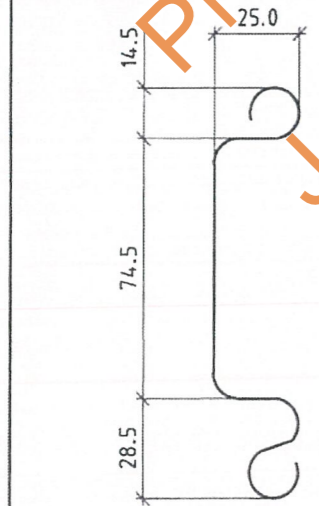


TYPICAL ROLLER SHUTTER ELEVATION (INSIDE VIEW)
SCALE 1:75



TYPICAL ROLLER SHUTTER SLAT
SCALE 1:2

- NOTES:-
- APPROXIMATE COVER WIDTH TO SLAT 100mm.
 - SLAT SHALL BE COLD ROLLED FROM 0.95mm BMT G250 Z275 GALVABOND STEEL STRIP.

DOOR MATERIAL TABLE (C2 RATING)

DOOR WIDTH (mm)	WIND LOCK SPACING	END GAP (mm)	ULTIMATE DESIGN RESISTANCE (kPa)	ULTIMATE REACTIONS (kN/m)	TRUBOLT SPACING (mm)	CHEMSET SPACING (mm)
1500	NIL	10	2.92kPa, -3.37kPa	X=0 Y=2.52	M12@600	M12@600
2000	NIL	10	2.92kPa, -3.37kPa	X=0 Y=3.37	M12@600	M12@600
2500	EVERY 4th SLAT	10	2.92kPa, -3.37kPa	X=4.7 Y=4.21	M12@600	M12@600
2500	EVERY 2nd SLAT	10	2.92kPa, -3.37kPa	X=4.7 Y=4.21	M12@600	M12@600
3000	EVERY 4th SLAT	10	2.92kPa, -3.37kPa	X=12.8 Y=5.05	M12@600	M12@600
3000	EVERY 2nd SLAT	10	2.92kPa, -3.37kPa	X=12.8 Y=5.05	M12@600	M12@600
3500	EVERY 4th SLAT	15	2.92kPa, -3.37kPa	X=16.6 Y=5.89	M12@400	M12@400
3500	EVERY 2nd SLAT	15	2.92kPa, -3.37kPa	X=16.6 Y=5.89	M12@400	M12@400
4000	EVERY 4th SLAT	20	2.92kPa, -3.37kPa	X=20 Y=6.74	M12@400	M12@400
4000	EVERY 2nd SLAT	20	2.92kPa, -3.37kPa	X=20 Y=6.74	M12@400	M12@400
5000	EVERY 2nd SLAT	30	2.92kPa, -3.04kPa	X=23.2 Y=7.60	M12@400	M12@400
6000	EVERY 2nd SLAT	40	2.92kPa, -3.04kPa	X=28.2 Y=9.12	M12@400	M12@400
7000	EVERY 2nd SLAT	45	2.92kPa, -3.04kPa	X=34.9 Y=10.6	M12@200	M12@200
8000	EVERY 2nd SLAT	45	2.92kPa, -3.04kPa	X=43.6 Y=12.2	M12@200	M12@200
8500	EVERY 2nd SLAT	45	2.92kPa, -3.04kPa	X=48.2 Y=12.9	M12@200	M12@200

DOOR MATERIAL TABLE (C3 RATING)

DOOR WIDTH (mm)	WIND LOCK SPACING	END GAP (mm)	ULTIMATE DESIGN RESISTANCE (kPa)	ULTIMATE REACTIONS (kN/m)	TRUBOLT SPACING (mm)	CHEMSET SPACING (mm)
1500	NIL	10	4.30kPa, -4.95kPa	X=0 Y=3.71	M12@600	M12@600
2000	EVERY 4th SLAT	10	4.30kPa, -4.95kPa	X=4.30 Y=4.95	M12@600	M12@600
2500	EVERY 4th SLAT	10	4.30kPa, -4.95kPa	X=10.5 Y=6.18	M12@400	M12@400
2500	EVERY 2nd SLAT	10	4.30kPa, -4.95kPa	X=10.5 Y=6.18	M12@400	M12@400
3000	EVERY 2nd SLAT	10	4.30kPa, -4.95kPa	X=24.2 Y=7.42	M12@400	M12@400
3500	EVERY 2nd SLAT	15	4.30kPa, -4.95kPa	X=28.3 Y=8.66	M12@400	M12@400
4000	EVERY 2nd SLAT	20	4.30kPa, -4.95kPa	X=32.5 Y=9.90	M12@200	M12@200
5000	EVERY 2nd SLAT	30	4.30kPa, -4.47kPa	X=36 Y=11.2	M12@200	M12@200
6000	EVERY 2nd SLAT	40	4.30kPa, -4.47kPa	X=42.9 Y=13.4	M12@200	M12@200
6500	EVERY 2nd SLAT	45	4.30kPa, -4.47kPa	X=46.4 Y=14.5	M12@200	M12@200

DOOR MATERIAL TABLE (C4 RATING)

DOOR WIDTH (mm)	WIND LOCK SPACING	END GAP (mm)	ULTIMATE DESIGN RESISTANCE (kPa)	ULTIMATE REACTIONS (kN/m)	TRUBOLT SPACING (mm)	CHEMSET SPACING (mm)
1500	EVERY 4th SLAT	10	5.81kPa, -6.69kPa	X=0 Y=5.01	M12@600	M12@600
2000	EVERY 4th SLAT	10	5.81kPa, -6.69kPa	X=11.0 Y=6.69	M12@600	M12@600
2500	EVERY 2nd SLAT	10	5.81kPa, -6.69kPa	X=20.1 Y=8.36	M12@400	M12@400
3000	EVERY 2nd SLAT	10	5.81kPa, -6.69kPa	X=36.8 Y=10.0	M12@200	M12@200
3500	EVERY 2nd SLAT	15	5.81kPa, -6.69kPa	X=41.3 Y=11.7	M12@200	M12@200
4000	EVERY 2nd SLAT	20	5.81kPa, -6.04kPa	X=41.1 Y=12.1	M12@200	M12@200
4500	EVERY 2nd SLAT	25	5.81kPa, -6.04kPa	X=46.1 Y=13.6	M12@200	M12@200

X = HORIZONTAL REACTION IN PLANE OF DOOR
 Y = HORIZONTAL REACTION PERPENDICULAR TO PLANE OF DOOR

NOTE: 1. REDUCE THE REACTIONS PROPORTIONATELY WHEN THE CALCULATED DESIGN WIND PRESSURE IS LESS THAN THE ULTIMATE DESIGN RESISTANCE.
 2. FOR ANCHOR TYPE REFER TO DOOR GUIDE FIXING DETAIL ON SHEET 2.

Product name
 ROLLER SHUTTER DOORS WITH WIND LOCKS-GUIDE TYPE 2-COLD FORMED WITH WELDED FLAT BAR

Product Description
 ROLLER SHUTTER DOORS WITH WIND LOCKS - GUIDE TYPE 2

Manufacturer's Name
 MIRAGE DOORS (AUST) PTY LTD
 PH (07) 3713 3000

Design Criteria

- THE INSTALLED ROLLER SHUTTER IMPOSES SIGNIFICANT FORCES ON THE MAIN BUILDING STRUCTURE. THE IMMEDIATE SUPPORTING STRUCTURE MUST BE DESIGNED TO RESIST THE LOADINGS APPLIED AT EACH END OF THE DOOR AS INDICATED IN THE TABLE. THE REACTIONS IN THE TABLE ARE BASED ON THE INDICATED ULTIMATE DESIGN RESISTANCE OF THE DOOR AND MAY BE REDUCED PROPORTIONATELY IF THE CALCULATED DESIGN WIND PRESSURE IS LESS THAN THE DESIGN ULTIMATE RESISTANCE. A SEPARATE SECTION 40 CERTIFICATE SHALL BE OBTAINED COVERING THE IMMEDIATE SUPPORTING STRUCTURE.
- THE RATED DESIGN WIND LOAD RESISTANCE FOR EACH DOOR WIDTH IS AS INDICATED IN THE TABLE. THE STRUCTURAL ENGINEER OR CERTIFIER INVOLVED WITH THE MAIN BUILDING DESIGN SHALL VERIFY THAT THE STATED DESIGN RESISTANCE EXCEEDS THE SITE SPECIFIC DESIGN WIND LOADING.
- THE DOORS HAVE BEEN TESTED FOR DEBRIS IMPACT AS PRESCRIBED IN AS/NZS1170.2-2011. REFER VIPAC CYCLONIC WINDBORNE DEBRIS IMPACT TEST REPORT.

Limitations

- 6500mm MAX DOOR HEIGHT
- 8500mm MAX DOOR WIDTH
- END GAPS MUST BE SET AS INDICATED IN TABLE.
- THE DOOR MAY BE POSITIONED AT ANY LOCATION ON THE BUILDING STRUCTURE INCLUDING LOCAL PRESSURE ZONES (CORNERS OF BUILDINGS), PROVIDING THAT THE MAXIMUM ULTIMATE DESIGN RESISTANCE OF THE DOORS IS NOT EXCEEDED AND THE MAIN BUILDING FRAME CAN SUSTAIN THE DOOR GUIDE REACTIONS
- IT IS CRITICAL THAT THE ROLLER SHUTTER WIND LOCKS BE SET WITH THE END GAP INDICATED IN THE TABLE. THE SLAT & WINDLOCK SHALL BE ACCURATELY INSTALLED SO THAT THE SPECIFIED END GAP IS ACHIEVED.
- ALL WELDED CONNECTIONS SHALL BE COLD GALVANISED.
- THE ROLLER SHUTTER INSTALLATION SHALL BE TREATED AS REQUIRED IN ORDER TO COMPLY WITH THE DURABILITY REQUIREMENTS OF THE BCA FOR THE ACTUAL SITE EXPOSURE CONDITIONS.
- PERSONAL ACCESS DOORS ARE NOT PERMITTED IN THE DOOR CURTAIN.

Accepted for Inclusion

DTCM ref: M/575/01 SHEET 1 OF 2

Chairman's Signature:

Chairman's Name: Paul Nowland

Date of Approval: 25-01-2019 Expiry Date: 25-01-2024

Notes covering basis of DTC (Relevant test report etc)

- REFER TO NJA CONSULTING REPORT - REFERENCE No. J170029-01: DMcD.
- REFER VIPAC ENGINEERS AND SCIENTISTS LTD CYCLONIC WINDBORNE DEBRIS IMPACT TEST REPORT 30B-13-0030-TRP-336169-0 DATED 31 JULY 2013.
- REFER JAMES COOK UNIVERSITY TEST REPORT TS999 "STATIC & CYCLONIC SIMULATED WIND LOAD STRENGTH TESTING OF MIRAGE S100 STEEL ROLLER SHUTTER" DATED 13 MARCH 2015

****Certifying Engineer's Certification**

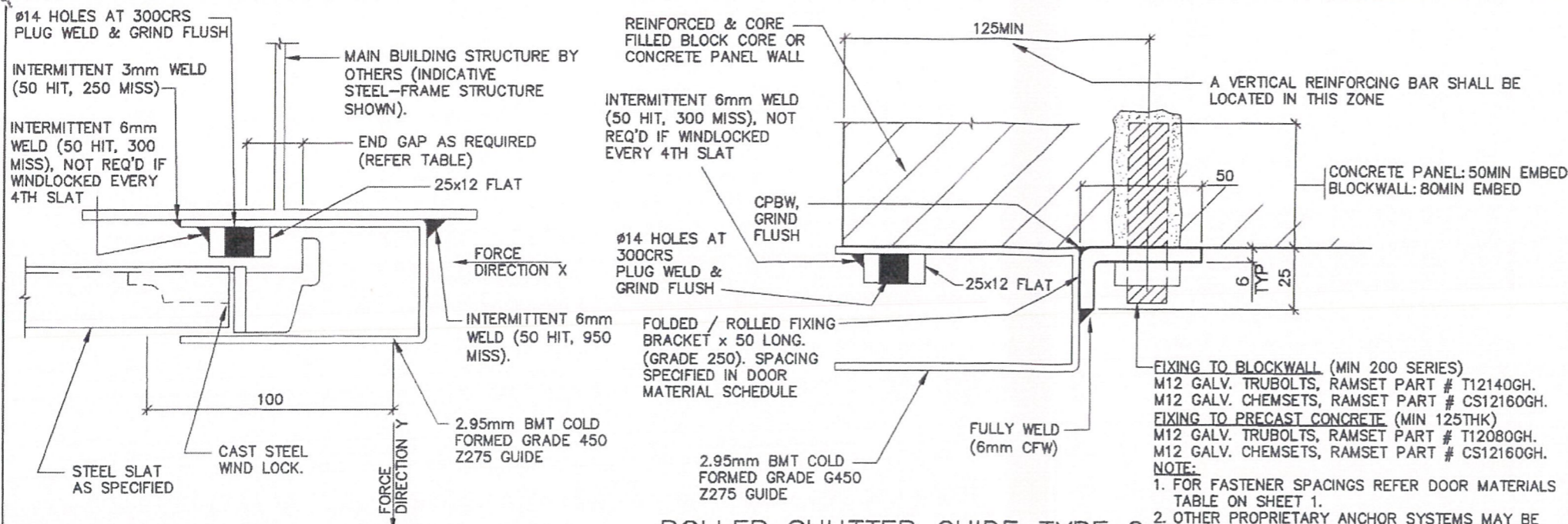
Name: RONALD A. BELL
 Registration Number: 60596 ES
 Date: 01MAY2018
 Signature:

**registered as a structural engineer in Northern Territory

***Design Engineer's Certification**

Name: DARREN McDONALD
 Registration Number: 24619 ES
 Date: 01-05-2018
 Signature:

*registered as a structural engineer in Australia



TYPICAL ROLLER SHUTTER GUIDE DETAIL TYPE 2
NTS

ROLLER SHUTTER GUIDE TYPE 2 TO BUILDING FIXING
NTS - (FIXING TO BLOCKWORK OR CONCRETE)

Product name
ROLLER SHUTTER DOORS WITH WIND LOCKS-GUIDE TYPE 2-COLD FORMED WITH WELDED FLAT BAR

Product Description
ROLLER SHUTTER DOORS WITH WIND LOCKS - GUIDE TYPE 2

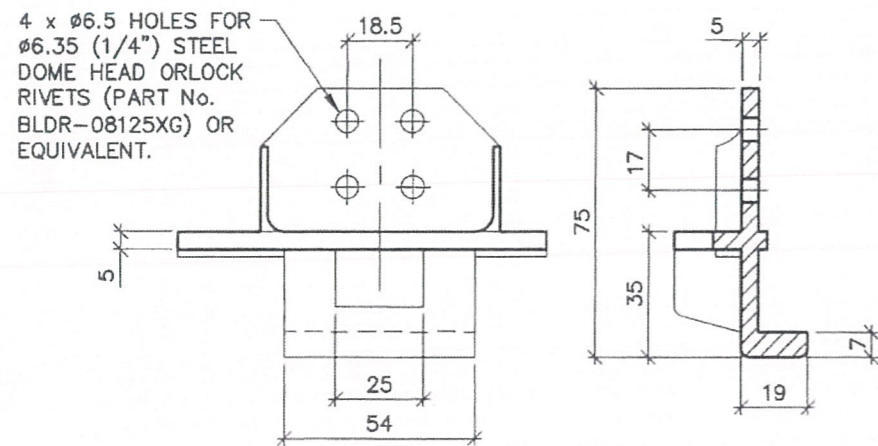
Manufacturer's Name
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PH (07) 3713 3000

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 2. THE RATED DESIGN WIND LOAD RESISTANCE FOR EACH DOOR WIDTH IS AS INDICATED IN THE TABLE. THE STRUCTURAL ENGINEER OR CERTIFIER INVOLVED WITH THE MAIN BUILDING DESIGN SHALL VERIFY THAT THE STATED DESIGN RESISTANCE EXCEEDS THE SITE SPECIFIC DESIGN WIND LOADING.
 3. THE DOORS HAVE BEEN TESTED FOR DEBRIS IMPACT AS PRESCRIBED IN AS/NZS1170.2-2011. REFER VIPAC CYCLONIC WINDBORNE DEBRIS IMPACT TEST REPORT.

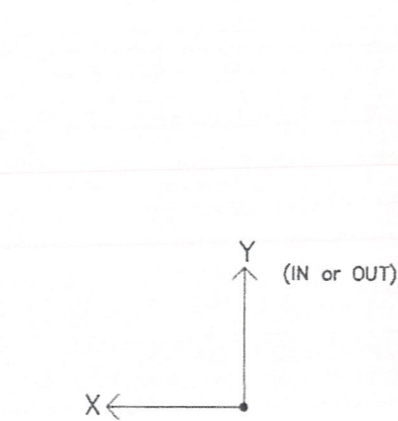
- Limitations**
1. 6500mm MAX DOOR HEIGHT
 2. 8500mm MAX DOOR WIDTH
 3. END GAPS MUST BE SET AS INDICATED IN TABLE.
 4. THE DOOR MAY BE POSITIONED AT ANY LOCATION ON THE BUILDING STRUCTURE INCLUDING LOCAL PRESSURE ZONES (CORNERS OF BUILDINGS), PROVIDING THAT THE MAXIMUM ULTIMATE DESIGN RESISTANCE OF THE DOORS IS NOT EXCEEDED AND THE MAIN BUILDING FRAME CAN SUSTAIN THE DOOR GUIDE REACTIONS
 5. IT IS CRITICAL THAT THE ROLLER SHUTTER WIND LOCKS BE SET WITH THE END GAP INDICATED IN THE TABLE. THE SLAT & WINDLOCK SHALL BE ACCURATELY INSTALLED SO THAT THE SPECIFIED END GAP IS ACHIEVED.
 6. ALL WELDED CONNECTIONS SHALL BE COLD GALVANISED.
 7. THE ROLLER SHUTTER INSTALLATION SHALL BE TREATED AS REQUIRED IN ORDER TO COMPLY WITH THE DURABILITY REQUIREMENTS OF THE BCA FOR THE ACTUAL SITE EXPOSURE CONDITIONS.
 8. PERSONAL ACCESS DOORS ARE NOT PERMITTED IN THE DOOR CURTAIN.

Accepted for Inclusion
DTCM ref: M/575/02 SHEET 2 OF 2

Chairman's Signature: *[Signature]*
Chairman's Name: Paul Newland
Date of Approval: 25-01-2019
Expiry Date: 25-01-2024



ELEVATION ON WIND LOCK
SCALE 1:2
CAST STEEL, Z/P.



REACTIONS ON DOOR GUIDE
REFER DOOR MATERIAL TABLE ON SHEET 1

- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. TREAT ALL WELD AFFECTED SURFACES WITH CORROSION RESISTANT COATING SYSTEM AS REQUIRED.
 3. LOCATE MASONRY ANCHORS AS NEAR AS PRACTICABLE TO CENTRE OF VERTICAL REINFORCED CORES AND 35mm AWAY FROM ANY MORTAR JOINT.
 4. ALL DOOR COMPONENTS TO BE SUITABLY PROTECTED AGAINST CORROSION INCLUDING ZINCALUM GALVANISING OR OTHER APPROVED COATING SYSTEM.

Notes covering basis of DTC (Relevant test report etc)

- REFER TO NJA CONSULTING REPORT - REFERENCE No. J170029-01: DMcD.
- REFER VIPAC ENGINEERS AND SCIENTISTS LTD CYCLONIC WINDBORNE DEBRIS IMPACT TEST REPORT 30B-13-0030-TRP-336169-0 DATED 31 JULY 2013.
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