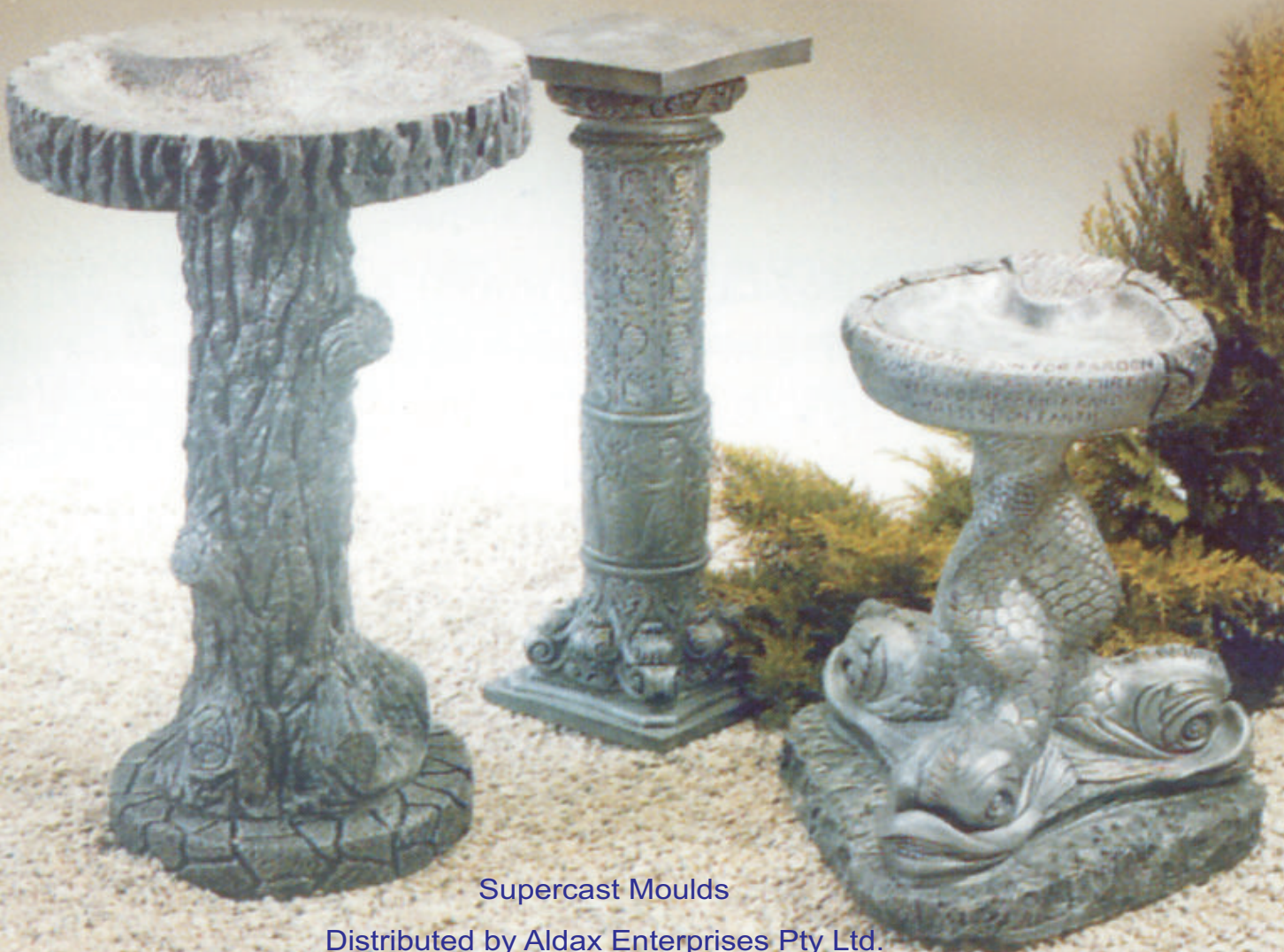


How to Run A Concrete Garden Ornaments Business



Supercast Moulds

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**HOW TO RUN A
CONCRETE
GARDEN
ORNAMENTS
BUSINESS**

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CONCRETE: THE WONDER MATERIAL

Concrete in the past decade has become exciting. New developments are pushing this once staid but basic building product into uses and areas inconceivable a few short years ago.

Concrete has always had support, for the fact that it is cheap, strong and everlasting. However, it is heavy and rather plain looking. These are the two areas that have seen the most research and development dollars as you can imagine.

Weight is being reduced by making products half as thick but just as strong or even stronger. GFRC (glass fibre reinforced Concrete) is but one of many such admixtures enabling mould removal and dispatch in days rather than weeks.

Great use is being made of polymers and resins such as polyurethane and acrylic to complement the existing advantages of Portland cement. Surface rendering of existing concrete is being widely used in home driveways and shopping centres using stoned and polyurethane mould imprint pressing techniques. Highly polished concrete, coloured are common in mall flooring and are being used in homes for flooring and kitchen and bathroom benches as an increasing number of tradesmen are being trained in its application.

The rapid growth of interest in gardens in recent years has been coupled with increasing diversity and sale of concrete garden ornaments.

Long gone are the days of garden gnomes as the sole style of garden figurine. Overseas travellers have established a new wide range of garden styles with Japanese, Balinese figurines and many others being used to set differing garden themes.

From the formal to the exotic a new wide palette of colour, styles, concrete figurines, plaques and other decorative items have come to grace our new gardens.

Now the interesting thing as far as we are concerned is that it is an ideal business to enter with low capital requirements, low initial skill requirement, requiring only a suitably located manufacturing and sale outlet (which can be your own home), enthusiasm and a considerable amount of good honest toil.

Concrete garden ornaments are made in moulds into which is poured a mixture of sand, cement and water. Sounds simple and so it is initially if you start off on the right foot with competent advice and the right type of mould and this is where we hopefully can be of assistance to you.

Later, more sophisticated figurines will require the use of more professional moulds and new techniques. Get established with moulds that you can pour successfully and are readily available.

Mould making is often on the beginners minds at the outset as a cost saving measure, as moulds are labour intensive to make and costly as a result. It seems to make good sense to buy a limited range of professional moulds to start with, this guaranteeing a successful output while you are gaining experience in casting and marketing and generating some cash flow. Then in your spare time you can start building up your own collection of unique items by making some simple latex and fibreglass backed glove moulds. It is only in this period of spare time when it is economic to make moulds. When you reach the stage when you are busy (with a maximum of 10 pours paying for the purchasing of any readymade mould) is it cheaper to buy moulds and devote full time to casting and selling.

The hobby ceramic industry found this out decades ago and it is just as true in the concrete garden ornament industry. A wide product range is essential and it simply does not pay to make all your moulds. Buy the majority and make only the original items that can distinguish your range from your competitors.

Concrete garden ornament manufacture has many advantages for the smaller one man entrepreneur. Firstly it does not require the injection of large amounts of capital to start up. Relatively few moulds are required in the early stages to start generating cash flow. Secondly you can learn on the job as you gain experience. Thirdly the items you make are heavy and costly to freight, making outside big scale competition unlikely. Most small manufacturers enjoy a captive local market, particularly in country areas. Most garden centres prefer to buy wholesale from local manufacturers to cut down freight costs.

This is one of the rare types of businesses where you can dictate the size you want it to be. It can be a part time self supporting hobby that gives you a lifetime of pleasure or it can be a full time venture as big as you wish.

The market for precast concrete specialties now has many different basic types. First the ornamental type with which you are probably most familiar and are intended primarily to decorate. However there exists an increasing market for specialty items which are used by the home owner to improve an existing property. Examples of this type of concrete product are stepping stones, patio blocks, garden lawn edging, tree ring borders, benches and tables for the lawn.

Thirdly building contractors are a ready market for utility items such as precast steps, sills, copings, balustrades, lintels, chimney caps, parking curbs, bumper blocks etc.

Fourthly a new and emerging market is developing for concrete precast kitchen benches.

Finally with the continuing use of bush stone, natural stone is running out and increasing use is being made of stone made from concrete. This can be made on site or in moulds and artificially coloured to be indistinguishable from the real thing and is used widely in swimming pool surrounds, waterfalls and rock gardens.

Moulds are available for surface rendering walls etc with rock finishes. Initially these have been made using lightweight polyurethane but long term use is showing these are readily damaged and become unsightly and American usage is turning to a lifetime of concrete products.

CEMENT and CONCRETE

The words *cement* and *concrete* have come to mean different things to different people. For the purpose of clarity when we refer to cement we mean

- Portland Cement – the grey powder available in bags at most hardware stores unmixed with water or anything else.
- Concrete – refers to Portland Cement mixed with water and an aggregate which is usually sand and gravel and water.
- Cement mixtures – are Portland Cement mixed with any type of aggregate not necessarily only cement, sand and water.

Portland Cement in its common grey form is the cement powder of choice for most garden ornamental work, however there is a more expensive white form used when colour is important in the finished product.

The 'Portland' in Portland Cement got its name when Joseph Ashdin of Leeds, England, developed and patented a much improved cement that when hardened was waterproof and looked similar to the rock quarried on Portland Island, an island in the English Channel.

You can now buy several varieties of this original product which incidentally is a mixture of lime, silica, alumina and iron. For our purposes, the common regular builders Portland Cement is still the cement of choice. No need to use air-entraining cement, high pearly cement or other specialty cements. Portland Cement is both cheaper and easier to work with.

Surprisingly, it can be an advantage not to have come from using concrete as a building material. It saves having to unlearn the difference between what is required from concrete

as a building material and that required for producing a quality saleable piece of ornamental garden statuary. The builder requires concrete that can be subjected to enormous stress and/or weight. We required concrete for the easy manufacture of ornaments with a quality surface finish. The difference is in the amount of water used in the concrete.

To produce an ornament with a good smooth finish with the ability to flow into all the interstices of your moulds and produce a top quality looking ornament you need concrete made with much more water than a builder would use. That said, too much water weakens the concrete so experience is necessary to determine the upper limits for water in your mix.

Protect your Portland Cement bags from moisture during storage. It can be a good idea to place the paper bags inside green plastic garbage bags and secure the neck.

Another basic difference is in the type of aggregate that can be used. Builders concrete is a combination of cement, sand and a gravel mix. Ornamental concrete can use many different types of aggregate as we will detail later.

USE OF AGGREGATES

If you were making a path or steps in your backyard you would have no alternative but to use the strongest concrete mix possible, that of cement and water with the fine aggregate of sand and the coarse aggregate gravel or crushed stone.

However with ornamental garden work, the gravel can be omitted altogether or used in reduced quantities or alternative aggregates used for the production of lightweight concrete.

We suggest you experiment with your locally available ingredients but start off with standard cement, sand and water formula we provide later. The sand which should be free from foreign bodies such as dirt, weeds etc can be any clean sharp sand such as that used in your area for ready mixed concrete, available in small lots from your hardware merchant.

Dry sand will always contain trapped air that can be the enemy of any pourer, resulting in a mix that contains myriads of air bubbles that rise to the surface and destroy the look of your finished piece.

For this reason always keep your sand pile damp and never let it dry out. This raises as you can see the first problem in your mix. How damp is your sand? How much water are you introducing into your mix with your sand? This makes the water addition in any ornamental

garden cement mix the variable. It will never be exact and will have to be judged by experience.

Adding gravel or crushed stone in your mix is optional. As with the sand, keep your gravel moist.

Water: The recipe here is only use water “fit to drink”. Chemicals can affect cement mixes and could be found in stagnant or dirty water. Never use them.

Cement acts like a glue that binds all the ingredients together but water is the important ingredient that allows the even coating of all the solid particles with this glue and produce a good product.

THE BASICS FOR POURING INTO MOULDS

Sand ***

Cement *
3:1:2

Water **

This is the basic formula for you to start with, varied as is described later. Once you have mastered pouring with this mix and gain experience by all means experiment.

The pouring method is the easiest way to make concrete garden ornaments. The addition of extra water to the usual builders’ concrete enables it to pour easily into moulds.

Although it is a good idea to have a cement mixer, it is not necessary to have one. Excellent cement mixtures can be made using a hoe and wheel barrow.

The secret of success is in the thoroughness of the mixing. Start off by measuring the dry ingredients, the sand and/or gravel and placing into the mixer then the cement. Mix thoroughly before commencing to add small amounts of water. Keep missing till your mix has the right look and feel to be the correct consistency for experience alone will allow you to judge this.

Unlike builders, ornamental garden work requires the amount of sand and cement to be mixed and water to be added in varying amounts to arrive at a good working consistency.

Unlike in the northern hemisphere temperature is rarely a problem here. It is sufficient to say that to get best results your mix should be at temperatures between 60°C to 80°C. Anything below 40°C and there is a danger the concrete will not set up.

If you vary the suggested ratios such as increasing the amount of sand, you will also have to change the amount of water. Keep the ration of sand to cement at 3 to 1. Too much cement in a mix will yield a bad mix causing hairline surface cracks etc on the finished piece.

Practice with some small moulds and small mixes until you have a feel for the correct consistency for mould pouring. We have used a hand drill ½ hp slow RPM in a mixer that we used for plaster mixing (one that does not beat air into the mix) and a bucket satisfactorily on many occasions for testing. Remember the correct mix starts to set immediately after you stop mixing. So give an additional mix before pouring each mould.

We varied the usual mixing method for this small quantity by putting in the water first in the bucket then the sand and finally slowly adding the cement while running the drill slowly. We let it mix for several minutes and then poured immediately.

Ornamental concrete moulds require additional water in their mix to produce a smooth good looking surface. Do not let this concern you. The ornaments still will have more than enough strength and hardness to last indefinitely.

It should be emphasized at this stage that the above suggestions apply only to ornamental concrete items. All structural items such as fountains, bird baths, and seats etc where human safety is concerned only full strength reinforced concrete should be used. Children can climb on this type of item and they are felt with separately.

HOW TO USE ADDITIVES IN THE MIX

New products are constantly being developed to endeavour to improve setting times, flow characteristics etc of concrete but at this stage we recommend you do not use additives except when required. Calcium chloride can be used to speed up the setting time.

Calcium chloride is added to the mix at the rate of 1 to 4% of the weight of the cement only that is being used in the mix. We recommend starting off by adding at the ratio of 2% or 2kg to every 100kg of cement or 1kg for every 50kg and so on. It is easier to redissolve the calcium chloride and use a stock solution containing say 1kg in 2 litres of water and use it as part of the water in the mix.

As calcium chloride improves flow characteristics of the mix you will need less water, about 10% less because it increases the early strength of the concrete, moulds can be removed much earlier and production rates improved.

However for practical purposes we recommend you start by using the standard cement and sand pre mix available at all hardware stores. Perfect your techniques using this material before starting to experiment with your own mixtures. Satisfactory results can be achieved using any of the available mixes such as Boral or CSR.

PREPARING THE MOULDS FOR POURING

Most moulds are made of latex rubber made with a support to maintain the ornaments shape by either a backup mould of plaster, fibreglass or some similar material, however there are also fibreglass and aluminium moulds in use and one should be aware that the mould release agents used for these two varieties of moulds differ greatly.

LATEX MOULDS

People hear you use engine oil as a release agent and promptly use it in their latex moulds and of course ruin them in short order. You must never use petroleum based oils on latex moulds. We have found a good release agent for latex. It's a solution of 1 part industrial castor oil to 8 parts of methylated spirits. This vegetable oil is quite safe and actually conditions the latex over time.

FIBREGLASS AND ALUMINIUM MOULDS

Clean, used motor oil (as light a grade as possible, say 20) is still the best release agent for both fibreglass and aluminium moulds. It can also be used on any wood, plastic or similar mould forms you may use.

Surprisingly the oil does not stain the concrete and will disappear as the product cures. Alternative release agents are light grade machine oil or a solution of petroleum jelly dissolved in kerosene.

Let your moulds drain after oiling to prevent an accumulation of oil at the base of the mould. Don't use motor oils containing detergents as this can lead to surface voids or pitting.

HOW TO ORGANISE YOUR POURING

Before starting your pour, arrange moulds for easy access. Moulds must be firmly supported and level. Smaller often back plaques can be conveniently levelled and supported on your sand pile. Large moulds if professionally made will have level legs built into the moulds for easy support and pouring.

Homemade moulds are often built with a heavy 2 piece plaster backup shell kept closed with rubber bands and can be kept level with material scraps wedged around the base in card board boxes.

Immediately after you have finished mixing, start to pour before your mix has a chance to settle. The place for it to settle is inside the mould, not in your mixer. Use a plastic or metal 2 or 4 litre container with handle to bail out the mix and pour into your moulds.

Use your hoe to stir your mix in the wheelbarrow, or give your mix a few turns to keep the mix from setting.

When pouring a mould with undercuts, tilt the mould from time to time while pouring to ensure there is no trapped air. Air bubbles are your biggest enemy and you use tilting, bumping, prodding and vibrating to help get rid of them.

A couple of gentle bumps with a rubber mallet against the side of a mould are usually sufficient to dislodge most air bubbles. Later when you get into volume production you could consider acquiring a vibrating table.

A simple eccentric wooden chuck on the end of slow RPM hand drill, somewhere around 400rpm beating under a loose tabletop is usually sufficient for 15 – 20 seconds.

Alternatively a vibrator obtainable from concrete supply houses attached to an air compressor can be clamped onto your mould for good results until you graduate to a vibrating table.

A vibrator table of 3,000rpm using amplitude in proportion to the size of the mould – would need 10-15 seconds for most small moulds.

Prodding the cement or concrete mix with a length of broom handle or dowel gently, helps break up the air bubbles and also helps setting the mix into any undercuts. Do this slowly as not to beat air bubbles into the mix.

Continue pouring cement mix or concrete into the mould until it is slightly overfilled. After about 30 – 45 minutes you will notice clear water rising to the top. Add additional cement mix or concrete, or damp gravel to the mould to float off this excess water.

After the mix begins to set, remove the excess concrete, using a wooden float and by scrapping it from one side of the base to the other letting the excess fall over the edge.

HOW TO REMOVE YOUR CASTINGS

Patience is now needed as concrete moulds unlike plaster should not be demoulded for 12-24 hours depending on the type of mould used. This time can be reduced by 50% if calcium chloride accelerant is being used.

The sooner a latex mould is demoulded the longer will be the life of the latex. Latex moulds yield very detailed ornamentation on your pieces but are not as strong as fibreglass or aluminium moulds and care must be taken.

Place the mould upside down on its base, remove the bolts if using a fibreglass backup mould and take it apart.

Gently strip the latex mould from the concrete and stand on wood or wet sand to prevent damage of the green concrete remembering that the concrete is not yet cured and is very easy to break. Concrete takes an hour or so to set up to 12 to 24 hours to be strong enough to remove from the mould and several weeks to come anywhere near its full strength. Concrete will continue to harden for years.

Once removed from the mould set your ornamental pieces aside in a cool area and spray regularly with water 2 or 3 times a day to keep them damp. A good idea is to cover with hessian and keep the hessian wet.

Do not allow the concrete to dry out for several weeks and do not put it out in the sun. If you follow this procedure you will deliver a quality piece of ornamental garden ware to your customers. Concrete that has not been kept damp as outlined above often develop cracks that usually do not show up for days or months ahead and results in returns from dissatisfied purchasers.

Incidentally below 50°f concrete may stop curing and is a problem in cold climates. Concrete needs temperatures above 60°f and plenty of water to cure properly.

FINISHING YOUR CASTINGS

SEAM REMOVAL

When using 2 piece moulds you finish up with a seam the size of which depends on the quality of your mould. Well fitting rubber moulds can deliver an almost invisible seam, which can be easily removed. However if the two sections of your mould do not fit exactly, quite a large and obvious seam can be left

The secret for its removal is to leave the item for at least a week. If you start cleaning it up as soon as the product is released from the mould you will leave a band of rough concrete, which will stand out against the remaining smooth surface.

When well on the road to being fully cured after a week, remove the seam by rubbing with an old brick or rock while keeping wet with water. Keep dipping your brick into a bucket of water to keep it moist. This grinding action removes the seam very effectively.

REPAIRS

Any damage to the casting and filling of any air holes is better repaired within 48 hours of removal of the casting from the mould. Thoroughly wet the area to be repaired - Leave for almost half an hour to ensure it is well soaked - and apply a repair paste with rubber-gloved hands. The repair paste can be made using Portland cement with a little water. Clean up any repair work by wiping over with a damp cloth.

CURING

Many people graduating from plaster casting to working with concrete and cement, attempt to treat them the same way and are disappointed with the results. Unlike plaster, cement mixes take an hour before it sets, 24 hours before it is strong enough to be demoulded and a week or two to attain almost its full strength and hardness.

Another important thing to note is that if cement or concrete mixtures dry out, all curing stops, so your cast pieces must be kept wet by hosing 2 to 3 times a day and kept covered by hessian to keep damp in order to permit curing to take place.

So the three important factors are 1.) Keep the product wet for the first week. 2.) Allow the necessary time for curing. 3.) Keep at the correct temperatures. Keep your pieces out of the direct hot sun- as curing occurs on the surface and not throughout the piece. For a stronger piece, let it cure slowly. In winter, do not expose your pieces to freezing temperatures during the first week.

The higher the temperature the faster your concrete will cure. Less than 50°C curing almost stops altogether; warm temperatures of 60°C- 80°C seems to be the ideal temperature. As concrete curing is a chemical not a drying process the aim should be one of a slow, cool and damp cure. Concrete increases strength with age reaching 75% in 7 days and 95% in 30 days.

MAKING LIGHTWEIGHT CONCRETE

No matter what formula you use, lightweight concrete will never be as strong as the regular mixes you will be using. Normally weight is not a problem with garden ornaments as they are rarely moved once they are set up in a garden. However there are times when a lightweight mix may be desired.

Do not alter the regular mix if the piece can be lightened by providing air cavities within the piece. This is easily achieved by putting empty capped milk containers, oil cans or glass jars or bottles inside the moulds wedged away from the surface of the mould with a broken piece of concrete so as not to show on the finished piece.

Another method is to replace up to half of the sand aggregate with lightweight fillers such as Vermiculite, perlite, sawdust, heat moss, pumice or wood shavings. Vermiculite is commonly used but we prefer perlite as it is readily available from hydroponic centres, is inert and does not swell and contract as vermiculite does depending on moisture content of the finished piece. A concrete ornamental figuring that breaks due to the expansion and contraction of vermiculite is not a good idea.

All aggregates added to the concrete should be thoroughly dampened before adding to the mix to prevent them soaking up the water. Wood shavings can be purchased at pet stores as pet bedding.

The tannins and oils in some sawdust sometimes prevent the concrete from setting up so add 11kg of calcium chloride to each 20kg of cement or boil the sawdust in water with some iron sulphate to neutralise the tannins. We have had no problems with the pine wood shavings sold in pet shops to date.

It should be remembered that lightweight fillers should not be used where people safety is a factor- such as replacing your regular concrete mix in the manufacture of seats, fountains etc.

Pavers can be sometimes lightened by cutting a sheet of polyester insulation or packing material 2.5cm from the edge of the mould- pour half the concrete then place on polystyrene and then continue to fill the mould.

ITEMS THAT NEED REINFORCING

Pieces with a large mass such as bird baths and pedestals, seat legs and the thicker stepping stones usually do not require reinforcement. Any item sufficiently bulky to be hard to break would come into this category.

Some items however are subject to breakage and should be reinforced. Thus even if they are damaged they are held together and can be easily repaired. An example of this would be the neck of a swan.

Steel rods, wire or chicken mesh, heavy gauge wire, coat hangers etc. all make good reinforcing material. It is better to use several pieces of a thinner metal than to use one large rod. Metal expands and contracts with changing temperature much more than concrete and if the reinforcement is too near the surface of the pieces, it could crack the concrete.

Wherever possible keep the metal rods below 12mm and you should have no difficulties. Place the wire or rods bent to shape in the moulds before pouring. The reinforcement does not need to be held in position as it seems to rise off the bottom and centre itself away from the surface of the item when the concrete is poured (unless it is caught under an undercut in the mould).

TROUBLESHOOTING: PROBLEMS THAT CAN ARISE

One of the main problems that you will come across will be that of small holes appearing on the surface of the finished piece caused by misuse of the release agent, excess water or air. Excess release agent will sometimes pool on the bottom or surface of the mould and prevent the concrete from filling properly thus causing unattractive surface pitting. These voids are usually small and spherical and measure about 2 to 3mm.

In a similar manner water can also be trapped against the mould surface. As the water evaporates small holes are left. This is attributed usually to the high water to cement ratio. Pouring immediately after you have finished mixing yields a much improved product.

Air holes are large (up to 12.5mm in size) and can be formed under undercuts or using too large aggregate and entrapping air due to too little mortar. A more fluid mix followed by tamping and/or vibrating eliminates most air holes.

It is almost impossible to completely eliminate surface pitting due to the many variables present in concrete casting. However to help improve your castings make sure you are mixing your concrete thoroughly and for a sufficiently long time.

Apply the release agent in a thin film whether a chemical release agent or an oil to eliminate the pooling in the lower sections of your mould. If using the pouring method of casting, more water can be added to the mix to increase fluidity. It is not usually necessary to vibrate this type of mix.

Make sure you are using thoroughly dampened sand or other aggregate in your mix. Dry aggregates contain a lot of air. Bumping and tapping with a rod also helps – both during and after pouring can help in the release of trapped air and water.

Soft or crumbly spots in the concrete

Usually caused by inadequate mixing. Mix longer to ensure that all aggregate is completely covered by the cement.

Streaks of what appears to be sandy texture on the surface and sometimes hairline cracks

This is usually the result of too much Portland cement in the mixture. Reduce to 3 parts sand and 1 part cement.

Broken edges, chipped corners

More often than not this is caused by handling the concrete too roughly before it has cured. Freshly poured concrete is fragile, use care in moving. Keep wet with the hose for 7 days at least to allow the product to cure and gain most of its strength.

HOW TO COLOUR CONCRETE

Fashions change and you should attempt to meet the expectations of your local market place. A simple antique wash may work one day, while a painted product might be the most saleable item the next.

Concrete in itself has an attractive natural grey colour. This can be enhanced by adding metallic colour oxides to the mix prior to casting. These come in a variety of colours, reds, browns, black, yellow and green. An attractive sandstone colour is very popular and can be achieved by mixing your yellow, reds and browns

Replacing your grey Portland cement with white cement gives you the possibility of another palette of colours. White cement is never pure white but has undertones of pastel colours which can look very attractive as cast or the pieces can be painted.

Another caster demonstrated a simple wash to me. He made a bath of black oxide and water, dipped the pieces in and wiped off selected areas with a damp cloth. Or you could make a thickened wash of paintable oxide and water with a little Portland cement added. Much the same effect can be achieved painting the entire object with black paint and then wash off from all the raised portions leaving the paint in the grooves.

When painting concrete, allow the piece to dry completely for about a week after the end of the week's damp curing period. Any exterior paint can be used either water or oil based. A very natural look can be achieved using stains. You can mix your own stains by using powdered candle dyes and a solvent type sealer. You can now use the sealer just as you would a stain.

SPARKLE LOOK

While your concrete is still wet, say immediately after removal from the mould, lightly dust the area you want to sparkle with silicone carbide. I have been told you can dust the silicon carbide into the mould before casting- but I would think the cement would cover the silicone and you would lose the effect. Experiment.

INTERESTING TABLE TOPS

Different materials can be cut to size to place on the bottom of your table top mould to give interesting texture effects. Linoleum, rubber matting, polyurethane texture mats, and oiled plywood are but some of the textures available.

HOW TO DECORATE YOUR PRODUCT

PAINT FINISHES

Seal your concrete ornament with a good exterior primer. This is essential due to the alkaline nature of concrete. Any exterior paint either water or oil based can be used either with a solid colour finish or multi colour dry brushing techniques.

We have concrete ornaments painted with acrylic paints that show no signs of fading or peeling off after 15 years of exposure to the weather in our backyard. Some have been airbrushed for special shading effects but most are dry brushed.

In volume production time can be saved by spraying your base coats. You can cut your time to a fraction of that required for hand painting by using an economical spray gun such as the Wagner airless spray gun available from most hardware stores.

DRY BRUSHING

Very professional results can be achieved using this method. Simply spray or brush on your dark colour base coat and sparingly over paint with a stiff dry brush with your lighter accent colours

A popular colour combination is to use black as your base coat, let thoroughly dry and then antique with green or one of the metallics such as copper. Ensure that you are not applying too much paint by dipping your brush in the paint and then removing most of it by dabbing your brush onto cardboard or newspaper until it is almost dry and then apply.

ANTIQUING

A simple and effective treatment is to reverse the paint order from dry brushing. Instead use a light coloured base coat, let thoroughly dry and then completely over paint with a darker colour and while still wet, wipe off with a damp rag leaving the dark colour only in the detailed areas. Almost any paint can be used, oil or water based. Finish with a final coat with a good acrylic sealer.

Another method is simply to dip your concrete ornament into a bath made with a mixture of coloured oxide and water. Allow to drain and then wipe off from the ridged areas leaving the colour in the detail areas. Keep wiping until you achieve a pleasing result.

MARBLEIZING

This technique can be very effective when used with flat surfaced moulds such as table tops. You can commonly see this effect used by bathroom basin manufacturers using polyester resins. The method is exactly the same for both materials.

With your mould reversed so the finished table top will be facing the bottom of the mould, quarter fill your mould with say a white concrete mix. Allow to settle for a few minutes and then pour some black or dark coloured concrete in an irregular pattern through the white concrete. Don't use straight lines but try to simulate the appearance of natural marble. Now complete filling the mould with the white concrete. The effects can be really beautiful.

ALTERNATIVE TREATMENTS

SANDBLASTING EFFECT

Concrete can be sandblasted while it is still green, that is immediately after it is removed from the mould. Apply the sandblaster to the surface until the sand shows through to yield a sculptured, hand carved appearance.

Allow the pieces to cure in the normal way after sandblasting. Using the new photo stencils, logos, motifs and designs of all types can be easily applied to the surface.

EXPOSED AGGREGATE

This is a finish that is really hard to beat and looks like hand carved rock. With the increasing importation of coloured crushed stone and pebbles from Indonesia and the Philippines this is a market that is simply asking to be exploited. Never had we had such a terrific variety of materials available for this technique.

Basically the effect is achieved by removing the outer layers of cement to let the sand and other coloured aggregates show through. This is achieved by temporarily retarding or 'killing' the cement that is in contact with the top mould surface. We import one time use specially impregnated paper from America that is placed in the mould prior to pouring the concrete.

A little known trade secret is that this effect can also be achieved by using some thick molasses. You wipe your mould with a thin layer of release oil in the normal manner with an oily rag and then apply a thick coat of molasses on the base of the mould and fill with

your pouring mix. The molasses is in contact with the top layer of cement and retards it, but does not affect the rest of the concrete pour.

As soon as the mould is released from the mould, hose the top of the mould at about a 60° angle and remove the killed cement revealing the aggregate. A little elbow grease and a wire brush with water will remove any stubborn cement. As you can see there are quite a few variables and to achieve a standardized product, quite a few test pours will have to be made.

Stepping stones or pavers are an ideal product to make using this technique but many others come to mind such as garden pots, wall plaques with added design and colour features etc. Someone is going to make a lot of money exploiting this idea. Why not try it yourself?

MOSAIC FINISHES

Tiled mosaics are the flavour of the month- but why stop there. Practically anything can be used to provide a pattern or design on the top surface of your mould. Why not use the pebbles or crushed stone mentioned previously or broken china to build a pattern on the base of your mould (top of your finished product). Ensure the pattern stays in place while pouring the backup concrete by adhering the pebbles etc. in position using a water soluble glue.

The pattern could be worked up on a piece of paper, cut to the required size to fit in the mould and the individual items could be stuck onto the paper with the water soluble glue. When finished and dry the whole item could be simply lifted and placed in the mould ready for pouring the concrete. Removal of the paper could be achieved by subsequently wetting and using a wire brush to give your desired finish.

SELLING YOUR CONCRETE PRODUCTS

One of the best features of small scale manufacturing of concrete products is that the local producer has a big advantage over out of town suppliers. Concrete is a heavy item to transport and freight is increasingly expensive. This gives the local a big early price advantage.

To sell ornamental concrete products they must be displayed. If your home or place of business is on a highway that's fine, you get a bonus of heavy passing traffic. However, we have had customers operating successfully from backstreet locations using their front yard as their display and their garage as the manufacturing area. It just took longer for word of mouth to drive business to their door. Word of mouth is still one of the best means of growing your business.

For word of mouth to work in your favour you must strive to build a better product. To give that extra bit of service. To give greater value than your competitors. And the beauty of it is that it is not hard to do.

I sometimes think back to my childhood. Running messages to the local corner store is not a job normally greeted with joy by a child in the middle of an after school game. My mother could never understand why I never complained. The shop proprietor had a secret weapon, he invariably gave me a sweet. A cheap but very effective bit of P.R.

Once you have established your retail business it is often a good idea to develop wholesale sales to make profitable use of your slack periods. If you offer items to local nursery outlets on consignment, give them say 20% commission. The usual wholesale margin is 40%.

Display is everything. No selling is necessary with this product range. Information, yes! Selling, no! To build a display that will catch the eye, you need finished product and plenty of it. The more the better.

That does not mean you must purchase a plethora of moulds and use up all your available capital. Make maximum use of each mould by using differing finishing techniques. It is possible to have the same item featured with 8 different treatments giving a much diversified look to your display. An effective display can be made by using colour grouping rather than product type grouping. The same item can then be featured in different positions in the display and look like a completely new piece to your customers.

Every month or so alter your display by moving it around. Many are the time a customer has said to me "I like this new item". She is of course referring to that dog you have had in stock for years that you recently moved to a prime position in your display.

MARKETS AND FAIRS

Many use weekend markets as a way both to promote their business and as a means of ensuring a weekly cash flow. Display as wide a range as you can bring and always have business cards available You will generate quite a deal of follow on business with people who take away your cards and visit your main outlet at a later date.

NEWSPAPER ADVERTISING

Advertising in local free newspapers is quite expensive in most locations in Australia and I have rarely found it produces results that justify the costs involved. Perhaps the one time to try an ad would be in the pre Christmas period. A simple printed leaflet left in letterboxes is often more productive, particularly if you can couple it with some special offer. Photographs are essential for all advertising of this type of product and can be readily downloaded from digital cameras for printers.

WEB SITES

Most of your product is going to be sold locally so I do not believe that a web site is going to be of much value in the early stages. Later you may have a lightweight product that you may be able to feature, but initially I would be putting maximum effort into local promotion. E-Bay could be considered if you see that items of a similar nature are selling at a price that leaves you with a good margin of profit.

HOW TO ESTABLISH SELLING PRICES

This is one area that we do not feel we can be of much assistance. Prices vary so much from area to area that we feel you must first look at what your competitors are offering and then examine your cost of labour and materials to see if you can profitably match or better his or her prices

Our starting point for retail pricing is to multiply your cost of materials and labour by 10. We next look at any special difficulties with that particular product and allow for that in the pricing. Some items with reinforcing necessary, may have to bear a much higher margin say x20 to make it worthwhile producing.

With this industry it is very rare that you will be subjected to comparison pricing. As long as you are in the same ball park as other locals, a few dollars here and there are simply not going to matter.

The difference in making the sale is not going to be in the pricing, it is going to be in the finish of the article. If they like what they see they will buy it, price will not enter into it. So the message is clear, in this industry as in many others pay particular attention to finish quality and decoration. From what I have seen around the traps you have not got much to beat. Experiment with finishes. There are literally hundreds of ways of presenting your concrete products that could appeal to your local customers. Keep experimenting until you find what sells.

Do not be afraid to place a fair price on your finished products. Many people who have been in retail previously are used to much lower margins than are possible in the concrete ornamental manufacturing industry. But you must remember you have earned the right for these higher margins. You are the manufacturer, designer, decorator, merchandiser and promoter all rolled into one! You are not purchasing an item from someone and simply reselling it.

Some add 10 or 20% to the displayed retail prices and then give a discount, it is up to you how you merchandise. You are in complete control of your end price.