

Protowerx Design Inc.

www.protowerx.com

Who we are and what we do...

Protowerx design is a company that seeks to provide a complete design solution for our customers. We design control systems, working with our client step by step, we help you get the right design the first time around. We help you source all of your components and we will help you make sure your enclosure is everything you want it to be. You can have the whole design solution or just the service bureau... What ever stage you are at, we can help!

Protowerx now offers diverse RP services

Protowerx strives to supply solutions to all of our customers needs. So in addition to our 3 dimensional printing service, we now offer milling services using the Roland MDX-650. This powerful milling machine gives you the option the produce your models from solid materials such as plastic, modelers wax, wood and metal. This allows for strength while maintaining fineness of detail. With a large work area (25 9/16 X 17 11/16

X 6 1/6 inches) and a mechanical resolution of 0.000039 inch (0.001mm/step) you will get exactly what you need every time.

3D Milling

Our Roland MDX650 is equipped with a rotary axis; this enables 3D milling without having to turn the part over and reset on work table by hand. The ATC makes your milling easy and accurate.



What's going on?

- New milling service
- Zsnap is in the house
- Zcast is a fast economical solution to non-ferrous castings see our website for our case study with Pacific Mako



Z310 printer; Prints 3D models quickly and gives you a cost-effective detailed model that can be finished to look real and/or tooled for testing. We now print using your choice of media;

- zp102, standard plaster based powder
- Zcast; for direct pour moulds of non-ferrous metals
- Zsnap; a powder that produced a finished product with plastic "snap-fit" qualities.

Log on to www.protowerx.com for more information.

Models to suit your needs



What are your needs? A mock up for a presentation model? A medical model? Trying out a new design or do you need to send a part overseas to give your suppliers a template? Perhaps you are designing jewelry and want a lost wax casting. Both additive and subtractive RP technologies have their benefits. Protowerx offers both services to help your design process become more efficient and cost effective. Give us a call to find out what best suits your needs.



Above and right: 3D printing is additive RP, special finishes and complexity of design are factors when deciding which type of RP technology to use.



Above: in plastic a roughing in of a positive for a silicon mould production. The finishing passes of the cutter occur at slower speeds for desired finish after the general shape has been cut. Left: lost wax positive for casting jewelry. We can use a variety of materials in subtractive RP; modelers wax, plastics, wood and metal.



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Zcasting is a fast cost saving way to go!

In March Protowerx and Pacific Mako did a case study and presented it to the American Foundry men's Society in New Westminster. Shawn Cherewick, president of Protowerx and Brad Vanderlinde from Pacific Mako presented a power point show about the in's and out's of Zcasting. They showed their audience the savings in lead time and costly mould making methods that can substantially reduced with the use of Zcast. There are several ways to use Zcast to speed up your pattern making... Log on to our website; www.protowerx.com and see the presentation for

yourself or give us a call for more information.



3D presentation models can be almost impossible to tell apart from the real thing... Your best way to impress your client



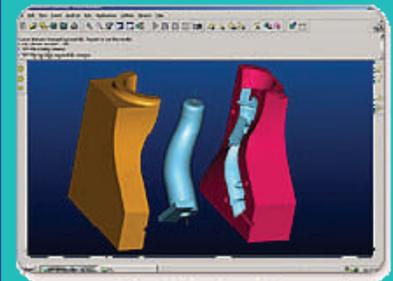
Above: Intake manifold and it's mould using Zcast technology.

If you can design it... Zcast moulds

Protowerx is a silver partner with Zcorp. This means we can print your moulds from a 3D file and our certified foundry partner, Pacific Mako will pour and produce the finished part, if you are a pattern maker with experience in producing 3D computer models, extensive knowledge of mould making for casting with non-ferrous metals and would like to partner with us in providing this exciting service, call us at Protowerx, 604-852-9090 or log onto the website at www.protowerx.com .

Break the mould.

Eliminate the limitations of traditional metal casting methods.



Left: Zcast mould and aluminum pipe using Zcast technology. Above: screen shot of Zcast mould and core set created in 3D CAD

Contact us:

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Come and visit us!

We welcome anyone interested to visit us. See our home office setup, see examples of the quality of work from both types of RP or just network and visit.

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