 7 handpieces. The handpieces that work with this will all end with SJ. For instance, H.30SJ.



SQUARE DRIVE

It would be very rare for a jeweller to need a square drive (sometimes called a heavy duty) flexshaft. It not very flexible, and is used for unusually large or difficult heavy-duty jobs.

It limits your choice to 4 specific handpieces. The handpieces that work with this will all end with H. For instance, H.30H.

Under control...



You need a controller to turn your motor on and off, and to control the speed. They have two cords coming out of the back. A short cord which accepts the motor plug, and a longer cord which connects to the power outlet.

Note - if using a LX motor you need a specific controller which converts AC to current DC.



FOOT PEDAL



The foot pedal is the most common controller for a jeweller. It gives you full control over speed whilst keeping your hands free. You use it like an accelerator pedal in a car, or a foot control for a sewing machine - the further you press it, the faster you go! They come in a plastic or a heavy cast iron version.

There is also an on-off foot switch, which is used together with the table top dial control; you set the right speed on the dial and use the pedal to simply turn the motor on and off.

Check you get the right controller for your motor, the SR and LX motor use different controllers, using the wrong one will damage your motor.

TABLE TOP DIAL CONTROL



The table top controller has a dial that you turn to start and adjust the speed of the motor. You can mark it at your favourite speed, making it easy to find the right speed for certain jobs.

The table top control comes in a standard single speed version, or as the dual speed version pictured to the left. This has a flick switch with two speed options, LO and HI, as well as the dial. If you need to slow down your SR motor, for instance for regular use of a H.15 hammer handpiece, you would set it to LO and then turn the dial to the speed you're after.

Check you get the right controller for your motor, the SR and LX motor use different controllers, using the wrong one will damage your motor.



BUILT-IN DIAL CONTROL

You can get the bench-type motor with a built in dial speed control.

It works like the table top dial control, but is set into the motor bench base.

Which handpiece?

The handpiece is a very important part of your setup. It needs to feel good in your hand and it needs to take the accessories you need. Here are our four favourites from a jewellery makers perspective.

There are 17 handpieces to choose from for the keytip flex shaft, and 7 for the slip joint. These four are all available in the standard key-tip as well as slip joint versions.



H.30

A great all-round handpiece.

A chuck-style handpiece, which means you use a chuck key to open and close the 3-jaw chuck, to replace bits, burrs, drills, and any accessories you use.

The chuck (like an adjustable collet) can be opened to take any accessory from a skinny drill bit all the way up to a shank size of 4mm.

Slightly fiddlier than a quick-change handpiece but great value and gives you great flexibility.

Lots of attachments available, like a drill press, angle grinder, belt sander, and handpiece holder.

Weight: 164gm



H.20

A well priced quick-change handpiece.

Quick-change means you simply rotate the lever 90° to open the collet to replace bits, burrs, drills, and any accessories you use.

A quick-change is good for jewellers who change the bit often.

The collet comes in one size only. 2.35mm (3/32").

Slim and tapered shape sits nicely in most hands

ALWAYS keep a burr in the collet.

Weight: 114gm



H.18

Premier quick-change handpiece.

Quick-change means you simply press the lever to open the collet to replace bits, burrs, drills, and any accessories you use.

A quick-change is good for jewellers who change the bit often.

The collet comes in one size only. 2.35mm (3/32").

Super slim grip giving a pen-like feel.

ALWAYS keep a burr in the collet.

Weight: 104gm



H.15

Hammer handpiece.

A reciprocating action gives you a 1/32" hammer stroke (the tip doesn't rotate).

Used only with threaded anvil points and styluses for engraving, stone setting, and other decorative work.

Super slim grip giving a pen-like feel.

NEVER use over 5,000RPM.

If this is the handpiece you want to use most of the time, either get a LX motor, or a dial speed control to slow down the SR motor

Weight: 103gm

Search YouTube for "Comparing Foredom Handpieces 18, 20 and 30" to see Petra talk about these in detail..

What about...

...this other handpiece you've seen? There are **MANY** more great handpieces to choose from. The four above are our top choices for a general jewellery maker starting out with a flex shaft. A setup of a H.30 with one of the quick-change handpieces will give you a great flexibility, and the hammer handpiece is an ideal add-on if you want to do stone setting or engraving.

Jewellery Kits



These are our top choices of complete Foredom kits for jewellery makers. Have a think about what you will use the motor for most, and then pick if you want a basic setup or a more deluxe all-inclusive version.



COMPLETE KIT - chuck style

Foredom Motor Kit - SR Complete Jeweller's Kit with H.30 Handpiece

The most popular beginners kit. A SR motor, a H.30 chuck-style handpiece (open chuck using a key to change accessory), foot pedal, and a 42 pc accessory kit with lots of metal working accessories. Excellent all-round motor and kit.

SKU: 106-K.2230-21CE



COMPLETE KIT - quick change

Foredom Motor Kit - SR Professional Jeweller's Kit Quick Change H20 Handpiece

Like above, but with a H.20 quick-change handpiece instead of the chuck-style handpiece - just flip a lever to change the accessory.

SKU: 106-K.2220-21CE



STONE SETTING - intro kit

Foredom Motor Kit - LX Stone Setting - LX Pendant Motor with Hammer Handpiece

If your main work is stone setting or other low-speed applications, you will want a LX motor. This kit includes the slower LX motor, a H.15 hammer handpiece, foot pedal, and 4 anvil tips for stone setting and basic engraving.

SKU: 106-K.2250-21



DELUXE STONE SETTING KIT

Foredom Motor Kit - LX Professional Stone Setting - LX Pendant Motor with 2 Handpieces

Like above, but with an additional H.18 deluxe quick-change handpiece (as well as the H.15 hammer handpiece), and a 13 pc accessory kit with stone setting step drills and engraving burrs (and 1 anvil tip instead of 4).

SKU: 106-K.2245-21



POWER GRAVER KIT

Foredom PowerGraver Kit

A specialised kit for stone setting and engraving. The PGX is the slowest motor Foredom makes, it is designed for engraving, stone setting, bright cutting, bead raising, and other decorative applications needing a graver or a hammering effect.

SKU: 106-K.2293-21