CIVIL PRODUCTS
CORRUGATED STEEL PIPES
CORRUGATED-PLATE STRUCTURES
Suppliers of

Corrugated Steel Pipes and Structures

for

road and rail infrastructure, natural resource &
construction projects

DRAINAGE CULVERTS

STORMWATER MANAGEMENT & IRRIGATION SYSTEMS

CONVEYOR, PERSONNEL & STOCKPILE STRUCTURES

BRIDGES, ARCHES & UNDERPASSES

MINE PORTALS, SHAFTS & TUNNELS

HVAC AIR HANDLING DUCTING

TUNNEL VENTILATION

VOID FORMERS

PERMANENT LINERS FOR BORED PILE FOUNDATIONS
Roundel Civil Products supplies a comprehensive range of corrugated steel pipes and structures for use in road and rail infrastructure, natural resource and construction projects. Family owned and operated, we pride ourselves on offering our customers high quality engineered products, competitive prices and great service.

Our pipe range includes corrugated and smooth-wall pipes available in a range of materials and what we believe is the widest range of corrugation profiles available in Australia. These extend up to 150 x 50, the largest and strongest pipe profile available worldwide.

Materials include galvanized steel, successfully used for the vast majority of drainage culverts across Australia for over 70 years; aluminium, ideal for use in adverse ground conditions; and PE-laminated steel for installation in the most corrosive environments and when extra long service-life, in excess of 100 years, is required. Our smooth-wall and ribbed pipes are also available in these materials and in stainless steel. A wide range of fittings is available for all pipes as required.

Our bolted corrugated-plate structures are available in a wide range of shapes and sizes including pipes, pipe arches, underpasses and box culverts. Again, we pride ourselves on offering the widest range of corrugation profiles, ranging from 100 x 22 up to 400 x 150. This wide range helps us ensure that we can always offer our customers a competitively priced structure.

We have three manufacturing bases strategically placed around the country with eight production mills in all. These include two state-of-the-art trailer-mounted mobile production mills which we drive directly to a client’s site for larger projects, with significant savings in delivery costs, or when very large diameter pipes - of up to 7.2m diameter - are required. These mobile mills set new standards in safety for on-site CMP production and are independently certified as being fully mine site compliant.

Our Quality Assurance programme is designed to provide full traceability from steel mill to finished product across our full range, ensuring that we deliver a top quality product to every client, every time, on time.

And it’s that dedication to our clients that has helped us grow from modest beginnings in 1998 to become the supplier of choice to many of the country’s leading resource companies, civil engineers and building contractors.
We have 8 CSP production plants around the country, including permanent production plants within the Pilbara, WA and the Bowen Basin, QLD, giving us greater production capacity than any other supplier.

With minor variations, these mills provide:

Diameter range: 300mm to 3600mm (up to 7200mm on the mobile mills)

Material thickness: from 1.6mm up to 4.2mm

CORRUGATION PROFILES

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<th>Height</th>
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PIPPES ARE AVAILABLE IN A RANGE OF MATERIALS TO SUIT THE LENGTH OF SERVICE LIFE REQUIRED:

STILCOR pipes, manufactured from galvanized steel, the material used for the majority of drainage culverts across Australia for over 70 years. The steel has a galvanized coating of Z600 in accordance with AS 2041, the Australian Standard governing ‘buried corrugated metal structures’.

ALUCOR pipes are manufactured from Aluminium alloy Alclad material, manufactured in accordance with ASTM B745 to grade 3004-H34. Traditionally used for the manufacture of culverts being installed in corrosive ground conditions, aluminium is ideal for installation in acidic environments or ground conditions with relatively high concentrations of soluble salts.

ALUCOR II pipes are manufactured from aluminized steel strip of grade G230 minimum with an aluminized (type II) coating, in accordance with ASTM A929, which combines the strength of traditional steel pipes with the anti-corrosion properties of aluminium.

POLYCOR pipes are manufactured from Polyethylene-laminated galvanized steel which combines the traditional benefits of corrugated steel pipes – high strength to weight, ease of handling and speed of installation – with the excellent chemical resistance and durability properties of polyethylene.

Intensive studies have shown that POLYCOR pipes can provide a service life of in excess of 100 years even when installed in extreme ground conditions.

PERMACOR pipes are manufactured from mild, or black, steel. This material is used only when a short life-span is required for temporary culverts, for example, or when pipes are being installed vertically as permanent, or sacrificial, liners in bored piling applications.
We have two state-of-the-art mobile CMP production mills especially developed for on-site production, the first of their type outside North America. Each consists of two trailers: the first trailer contains a decoiler, corrugating mill and run-out track ingeniously designed to sit within each other for transportation; the second trailer contains all the support plant required including a generator, control room and tooling.

For large-scale infrastructure projects, projects in remote areas or when very large diameter pipes are required (for the bored pile foundations under wind farm generators, for example) we can take our production plant & equipment directly to a client’s project site. Delivery costs can be drastically reduced, pipes supplied more quickly and in longer lengths, with subsequent savings in installation time and costs.

The plants have been designed from the outset to meet the most stringent safety standards. All pipes are manufactured at standard factory height. All moving parts are fitted with safety guards and the plant operator works behind a light curtain. The mills have been independently certified as meeting in full the requirements of the Mines Safety and Inspection Regulations 1995 Act – an Australian first.

We have a comprehensive range of support plant including large capacity forklift trucks, mobile site offices, generator sets and purpose-built pipe support systems. Providing we can obtain supplies of water and fuel we are entirely self-sufficient.

While our mobile mills set new standards in on-site safety they are only as good as our most important asset – the people that operate them. We pride ourselves on our safety-first practices and on the continuous training that our employees receive.
Our production teams, including plant operators and their support crew, are regularly certified for competency in their various responsibilities, are subject to regular medical and safety checks and have been approved to operate on mine sites operated to the most stringent safety standards by some of the world’s leading resource and engineering businesses.

We follow well-established production systems and procedures. Our HSE standards are comprehensive and our Quality Assurance programme is designed to provide full traceability from steel mill to finished product.

The Roundel team has manufactured many thousands of meters of pipe on production sites that have ranged from congested city centre, to lush jungle, to remote desert, across Australia and in South East Asia. And we’re proud to have set new standards in site safety along the way.
Corrugated metal pipes are ideal for stormwater management systems. The range of diameters available, ready availability in long lengths, their structural integrity combined with light weight and resulting speed of installation all combine to provide the most cost-effective and flexible long-term solutions for managing excessive stormwater.

Whether your need is to harvest rainwater, to temper the destructive energy from excessive stormwater, to retain for controlled discharge or simply to store water for subsequent sub-surface infiltration, corrugated metal pipes provide maximum flexibility and unrivalled value for money.

Structures can be fabricated in galvanized steel, aluminium or in PE-laminated steel. Drinking water-quality liners can be added if required. A full range of manholes, access shafts, inspection chambers, silt sumps, inlet and outlet connections, ladders, couplers, bends and cap ends are available to order. All factory made and ready for fast installation on site.

A full range of flow regulators and filtration devices are also available.
In addition to our corrugated pipes we manufacture spiraltube pipes with a smooth-wall interior when smooth flow of air or water is required. These are available in two forms: ribbed, for use as drainage and irrigation pipes and for reinforced light-weight service ducting; and plain, for use as traditional circular ducting and as formwork or voidformers.

SPIRALTUBE DUCTING

Our range of spiraltube includes ducting made from galvanized steel, aluminium or stainless steel. A full range of fittings is available including bends, T-pieces, reducers, junctions and cap ends.

CORRUGATION PROFILES

PRODUCT SPECIFICATIONS:

Diameter range: currently 300mm to 2500mm
Profiles: plain, ribbed and corrugated
Material thickness: from 0.5mm up to 2.5mm
**HYDRORIB** pipes provide a lightweight structured wall pipe system for non-pressure drainage and irrigation applications. The pipes are manufactured from PE-laminated galvanized steel and feature a triple-rib exterior profile, either 9.5mm or 13mm high depending upon diameter, to provide added strength. The polyethylene lamination ensures resistance to corrosion and abrasion.

The **AGRIRIB** pipe system is similar to the HYDRORIB product but features integral socket-and-spigot couplers with a rubber ring seal, ideal for non-pressure and low-head enclosed irrigation applications. A wide range of fittings is available for the system including bends, T-pieces and reducers.

Our ribbed pipes are available in diameters ranging from 300mm up to 900mm.
Corrugated plate structures consist of individual plate sections (corrugated and curved) which are bolted together to form an integrated load-bearing structure.

Structures can be supplied in a wide range of corrugation profiles and shapes, including full round pipe, arch or pipe-arch, elliptical, underpass or long-span shapes.

Sizes range from small structures of a few metres up to large bridges and underpasses with spans in excess of 16m carrying railway or heavy mining plant loads. Even larger structures, or structures subject to particularly heavy loads, can be designed using the Composite Beam System.

Individual plates are delivered to site on pallets for assembly. Installation is a relatively fast and straightforward process providing simple guidelines are followed.

We offer a full design service on our range of corrugated-plate and composite beam system structures including structural and hydraulic designs to all of the established Australian and international design standards for buried corrugated metal structures and bridges.

Designs use both ring-compression theory and limit states design. For larger structures finite element analysis can also be provided when required. We also provide a comprehensive support service for your installation contractor.
The Composite Beam System combines the benefits of corrugated-plate structures with the strength of reinforced concrete ribs which are cast on site to form an integral part of the finished structure.

This allows the construction of structures with wider spans (in excess of 20m) and/or subject to heavier loads, such as those imposed at mine stockpiles, while retaining the advantages of corrugated-plate structures: the ease of delivery to site, the speed of installation and subsequent savings in time and money.

The CBS system can be incorporated into our full range of corrugation profiles from 150 x 50 up to our Bridge-Plate, at 400 x 150mm the strongest profile available.

The system consists of a steel reinforcement bar assembly installed across the corrugations around the circumference of the arch. The capping plates are then installed to “close off” the rib profile prior to concreting. The plates are installed and concreted in stages to allow the concrete to be vibrated, ensuring the full integrity of the pour. The CBS ribs can be placed at varying centres to suit the structural requirements of the finished structure.
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