

With thanks to:

Deepak Sharma Operation Manager – PGGI ABB (China) Limited

Photography Rio Tinto www.riotinto.com Pages Front Cover

Turquoise Hill www.turquoisehill.com Page 11

DISCLAIMER

This brochure has been prepared specifically for customers of the publisher and as a general reference only. B&R Enclosures Pty Ltd engages in a policy of continuous development and improvement of its products and reserves the right to alter, add and/or delete specifications of any products or equipment and change of manufacturing location without notice and without incurring liability. The publisher and any party associated with the production of this catalogue do not accept any responsibility or liability whatsoever (to the extent permitted by law) for any inaccuracy, error, misinformation or misleading statements, whether negligently caused or otherwise, contained in this publication. This publication is protected by copyright and may not be reproduced or copied (using any method of reproduction or copying), sold, transmitted, circulated or otherwise forwarded to third parties, in whole or part, without prior written consent of the author. All registered trademarks and product names appearing herein are the property of the respective owners.



TABLE OF CONTENTS

The B&R Engagement loop	
Electrical Integration	
Our Customers	
Project Profile	8
Our Locations	
Material Selection	
Paint Colours	
Standard Product Solutions	
Solutions	
Flat Roof Light & Power Distribution Panels (FRE)	16
Zinc Coated Steel, Traffic White RAL9010, IP42, Internal Use, Lifting Lugs.	
Sloping Roof Light & Power Distribution Panels (SRE)	18
316SS, N4, IP56, External Use, Lifting Lugs.	
Sloping Roof Local Control Stations (LCS)	20
316SS, N4, IP65, External Use, Lifting Lugs.	
Sloping Roof Local Control Stations (DSW)	22
316SS, N4, IP65, External Use, Mine Site Disconnecting Switch, Lifting Lugs.	
Sloping Roof Local Control Stations (DSW-INT)	24
316SS, N4, IP65, External Use, Mine Site Disconnecting Switch, Viewing Window,	
Lifting Lugs.	0/
Flat Roof Single Door Enclosures (PLC/IOP)	26
Zinc Coated Steel, Traffic White RAL9010, IP55, Internal Use, Lifting Lugs, Metal Ware Parts Only	
Sloping Roof Double Door Enclosures (PLC/IOP)	28
316SS, N4, IP65, External Use, Lifting Lugs.	
Flat Roof Single Door Fire Alarm Panels (FAP)	3(
316SS, N4, IP66, External Use, Viewing Window, 75mm High Galvanised Plinth,	
Lifting Lugs, Padlockable Door.	
Sloping Roof Single Door Fire Alarm Panels (FAP)	31
316SS, N4, IP66, External Use, Viewing Window, Lifting Lugs, 350mm High	
Stainless Steel Plinth, Padlockable Door.	
Sloping Roof Double Door Fire Alarm Panels (FAP)	32
316SS, N4, IP66, External Use, Viewing Window, Lifting Lugs, 75mm High	
Galvanised Plinth, Padlockable Door.	

A Message from B&R,

Since 1955, B&R Enclosures has been manufacturing, designing and supplying enclosure solutions to a variety of markets and projects. Today, we remain a 100% Australian family-owned and operated local manufacturer with facilities in Brisbane, Adelaide, Sydney, and Melbourne as well as Suzhou (China) and Dammam(Saudi Arabia), supported by an international network of sales and distribution centres.

Our team of dedicated state, national and international business development staff work at branch level with specifiers, end users and contractors to ensure the market for our products continues to grow and that our brand offering is specifically selected for major projects, such as Oyu Tolgoi, the primary target for this catalogue.

The outcomes delivered with the Oyu Tolgoi project illustrates the value of B&R's focus on investigating and understanding our customers' application, scoping and delivering an agreed total solution all within an ongoing trusting relationship. With a unique understanding of local conditions, we are able to offer 'engineered system solutions' to meet your specific project requirements.

No matter the size and criteria of your project, B&R have your electrical, data, mining, infrastructure and industrial enclosure needs covered. The success of B&R Enclosures centers around the people who dedicate themselves to providing you with the very best quality enclosure solutions on the market.

We look forward to working together with you to provide enclosure solutions that meet all of your requirements.

Please contact a member of our team at a location nearest to you to discuss your best product solution.

Yours sincerely,

Tim Bridges Dan Bridges Ben Bridges Co-CEO Co-CEO Co-CEO



The B&R Engagement loop



In order to engage successfully with our project customer's, B&R representatives follow a structured service plan.

We take our responsibility seriously, and pride ourselves on the collaborative and open relationships we undertake with our project customers. This makes sure we understand and provide value, because our customer's needs vary greatly across the different types of project applications and technical requirements.

- Our first action before we reach out or after a customer had reached out to us, is to INVESTIGATE. This includes researching the customer/ project and any other relevant stakeholders.
- The second action of UNDERSTAND is when we speak to the customer at length about their issue and challenges for current and future projects.
 From these discussions we can begin to see how our product solutions can solve the customer's issues and challenges.
- We take our newly acquired customer knowledge back to our in-house design, engineering and estimating teams for our third action to SCOPE the work, and prepare quotes and drawings as required.

- 4. Once we have created the tailored offer for the customer we process any variations which might be needed before our fourth action of AGREE. With everything signed off we move into manufacturing and equipment integration.
- Once the product solution is ready our fifth action of **DELIVER** takes place. We make sure the goods are shipped to site according to agreed upon timelines.
- To learn from our experience and confirm our service level we take an **EVALUATION** action. This is when we reflect on the job we've completed and depending on the size and extent of the order we will seek customer feedback as well.



Electrical Integration

B&R Enclosures have built a reputation for providing customers with the highest standard of custom designed, manufactured and supplied complete enclosure solutions.

At B&R, we not only manufacture and supply a range of enclosure solutions, but we also customise the standard product design to be 100% fit-for-purpose, innovative and efficient.

B&R's team of designers work with clients on unique engineering challenges to provide innovative, efficient solutions delivered with short lead times and complex project specifications. B&R's design and engineering division work with customers to customise any standard product to ensure you have a product to suit project requirements.

B&R prides itself on continually searching for the best and most innovative solutions across multiple industries, designing and supplying standard or complete engineered solutions into a vast array of applications.

Offering customers a complete electrical integration service via our team of qualified electricians and electrical engineers, allows us to build complete component sub-systems that deliver total system functionality prior to final installation.

B&R Enclosures have established and fully certified multiple value add divisions which are located within our facilities in Brisbane, Adelaide, Sydney, Suzhou (China) and Dammam (Saudi Arabia).

All B&R products are backed by staff with local knowledge, experience of markets, environmental conditions, project requirements, electrical regulations, cultural customs and language dialects.

Solutions include standard off-the-shelf products, customised and assembled-to-order solutions, fully engineered enclosures, electrical wiring services and supply chain management.

Our Services include:

- · Door cutouts
- · Cable entries
- · Terminals and controls fitted
- · Viewing windows
- · Customised wiring
- · Vent kits / sunshades fitted or punched
- · Assembled-to-order / fitting of accessories
- · Design and engineering

What this means for our customers:

- · Custom designed solutions to suit project requirements
- Shorter lead times
- · Available for small or large quantities
- · One point of contact
- · Standard product straight off the floor







Industrial

Process Automation & Control Junction & Marshalling Power Distribution Motor Control Climate Control

Data & ICT

Networking & Server Containment & Caging High Security/SCEC Cooling & Efficiency Small Office/Home Office Telecommunications Solutions Power Distribution

Our Customers



Some of the largest companies around the world use B&R as a major supplier including Rio Tinto and BHP Billiton. B&R Enclosures fosters longstanding partnerships with our clients, ensuring that we understand their evolving needs and business drivers.

Our Customers Include

- · Rio Tinto
- 3W Networks
- ABB
- PAN Electric
- Alstrom
- · Aramco, Saudi Arabia
- AramcoCaltex
- Arrow Energy
- · Atlantic, Gulf & Pacific Company
- BHP Billiton
- · Krohne Malaysia
- Boeing
- Solomon Islands Electricity Authority
- BP
- Emerson
- NBN Co
- Invensys
- QANTAS
- SendanTelstra

Project Experience Includes

- · APLNG Project, Malaysia
- Macedon Gas Plant, Malaysia
- Emerson, Saudi Arabia
- · Ichthys LNG Project, Australia
- SABIC, Saudi Arabia
- South Jeddah Pumping Stations, SWTP, Saudi Arabia
- Steeline Warehouse, Australia
- · Output Based Aid, Solomon Islands
- Aramco, Saudi Arabia

Markets Include

- Mining
- Industrial
- · Renewable Energy
- · Oil and Gas
- Transport
- Defence
- · Industrial Process Control
- · Infrastructure; and more

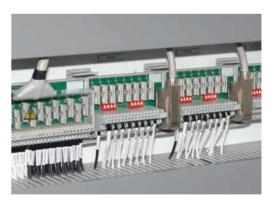
"

These products are built to Rio Tinto's highest quality standard using ABB and other equipment.

Deepak Sharma Operations Manager PGGI ABB (China) Limited







	Optiol	Commer	α
1 (0010	OHIGH		Olai

Power Distribution Group / Commercial Metering Home Networking

Hazardous Areas

Exe & Exd Enclosures Lighting Weatherproof Plug & Socket Outlets

Project Profile

Oyu Tolgoi Mine Gobi Desert, Mongolia

The Oyu Tolgoi mine is a combined open pit and underground mining project in Mogolia's South Gobi Desert approximately 550km south of the capital, Ulaanbaatar and 80km north of the Mongolia-China border. It primarily produces copper but also small amounts of gold, silver and other metals.

The Oyu Tolgoi mine is jointly owned by the Government of Mongolia (34%) and Rio Tinto (66%). Rio Tinto have been managing the mine since 2010. Oyu Tolgoi mine has been producing concentrate using ore mined from the surface through open pit mining. Due to 80% of the copper being found deep under the surface during exploration drilling, the mine has now expanded to include underground mining.

Based on recommendations by Rio Tinto and a previous working relationship with ABB, B&R Enclosures Australia, was approached by ABB to assist with the design and engineering of enclosures for use at the Oyu Tolgoi mine. This included the manufacture, assembly, wiring, dual language labelling, testing, quality control and project management of supply.

Worley is responsible for providing engineering, procurement and construction management (EPCM) services to implement the material handling systems for the new underground mine and associated infrastructure, delivered over a five to seven-year period. Worley approached ABB regarding the supply of PLC panels, local control stations and custom power distribution boards, each of which needed to be suitable for use outside, in the underground mine and in buildings located on the mine site.

Power Distribution Boards

Custom power distribution boards are designed, engineered, manufactured and wired with electrical technology integration, which was proudly carried out at B&R Australia and is now being carried out by our facility in Suzhou, China. Due to its close proximity, it ensures customer convenience with improved turn around times. Various departments within B&R work closely with technical teams at Worley and Rio Tinto Australia, to provide products that comply with Rio Tinto and Australian standards. This includes wiring to Mongolia's colour coding standard.

Worley supplied initial drawings of the power distribution boards to ABB as they had specific requirements of what the enclosures needed to be, how they should function and where they would be used. These enclosures were based on the specific requirements needed to meet the needs of Rio Tinto for the design of power distribution boards and related enclosures. As with the PLC panels and local control stations, the power distribution boards were also to be used throughout the mine site.

B&R Enclosures worked with ABB to assist them with the final design based on Worley specifications. The two types of custom power distribution boards included strict size dimensions on the

B&R is Worley's go-to for achieving Rio Tinto C2 compliance for control panels.



overall product and an IP56 protection rating. A dedicated terminal for field connections was also required while still having the testing facilities at the board along with the ability to withstand the harsh mining environment.

A modified design of B&R's Bowen enclosure was used for the outside and underground applications as it is manufactured from 316 stainless steel, has an IP56 protection and comes with a 40 degree sloping roof designed to prevent water or sediment build-up.

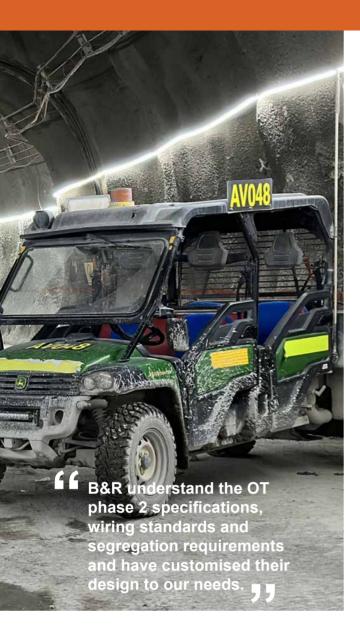
The power distribution boards used within buildings on the mine site are based on Monarch IP which is manufactured from zinc coated steel, has an IP42 protection and is powdercoated RAL9010 Traffic White.

B&R's design and engineering team were successful in manufacturing and testing a power distribution board that allowed internal connections for earth leakage testing facilities as well as a dedicated terminal for field connections all within the compact size dimensions Worley specified.

PLC Panels & Local Control Stations

All wiring and electrical integration for the PLC panels and local control stations is carried out at the B&R facility located in Suzhou, China. The Suzhou facility utilises methods, knowledge and experience from the Australian founding company to provide full-service solutions including standard off-the-shelf products, customised and assembled-to-order solutions, fully engineered enclosures, project management, electrical wiring and supply chain management.

The design for the PLC panels and local control stations to be used outside and underground were a combination between B&R's Bowen Series and Monarch IP enclosures. The 30 degree sloping roof is designed to prevent water and sediment build-up. The sloping roof



was then combined with the Monarch IP enclosure. Manufactured from 316 stainless steel with an IP66

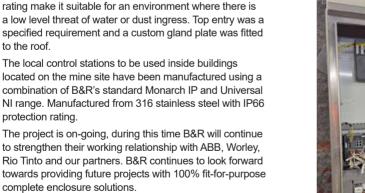
The PLC panels which are being used inside buildings on the mine site, is a modified iLINQ bayable cabinet. Manufactured from 1.5mm galvanised steel (frame), 1.6mm zinc coated steel (cladding) and an IP54 protection















Our Locations

B&R Enclosures have built a reputation for providing customers with a high standard of design, manufacture and supply of complete enclosure solutions.



Australia

Brisbane (QLD)

Global head office, manufacturing, sales and warehousing

Sydney, NSW

Hazardous manufacturing, sales and warehousing

Adelaide, SA

Manufacturing, sales and warehousing

Townsville (QLD), Newcastle (NSW), Melbourne (VIC), Perth (WA) Sales and warehousing

Launceston (TAS), Darwin (NT)
Distribution

New Zealand

Auckland

Sales and warehousing

Saudi Arabia

Dammam

Hazardous manufacturing, sales and warehousing

China

Suzhou

Manufacturing, sales and warehousing



Material Selection

At B&R, we choose only the best materials when manufacturing our enclosures. This superior quality ensures you can trust the product and us.

Aluminium

B&R Enclosures aluminium products are manufactured using a medium strength alloy material that has excellent corrosion resistance and weldability.

Aluminium can be used successfully in coastal applications as well as other general industrial environments. It is also used in food processing applications and can be supplied without finishing to ensure the reliability of materials.

B&R use a variety of aluminium types including 5052 and 5251 with the differences being in the yield strength of the material. All B&R standard products are manufactured using materials that have a temper of H32.

Yield Strength

Yield strength refers to the indication of maximum stress that can be developed in a material without causing distortion. It is the stress at which a material exhibits a specified, permanent deformation and is an approximation.

In design applications, the yield strength is often used as the upper limit for allowable stress that can be applied. This is specifically important in applications that require precise dimensional tolerances.

316 Stainless Steel

The main benefits of using stainless steel are its structural strength, aesthetic appeal and high level of corrosion protection due to naturally occurring chromium-rich oxide film formed on the surface of the steel.

Grade 316 stainless steel can be used successfully in coastal locations where many other grades may experience corrosion due to the higher levels of chloride present in the environment. As the preferred material used in food processing applications, it can be easily cleaned and

resists many organic chemicals, dyes and a wide variety of inorganic chemicals.

B&R Enclosures use only the highest quality 316 stainless steel materials, manufacturing and finishing techniques and are accredited by the Australian Stainless Steel Development Association (ASSDA).



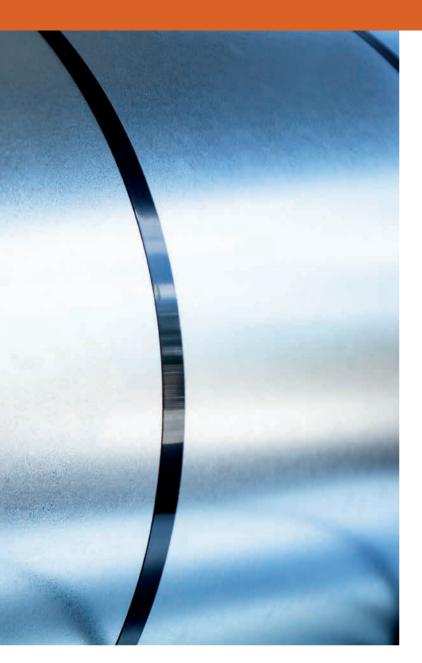
Surface Finish

We finish our stainless steel products in a way that is aesthetically pleasing and also ensures superior protection. We apply an N4 surface finish, with a maximum Ra or $0.4\mu m$. This Ra rating is a key factor in the corrosion protection and 'cleanability' of our products.

Surface corrosion, often referred to as 'tea staining' is common along the coastal fringe and high salinity areas of Australia. Tea staining is a discolouration of the metal surface which is unsightly, but does not affect the structural integrity of the enclosure.

Zinc Coated Steel

We use primarily zinc coated steel for our B&R branded products. This is a matte, hot dipped, zinc iron alloy which when combined with chemical pretreatment and powdercoat finish offers the best possible corrosion protection for enclosure systems.















Pretreatment

A B&R branded zinc coated steel enclosure is punched, bent, welded and ground on the way through our factory. Following fabrication it goes through an automated process which consists of the following:

- Alkaline cleaner
- · Reticulated freshwater rinse
- Iron phosphate coating
- · Reticulated freshwater rinse
- · Demineralised water with polymer additive

Tiltration tests are also conducted to ensure that the material meets the required specifications.

Powdercoat Finish

The powdercoat paint is applied at an average coating thickness of $100\mu m$ for a ripple finish and $70\mu m$ for a gloss. The minimum coating thickness is $60\mu m$ on the exterior of the enclosure and $25\mu m$ on the interior (conforms to AS/NZS 4506:1998).

Testing

The powdercoat paint finish is tested extensively to the following standards and ensure consistent paint finish, both quality and colour, across our range of enclosures.

- Powdercoating thickness test (AS1580.108.1:1994)
- · Cure Test, solvent resistance method (AS/NZS4506:1998)
- Adhesion, cross cut test (AS/NZS 1580.408.4:1993)
- Paint colour comparison test (AS2700:1996)

Paint Colours

We offer a range of standard powdercoat colours on all of our enclosure products. These colours are based on industry standards and allow us to offer our customers a range of products that are easily identifiable in multiple applications. Colour changes to standard product is an optional extra and other colours are available on request so contact us today for more information.



Standard Product Solutions



We offer a range of standard enclosures that have been delivering safety for people and protection of equipment for over 60 years.

Industrial





Forte FR



Polynova Series



Pilbara SP

Field FC

Connector TE

Connector



Universal DD Suitable for inc



Hedland PH 316 Stainless Stee



Monarch IP

Finucane FI

Bowen Series 316 Stainless Steel For harsh environments where increased



Lambert LB



Miner ME



iLINQ High quality, modular bayable enclosure system that is versatile and simple to install.



Monarch SMB



Incline SR



Data ICT



Telecom BD



Ausrack Wall onyX

Cable Management

Ausrack Floor Server onyX



Ausrack+ Network 19" racking cabinet designed to accommodate medium to large passive patching networks and active communication equipment.



Ausrack TxD



Ausrack Power Rails

Ausrack COr Class C & B cabinets for ensuring protection

Ausrack Patch A 2-post frame designed to provide a functional solution where accessibility is a main



Home Networking







Cold Aisle Containment

Ausrack IP



Hazardous Areas





GRP Control Stations



GRP Terminal Boxes

Plug & Socket Outlets

Cable Glands & Accessories











Residential Commercial

















Hinged Switchboard Frames



CT Metering





Oyu Tolgoi Light & Power Distribution Panels (FRE)

Flat Roof Internal Enclosures





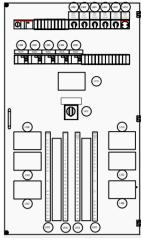




- Designed to suit light and power specifications of the Oyu Tolgoi mine site.
- · Suitable for internal applications.
- 110° door opening.
- · Fully welded construction.
- · Fixed internals specific to enclosures.
- One (1) tonne rating lifting lugs.
- · External wall mounting brackets.
- · Integrated earth leakage test circuit.
- · Manufactured from 1.6mm thick zinc coated steel.
- · Powdercoated Pure White RAL9010.

Comes standard with:

- · Steel internals powdercoated RAL9010 or B33
- · 3mm stainless steel gland plate mounted externally
- Chrome swing handle padlockable
- Earth strap kit



Hinged Escutcheon OTF48P1408/FF (Fully fitted)

AC DISTRIBUTION PANELS

RATED VOLTAGE	SERVICE VOLTAGE	AUXILIARY VOLTAGE	NO. OF PHASES
400V	400V / 230V	230V, 50Hz	3



ORDERING GUIDE (FULLY FITTED OUT)

	Dim	ensions (r	nm)	_		
Part Number	Height (A)	Width (B)	Depth (C)	No. of Poles	Horizontal Rows of 33-Modules of DIN	No. of RCBO up to 40Amp
OTF12P1208/FF	1200	800	400	12	2	11
OTF24P1208/FF	1200	800	400	24	2	23
OTF48P1408/FF	1400	800	400	48	2	47
OTF72P1414/FF	1400	1400	400	72	6	71

Fully fitted enclosures come standard with:

- MCCB 250A, 3-Pole Main Switch with locking handle and terminal cover
- Encapsulated chassis 250A MCB
- Earth & Neutral set sized as required
- Surge protection type T2 40kA 3P + N
- Fuse disconnector 3P + N with fuse
- RCBO 1P 6-40A 10kA C-curve 30mA Type AC BL Neutral
- MCB 1P 2A 10kA C-curve in 12 / 24 / 48-pole for control
- MCB 1P 6A 10kA C-curve in 72-pole for control
- Locking device for MCB in OFF Position
- · Emergency light test unit
- Integrated earth leakage test circuit
- Terminal block, double tier, 16mm² max terminal with end plate and end stopper



Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

Oyu Tolgoi Light & Power Distribution Panels (FRE) Flat Roof Internal Enclosures



ACCESSORI	ES (OPTIONAL)				
Product	Description	OTF12P1208	OTF24P1208	OTF48P1408	OTF72P1414*
Plinths	Channel iron				
1 1111113					
Gland Plates	6mm Aluminium	•	•	•	•
Giariu Flates	3mm Brass	•	•	•	•
Lock	Keylockable L-Handle (keyed to 92268)	•	•	•	•
Clock	Astronomical Clock Circuit	•	•	•	•



Light Kits

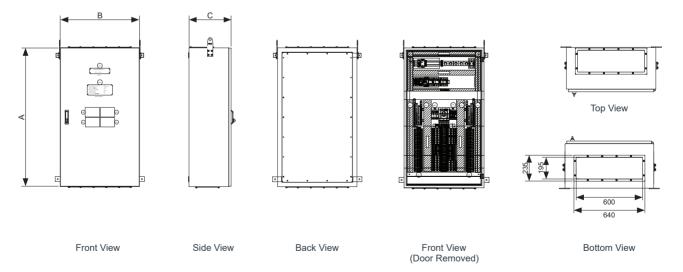
High output, small form factor LED lighting. Up to 4 units can be daisy chained from the one power supply. Allows for the opening of full height swing frames or escutcheons when fitted to the roof. The optional PIR movement sensor can be used for power efficiency as a door switch. All light kits can be mounted directly onto 19" rack rails. In the absence of 19" rack rails a mounting kit is available to suit the enclosure size.



			Inclusions		Required	Mounting				
Part Number	LED Light	Power Supply	Splitter S	Switch	Connectors	IPLKB04 I	PLKB06	IPLBK08	Width (mm)	Optional
BRLED300	•	•		•					400	BRMOT PIR Motion Sensor

Please note that mounting bracket is required for light kits.

TECHNICAL DRAWINGS (FULLY FITTED OUT)



^{*} OTF72P1414 requires a custom made plinth.

Oyu Tolgoi Light & Power Distribution Panels (SRE)

Sloping Roof Outdoor Enclosures





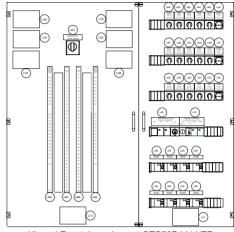




- Designed to suit light and power specifications of the Oyu Tolgoi mine site.
- Suitable for use in the harshest conditions found at the Oyu Tolgoi mine site and other applications.
- 40° sloping roof with 40mm overhang.
- 110° door opening.
- Fully welded construction.
- · Fixed internals specific to enclosures.
- · One (1) tonne rating lifting lugs.
- · External wall mounting brackets
- · Integrated earth leakage test circuit.
- · Manufactured from 2mm 316 stainless steel.
- · N4 surface finish.

Comes standard with:

- Steel internals powdercoated RAL9010 or B33
- 3mm stainless steel gland plate mounted externally
- · Padlockable swing handle
- · Earth strap kit
- · Lifting lugs



Hinged Escutcheon Layout OTS72P1414/FF (Fully fitted)

AC DISTRIBUTION PANELS

RATED VOLTAGE	SERVICE VOLTAGE	AUXILIARY VOLTAGE	NO. OF PHASES
400V	400V / 230V	230V, 50Hz	3



ORDERING GUIDE (FULLY FITTED OUT)

	Dim	ensions (mm)	_		
Part Number	Height (A)	Width (B)	Depth (C)	No. of Poles	Horizontal Rows of 33-Modules of DIN	No. of RCBO up to 40Amp
OTS12P1208/FF	1200	800	400	12	2	11
OTS24P1208/FF	1200	800	400	24	2	23
OTS48P1408/FF	1400	800	400	48	2	47
OTS72P1414/FF	1400	1400	400	72	6	71

Fully fitted enclosures come standard with:

- MCCB 250A, 3-Pole Main Switch with locking handle and terminal cover
- Encapsulated chassis 250A MCB
- Busbar, Earth & Neutral set sized as required
- Surge protection type T2 40kA 3P + N
- Fuse disconnector 3P + N with fuse
- RCBO 1P 6-40A 10kA C-curve 30mA Type AC BL Neutral
- MCB 1P 2A 10kA C-curve
- Locking device for MCB in OFF Position
- Emergency light test unit
- Integrated earth leakage test circuit
- Terminal block, double tier, 16mm² max terminal with endplate and end stopper
- Panel light LED 12V with motion sensor
- Anti-condensation heater 300W 230V AC/DC
 Thermostat -10 + 80 AL 110/250V AC NC
- Humidistat 0-60°C 35-95% RH 1CO
- MCB 1P 2A 10kA C-curve in 12 / 24 / 48-pole for control
- MCB 1P 6A 10kA C-curve in 72-pole for control



Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

Oyu Tolgoi Light & Power Distribution Panels (SRE) Sloping Roof Outdoor Enclosures



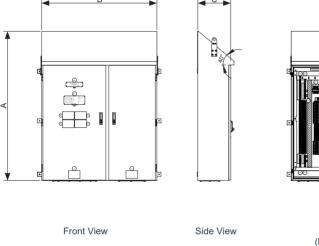
ACCESSORIES	TS12P1208/S	S24P1208/S	TS48P1408/S	TS48P1608/S	TS72P1414/S	
Product	Description	OT	O	OT	O	OT
Plinths	Channel iron	•	•	•		•
Gland Plates	6mm Aluminium	•	•	•	•	•
Giariu Flates	3mm Brass	•	•	•	•	•
Clock	Astronomical clock circuit	•	•	•		•

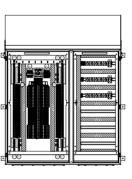
^{*} OTS72P1414 requires a custom made plinth.



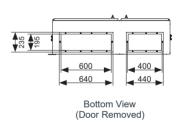
IPPC294

TECHNICAL DRAWINGS (FULLY FITTED OUT)





Front View (Door Removed)



Oyu Tolgoi Local Control Station (LCS)

Sloping Roof Mine Site



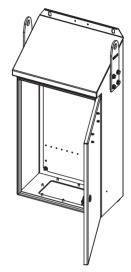




- · Designed to suit the specifications of the Oyu Tolgoi mine site.
- Suitable for use in the harshest conditions.
- 30° sloping roof to prevent build up of solids.
- 110° door opening.
- · Fully welded construction.
- · Fixed internals specific to enclosures.
- One (1) tonne rating on lifting lugs (except 300x200x150)
- · External wall mounting brackets.
- Manufactured from 2.0mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel internals powdercoated B33
- · 3mm brass gland plate mounted externally
- 250Amp (12-pole) earth bar to suit maximum 125mm² cable
- 1/4 turn lock
- · Earth strap kit
- Lifting lugs (except 300x200x150)



SELECTION GUIDE Dimensions (mm)							Emergency Stop	Pushbutton	Indicator Light	ate Switch	12-Pole Earth Bar	s of DIN	ng Lugs
Part Number	Туре	Height	Width	Depth	10 x	20 x	Eme	Pus	Indic	Rotate	12-F	Rows	Lifting
OTSLCS1S/FF	LCS1	300	200	150	•		1		1	1	•	1	
OTSLCS2S/FF	LCS2	300	200	150	٠			2	1	1	•	1	
OTSLCS3S/FF	LCS3	300	200	150	•			1	1	1	•	1	
OTSLCS4S/FF	LCS4	300	200	150	•			3	1	1	•	1	
OTSLCS5S/FF	LCS5	300	200	150	•		1	2	1	1	•	1	
OTSLCS6S/FF	LCS6	300	200	150	•				1	1	•	1	
OTSLCS7S/FF	LCS7	300	400	200				2	1	_		2	

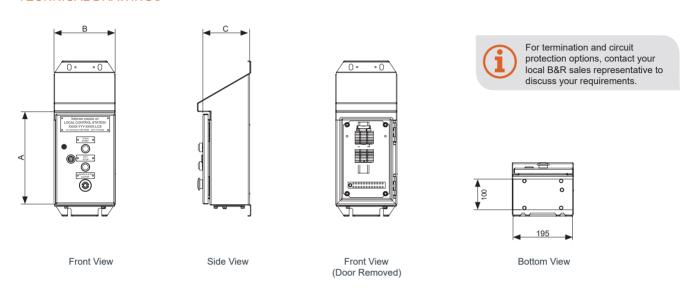


Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

Oyu Tolgoi Local Control Station (LCS) Sloping Roof Mine Site

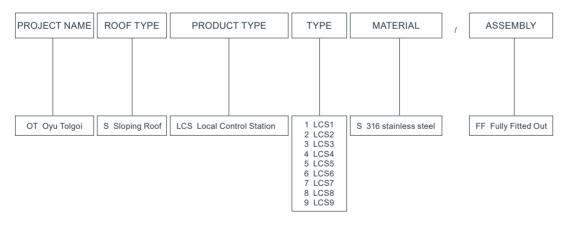


TECHNICAL DRAWINGS



PART NUMBER CONVENTION

There are a number of standard configurations available with this offer. Each type has a unique identification / part number which can be used to identify its core characteristics. Below is an example that explains each part number.



Example:

ОТ	S	LCS	1	S	/	FF
OYU TOLGOI	SLOPING ROOF	LCS PRODUCT TYPE	LCS1	316 STAINLESS STEEL	1	FULLY FITTED OUT

Oyu Tolgoi Local Control Station (DSW)

Sloping Roof Mine Site Disconnecting Switch



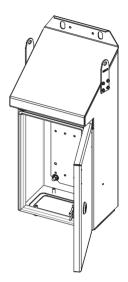




- · Designed to suit the specifications of the Oyu Tolgoi mine site.
- Suitable for use in the harshest conditions.
- 30° sloping roof to prevent build up of solids.
- 110° door opening.
- · Fully welded construction.
- · Fixed internals specific to enclosures.
- One (1) tonne rating on lifting lugs.
- · External wall mounting brackets.
- · Manufactured from 2.0mm thick 316 stainless steel.
- · N4 surface finish.

Comes standard with:

- Steel internals powdercoated B33
- · 3mm brass gland plate mounted externally
- · DeadEasy current sensing device
- 1/4 turn lock
- Earth strap kit
- Lifting lugs



SELECTION GUIDE (FULLY FITTED OUT) Dimensions (mm)							asy	5mm Terminals	x 2.5mm Terminals	2.5mm Terminals	ency Stop	ntton	Earth Bar	of Poles	of DIN	Lugs
Part Number	Туре	Height (A)	Width (B)	Depth (C)	125A Isolator	200A Isolator	Dead Easy	10 x 2.5mm	20 × 2.	25 x 2.	Emergency	Pushbutton	12-Pole	No. of B	Rows of DIN	Lifting I
OTSDSW1S/FF	DSW1	400	300	150	•		1	•				_	•	3 or 4	2	•
OTSDSW2S/FF	DSW2	400	400	200	•		1	•			1	2	•	3 or 4	2	•
OTSDSW3S/FF	DSW3	600	400	200		•	1		•		1	2	•	3 or 4	2	•
OTSDSW4S/FF	DSW4	600	400	200		•	1		•		1	4	•	3 or 4	2	•
OTSDSW5S/FF	DSW5	400	400	200	•		1		•		1	3	•	3 or 4	2	•
OTSDSW6S/FF	DSW6	400	400	200	•		1		•			2	•	3 or 4	2	•
OTSDSW7S/FF	DSW7	600	400	200	•		1		•			4	•	3 or 4	2	•
OTSDSW8S/FF	DSW8	400	400	200	•		1			•	1	2	•	3 or 4	2	•
OTSDSW9S/FF	DSW9	600	400	200	•		1		•		_	2	•	3 or 4	2	•

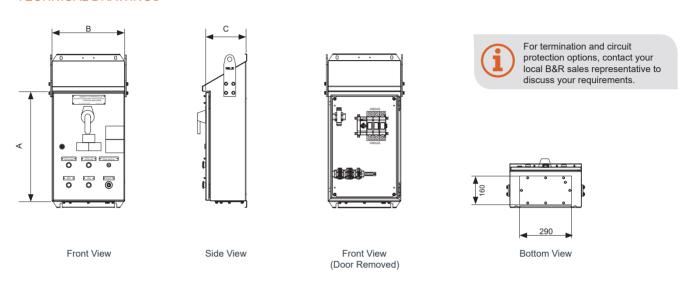


Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

Oyu Tolgoi Local Control Station (DSW) Sloping Roof Mine Site Disconnecting Switch

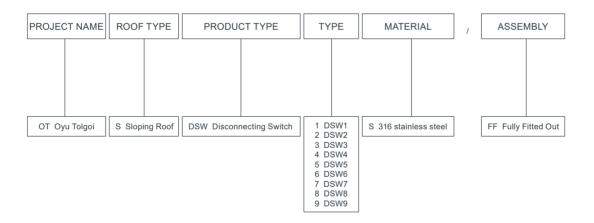


TECHNICAL DRAWINGS



PART NUMBER CONVENTION

There are a number of standard configurations available with this offer. Each type has a unique identification / part number which can be used to identify its core characteristics. Below is an example that explains each part number.



Example:

ОТ	S	DSW	1	S	/	FF
OYU TOLGOI	SLOPING ROOF	DSW TYPE	DSW1	316 STAINLESS STEEL	1	FULLY FITTED OUT

Oyu Tolgoi Local Control Station (DSW-INT)

Sloping Roof Mine Site Disconnecting Switch with Viewing Window



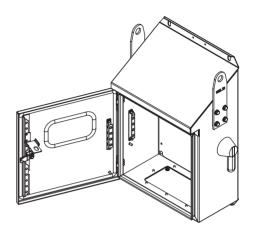




- · Designed to suit the specifications of the Oyu Tolgoi mine site.
- Suitable for use in the harshest conditions.
- · Side operated handle / switch.
- 110° door opening with front door viewing window.
- · Visual load break switch contacts.
- 30° sloping roof to prevent build up of solids.
- Fully welded construction.
- · Fixed internals specific to enclosures.
- One (1) tonne rating lifting lugs.
- · External wall mounting brackets.
- · Manufactured from 2.0mm thick 316 stainless steel.
- · N4 surface finish.

Comes standard with:

- Steel internals powdercoated B33
- · 3mm brass gland plate mounted externally
- 250Amp (12-pole) earth bar to suit maximum 125mm² cable
- ¼ turn lock
- Earth strap kit
- Lifting lugs



ORDERING GUID	E				itor	ıtor	`	n Terminals	n Terminals	n Terminals	y Stop	د		Window	Earth Bar	Se	<u>z</u>	s
5	_		nensions (n		125A Isolator	200A Isolator	Dead Easy	10 x 2.5mm	20 x 2.5mm	25 x 2.5mm	Emergency	Pushbutton	Interlock	Viewing W	12-Pole E	No. of Poles	Rows of DIN	Lifting Lugs
Part Number	Туре	Height	Width	Depth	_	7		_	7	7	Ш	_С	<u> </u>	>	_			
OTSDSW1VS/FF	DSW1	400	400	200	•		1	•				_	1	1	•	3 or 4	2	•
OTSDSW2VS/FF	DSW2	400	400	200	•		1	٠			1	1	1	1	•	3 or 4	2	٠
OTSDSW3VS/FF	DSW3	600	400	200		•	1		•		1	2	1	1	•	3 or 4	2	•
OTSDSW4VS/FF	DSW4	600	400	200		•	1		•		1	4	1	1	•	3 or 4	2	•
OTSDSW5VS/FF	DSW5	400	400	200	•		1		•			3	1	1	•	3 or 4	2	•
OTSDSW6VS/FF	DSW6	400	400	200	٠		1		•			2	1	1	•	3 or 4	2	•
OTSDSW7VS/FF	DSW7	600	400	200	•		1		•			4	1	1	•	3 or 4	2	•
OTSDSW8VS/FF	DSW8	400	400	200	•		1			•	1	2	1	-	•	3 or 4	2	•
OTSDSW9VS/FF	DSW9	600	400	200			1		•		_	2	1	_		3 or 4	2	

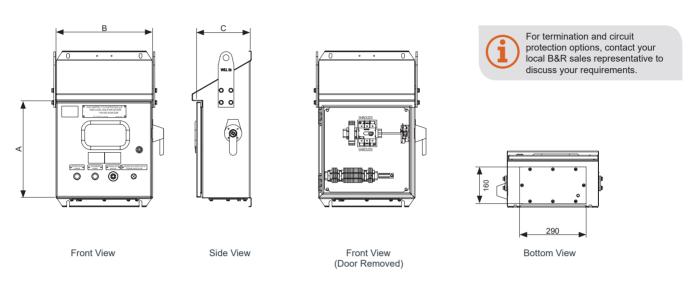


Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.



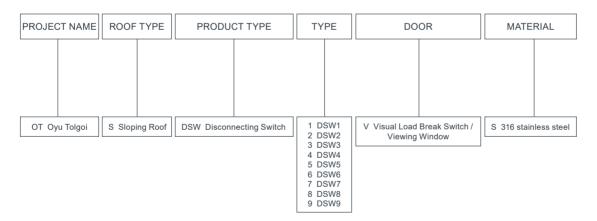


TECHNICAL DRAWINGS



PART NUMBER CONVENTION

There are a number of standard configurations available with this offer. Each type has a unique identification / part number which can be used to identify its core characteristics. Below is an example that explains each part number.



Example:

ОТ	S	DSW	1	V	S	/	FF
OYU TOLGOI	SLOPING ROOF	DSW PRODUCT TYPE	DSW1	VISUAL LOAD BREAK SWITCH / VIEWING WINDOW	316 STAINLESS STEEL	1	FULLY FITTED OUT

Oyu Tolgoi Single Door (PLC/IOP) Flat Roof Indoor Environments



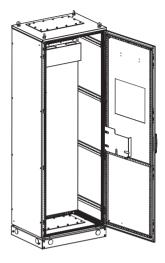




- Designed to suit the specifications of the Oyu Tolgoi mine site.
- Based on standard iLINQ product range (refer to iLINQ catalogue).
- Frame construction.
- Fixed internals specific to enclosures.
- Manufactured from 1.6mm thick zincanneal.
- Powdercoated Traffic White RAL9010.

Comes standard with:

- Steel internals powdercoated B33
- · 6mm brass gland plate mounted internally
- Earth strap kit



SELECTION GUIDE

Dimensions	(mm)
	_

Part Number	Height	Width	Depth
LQE140806	1400	800	600
LQE160806	1600	800	600
LQE180806	1800	800	600
LQE200806	2000	800	600
LQE220806	2200	800	600
OTFPLC2208	2200	800	600
OTFPLC2208-HMI	2200	800	600

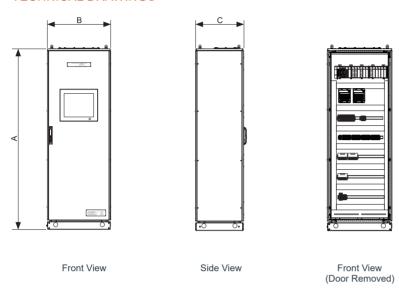


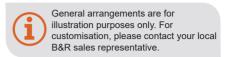
Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

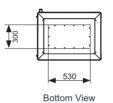
Oyu Tolgoi Single Door (PLC/IOP) Flat Roof Indoor Environments



TECHNICAL DRAWINGS

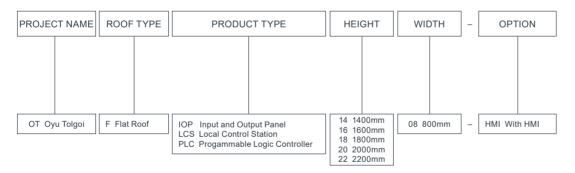




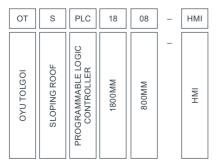


PART NUMBER CONVENTION

There are a number of standard configurations available with this offer. Each type has a unique identification / part number which can be used to identify its core characteristics. Below is an example that explains each part number.



Example:



Oyu Tolgoi Double Door (PLC/IOP) Sloping Roof Outdoor or Underground Environments



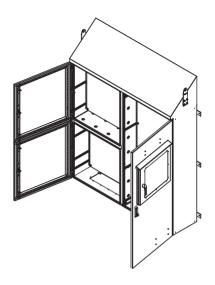




- Designed to suit the specifications of the Oyu Tolgoi mine site.
- Suitable for use in the harshest conditions.
- 40° sloping roof to prevent build-up of solids.
- 180° door opening.
- · Fully welded construction.
- · Fixed internals specific to enclosures.
- One (1) tonne rating lifting lugs.
- · External wall mount brackets.
- · Manufactured from 2.0mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel internals powdercoated B33
- 6mm brass gland plate mounted internally
- 3-point locking
- Earth strap kit
- · Lifting lugs



SELECTION GUIDE

D:	/·\
Dimensions	(mm)

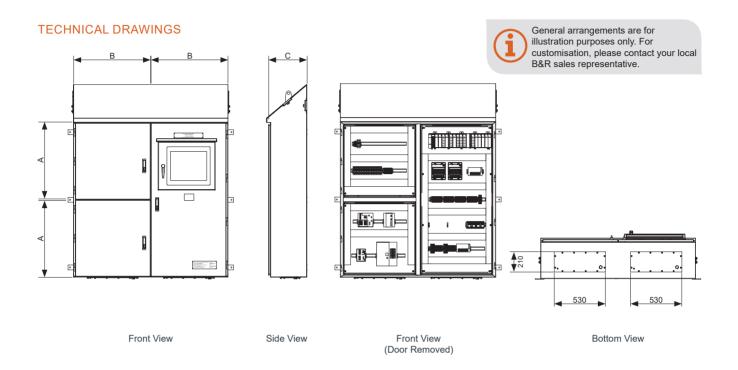
		,	
Part Number	Height	Width	Depth
OTFPLC0806/S	800	600	300
OTFPLC1814/S	1800	1400	400
OTFPLC1616/S	1600	1600	400
OTFPLC1616/S-HMI	1600	1600	400
OTFPLC1814/S-HMI	1800	1400	400



Panels are ONLY supplied fully fitted with all switchgear as listed above. Variations (to standard configurations) will be considered subject to specification review.

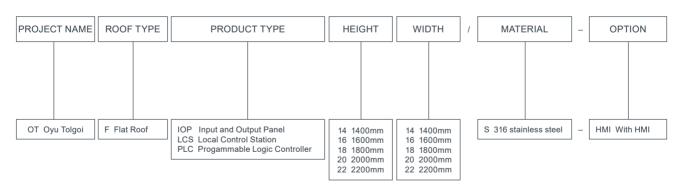
Oyu Tolgoi Double Door (PLC/IOP) Sloping Roof Outdoor or Underground Environments



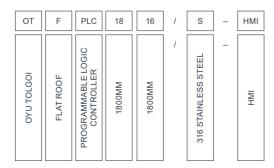


PART NUMBER CONVENTION

There are a number of standard configurations available with this offer. Each type has a unique identification / part number which can be used to identify its core characteristics. Below is an example that explains each part number.



Example:



Oyu Tolgoi Single Door Fire Alarm Panels (FAP)

Flat Roof with Full Viewing Window



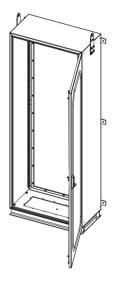




- Designed to suit the specifications of the Oyu Tolgoi mine site.
- To house 2 x fire alarm panels plus detector systems.
- 110° door opening.
- Fully welded construction.
- One (1) tonne rating lifting lugs
- External wall mounting brackets.
- Manufactured from 2.0mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel internals powdercoated traffic white RAL9010 or mist blue B33
- Metal mounting pan mounted internally
- 6mm brass gland plate mounted externally Full size polycarbonate viewing window
- Stainless steel swing handle padlockable
- 75mm hot dip galvanised channel iron plinth
- Earth strap kit
- Lifting lugs

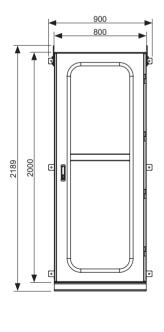


SELECTION GUIDE

	Dimensions (mm)						
Part Number	Height	Width	Depth				
OTFWIN2008/S	2000	800	400				

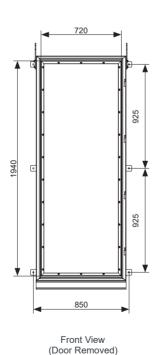
Please note: Part numbers are for metal ware parts only.

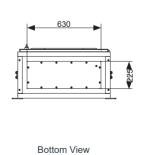
TECHNICAL DRAWINGS





Side View





Front View

Oyu Tolgoi Product Catalogue

Oyu Tolgoi Single Door Fire Alarm Panels (FAP) Sloping Roof with Full Viewing Window









- Designed to suit the specifications of the Oyu Tolgoi mine site.
- To house 2 x fire alarm panels plus detector systems.
- 40° sloping roof to prevent build up of solids.
- 110° door opening.
- · Fully welded construction.
- One (1) tonne rating lifting lugs
- External wall mounting brackets.
- Manufactured from 2.0mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel internals powdercoated traffic white RAL9010 or mist blue B33
- Metal mounting pan mounted internally 6mm brass gland plate mounted externally
- Full size polycarbonate viewing window
- Stainless steel swing handle padlockable
- 350mm stainless steel access plinth
- Earth strap kit
- Lifting lugs

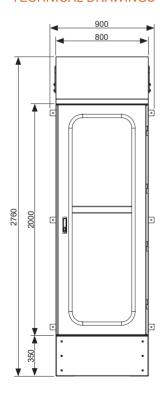


SELECTION GUIDE

	Dimensions (mm)					
Part Number	Height	Width	Depth			
OTSWIN2008/S	2000	800	400			

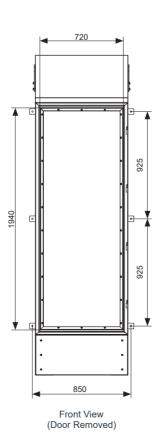
Please note: Part numbers are for metal ware parts only.

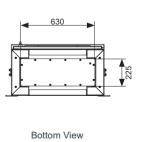
TECHNICAL DRAWINGS



Front View







Side View

Oyu Tolgoi Double Door Fire Alarm Panels (FAP)

Sloping Roof with Full Viewing Window



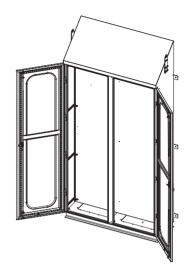




- Designed to suit the specifications of the Oyu Tolgoi mine site.
- To house 3 x fire alarm panels plus detector systems.
- 40° sloping roof to prevent build up of solids.
- 110° door opening.
- Fully welded construction.
- One (1) tonne rating lifting lugs
- External wall mounting brackets.
- Manufactured from 2.0mm thick 316 stainless steel.
- · N4 surface finish.

Comes standard with:

- Steel internals powdercoated traffic white RAL9010 or mist blue B33
- Metal mounting pan mounted internally 6mm brass gland plate mounted externally
- Full size polycarbonate viewing window
- Stainless steel swing handle padlockable
- 75mm hot dip galvanised channel iron plinth
- Earth strap kit
- Lifting lugs

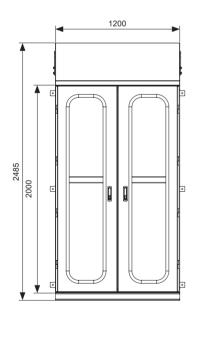


SELECTION GUIDE

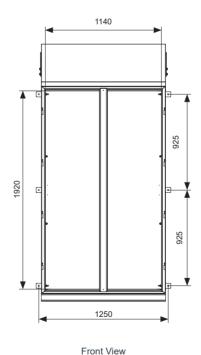
	Dimensions (mm)						
Part Number	Height	Width	Depth				
OTSWIN2012/S	2000	1200	400				

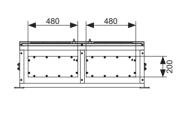
Please note: Part numbers are for metal ware parts only.

TECHNICAL DRAWINGS









Front View

Side View

(Door Removed)

Bottom View

NOTES	B:R

NOTES	

NOTES	B:R

AUSTRALIA

Sales

T: 1300 Enclosures (1300 362 567) E: sales@brenclosures.com.au brenclosures.com.au

QUEENSLAND

Brisbane Manufacturing, Sales & Warehouse 51 Stradbroke Street Heathwood QLD 4110 (PO Box 1151) Browns Plains BC QLD 4118 T: +61 7 3714 1111

E: salesqld@brenclosures.com.au

NORTH QUEENSLAND Townsville Sales & Warehouse Unit 4/ 780 Ingham Road Mount Louisa, QLD 4814 (PO Box 7615) Garbutt QLD 4814 T: +61 7 4727 1900

E: salestvl@brenclosures.com.au

NEW SOUTH WALES NSW & ACT Sales & Warehouse 7 Metters Place Wetherill Park NSW 2164 T: +61 2 9915 9555

E: salesnsw@brenclosures.com.au

NEWCASTLE Distribution Ross Joice Agencies Pty Ltd 109-111 Broadmeadow Road Broadmeadow NSW 2292 T: +61 2 4961 4433

VICTORIA

VIC & TAS Sales & Warehouse 50-52 Sunmore Close Heatherton VIC 3202 T: +61 3 9552 0552

E: salesvic@brenclosures.com.au

TASMANIA Distribution W P Martin Pty Ltd 85 Elizabeth Street Launceston TAS 7250 T: +61 3 6331 5545

SOUTH AUSTRALIA
SA & NT Manufacturing, Sales & Warehouse
505 Grand Junction Road
Wingfield SA 5013
T: +61 8 8417 6222
E: salessa@brenclosures.com.au

NORTHERN TERRITORY Distribution Jewell Distributors Pty Ltd Cnr Hidden Valley & Beaton Roads Berrimah NT 0828 T: +61 8 8947 0870

WESTERN AUSTRALIA
WA Sales Office & Warehouse
6 Montgomery Way
Malaga WA 6090
T: +61 8 6310 4777
E: saleswa@brenclosures.com.au

NEW ZEALAND

Sales

B&R Enclosures Limited T: 0800 Enclosures (0800 362 567) E: sales@brenclosures.co.nz brenclosures.co.nz

AUCKLAND Distribution Matchmaster Unit 6103 Cryers Road East Tamaki Auckland NZ 2013 T: +64 9 265 2097 E: sales@brenclosures.co.nz

CHRISTCHURCH Distribution Matchmaster 17 Washbournes Road Wigram Christchurch NZ 8042 T: +64 3 348 0659 E: sales@brenclosures.co.nz

CHINA

B&R Enclosures (Suzhou) Co. Ltd E: sales@brenclosures.com.cn brenclosures.com.cn

SUZHOU

Manufacturing, Sales & Warehouse South Block, Building 23 Chuangtou Industrial Zone Heshun Road, SIP, Suzhou 215122 PEOPLE'S REPUBLIC OF CHINA T: +86 512 8718 2139 E: sales@brenclosures.com.cn

MIDDLE EAST

Sales B&R Gulf

M: +966 503 496 592

T: +966 381 2869 1 or +966 5034 9659 2

E: sales@brgulf.com.sa

brgulf.com

braulf.com

DAMMAM Manufacturing, Sales & Warehouse B&R Gulf Factory No. 12, Modon Buildings, King Salman Road, Industrial Area 3, Dammam, Saudi Arabia M: +966 503 496 592 T: +966 381 2869 1 or +966 5034 9659 2 E: sales@brgulf.com.sa