



ALSPEC **ENDURAL**[®] BALUSTRADE SYSTEM



EndurAl
Balustrade System





ENDURAL BALUSTRADE SYSTEM

Unhindered Visual Freedom

The EndurAl™ Balustrade System from Alspec has been developed to provide Architects and Builders an engineered and tested balustrade solution with Australia's unique architecture and wind classifications in mind. EndurAl™ is a complete balustrade solution, suitable for use in a wide range of building applications for both residential and commercial environments which require engineered solutions up to and including the most stringent C5 overcrowding requirements.



Furthermore, EndurAl™ is a high end, comprehensive, easy to specify and easy to install balustrade solution that offers class leading strength whilst enhancing the surrounding visual outlook.

Key Features:

- Tested to exceed the requirements of AS1170.1 & AS1657
- Higher strength for increased spans
- Core drilled or welded post options
- Captive glazing pockets can accommodate up to 15mm glass
- Suitable for timber deck installation
- Wide range of top rails and accessories





ALSPEC ENDURAL BALUSTRADE SYSTEM

Engineered to Perform

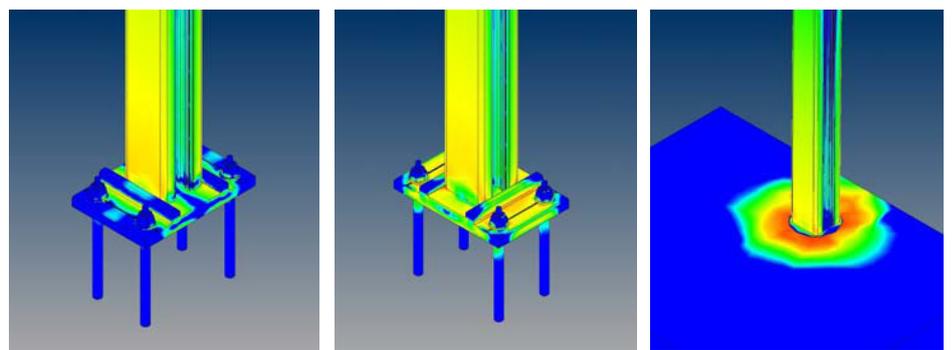
After significant research and testing to exceed AS1657, Alspec is pleased to release the EndurAl™ Balustrade System. EndurAl™ is a suite of specifically engineered extrusions that provides a premium solution for a wide range of balustrade applications for residential (C3) and commercial (C1) applications. The EndurAl™ System also delivers a core-drilled solution for overcrowding (C5) applications.

By utilising a 55mm Structural Glazing Post, the EndurAl™ System has enabled Alspec to offer a solution that:

- Is significantly stronger than 50mm glazing posts
- Has a wide range of glazing options (up to 15mm Glass)
- Can be mounted using welded post plates (base and side mounted)
- Has the ability to reach up to 1200mm high, and enables post centres up to 1800mm
- Meets architectural design requirements

The EndurAl™ Balustrade System has been built on the back of Alspec's sophisticated architectural systems experience. As a result, the Alspec EndurAl™ is an innovative and cost effective balustrade system that can be easily adapted to provide a seamless solution to the evolving trend of multi-use commercial / residential developments.

Testing and Compliance



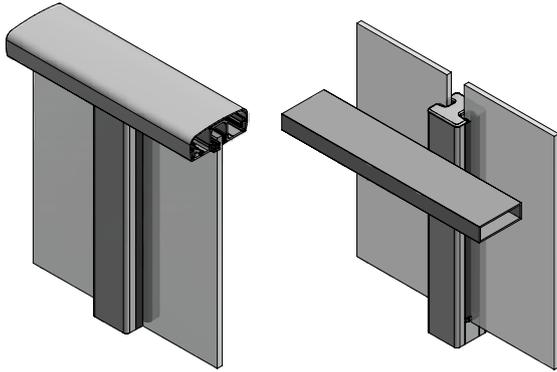
Tested to exceed Australian Standard requirements the EndurAl™ balustrade system offers a range of improved spacing and height solutions across multiple installation methods. Core Drilled, top and side mount base plate and timber deck scenarios have been extensively tested by an independent NATA approved facility.

VERSATILE DESIGN

Multiple Glazing Options

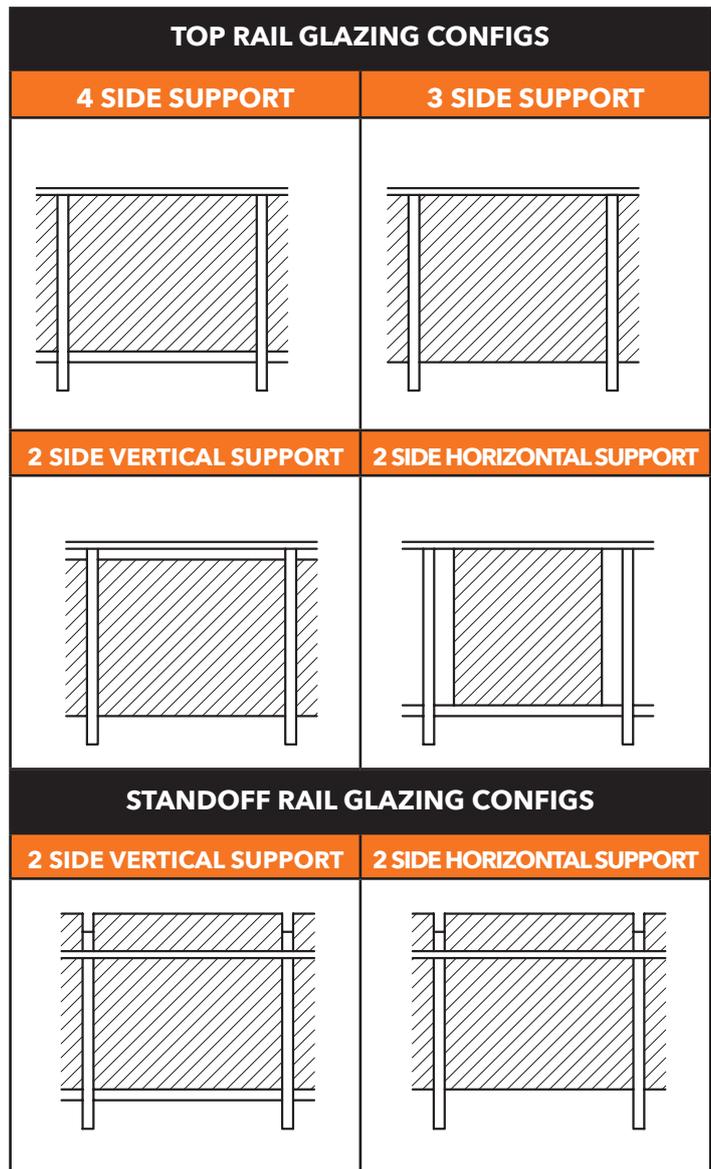
The EndurAl™ system can be used in multiple glazing configurations to suit various architectural requirements.

Available to you are multiple glazing options ranging from 2 side, 3 side and 4 side support configurations with either a top mounted or standoff handrail option to suit any aesthetic requirement.

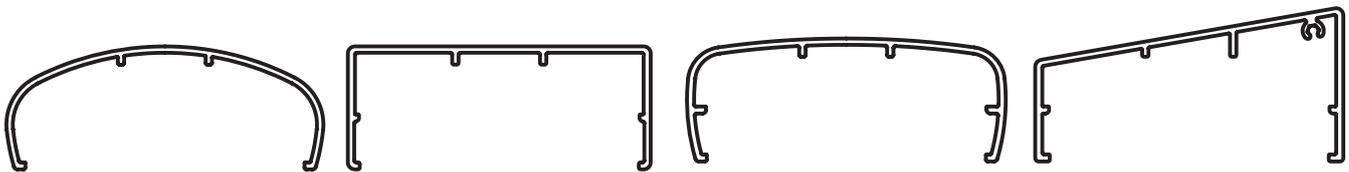


Stronger Posts and Thicker Glass Options

By incorporating a wider glazing pocket, EndurAl can satisfy the glazing requirements of AS1288-2006.



Multiple Handrail Options



With the EndurAl™ Balustrade System, you have access to a range of modular slimline, rectangular & circular handle profile designs to suit both top rail and standoff rail configurations.

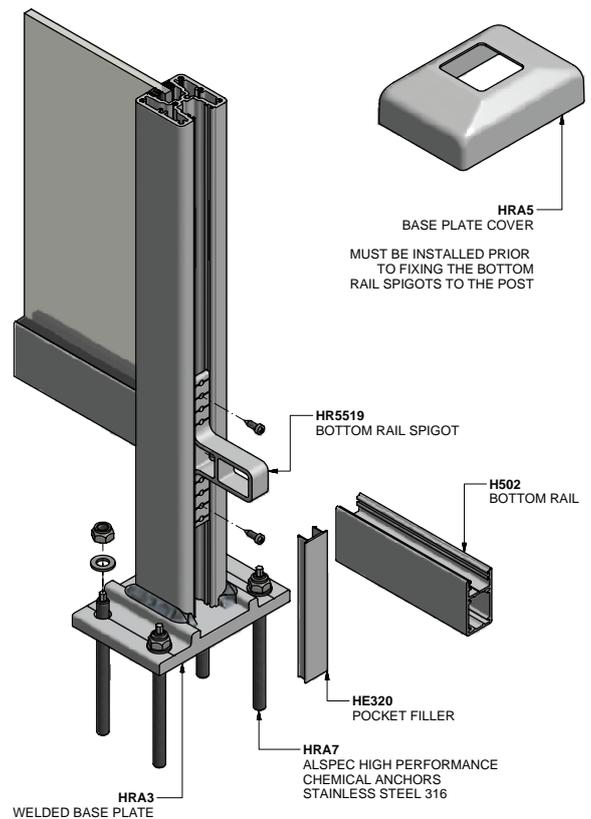




SIMPLE INSTALLATION

Simpler. Faster. Safer.

Safety, security, protection and style without compromising your views and enjoyment, the EndurAl™ Balustrade design has been developed to minimise both fabrication and installation time. By incorporating a deep captive glazing pocket, the EndurAl™ Balustrade can be installed faster and safer than other balustrade glazing methods. Pre-cut rail spigots are easily positioned for on site fixing of horizontal glazing rails.

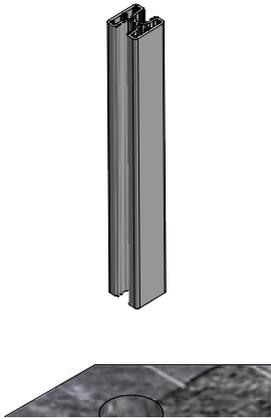
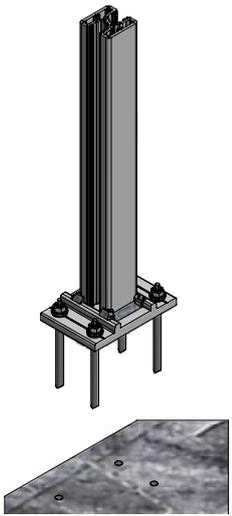
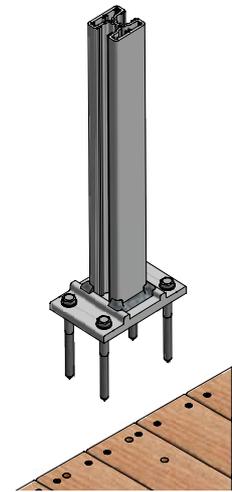


Colour Range and Finish Options

Alspeg has four strategically positioned advanced powder coat lines throughout Australia. These lines enable Alspeg to offer over 100 colours. These powder coat options help position the EndurAl™ Balustrade System as a perfect solution for your next project.

Mounting Solutions

The EndurAl™ Balustrade System can be tailored to suit your exact requirements, with multiple mounting solutions including core drilled, spigot mounted, face fixed, or utilising semi frameless fixing posts.

MOUNTING SOLUTIONS	
CORE DRILLED MOUNTING	TOP MOUNTED INTO CONCRETE SLAB
	
TIMBER DECKING TOP MOUNTED	SIDE MOUNTED INTO CONCRETE SLAB
	

EndurAl™ Accessories

The EndurAl™ Balustrade System comes with a comprehensive range of accessories which includes items such as end caps, stand off brackets, specifically designed glass blocks, cover plates and fixing hardware.

Technical Support

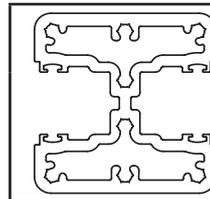
For further information or to get a copy of the EndurAl™ Technical Manual, please contact your nearest Alspec branch or Area Manager.





HOUSING: REGIONS A & B

Residential balconies, landings, roof edges.



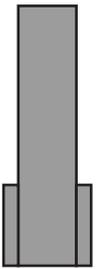
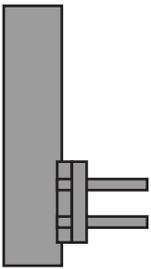
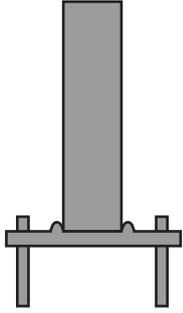
HR500 55mm 2 WAY POST

Alloy: 6106 T6

Ultimate Limit State: 210Mpa

Minimum Live Load: 750 N/m

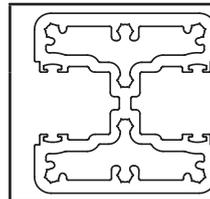
POST HEIGHT	MOUNTING OPTION	ULTIMATE WIND PRESSURE RATING								
		1000	1100	1200	1300	1400	1500	1600	1700	1800
1200	CORE 120	N6	N5	N5	N5	N5	N4	N4	N4	N4
	CORE 100	N6	N5	N5	N5	N5	N4	N4	N4	N4
	SIDE PLATE	N4	N4	N4	N4	N4	N3	N3	N3	N3
	BASE PLATE	N4	N4	N4	N4	N4	N3	N3	N3	N3
1150	CORE 120	N6	N6	N5	N5	N5	N5	N4	N4	N4
	CORE 100	N6	N6	N5	N5	N5	N5	N4	N4	N4
	SIDE PLATE	N5	N4	N4	N4	N4	N4	N3	N3	N3
	BASE PLATE	N5	N4	N4	N4	N4	N4	N3	N3	N3
1100	CORE 120	N6	N6	N6	N5	N5	N5	N5	N4	N4
	CORE 100	N6	N6	N6	N5	N5	N5	N5	N4	N4
	SIDE PLATE	N5	N5	N4	N4	N4	N4	N4	N4	N3
	BASE PLATE	N5	N5	N4	N4	N4	N4	N4	N4	N3
1050	CORE 120	N6	N6	N6	N6	N6	N5	N5	N4	N4
	CORE 100	N6	N6	N6	N6	N6	N5	N5	N4	N4
	SIDE PLATE	N5	N5	N5	N4	N4	N4	N4	N4	N4
	BASE PLATE	N5	N5	N5	N4	N4	N4	N4	N4	N4
1000	CORE 120	N6	N6	N6	N6	N6	N6	N5	N4	N4
	CORE 100	N6	N6	N6	N6	N6	N6	N5	N4	N4
	SIDE PLATE	N6	N5	N5	N5	N4	N4	N4	N4	N4
	BASE PLATE	N6	N5	N5	N5	N4	N4	N4	N4	N4
POST CENTRES		1000	1100	1200	1300	1400	1500	1600	1700	1800

TESTED MOUNTING SOLUTIONS		
CORE DRILLED	SIDE MOUNT BASE PLATE	TOP MOUNT BASE PLATE
 <p>100mm Embedment Depth 120 mm Embedment depth required for wind loads exceeding 5kPa</p>	 <p>Alspec Base Plate Alspec Chemical Anchors Restricted to wind pressures below 5kPa</p>	 <p>Alspec Base Plate Alspec Chemical Anchors Restricted to wind pressures below 4kPa</p>



HOUSING: REGIONS C & D

Residential balconies, landings, roof edges.



HR500 55mm 2 WAY POST

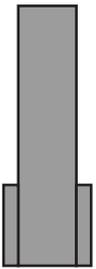
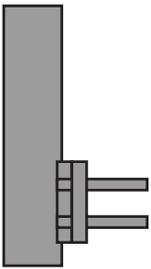
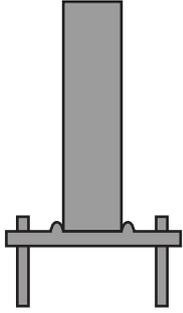
Alloy: 6106 T6

Ultimate Limit State: 210Mpa

Minimum Live Load: 750 N/m

POST HEIGHT	MOUNTING OPTION	ULTIMATE WIND PRESSURE RATING								
		800	900	1000	1100	1200	1300	1400	1500	1600
1200	CORE 120	C4	C3	C3	C2	C2	C2	C2	C2	C2
	CORE 100	C4	C3	C3	C2	C2	C2	C2	C2	C2
	SIDE PLATE	C2	C2	C1	C1	C1	C1	C1	C1	-
	BASE PLATE	C2	C2	C1	C1	C1	C1	C1	C1	-
1150	CORE 120	C4	C3	C3	C3	C2	C2	C2	C2	C2
	CORE 100	C4	C3	C3	C3	C2	C2	C2	C2	C2
	SIDE PLATE	C2	C2	C2	C2	C1	C1	C1	C1	C1
	BASE PLATE	C2	C2	C2	C2	C1	C1	C1	C1	C1
1100	CORE 120	C4	C4	C3	C3	C3	C2	C2	C2	C2
	CORE 100	C4	C4	C3	C3	C3	C2	C2	C2	C2
	SIDE PLATE	C3	C2	C2	C2	C2	C1	C1	C1	C1
	BASE PLATE	C3	C2	C2	C2	C2	C1	C1	C1	C1
1050	CORE 120	C4	C4	C4	C3	C3	C3	C3	C2	C2
	CORE 100	C4	C4	C4	C3	C3	C3	C3	C2	C2
	SIDE PLATE	C3	C3	C2	C2	C2	C2	C1	C1	C1
	BASE PLATE	C3	C3	C2	C2	C2	C2	C1	C1	C1
1000	CORE 120	C4	C4	C4	C4	C3	C3	C3	C3	C2
	CORE 100	C4	C4	C4	C4	C3	C3	C3	C3	C2
	SIDE PLATE	C4	C3	C3	C2	C2	C2	C2	C2	C1
	BASE PLATE	C4	C3	C3	C2	C2	C2	C2	C2	C1
POST CENTRES		800	900	1000	1100	1200	1300	1400	1500	1600

TESTED MOUNTING SOLUTIONS

CORE DRILLED	SIDE MOUNT BASE PLATE	TOP MOUNT BASE PLATE
 <p>100mm Embedment Depth 120 mm Embedment depth required for wind loads exceeding 5kPa</p>	 <p>Alspec Base Plate Alspec Chemical Anchors Restricted to wind pressures below 5kPa</p>	 <p>Alspec Base Plate Alspec Chemical Anchors Restricted to wind pressures below 4kPa</p>

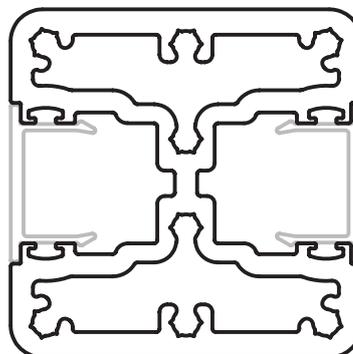


ENDURAL PROFILES

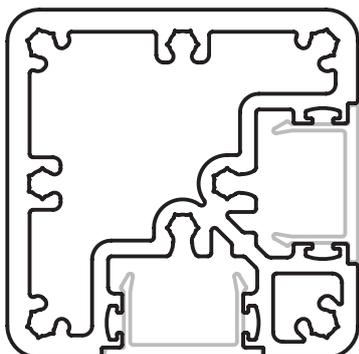
EndurAl™ Post Sections



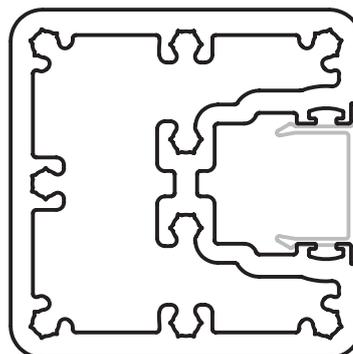
ME8	
ITEM	POCKET FILLER
ITEM NO.	1600748



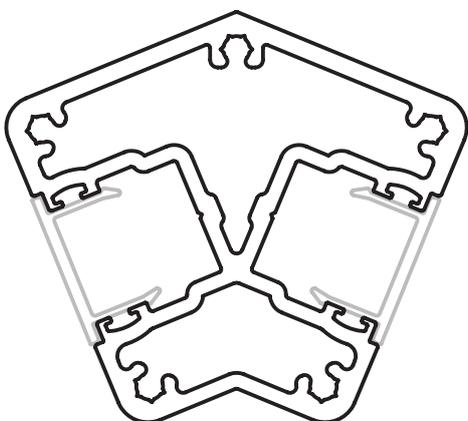
HR500	
ITEM	55mm 2 WAY POST
ITEM NO.	1629314



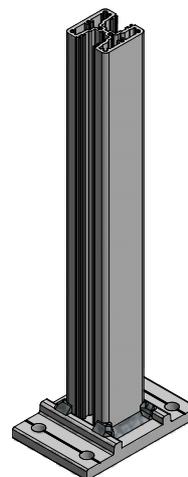
HR501	
ITEM	55mm 90 DEG POST
ITEM NO.	1629313



HR506	
ITEM	ONE WAY POST
ITEM NO.	1629319



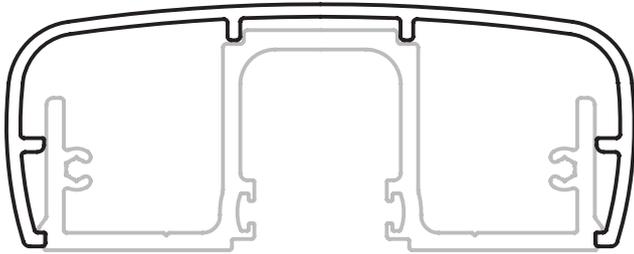
HR503	
ITEM	55mm 125 DEG POST
ITEM NO.	1629316



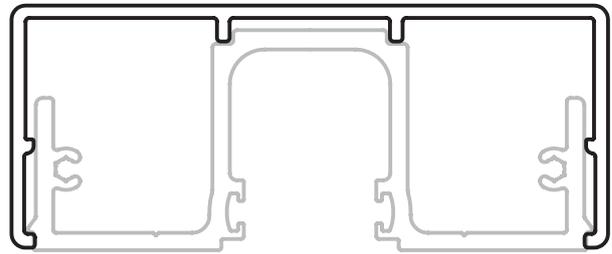
2 WAY WELDED POST	
ITEM NO.	1629333
POST HEIGHT	1100mm
COLOURS	MILL FINISH, SATIN BLACK, PRECIOUS SILVER PEARL



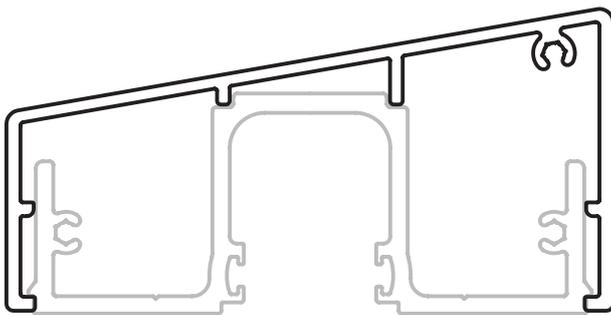
EndurAl™ Rail Sections



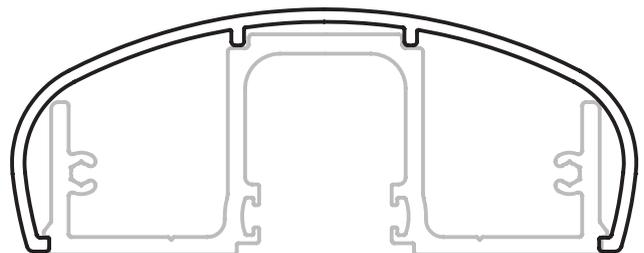
HR505	
ITEM	BULL NOSE TOP RAIL
ITEM NO.	1629318
ALUM ENDCAP	1331129



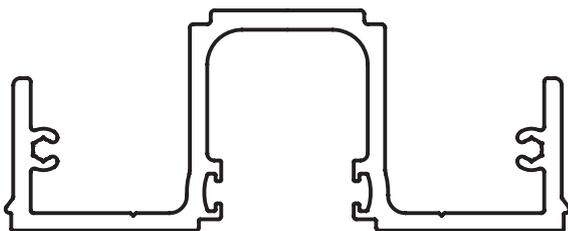
HR509	
ITEM	SQUARE TOP RAIL
ITEM NO.	1629322
ALUM ENDCAP	1331123



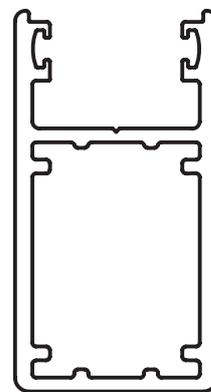
HR508	
ITEM	TAPERED TOP RAIL
ITEM NO.	1629321
ALUM ENDCAP	1331138



HR510	
ITEM	ELLIPTICAL TOP RAIL
ITEM NO.	1629324
ALUM ENDCAP	1331139



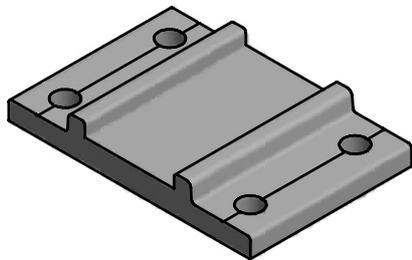
HR507	
ITEM	HAND RAIL BASE
ITEM NO.	1629320



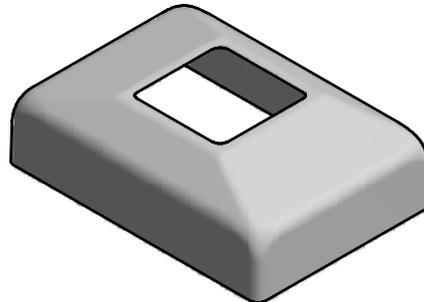
HR502	
ITEM	55mm BOTTOM RAIL
ITEM NO.	1629315

ENDURAL HARDWARE & ACCESSORIES

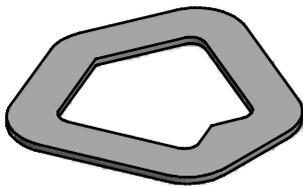
EndurAl™ Base Plates & Accessories



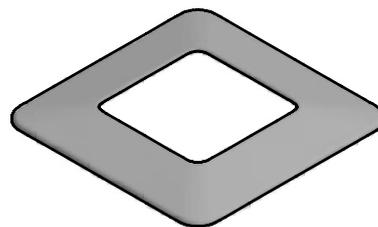
HRA4 ENDURAL BASE PLATE	
ITEM NO.	1331151
FINISH	MILL FINISH ALUMINIUM EXTRUSION
QTY	EACH



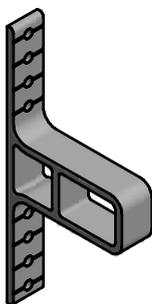
HRA5 ENDURAL BASE PLATE COVER	
ITEM NO.	1331152
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



HRA4 ENDURAL 135 DEG DRESS RING	
ITEM NO.	1331140
FINISH	MILL FINISH 3mm ALUMINIUM
QTY	EACH



HRA2 ENDURAL SQUARE DRESS RING	
ITEM NO.	1331111
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH

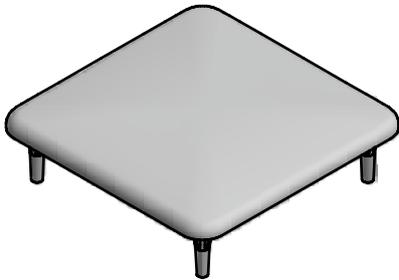


HRA3 ENDURAL BOTTOM RAIL SPIGOT	
ITEM NO.	1331150
FINISH	MILL FINISH ALUMINIUM EXTRUSION
QTY	EACH

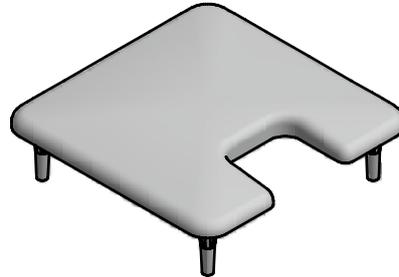


HRA1 ENDURAL GLASS SUPPORT BLOCK	
ITEM NO.	1331110
FINISH	BLACK PLASTIC
QTY	EACH

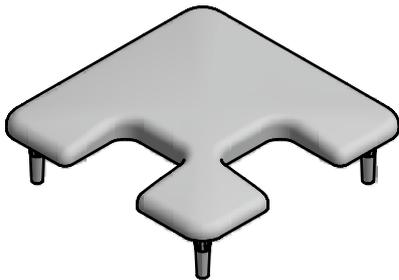
EndurAl™ End Caps & Brackets



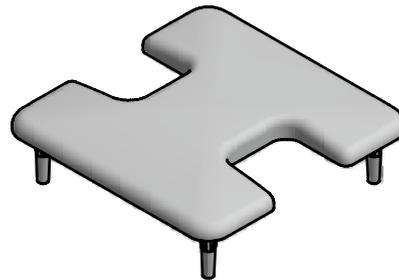
HRA13 ENDURAL POST END C AP	
ITEM NO.	1331132
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



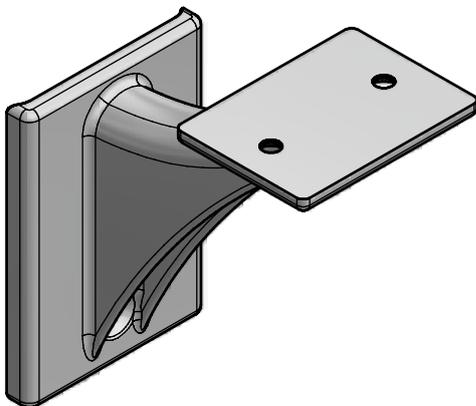
HRA14 ENDURAL POST END CAP - ONE WAY	
ITEM NO.	1331133
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



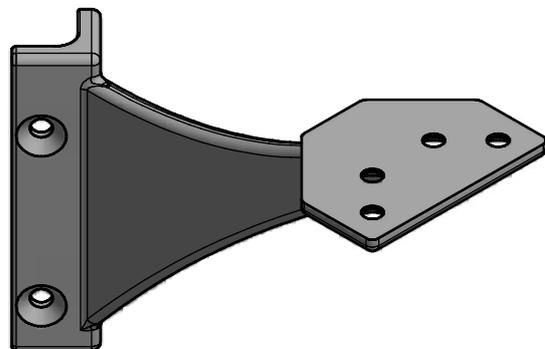
HRA15 ENDURAL POST END CAP - 90 DEG	
ITEM NO.	1331134
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



HRA16 ENDURAL POST END CAP - TWO WAY	
ITEM NO.	1331135
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



HRA17 ENDURAL STAND OFF HANDRAIL BRACKET	
ITEM NO.	1331136
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH



HRA17 ENDURAL CORNER STAND OFF BRACKET	
ITEM NO.	1331137
FINISH	MILL FINISH ALLOY CASTING
QTY	EACH

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