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**Think versatile,
think thermoforming,
think Flecknoe**



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Think versatile, think thermoforming, think Flecknoe

**You don't have to
look very far to see
what people make with
Flecknoe's machines.**

The Perth company's thermoformers and vacuum formers are the technology of choice for firms around Australia.

Twenty five Flecknoe machines are installed and running across Australia, with more on the way.

Point-of-sale stands, spa pools, caravan parts, paver moulds, canoes: people use Flecknoe's technology for big and small jobs in the city and the country.

At Flecknoe, director Phil Kitney jokes that he speaks both languages... vacuum forming or thermoforming... when it comes to making plastic do what you need.

And those languages are in demand.

"The market is getting bigger and so are the products," Kitney said.

"The growth in thermoforming is keeping up with, and even overtaking, the growth of the plastics industry overall."

After taking a walk around the factory floor with Kitney, it's easy to see why people buy his machines.

"In the past, people had to build their own thermoformers: it was a costly and time consuming process, and the result wasn't operator friendly," Kitney said.

"But with our machines you don't have to use mechanical stops.

"You can easily set the platen through the control panel, for example."

There are other benefits when using a thermoformer for your business.

Platen positioning, infrared sensors and colour changing ceramic elements are features you can't do without, and once you've used the in-built colour touch screen you'll wonder how you managed previously. The recipes option lets you save heater settings, lock in platen positions, control sheets temperatures and much more.

"A thermoformer also offers total process control through the PLC and an aluminium clamp frame," Kitney said.

Thermoformed products have become larger over the years as machines offer better capabilities.

"Thermoforming is so versatile it's replacing many fibreglass parts, like tractor cabins," Kitney said.

The cabins are twin-sheet thermoformed, with moulded-in air conditioning ducts.

Caravans and campervans are using large thermoformed parts for ends and pop-up roofs.

Thermoforming has even moved into marine applications.

"Small boats and canoes have been made in the past and now we form up to the size of yachts," Kitney said.

Thermoforming is a much faster process than making fibreglass parts.

Fibreglass manufacturers can only make one or two parts per mould per day, but 100 parts in a day is no problems with thermoforming.

In addition, there are no unpleasant emissions.



"Volatile organic chemicals come off fibreglass when it's being cured," Kitney said.

"But you get very minimal fumes with thermoforming, so there are fewer health issues."

The company's thermoforming business has increased significantly in the last five years.

Warringah Plastics in Sydney, relies on Flecknoe for thermoforming technology.

The NSW company bought a monster 3.3 x 2.7m machine.

Warringah makes skylight covers and light diffusers, equipment housings and interior coverings, builder handling trays, sealed enclosures and promotional material like display stands.

"Thermoforming is ideal for them because it looks great and feels finished but doesn't cost as much as injection moulding," Kitney said.

The lower cost is due to only one side of the tool being required to inject the moulding.

It has no trouble with varying textures and undercuts... and it's ideal when you need really sharp detail.

The pressure former achieves the sharper detail because you control how much pressure is brought onto the tool.

It works with acrylic, polycarbonate, polypropylene, PVC and ABC and even high impact styrene.

"It can deliver higher and better definition on the formed article," Kitney said.

"Attention-getting features such as embossed logos and lettering are a breeze, as are stiffening ribs, styling lines and surface texturing."

The sharpness of a thermoformed part is a joy to behold. You can have your phone number and other important corporate information easily identifiable: it's great for the visibility of your business.

Another happy Flecknoe customer is Perth company Superline.

The firm thermoforms a wide range of plastic products... signs, skylights and much more... and has a fully equipped CNC machine shop which produces precision plastic parts

with exacting tolerances.

Superline has been in business for more than fifty years and has been using a Thermwood five-axis CNC router for a decade.

The Thermwood router achieves continuous and high output production.

"Companies with comprehensive manufacturing capabilities rely on us to supply them with a quality product," Kitney said.

"They do a tremendous amount of business and require first class technology that won't let them down."

One of Flecknoe's strengths is being able to custom-build a thermoformer.

Some companies, like PopArt in Melbourne, need smaller machines built to their exact specifications.

"Sometimes you can get better efficiencies that way," Kitney said.

"Why take a truck to the airport to pick up a single passenger? Some of our customers need a smaller device, so we build the machine to suit them."

PopArt are a leading point-of-purchase design and manufacturing company and have won multiple international advertising awards for their work.

"They think creatively, solve problems and create displays and stands that work... and do it all on Flecknoe machinery," Kitney said.

A machine can cost around \$70,000 for an entry level device up to \$300,000 for a large unit.

It makes sense to buy locally made, too.

"We're fighting off the imported machines without too much trouble," Kitney said.

The large machines are so big they won't fit into a container, which means the freight can cost as much as the machine itself.

Servicing imported technology can be a real headache too... which is where buying from Flecknoe has a clear competitive advantage.

"All our machines have an Australian electrical system, which means easier servicing and spare parts," Kitney said.

"They all come with a fully documented handbook and manual,

and Australian backup.

"We build the formers and we service them."

If required, however, the company imports high standard Thermwood 5-axis routers from the United States for trimming and mould-making.

These are becoming even more affordable, especially with the strong Australian dollar.

The Thermwood routers are fast becoming the standard for trimming formed plastic parts, and can be used for pattern making and trimming composite parts.

One of the Thermwood's indispensable features is its impact resistant head.

Inevitably a router's cutting head is going to run into the fixture.

In the past this would damage the head, causing it to go out of alignment or damaging it, meaning downtime and loss of production.

With the Thermwood, you just move the machine away from the part, reset the e-stop and you're back in business.

"There's no permanent damage and seldom any need for a realignment," Kitney said.

Flecknoe also have access to a huge range of Onsrud metric bits for your router.

Onsrud's plastic tooling has been developed based on the properties of the plastic being routed... soft plastics tend to curl when cut, while harder plastics tend to flake when routed.

Its aluminium tooling has been engineered for optimised use on high speed CNC mills, machining centres, and routers.

The Flecknoe stand at Ausplas 2008 in Melbourne later this year will feature an operating thermoformer... so don't take Kitney's word for it: come and see for yourself.

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