



# Reader User Guide

## ISO-6000 Series Race Reader

Version 1.00 11/09/2009

**IMPORTANT! This User Guide must be read in conjunction with Reader, prior to use.**

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N13429



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## REGULARITY NOTICES AND CONFORMITY



### Information to the user (FCC Part 15.105)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encourage to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

### Modification warning (FCC Part 15.21)

Warning: Any changes or modifications not expressly approved by Aleis could void the user's authority to operate this equipment.

### Canada

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



This device has been tested and meets the Electromagnetic Compatibility requirements for EN300 330



This device has been tested and meets the Electromagnetic Compatibility requirements for CISPR 11

### Antenna Warning

This device has been designed to operate with the antennas listed below. The ISO-6000 Series Readers are only approved with the detachable antennas below. In accordance with RSS-GEN Issue 2 June 2007 Section 7.1.4 and FCC Part 15.21, antennas not included in this list are strictly prohibited for use with this device.

Aleis Part Number	Antenna Size	Antenna Description
4028	1200mm x 600mm	Loop antenna
4027	1200mm x 400mm	Loop antenna
4026	900mm x450mm	Loop antenna
4025	600mm x 400mm	Loop antenna
4024	500mm x 400mm	Loop antenna

**IMPORTANT**  
*Must be read prior to using system*  
**HANDLING INSTRUCTIONS**

The following instructions must be wholly adhered to or permanent damage to the antenna/reader and/or permanent data loss can occur. Non-conformance to the handling and operating instructions will immediately void all warranties for the antenna/reader and software.

1.     **WARNING:** All Aleis warranties will be immediately voided if this reader is used in any way with Hyperterminal.
2.     Cattle must be in single file to be read successfully by the reader.
3.     During transportation, readers must be protected from shock in a padded case or box.
4.     For maximum performance, batteries must be charged before and after use.
5.     Have only one system at a time switched on.
6.     Do not hose or submerge antenna/reader in water.
7.     Use only a very lightly damp cloth to clean antenna/reader.
8.     Do not use chemicals to clean antenna/reader.
9.     Do not drop reader boxes as electronics are contained within.
10.    All boxes with seals are to be kept sealed.
11.    Do not remove any VOID stickers from readers.
12.    Do not drill holes in antenna.
13.    The ISO-6000 Series Race System must be mounted on wood when installed as per instructions set down in Section 2.0 of this manual.
14.    Aleis Conditions of Sale apply.

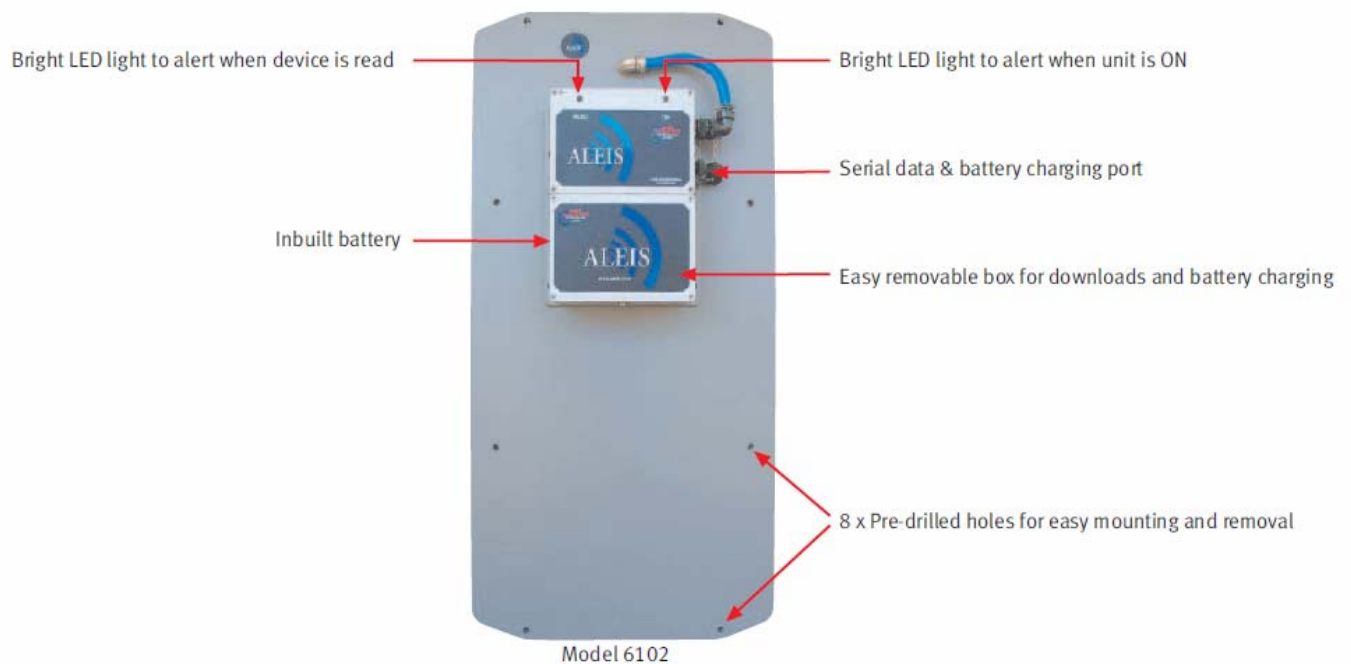
## 1.0 THE ALEIS ISO-6000 SERIES RACE SYSTEM

### The ISO-6000 series is available in different configurations

ISO-6101	with No Batteries
ISO-6101BT	with No Batteries and Bluetooth (pre-approved)
ISO-6101EXP	with No Batteries and 9000 exp board fitted
ISO-6101HM-EXP	with No Batteries, Hard Mounted Box and 9000 exp board fitted
ISO-6101HM-EXP-CLK	with No Batteries, Hard Mounted Box and 9000 exp board and Clock fitted

ISO-6102	Unit with Batteries
ISO-6102BT	Unit with Batteries and Bluetooth (pre-approved)
ISO-6102EXP	Unit with Batteries and 9000 expansion board fitted.
ISO-6102EXP-CLK	Unit with Batteries, 9000 expansion board and Clock fitted

ISO-610Multi-A	Master with No Batteries, Hard Mounted Box, Master Clock and sockets fitted
ISO-610Multi-B	Slave with No Batteries, Hard Mounted Box and sockets fitted



## 2.0 MOUNTING THE ALEIS ISO-6000 SERIES RACE SYSTEM

### New Yards

Correct rail measurements are required so only one set of holes at the top and one set at the bottom of the Antenna need in the centre of rails. See diagram below

### Existing Yards

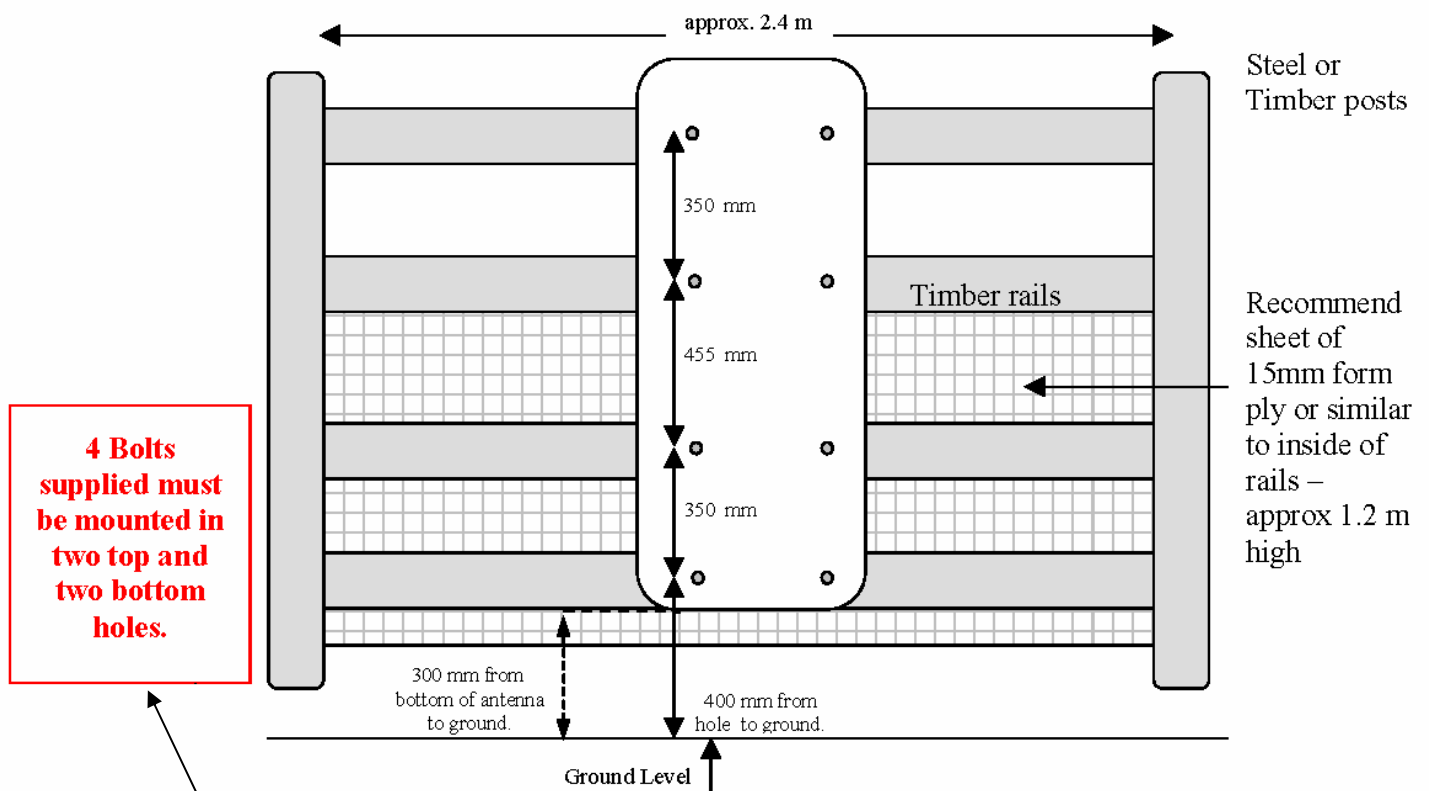
Four sets of holes are available on Antenna to allow for variations in existing yards or loading ramps. See diagram below

### Antenna Position

As NLIS tags go on the offside of the animal, it is recommended the Antenna is placed on the offside of the race.

**The antenna must be fitted to timber rails. Steel posts are acceptable, but not a full steel frame or sheet steel. This applies only to the panel to which the antenna reader is attached.**

**Recommended Race Width = 710mm maximum**



### ANTENNA MOUNTING MEASUREMENTS

Bottom of Antenna to be mounted 300 mm from ground where animal actually stands. Antenna bolt hole spacings are marked on diagram above. Holes are pre-drilled in antenna.

**DO NOT DRILL HOLES IN ANTENNA YOURSELF.** 10.10.01

### **3.0 PREPARATION FOR USE**

When you have mounted your Aleis ISO-6000 Series Race Reader, and you are ready to use it, please ensure the following steps are closely followed:

- When inserting or attaching a new electronic RFID device into or on an animal, keep all other electronic RFID devices a minimum of 3 meters away from the Aleis ISO-6000 Series Race Reader. This will ensure you only read the device you are inserting or attaching.
- Keep computers a minimum of 3 meters away from the Aleis ISO-6000 Series Race Reader.
- Securely fasten the computer lead into your scale indicator or computer – screw the connectors into place.
- Make sure the batteries you are using are fully charged.(Battery models only)

### **4.0 WARNINGS**

- Never open the reader box.
- Never drill the antenna.
- Some magnetic fields will affect reading, such as some computers, computer monitors, electric motors and generators – this can be checked by watching the ON light on the reader. This light must be blinking freely and evenly; if it is pulsating, and your read range has diminished, then the reader is being interfered with.

### **5.0 CARE AND MAINTENANCE**

- Charge batteries after every use. Only use fully charged batteries.
- Keep all spare electronic RFID devices away from the Aleis ISO-6000 Series Race Reader.
- Protect computer and power leads from animals (such as parrots) if the system is left in the yards.
- Treat the system with care; Aleis has built this system for the cattle yards, but it is an electronic unit and must be treated accordingly.
- Keep all reader connectors clean and screw covers on fittings when not in use.
- **MOST IMPORTANT:** Aleis' customers are our highest priority, and if you have any queries, please feel most welcome to contact your Aleis distributor.

## **6.0 METHODS OF CONNECTION**

There are two general methods of connecting your Aleis ISO-6000 Series Race System.

### **6.1 Direct connection with your scale indicator:**

The Aleis ISO-6000 Series Race Reader is compatible with all scale indicators accepting the standard RFID format from a reader. You may need to contact your scale indicator manufacturer for exact setup instructions.

There is no setup required on the reader end – simply plug in your reader to your scale indicator by plugging the 9-pin female plug into the 9-pin male plug on your scale indicator.

### **6.2 Direct connection with your computer:**

The ISO-6000 Series Race Reader can also link directly with your computer. The Aleis ISO-6000 Series Race Reader is compatible with all major herd management programs accepting a standard real-time RFID from a reader. You may need to contact your herd management software provider for exact setup instructions.

There is no setup required on the reader end – simply plug in your reader to your computer by plugging the 9-pin female plug into the 9-pin male plug on the back of your computer.

### **6.3 Interface Protocol**

When you are setting up the ISO-6000 Series Race Reader to read directly into your scale indicator or computer, you may be asked for the 'interface protocol' by the scale indicator manufacturer or software provider. These settings are as follows:

- Baud Rate: 9600
- Data Bits: 8
- Parity: None
- Stop Bits: 1
- Communication: ASCII Serial



## 7.0 BATTERY CHARGING (BATTERY MODELS)

The batteries in the unit can be charged by using the connector on the side of the unit.

### 7.1 Battery Charging Requirements

- Charge unit using supplied charger only.
- Do not use Reader while it is being charged.
- Ensure when fitting charger connector that the male and female groove are aligned and pushed in correctly.

### 7.2 Battery Charging Tips

- To ensure that the battery receives a full charge, charge the unit overnight (8hrs).
- To verify that the unit is charging, ensure that the light is ON, on the battery charger.
- Battery is **not** to be run dead flat.
- The battery does not have to be flat to be charged. It is recommended that after each use, the unit is charged.
- Readers can be left on charge – once the reader batteries have been charged, the charger will then automatically convert to trickle charge and no damage will be done to the batteries. (A transient protector is recommended to help prevent spikes through the power line damaging the charger and reader. Aleis part number 4059)
- Charge the battery prior to use and every 10-12 weeks. If the unit is not used for a long period of time, recharge unit overnight prior to use.

### 7.3 Battery Charging Options

An optional Car Cigarette Lighter Battery Charger is available.

## 8.0 OPTIONAL POWER

- Only use high quality, *regulated linear power supplies* for 240/12 volt use or solar panels. Please contact Aleis with any queries, you may have.
- Switch mode power supplies are NOT suitable and must not be used.

## 9.0 USING EXTERNAL POWER SUPPLY

If you purchased a ISO-6000 Race System without batteries, then you will need to use an external supply to power the reader. An external 12 volt battery can be used, or an external regulated linear power supply. **DO NOT USE A SWITCH MODE POWER SUPPLY.**

## 10.0 READER SPECIFICATIONS

<b>General</b>	
Frequency:	134.2Khz
RFID Compatibility:	ISO 11784 & 11785 HDX and FDX-B
User Interface:	RS-232 Serial Port/Bluetooth Option.
RS-232 Port:	9600bps, 8 Data Bits, No Parity, 1 Stop Bit.
RFID Code output:	Decimal or Hex
Antenna Tuning:	Auto or Manual
User Options:	EEPROM control via RS-232 Serial
Battery Power:	12 Volt DC
Agency Certifications:	USA - FCC Part 15.101, 15.209 Class B, Canadian - RSS-210, RSS-Gen, ICES-003 AS/NZS- CISPR 22

<b>Physical</b>	
Dimensions:	Max size with Antenna 4028 1200mm x 600mm x 150mm
Weight:	Antenna 21Kgs, With Batteries???
Material:	Antenna- PVC, Box- Polycarbonate
Operating Temperature:	-20c to +60c
Storage Temperature:	-40c to +85c
Humidity:	0 to 100%
Hermeticity:	IP67

<b>Performance</b>	
HDX:	>1600mm using Allflex HDX/HP tag in best orientation.
FDX:	>1200mm using Allflex FDX-B/HP tag best orientation.
Read Rate:	Wired Sync mode 10 times/second, Wireless Sync mode 9 times/second.
Read Error Rate:	less than 1 in 1 million.
Radiated Field Strength:	116.4 dBuV/m at 10 meters

**11.0 ALEIS CONDITIONS OF SALE**

1. In these conditions:
  - (1) 'Vendor' means Aleis Pty Ltd ACN 081 411 734 of Cnr Old Rosevale & Jandowae/Kingaroy Roads, Jandowae, Queensland, 4410 which is the seller of the goods
  - (2) 'Factory' means the Vendor's principal place of business at Cnr Old Rosevale & Jandowae/Kingaroy Roads, Jandowae, Queensland, 4410.
  - (3) 'Purchaser' means the customer(s) described overleaf which is the purchaser of the goods.
  - (4) 'Goods' means the products and, if any, services specified overleaf
  - (5) Nothing in these conditions shall be read or applied so as to exclude, restrict or modify or have the effect of excluding, restricting or modifying any condition, warranty, guarantee, right or remedy implied by law (including the Trade Practices Act 1974) and which by law cannot be excluded, restricted or modified.
  - (6) Words denoting the singular number only include the plural number and vice versa; where reference to any gender includes every other gender and words denoting individuals include corporations
2. These conditions (which shall only be waived in writing signed by the vendor) shall prevail over all conditions of the purchaser's order to the extent of any inconsistency.
3. The goods and all other products sold by vendor are sold on these terms and conditions.
4. Unless previously withdrawn, vendor's quotation is open for acceptance within the period stated therein or, when no period is so stated, within thirty (30) days only after its date. The vendor reserves the right to refuse any order based on this quotation within 7 days after the receipt of the order.
5. The cost of any special packing and packing materials used in relation to the goods shall be at the purchaser's expense notwithstanding that such cost may have been omitted from any quotation.
6. The purchaser waives any claim for shortage or discrepancy of any goods delivered if a claim in respect thereof has not been lodged with vendor within seven (7) days from the date of receipt of goods by the purchaser.
7. All specifications, drawings, and particulars of weights and dimensions submitted by vendor are approximate only and any deviation shall not be taken to vitiate any contract with vendor or form grounds for any claim against vendor. The descriptions, illustrations and performances contained in catalogues, price lists and other advertising matter do not form part of the contract of sale of the goods. Where specifications, drawings or other particulars are supplied by purchaser, vendor's price is made on estimates of quantities required. Should there be any adjustments in quantities above or below the quantities estimated by vendor and set out in a quotation, then any such increase or decrease shall be adjusted on a unit rate basis according to unit prices set out herein.
- 8.1 Any performance figures given by vendor are estimates only. Vendor shall be under no liability for damages for failure to attain such figures unless specifically guaranteed in writing and any such written guarantee shall be subject to the recognised tolerances applicable to such figures.
- 8.2 The Purchaser acknowledges that frequency from other products, for example computer equipment, videos, loud speakers and other metal products may affect the goods' performance. The Vendor gives no warranty that in the event of any frequency disruption the goods will remain fit for the purpose intended. The Vendor will not be liable for any claims made as a result of other equipment or other things interfering with the performance of the goods whether on account of frequency disruption or otherwise.
9. Delivery dates mentioned are an estimate only and vendor shall not be liable for late delivery or non-delivery and under no circumstances shall the vendor be liable for any loss, damage or delay occasioned to the purchaser arising from late or non-delivery or late installation of the goods.
10.
  - (1) Unless specifically agreed otherwise in writing, delivery shall be ex-factory. The Purchaser must make its own arrangements for the transport of the goods from the factory and any assistance that the Vendor gives in transporting the goods shall not effect the rights of the Vendor under this Clause. Vendor is not responsible for any loss or damage to goods in transit.
  - (2) Risk in the goods shall pass to the Purchaser upon dispatch of goods from Factory.
11.
  - (1) Vendor's liability for goods manufactured by it is limited to making good any defects by repairing the same or at vendor's option by replacement, within a period not exceeding twelve calendar months after the goods have been dispatched (or installed by Aleis) provided that:
    - (a) defects have arisen solely from faulty materials or workmanship;
    - (b) the goods have not received maltreatment, inattention or interference;
    - (c) accessories of any kind used by the purchaser are manufactured by or approved by vendor;
    - (d) the seals of any kind on the goods remain unbroken; and
    - (e) the defective parts are promptly returned free of cost to vendor.
    - (f) all freight is paid by the purchaser.
  - (2) If goods are not manufactured by vendor the guarantee of the manufacturer thereof shall be accepted by the purchaser and is the only guarantee given to purchaser in respect of the goods.
  - (3) Vendor shall not be liable for and purchaser releases vendor from any claims in respect of faulty or defective design of any goods supplied unless such design has been wholly prepared by vendor and the responsibility for any claim has been specifically accepted by vendor in

writing and in any event vendor's liability hereunder shall be strictly limited to the replacement of defective parts in accordance with para 11(1) of these conditions.

- (4) Except as provided herein, all express and implied warranties, guarantees and conditions under statute or general law as to merchantability, description, quality, suitability or fitness of the goods for any purpose or as to design, assembly, installation, materials or workmanship or otherwise are hereby expressly excluded and vendor shall not be liable for physical or financial injury, loss or damage or for consequential loss or damage of any kind arising out of the supply, layout, assembly, installation or operation of the goods or arising out of vendor's negligence or in any way whatsoever.

12. Vendor's liability for a breach of a condition or warranty implied by Div 2 of Pt V of the Trade Practices Act 1974 (other than s 69) is hereby limited to:

- (1) in the case of goods, any one or more of the following:
- (a) the replacement of the goods or the supply of equivalent goods;
  - (b) the repair of the goods;
  - (c) the payment of the cost of replacing the goods or of acquiring equivalent goods;
  - (d) the payment of the cost of having the goods repaired; or
- (2) in the case of services:
- (a) the supplying of the services again; or
  - (b) the payment of the cost of having the services supplied again.

13. Vendor's liability under s 74H of the Trade Practices Act 1975 is expressly limited to a liability to pay to the purchaser an amount equal to:

- (1) the cost of replacing the goods;
- (2) the cost of obtaining equivalent goods; or
- (3) the cost of having the goods repaired, whichever is the lowest amount.

14. Unless otherwise stated all prices quoted by vendor are net, exclusive of tax. Prices quoted are those ruling at the date of issue of quotation and are based on rates of freight, insurance, customs duties, exchange, shipping expenses, sorting and stacking charges, cartage, rate of weighs, cost of materials and other charges affecting the cost of production ruling on the date the quotation is made and any alterations thereto either before acceptance of or during the currency of the contract shall be to the purchaser's account.

15. The purchase price in relation to goods shall be payable and payment or balance thereof shall be made immediately at time of order, or otherwise as agreed in writing.

16. Vendor reserves the following rights in relation to the goods until all accounts owed by the purchaser to vendor are fully paid:

- (1) legal ownership of the goods;
- (2) to enter the purchaser's premises (or the premises of any associated company or agent where the goods are located) without liability for trespass or any resulting damage and retake possession of the goods; and
- (3) to keep or resell any goods repossessed pursuant to (2) above;

If the goods are resold, or products manufactured using the goods are sold, by the purchaser, the purchaser shall hold such part of the proceeds of any such sale as represents the invoice price of the goods sold or used in the manufacture of the goods sold in a separate identifiable account as the beneficial property of vendor and shall pay such amount to vendor upon request. Notwithstanding the provisions above vendor shall be entitled to maintain an action against the purchaser for the purchase price and the risk of the goods shall pass to the purchaser upon delivery.

17. Any property of the purchaser under vendor's custody or control shall be entirely at the purchaser's risk as regards loss or damage caused to the property or by it.

18. Vendor reserves the right to make a reasonable charge for storage if the purchaser does not take delivery of goods within fourteen days of notification that the goods are ready for collection.

19. Vendor shall not be under any obligation to accept goods returned by the purchaser and will do so only on terms to be agreed in writing in each individual case.

20. All goods to be supplied by vendor shall be as described on the quotation overleaf and the description on such order modified as so agreed shall prevail over all other descriptions including any purchaser's specification or inquiry.

21. No order may be cancelled except with consent in writing and on terms which will indemnify vendors against all losses.

22. The contract for sale of the goods is made in the state of Queensland and the parties agree to submit all disputes arising between them to the courts of such state at any court competent to hear appeals therefrom.

23. The Purchaser shall pay all and any import duties, levies or imports and/or any sales, use, excise, gross receipts, value added, goods and services tax, property or other taxes or duties of any kind whatsoever assessed upon or relating in any way to the goods ordered by the Purchaser irrespective of the person, nation, state or authority requiring payment thereof.

24. If the Vendor has not paid for any goods on the due date specified in this Agreement, without prejudice to any other right or remedy, all outstanding money shall bear interest on daily balances until paid at the rate of 1.5% per month and such money together with all interest shall be recoverable forthwith from the Purchaser.

The Purchaser charges as a fixed charge with the payment of all monies now or in the future becoming owing hereunder all his property both real and personal (other than property referred to in *Section 262 (i) of the Corporations Law*) and as a separate charge charges all his other property with the payment of all monies now or in the future becoming owing hereunder, provided that this second charge will be a floating charge in respect of the Purchaser's current assets but otherwise will be a fixed charge. The Purchaser irrevocably makes, nominates, constitutes and appoints, and in the place and stead of the Purchaser puts and deposes the Vendor and (if the Vendor is a corporation) the directors, general manager and secretary for the time being of the Vendor jointly and each of them severally to be the Attorney or Attorneys of Purchaser at any time after default as aforesaid has been made (sufficient proof of which will be the Statutory Declaration of the Attorney or Attorneys or either or any of them) to do all such things as may be required to consent to any Caveat or other like instrument under the Real Property Legislation of any other jurisdiction in the form prepared by the Vendor's Solicitor over any or all of the Purchaser's property and to execute a mortgage and/or charge or other like instrument under the Real Property Legislation of any other jurisdiction in such form and containing such terms and conditions as the Vendor may require over any or all of the Purchaser's property and from time to time to appoint a substitute or substitutes and such appointment or appointments at pleasure to revoke and another or other substitute or substitutes to appoint and generally to do, execute and perform any act, deed, matter or thing for that purpose as fully and effectually as the Purchaser could do and the Purchaser agrees to ratify and confirm all and whatever the said Attorney or Attorneys or any substitute or substitutes lawfully do or cause to be done for that purpose.

The End Ver10/05/01