

# Rittal – The System.

Faster – better – everywhere.

## ► Railway technology solutions



ENCLOSURES

POWER DISTRIBUTION

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IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



# Rittal – The System.

**Faster – better – everywhere.**

## Railway technology

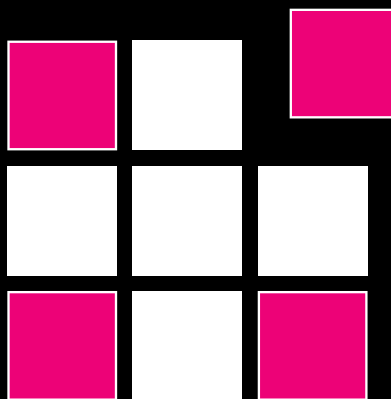
Every sector places its own specific demands on the associated applications. For the “Rail” sector, therefore, Rittal offers complete system solutions whose robustness and functionality meet every requirement, e. g. solutions for train control and protection, data communication, traction power supplies, signalling systems and tunnel safety. In dialogue with customers, Rittal develops efficient products for static use. Whether indoors and outdoors. Tailored sector solutions in full compliance with the typically strict specifications and standards to be observed by housings, enclosures, climate control and power distribution components for use in this field.

As our solutions are based on the wide product diversity of the standard Rittal range, considerable cost and time can be saved through flexible combination and fast availability from stock.

The perfectly developed system platform, the innovative products, future-oriented engineering solutions and all-embracing service are merged optimally for your benefit: “Rittal – The System.” This system offers all the elements you need to configure your own, precisely customised system solution.

The benefits for Rittal customers:

- Wide product diversity
- Engineering
- Local service



**Our Expertise.  
Your Benefit.**

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# Indoor

Traffic control and monitoring, IT, building power supplies, customer information systems – maximum safety and absolute reliability are imperative in rail transport operations. The infrastructure solutions from Rittal meet these high demands.

Testing in our own research laboratories and manufacturing in certified production facilities are the basis for identically high product quality and service standards with global availability. On the basis of standard products, Rittal develops individual, sector-specific solution and service concepts with exemplary cost-benefit profiles.

# Outdoor

Railway operators tolerate no interruptions. Whether it rains or snows, and irrespective of whatever other extreme ambient conditions may arise. If everything is to run smoothly and continuously, all those components which shield essential functions from the influences of the weather must deliver ultimate performance.

Rittal outdoor enclosures with climate control defy wind and weather – and even vandalism if need be. They are manufactured from high-quality materials (aluminium or stainless steel) and embody decades of production experience.

The proven modular concept “Rittal – The System.” stands for enormous variety based on standard solutions. Series enclosures available directly from stock and practically unlimited accessory compatibility thanks to a common system platform.

For the indoor sector, Rittal offers a diversity of wall-mounting and free-standing enclosures from stock, as well as efficient IT infrastructures with optimum equipment for data and communication centres, e. g. GSM-R networking, ticketing systems and logistics applications.

Further Rittal solutions cater for power distribution: From distribution boards for building supplies up to redundant IT power installations with corresponding UPS systems. For climate control, Rittal delivers the decisive advantage, with efficient system climate control solutions for all ambient conditions and power losses. This naturally includes also housing and enclosure climate control.

For outdoor use, Rittal supplies secure and durable housings in single- and double-walled designs. High-quality standard products can be combined with further Rittal system modules to meet individual requirements – whether that means special colours or an optional nano-coating as protection against dirt.

Where IT components and at the focus of an outdoor project, the needs can be met with CS Outdoor or container solutions for mobile BTS equipment. In the field of power distribution, too, Rittal offers numerous solutions.

These range from simple housings and enclosures with ISV distribution modules to redundant IT power supplies including full UPS functionality. In addition, Rittal develops efficient system climate control solutions for all ambient conditions and power losses, with corresponding specifications for either indoor or outdoor deployment.



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# Rail Acceptance

Within this brochure is a list of many approved products that are frequently used within the UK rail sector.

Dependant on your requirement we have gained PADS approvals for a wide range of products along with products that have been used for London Underground (LU) which have been approved for use against the S1085 specification for flammability, smoke and toxicity.

The enclosed range takes into account the facility to provide a safe environment for the installed equipment from the smallest to the largest, from indoor to outdoor whether it's going track side or for a tunnel application.

We supply:

**LONDON UNDERGROUND**

**NETWORK RAIL**

**SCOTRAIL**

**CROSSRAIL**

**HS2**



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# Junction Boxes for London Underground & Network Rail Projects



## Material:

- Enclosure: Cast aluminium
- Cover: Cast aluminium, all-round CR cellular rubber cord seal

## Colour:

- RAL 7001

## Protection category:

- IP 66 to IEC 60 529, complies with NEMA 4

## Supply includes:

- Enclosure with cover
- Cover screws, captive
- Screws for attaching support rails
- Screw for connection of the PE conductor

## Detailed drawings:

- Available on the internet

## Applications:

- London Underground & Network Rail

## Cast aluminium box GA

Dimensions mm			Packs of	Model No. GA	Accessories					
W	H	D			Mounting plate	Packs of	Wall mounting bracket	Packs of	Hinge, exterior	Packs of
58	64	34	5 pc(s).	<b>9101.210</b>	-	-	-	-	-	-
98	64	35	3 pc(s).	<b>9102.210</b>	-	-	-	-	-	-
75	80	57	1 pc(s).	<b>9104.210</b>	-	-	-	-	-	-
125	80	57	1 pc(s).	<b>9105.210</b>	9105.700	10 pc(s).	-	-	-	-
175	80	57	1 pc(s).	<b>9106.210</b>	-	-	-	-	-	-
250	80	57	1 pc(s).	<b>9107.210</b>	-	-	-	-	-	-
122	120	80	1 pc(s).	<b>9108.210</b>	9108.700	2 pc(s).	9121.122	2 pc(s).	9123.000	2 pc(s).
220	120	91	1 pc(s).	<b>9110.210</b>	9110.700	2 pc(s).	9121.122	2 pc(s).	9123.000	2 pc(s).
360	120	82	1 pc(s).	<b>9111.210</b>	-	-	9121.122	2 pc(s).	9123.000	2 pc(s).
160	160	91	1 pc(s).	<b>9112.210</b>	9112.700	2 pc(s).	9121.160	2 pc(s).	9123.000	2 pc(s).
260	160	91	1 pc(s).	<b>9113.210</b>	9113.700	2 pc(s).	9121.160	2 pc(s).	9123.000	2 pc(s).
360	160	91	1 pc(s).	<b>9114.210</b>	9114.700	1 pc(s).	9121.160	2 pc(s).	9123.000	2 pc(s).
202	232	111	1 pc(s).	<b>9116.210</b>	9116.700	1 pc(s).	9121.230	2 pc(s).	9123.000	2 pc(s).
280	232	111	1 pc(s).	<b>9117.210</b>	9117.700	1 pc(s).	9121.230	2 pc(s).	9123.000	2 pc(s).
334	233	111	1 pc(s).	<b>9118.210</b>	9118.700	1 pc(s).	9121.230	2 pc(s).	9123.000	2 pc(s).
330	230	181	1 pc(s).	<b>9119.210</b>	9118.700	1 pc(s).	9121.230	2 pc(s).	9123.000	2 pc(s).

A tough cast aluminium junction/terminal box with a high IP rating and screw fix lid that has been used extensively within London Underground projects and Network Rail.

Options include din rail, mounting plates, hinges and wall mount brackets to support your requirements.

# Junction Boxes for London Underground & Network Rail Projects



## Material:

- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal

## Surface finish:

- Enclosure and cover: Dipcoat-primed, powder coated on the outside, textured paint

## Supply includes:

- Enclosure with cover
- Quick-action screw including plastic bushes
- For enclosures with gland plate plus sheet steel gland plates with seals and assembly parts

## Colour:

- RAL 7035

## Protection category:

- Without gland plate: IP66 to IEC 60 529, complies with NEMA 4
- With gland plate: IP55 to IEC 60 529, complies with NEMA 12

## Approvals:

- UL
- cUL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas

## Detailed drawings:

- Available on the internet.

## Applications:

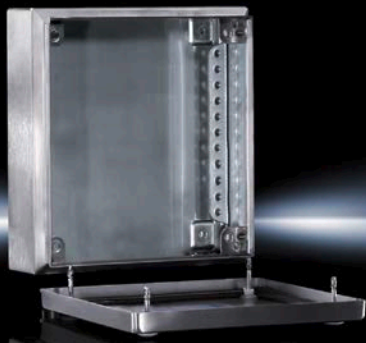
- London Underground & Network Rail

## Sheet steel junction box KL

Dimensions mm			Material Thickness		Model No. KL	Gland Plate	Weight (kg)	Gland Plate				Accessories						
W	H	D	W	H				Top	Bot-tom	Left	Right	Mounting Plate	Support Rail TS 35/15	Cover Retainer	Cover Hinge	Earthing Set	Wall mounting bracket with 8mm distance from wall	Optional quick-release fastener for KL PK12
150	150	80	1,25	1,25	1514.510	-	1,4					1560.700	2314.000	1591.000	1592.000	2570.100	1590.000	1593.000
200	150	80	1,25	1,25	1528.510	-	1,6					1575.700	2315.000	1591.000	1592.000	2570.100	1590.000	1593.000
200	200	80	1,25	1,25	1516.510	-	1,9					1562.700	2315.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	150	80	1,25	1,25	1515.510	-	2,1					1561.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	200	80	1,25	1,25	1517.510	-	2,6					1563.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	200	80	1,25	1,25	1518.510	-	3,2					1564.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	200	80	1,25	1,25	1519.510	-	4,6					1566.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
150	150	120	1,25	1,25	1500.510	-	1,6	-	-			1560.700	2314.000	1591.000	1592.000	2570.100	1590.000	1593.000
200	150	120	1,25	1,25	1529.510	-	1,8	-	-			1575.700	2315.000	1591.000	1592.000	2570.100	1590.000	1593.000
200	200	120	1,25	1,25	1502.510	-	2,3	-	-			1562.700	2315.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	150	120	1,25	1,25	1501.510	-	2,6	-	-			1561.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	150	120	1,25	1,25	1530.510	•	2,7	2	1	+	1	1561.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	200	120	1,25	1,25	1503.510	-	3,0	-	-			1563.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	200	120	1,25	1,25	1531.510	•	3,3	2	1	+	1	1563.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	300	120	1,38	1,25	1507.510	-	4,0	-	-			1567.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
300	300	120	1,38	1,25	1535.510	•	4,5	2	1	+	1	1567.700	2316.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	150	120	1,25	1,25	1589.510	-	3,2	-	-			1576.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	200	120	1,25	1,25	1504.510	-	3,6	-	-			1564.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	200	120	1,25	1,25	1532.510	•	4,0	2	1	+	1	1564.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	300	120	1,38	1,25	1508.510	-	4,8	-	-			1568.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	300	120	1,38	1,25	1536.510	•	5,2	2	1	+	1	1568.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	400	120	1,38	1,25	1511.510	-	6,2	-	-			1571.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
400	400	120	1,38	1,25	1539.510	•	6,7	2	1	+	1	1571.700	2317.000	1591.000	1592.000	2570.100	1590.000	1593.000
500	200	120	1,25	1,25	1505.510	-	4,4	-	-			1565.700	2318.000	1591.000	1592.000	2570.100	1590.000	1593.000
500	200	120	1,25	1,25	1533.510	•	4,9	2	2	+	2	1565.700	2318.000	1591.000	1592.000	2570.100	1590.000	1593.000
500	300	120	1,38	1,25	1509.510	-	5,8	-	-			1569.700	2318.000	1591.000	1592.000	2570.100	1590.000	1593.000
500	300	120	1,38	1,25	1537.510	•	5,2	2	2+2			1569.700	2318.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	200	120	1,25	1,25	1506.510	-	5,7	-	-			1566.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	200	120	1,25	1,25	1534.510	•	5,9	2	2	+	2	1566.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	300	120	1,38	1,25	1510.510	-	6,8	-	-			1570.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	300	120	1,38	1,25	1538.510	•	7,7	2	2	+	2	1570.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	400	120	1,38	1,25	1512.510	-	8,4	-	-			1572.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
600	400	120	1,38	1,25	1540.510	•	9,0	2	2+2			1572.700	2319.000	1591.000	1592.000	2570.100	1590.000	1593.000
800	200	120	1,25	1,25	1527.510	-	6,8	-	-			1574.700	-	1591.000	1592.000	2570.100	1590.000	1593.000
800	200	120	1,25	1,25	1542.510	•	7,2	2	3+3			1574.700	-	1591.000	1592.000	2570.100	1590.000	1593.000
800	400	120	1,38	1,25	1513.510	-	11	0	-	-		1573.700	-	1591.000	1592.000	2570.100	1590.000	1593.000
800	400	120	1,38	1,25	1541.510	•	12,0	2	3+3			1573.700	-	1591.000	1592.000	2570.100	1590.000	1593.000

Sheet steel junction/terminal box with gland plate options used on London Underground and Network Rail projects with a range of accessories available. EMC versions also available on request.

# Junction Boxes for London Underground & Network Rail Projects



## Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover / door: Stainless steel 1.4301 (AISI 304), all round foamed-in PU seal
- Mounting plate: Sheet steel (AE)

## Surface finish:

- Enclosure and cover / door: Brushed, grain 180 (KL)  
Brushed, grain 400, peak-to-valley height < 0.8 µm (AE)

## Protection category IP to IEC 60 529:

- IP66

## Protection category NEMA:

- NEMA 4X

## Detailed drawings:

- Available on the internet.

## Supply includes:

- Enclosure with cover (KL)
- Quick-release fastener including plastic bushes (KL)
- Enclosure with door(s) (AE)
- Mounting plate (AE)
- Lock: 3 mm double-bit (AE)

Please observe the product specific scope of supply.

## Approvals:

- cUL
- UL
- CSA
- TÜV
- DNV GL
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas

## Applications:

- London Underground & Network Rail

## Stainless Steel wall-mounted AE

Dimensions mm			Model No. AE	Wall mounting bracket	Wall mounting bracket	Wall angle	Pole clamp	Cam lock
W	H	D						
Packs of				4	4	4	1	1
200	300	120	<b>1001.600</b>	2433.000	-	2583.010	2584.000	2304.000
200	300	155	<b>1002.600</b>	2433.000	-	2583.010	2584.000	2304.000
200	300	155	<b>1002.500</b>	-	2433.500	2583.010	2584.000	2304.000
300	300	210	<b>1003.600</b>	2433.000	-	2583.010	2584.000	2304.000
380	300	155	<b>1004.600</b>	2433.000	-	2583.010	2584.000	2304.000
380	300	210	<b>1011.600</b>	2433.000	-	2583.010	2584.000	2304.000
300	380	210	<b>1005.600</b>	2433.000	-	2583.010	2584.000	2304.000
300	380	210	<b>1005.500</b>	-	2433.500	2583.010	2584.000	2304.000
380	380	210	<b>1006.600</b>	2433.000	-	2583.010	2584.000	2304.000
380	380	210	<b>1006.500</b>	-	2433.500	2583.010	2584.000	2304.000
600	380	210	<b>1009.600</b>	2433.000	-	2583.010	2584.000	2304.000
400	500	210	<b>1015.600</b>	2433.000	-	2583.010	2584.000	2304.000
500	500	210	<b>1007.600</b>	2433.000	-	2583.010	2584.000	2304.000
500	500	300	<b>1013.600</b>	2433.000	-	2583.010	2584.000	2304.000
380	600	210	<b>1008.600</b>	2433.000	-	2583.010	2584.000	2304.000
600	600	210	<b>1010.600</b>	2473.000	-	2583.010	2584.000	2304.000
600	600	210	<b>1010.500</b>	-	2433.500	2583.010	2584.000	2304.000
600	760	210	<b>1012.600</b>	2433.000	-	2583.010	2584.000	2304.000
760	760	300	<b>1014.600</b>	2474.000	2433.000	2583.010	-	2304.000
800	1000	300	<b>1016.600</b>	2475.000	2433.000	2583.010	-	2304.000
800	1200	300	<b>1017.600</b>	2475.000	2433.000	2583.010	-	-
*1000	1000	300	<b>1018.600</b>	2363.000	2433.000	2583.010	-	2304.000
*1000	1200	300	<b>1019.600</b>	2363.000	2433.000	2583.010	-	-
*1000	1200	300	<b>1019.500</b>	2363.000	-	2583.010	-	-

\* IP 55 - double door

## Compact enclosure AE Protection category IP 66 / \*IP 55



## Stainless Steel junction box KL

Dimensions mm			Model No. KL	Wall mounting bracket	Wall angle	Pole clamp	Cover hinge
W	H	D					
Packs of			1	4	4	2	2
150	150	80	<b>1521.010</b>	1594.000	2583.010	2584.000	1592.010
150	150	120	<b>1527.010</b>	1594.000	2583.010	2584.000	1592.010
300	150	80	<b>1522.010</b>	1594.000	2583.010	2584.000	1592.010
200	200	80	<b>1523.010</b>	1594.000	2583.010	2584.000	1592.010
200	200	120	<b>1528.010</b>	1594.000	2583.010	2584.000	1592.010
300	200	80	<b>1524.010</b>	1594.000	2583.010	2584.000	1592.010
300	200	120	<b>1529.010</b>	1594.000	2583.010	2584.000	1592.010
400	200	120	<b>1525.010</b>	1594.000	2583.010	2584.000	1592.010
300	300	120	<b>1526.010</b>	1594.000	2583.010	2584.000	1592.010
400	300	120	<b>1530.010</b>	1594.000	2583.010	2584.000	1592.010

## Terminal boxes KL Protection category IP 66





# Wall-mounted enclosures for London Underground & Network Rail Projects



## Material:

- Enclosure: Sheet steel
- Door: Sheet Steel, all-round foamed-in PU seal

## Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

## Approvals:

- cUL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas

## Protection category:

- See tables

## Supply includes:

- Enclosure with hinged door(s) of all round solid construction
- Gland plate(s) in enclosure base
- For single-door enclosures hinged on right, may be swapped to left (except with AE 1032.500 and AE 1035.500)
- With cam lock or 3-point lock system
- Mounting plate

## Colour:

- RAL 7035

## Detailed drawings:

- Available on the internet

## Applications:

- London Underground & Network Rail

## Sheet steel wall-mounted AE

Dimensions mm			Mounting plate mm		Material thickness mm		Mounting Plate thickness mm	Cam lock * = 3-point locking system	Model No. AE	Weight (Kg)	Accessories					
W	H	D	W	H	Box	Door					Gland plate Size	Qty	Rail for Interior Installation	Wall Brackets	Rain Canopy	
														Sheet Steel	Stainless Steel	
Qty.													4 units	1 unit	1 unit	1 unit
200	300	120	162	275	1,25	1,5	2,0	1	<b>1032.500</b>	4,0	1	1	-	2508.100	-	-
200	300	155	162	275	1,25	1,5	2,0	1	<b>1035.500</b>	4,5	1	1	-	2508.100	-	2470.000
300	300	155	254	275	1,38	1,5	2,0	1	<b>1036.500</b>	6,1	-	1	-	2508.100	-	-
300	300	210	254	275	1,38	1,5	2,0	1	<b>1033.500</b>	7,0	-	1	2383.210	2508.100	-	2361.000
300	400	210	254	375	1,38	1,5	2,0	1	<b>1034.500</b>	8,8	-	1	2383.210	2508.100	-	2361.000
380	300	155	334	275	1,38	1,5	2,0	1	<b>1030.500</b>	7,4	3	1	-	2508.100	-	2471.000
380	300	210	334	275	1,38	1,5	2,0	1	<b>1031.500</b>	7,5	3	1	2383.210	2508.100	2501.500	2472.000
380	380	210	334	355	1,38	1,5	2,0	1	<b>1380.500</b>	9,8	3	1	2383.210	2508.100	2501.500	2472.000
380	600	210	334	570	1,38	1,5	2,5	2	<b>1038.500</b>	15,6	3	1	2383.210	2508.100	2501.500	2472.000
380	600	350	334	570	1,5	1,5	2,5	2	<b>1338.500</b>	19,4	4	1	2383.350	2508.100	-	-
400	500	210	354	475	1,38	1,5	2	2	<b>1045.500</b>	13	4	1	2383.210	2508.100	-	-
400	800	300	349	770	1,5	2,0	3,0	2	<b>1037.500</b>	26,2	4	1	2383.300	2508.100	-	-
500	500	210	449	470	1,38	1,75	2,5	2	<b>1050.500</b>	16,8	4	1	2383.210	2508.100	-	2362.000
500	500	300	449	470	1,5	1,75	2,5	2	<b>1350.500</b>	19,6	4	1	2383.300	2508.100	-	-
500	700	250	449	670	1,5	2,0	2,5	2	<b>1057.500</b>	31,2	4	1	2383.250	2508.100	-	-
600	380	210	549	355	1,38	1,5	2,5	1	<b>1039.500</b>	15,4	5	1	2383.210	2508.100	2502.500	2473.000
600	380	350	549	355	1,5	1,5	2,5	1	<b>1339.500</b>	20,0	5	1	2383.350	2508.100	2511.500	-
600	600	210	549	570	1,38	1,75	2,5	2	<b>1060.500</b>	22,8	5	1	2383.210	2508.100	2502.500	2473.000
600	600	250	549	570	1,5	1,75	2,5	2	<b>1054.500</b>	24,8	5	1	2383.250	2508.100	-	-
600	600	350	549	570	1,5	1,75	2,5	2	<b>1360.500</b>	28,4	5	1	2383.350	2508.100	2511.500	-
600	760	210	549	730	1,38	2,0	3,0	2	<b>1076.500</b>	32,1	5	1	2383.210	2508.100	2502.500	2473.000
600	760	350	549	730	1,5	2,0	3,0	2	<b>1376.500</b>	36,0	5	1	2383.350	2508.100	2511.500	-
600	800	250	549	770	1,5	2,0	3,0	2	<b>1058.500</b>	33,6	5	1	2383.250	2508.100	-	-
600	1000	250	539	955	1,5	2,0	3,0	2	<b>1090.500</b>	50,5	5	1	2383.250	2508.100	-	-
600	1200	300	540	1155	1,5	2,0	3,0	*	<b>1260.500</b>	55,0	5	1	2383.300	2508.100	-	-
760	760	210	704	730	1,5	2,0	3,0	2	<b>1077.500</b>	40,0	5	1	2383.210	2508.100	-	-
760	760	300	704	730	1,5	2,0	3,0	2	<b>1073.500</b>	44,5	5	1	2383.300	2508.100	-	2474.000
800	600	300	749	570	1,5	2,0	2,5	2	<b>1055.500</b>	33,9	5	1	2383.300	2508.100	-	2475.000
800	1000	300	739	955	1,5	2,0	3,0	2	<b>1180.500</b>	57,0	5	1	2383.300	2508.100	-	2475.000
800	1200	300	740	1155	1,5	2,0	3,0	*	<b>1280.500</b>	70,0	5	1	2383.300	2508.100	-	2475.000
1000	760	210	944	730	1,5	2,0	3,0	2	<b>1100.500</b>	52	4	2	2383.210	2508.100	-	2363.000
1000	760	300	944	730	1,5	2	3	2	<b>1130.500</b>	56	4	2	2383.300	2508.100	-	2363.000
1000	1000	300	939	955	1,5	2,0	3,0	2	<b>1110.500</b>	71,0	4	2	2383.300	2508.100	-	2363.000
1000	1200	300	940	1155	1,5	2,0	3,0	*	<b>1213.500</b>	85,0	4	2	2383.300	2508.100	-	2363.000
1000	1400	300	940	1355	1,5	2,0	3,0	*	<b>1114.500</b>	97,0	4	2	2383.300	2508.100	-	2363.000

Sheet steel wall mounted enclosure with hinged door and alternative lock options and a wide range of accessories.

Used on London Underground & Network Rail projects. EMC versions also available including stainless steel. Please ask for details.

# Wall-mounted enclosures for Network Rail Projects



## Material:

- Enclosure and door: Fibre-glass-reinforced unsaturated polyester
- Door: All-round foamed-in PU seal
- Mounting plate: Sheet steel
- Viewing window: Glazed acrylic, 3.0mm with all-round rubber cable clamp strip

## Surface finish:

- Enclosure and door: Dyed plastic with no after-treatment
- Mounting plate: Zinc-plated

## Colour:

- Similar to RAL 7035

## Protection category:

- See Table

## Supply includes:

- Enclosure with hinged door, of all-round solid construction, 3mm double-bit lock
- Mounting plate
- Twin seal on the top and bottom edges of the door as integral rain protection strip
- Press-fitted C sections at the sides for infinitely variable mounting plate depth adjustment

Please note the product-specific scope of supply.

## Detailed drawings:

- Available on the internet

## Applications:

- Network Rail

## GRP wall-mounted KS

Dimensions mm			Mounting plate mm		Mounting Plate thickness mm	Model No. AE	Weight (Kg)	Protection category IP to IEC 60529	Protection category NEMA	Product-specific scope of supply						
W	H	D	W	H						Door(s)	Door hinged on the right, may be swapped to the left	Removable centre bar, lockable door on right	Viewing window	Cam lock	3-point lock system	
Qty.																
200	300	150	145	250	2	1423.500	3.4	IP 66	NEMA 4X	1	■	-	-	1	-	
250	350	150	195	300	2	1432.500	4.3	IP 66	NEMA 4X	1	■	-	-	1	-	
300	400	200	245	350	2	1434.500	5.9	IP 66	NEMA 4X	1	■	-	-	2	-	
400	400	200	345	350	2.5	1444.500	7.9	IP 66	NEMA 4X	1	■	-	-	2	-	
400	400	200	345	350	2.5	1448.500	8	IP 56	NEMA 12	1	■	-	■	2	-	
400	600	200	345	550	2.5	1446.500	11.5	IP 66	NEMA 4X	1	■	-	-	2	-	
400	600	200	345	550	2.5	1449.500	11.2	IP 56	NEMA 12	1	■	-	■	2	-	
500	500	300	417	450	2.5	1453.500	13.5	IP 66	NEMA 4X	1	■	-	-	2	-	
500	500	300	417	450	2.5	1454.500	13.4	IP 56	NEMA 12	1	■	-	■	2	-	
600	600	200	545	550	2.5	1466.500	15.9	IP 66	NEMA 4X	1	■	-	-	2	-	
600	600	200	545	550	2.5	1467.500	15.6	IP 56	NEMA 12	1	■	-	■	2	-	
600	800	300	517	750	3.0	1468.500	26.5	IP 66	NEMA 4X	1	■	-	-	-	■	
600	800	300	517	750	3.0	1469.500	26.0	IP 56	NEMA 12	1	■	-	■	-	■	
800	1000	300	717	950	3.0	1479.500	39.9	IP 56	NEMA 12	1	■	-	■	-	■	
800	1000	300	717	950	3.0	1480.500	41.7	IP 66	NEMA 4X	1	■	-	-	-	■	
1000	1000	300	917	950	3.0	1400.500	51.6	IP 56	NEMA 12	2	-	■	-	-	■	

Glass reinforced plastic enclosure with hinged lockable door including mounting plate.

Suitable for indoor and outdoor applications complete with integral rain protection strips.

Used on a number of Network Rail projects.

# Wall-mounted enclosures for London Underground & Network Rail Projects



## Material:

- Sheet steel
- Viewing window: Single-pane safety glass, 3mm

## Surface finish:

- Powder coated

## Colour:

- RAL 7035

## Benefits:

- Tool-free quick assembly
- System assembly on the open 482.6mm (19") frame

## Detailed drawings:

- Available on the internet

## Applications:

- London Underground & Network Rail

## Supply includes:

- Flat-packed enclosure
- 1 wall section
- 2 basic supports
- 2 roof/base plates, with cut-outs for cable entry via brush strips
- 2 side panels, lockable
- 1 glazed door, lockable, security lock 3524 E, door hinge point selectable
- Connection components for tool-free, fast assembly
- Earthing kit for system-compatible earthing of all enclosure parts

Please note the product-specific scope of supply

## Note:

- Max. installation depth: Depth -112 mm
- Max. distance between two 482.6 mm (19") levels: Depth -126 mm

## IT "19 inch" wall-mounted Flatbox

Dimensions mm			Units U	Model No. DK	Supply	Accessories							
W	H	D				Mounting Angles 482.6mm (19")	Levelling feet	Cover plates for fan panels	Earth Rail, horizontal	Enclosure internal thermostat	Cable Management panel	Component Shelf 2U, static installation	Component shelves, pull-out
Packs of						2 pc(s).	4 pc(s).	6 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 set(s)
600	358	400	6	<b>7507.000</b>	1 (pc(s).	7507.706	7507.740	7507.760	7113.000	3110.000	5502.205	7119.250	-
500	358	600	6	<b>7507.100</b>	1 (pc(s).	7507.706	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675
600	492	400	9	<b>7507.010</b>	1 (pc(s).	7507.709	7507.740	7507.760	7113.000	3110.000	5502.205	7119.250	-
600	492	600	9	<b>7507.110</b>	1 (pc(s).	7507.709	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675
600	625	400	12	<b>7507.020</b>	1 (pc(s).	7507.712	7507.740	7507.760	7113.000	3110.000	5502.205	7119.250	-
600	625	600	12	<b>7507.120</b>	1 (pc(s).	7507.712	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675
600	758	400	15	<b>7507.030</b>	1 (pc(s).	7507.715	7507.740	7507.760	7113.000	3110.000	5502.205	7119.250	-
700	758	700	15	<b>7507.200</b>	1 (pc(s).	7507.715	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675
700	892	700	18	<b>7507.210</b>	1 (pc(s).	7507.718	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675
700	1025	700	21	<b>7507.220</b>	1 (pc(s).	7507.721	7507.740	7507.760	7113.000	3110.000	5502.205		5501.675

A wall or floor mounted enclosure for housing IT equipment used on Network Rail & London Underground projects.

# Wall-mounted enclosures for London Underground & Network Rail Projects



## Material:

- Wall and hinged part: Sheet steel, 1.5mm
- Viewing window: Single-pane safety glass, 3mm

## Surface finish:

- Powder-coated

## Colour:

- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

## Protection category IP to IEC 60 529:

- IP55

## Supply includes:

- Wall section with solid gland plate, top and bottom and mounting plate (supplied loose)
- Designer glazed door

Please note the product-specific scope of supply.

## Approvals:

- cUL
- UL

## Detailed drawings:

- Available on the internet

## Applications:

- London Underground & Network Rail

## IP rated “19” wall-mounted enclosure EL

Dimensions mm			Units U	Packs of	Model No. EL	Product-specific scope of supply					
W	H	D				Wall section: Gland plate, solid, top and bottom	Wall section: mounting plate supplied loose	Hinged part with two 482.6mm (19”) mounting angles	Mini-comfort handle	Security lock 3524 E	Comfort handle and 2-point locking
600	212	373	3	1 pc(s).	<b>2243.605</b>	■	■	■	■	■	
600	212	473	3	1 pc(s).	<b>2253.605</b>	■	■	■	■	■	
600	345	373	6	1 pc(s).	<b>2246.605</b>	■	■	■	■	■	
600	345	473	6	1 pc(s).	<b>2256.605</b>	■	■	■	■	■	
600	478	373	9	1 pc(s).	<b>2249.605</b>	■	■	■	■	■	
600	478	473	9	1 pc(s).	<b>2259.605</b>	■	■	■	■	■	
600	612	373	12	1pc(s).	<b>2252.605</b>	■	■	■	■	■	
600	612	473	12	1 pc(s).	<b>2262.605</b>	■	■	■	■	■	-
600	746	373	15	1 pc(s).	<b>2255.605</b>	■	■	■	■	■	-
600	746	473	15	1 pc(s).	<b>2265.605</b>	■	■	■	■	■	-
600	1012	373	21	1 pc(s).	<b>2261.605</b>	■	■	■	-	■	■
600	1012	473	21	1 pc(s).	<b>2271.605</b>	■	■	■	-	■	■

With mounting plate and mounting angles, static installation

A wall mounted enclosure with optimum accessibility due to it being hinged in 3 parts with a high IP rating to house IT equipment.

Used on Network Rail & London Underground projects.

# Floor standing enclosures for London Underground & Network Rail Projects



## Material:

- Enclosure frame, roof, rear panel and gland plates: Sheet steel, 1.5 mm thick
- Door: Sheet steel, 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

## Surface finish:

- Enclosure frame: Dipcoat-primed
- Door, roof and rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate and gland plates: Zinc-plated

## Protection category:

- IP 55 to IEC 60 529, complies with NEMA 12

## Detailed drawings:

- Available on the internet

## Colour:

- RAL 7035

## Supply includes:

- Enclosure frame: with door(s)
- 3mm double-bit lock insert
- Mounting plate
- Gland plates
- Rear panel
- Roof plate
- 4 eyebolts

## Approvals:

- UL
- cUL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas

## Applications:

- London Underground & Network Rail

## Baying systems TS 8

Dimensions mm			Model No. TS	Door (s)	Weight (kg)	Side Panels	Base/plinth Front & Rear 100mm	Base/plinth sides 100mm	Base/plinth Front 200mm	Base/plinth sides 200mm
W	H	D								
1200	1600	500	<b>8265.500</b>	2	159,3	8165.235	8601.200	8601.050	8602.200	8602.050
800	1600	500	<b>8865.500</b>	1	103,0	8165.235	8601.800	8601.050	8602.800	8602.050
800	1800	400	<b>8884.500</b>	1	113,5	8184.235	8601.800	8601.040	8602.800	8602.040
1200	1800	400	<b>8284.500</b>	2	170,6	8184.235	8601.200	8601.040	8602.200	8602.040
600	1800	400	<b>8684.500</b>	1	91,3	8184.235	8601.600	8601.040	8602.600	8602.040
1000	1800	400	<b>8080.500</b>	2	140,0	8184.235	8601.000	8601.040	8602.000	8602.040
1000	1800	400	<b>8084.500</b>	1	136,4	8184.235	8601.000	8601.040	8602.000	8602.040
800	1800	500	<b>8885.500</b>	1	115,8	8185.235	8601.800	8601.050	8602.800	8602.050
1200	1800	500	<b>8285.500</b>	2	173,3	8185.235	8601.200	8601.050	8602.200	8602.050
600	1800	500	<b>8685.500</b>	1	93,8	8185.235	8601.600	8601.050	8602.600	8602.050
800	1800	600	<b>8886.500</b>	1	120,3	8186.235	8601.800	8601.060	8602.800	8602.060
1200	1800	600	<b>8286.500</b>	2	179,9	8186.235	8601.200	8601.060	8602.200	8602.060
800	2000	400	<b>8804.500</b>	1	124,0	8104.235	8601.800	8601.040	8602.800	8602.040
600	2000	400	<b>8604.500</b>	1	99,0	8104.235	8601.600	8601.040	8602.600	8602.040
1200	2000	400	<b>8204.500</b>	2	184,5	8104.235	8601.200	8601.040	8602.200	8602.040
1000	2000	400	<b>8004.500</b>	2	152,8	8104.235	8601.000	8601.040	8602.000	8602.040
800	2000	500	<b>8805.500</b>	1	126,3	8105.235	8601.800	8601.050	8602.800	8602.050
1200	2000	500	<b>8205.500</b>	2	190,6	8105.235	8601.200	8601.050	8602.200	8602.050
1000	2000	500	<b>8005.500</b>	2	157,1	8105.235	8601.000	8601.050	8602.000	8602.050
600	2000	500	<b>8605.500</b>	1	101,0	8105.235	8601.600	8601.050	8602.600	8602.050
800	2000	600	<b>8806.500</b>	1	130,5	8106.235	8601.800	8601.060	8602.800	8602.060
1200	2000	600	<b>8206.500</b>	2	194,6	8106.235	8601.200	8601.060	8602.200	8602.060
600	2000	600	<b>8606.500</b>	1	104,0	8106.235	8601.600	8601.060	8602.600	8602.060
1000	2000	600	<b>8006.500</b>	2	161,2	8106.235	8601.000	8601.060	8602.000	8602.060
800	2000	800	<b>8808.500</b>	1	137,0	8108.235	8601.800	8601.080	8602.800	8602.080
600	2000	800	<b>8608.500</b>	1	111,0	8108.235	8601.600	8601.080	8602.600	8602.080
1200	2000	800	<b>8208.500</b>	2	203,0	8108.235	8601.200	8601.080	8602.200	8602.080
1200	2200	600	<b>8226.500</b>	2	208,0	8126.235	8601.200	8601.060	8602.200	8602.060

Floor standing bayable enclosure made from sheet steel. Stainless steel versions available on request.

Used on a number of Network Rail & London Underground projects.

Can be installed with 19" rails to provide an alternative locking for high IP rated 19" equipment installation.

# Floor standing Network Rail Telecommunications Rack



**Material:**

- Sheet steel

**Surface finish:**

- Enclosure frame: Dipcoat-primed
- Doors and roof: Dipcoat primed, powder-coated

**Colour:**

- Enclosure frame, doors and panels: RAL 7035

**Detailed drawings:**

- Available on the internet

**Supply includes:**

- TS 8 enclosure frame with doors, roof plate and side panels
- Vented split sheet steel door at the front and rear (vented surface area approx. 85% perforated), 180Deg hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Two 482.6mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)

Please observe the product specific scope of supply.

## Baying system TS IT

Dimensions	Packs of	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Width mm		600	600	600	600	600	600	600
Height mm		2000	2000	1600	2000	2200	2200	2200
Depth mm		600	800	600	600	600	800	600
<b>Model No. TS IT</b>	<b>1</b>	<b>1053.617</b>	<b>1053.618</b>	<b>1053.620</b>	<b>1053.621</b>	<b>1053.622</b>	<b>1055.623</b>	<b>1053.624</b>

Supply includes

Split vented doors front and rear		■	■	■	■	■	■	■
Vented side panels		■	■	■	■	■	■	■
Dual supply 12 way, 1U PDU, 6 x outputs per 100Amp supply* (Fuses order separately)**		■	■	■	■	■	■	■
19" rails front and rear		■	■	■	■	■	■	■
Levelling feet		■	■	■	■	■	■	■
Cable trunking to the front each side		■	■	■	■	■	■	■
Cable tray central each side		■	■	■	■	■	■	■
Wall retaining brackets		■	■	■	■	■	■	■
Earth bar		■	■	■	■	■	■	■
Battery shelf		-	-	-	■	-	-	■
1 string fiamm batteries (150Amp each)		-	-	-	■	-	-	■
Flatpack 2 Powercore SPD, 4 x 100Amp batt MCB, 2 x 100Amp Load MCB, Smartpack 1 controller, 3 x 2kW HE rectifiers		-	-	-	■	-	-	■
**Fuses to be ordered separately choice of 2, 5, 10,15, 20 & 30Amp								

19" telecoms racks approved for Network Rail Telecom projects including DC distribution. Also available with -48V power supply units and batteries.

■ = Order separately. These items are not included with 1053.XXX products.

# Floor standing enclosures for London Underground & Network Rail Projects



## Material:

- Sheet steel
- Aluminium
- Glazed door: Single panes safety glass

## Surface finish:

- Enclosure frame: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated.

## Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation, vent grill at the front: RAL 9005

## Approvals:

- UL
- cUL

## Applications:

- London Underground & Network Rail

## Supply includes:

- TS 8 enclosure frame with doors and roof plate
  - Aluminium sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
  - Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
  - Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners
  - Spacers to raise the fan cover plate, for passive cooling (supplied loose)
  - Connection accessories for potential equalisation with earthing point (supplied loose)
  - 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
- Please observe the product specific scope of supply.

## “19 inch” enclosure TS IT

Dimensions mm			Units U	Packs of	Model No. DK	Product-specific scope of supply				
W	H	D				Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	Sheet steel door at the rear, 180 deg hinges	Roof plate, multi-piece, removable with side cable entry in the depth and covered cut-out for fan mounting plate	Sheet steel door at the rear, vertically divided, 180 deg hinges	Sheet steel door at rear, vertically divided, vented (vented surface area approx. 85% perforated), 180 deg hinges
With glazed door, with 482.6mm (19") mounting angles										
600	1800	600	38	1 pc(s).	<b>5527.120</b>	■	-	-	■	-
600	1800	800	38	1 pc(s).	<b>5528.120</b>	■	■	-	-	-
800	1800	800	38	1 pc(s).	<b>5505.120</b>	■	■	-	-	-
600	2000	600	42	1 pc(s).	<b>5529.120</b>	-	■	■	-	-
600	2000	800	42	1 pc(s).	<b>5530.120</b>	■	■	-	-	-
600	2000	1000	42	1 pc(s).	<b>5508.120</b>	■	■	-	-	-
600	2000	1200	42	1 pc(s).	<b>5510.120</b>	■	■	-	-	-
800	2000	600	42	1 pc(s).	<b>5506.120</b>	■	■	-	-	-
800	2000	800	42	1 pc(s).	<b>5507.120</b>	-	■	■	-	-
800	2000	1000	42	1 pc(s).	<b>5509.120</b>	-	-	■	■	-
800	2000	1200	42	1 pc(s).	<b>5511.120</b>	-	-	■	■	-
With vented door, with 482.6mm(19") mounting angles										
600	1800	600	38	1 pc(s).	<b>5527.110</b>	■	-	-	-	■
600	1800	800	38	1 pc(s).	<b>5528.110</b>	-	-	■	-	■
800	1800	800	38	1 pc(s).	<b>5505.110</b>	■	■	-	-	-
600	2000	600	42	1 pc(s).	<b>5529.110</b>	-	■	■	-	-
600	2000	800	42	1 pc(s).	<b>5530.110</b>	■	■	-	-	-
600	2000	1000	42	1 pc(s).	<b>5508.110</b>	■	■	-	-	-
600	2000	1200	42	1 pc(s).	<b>5510.110</b>	■	■	-	-	-
800	2000	600	42	1 pc(s).	<b>5506.110</b>	■	■	-	-	-
800	2000	800	42	1 pc(s).	<b>5507.110</b>	-	■	■	-	-
800	2000	1000	42	1 pc(s).	<b>5509.110</b>	-	■	■	-	-
800	2000	1200	42	1 pc(s).	<b>5511.110</b>	-	■	■	-	-

A floor standing, bayable 19" network/server rack for IT equipment.

Available in vented or glazed door options.

Used on Network Rail & London Underground projects.

# Outdoor enclosures for Network Rail Projects



## Material:

- Enclosure, roof and side panel: Aluminium AIMg3
- Base/plinth: Aluminium AIMg3

## Protection category:

- IP 55 to IEC 60 529
- Complies with NEMA 3R

## Surface finish:

- Powder coated
- UV resistant pure polyester

## Colour:

- RAL 7035

## General Description:

- Double-walled outdoor enclosure with base/plinth and rain canopy projecting on all sides. Side panels doubled up to the outside, door and rear panel to the inside.
- Photo shows a configuration example with equipment not included within the scope of supply

## Detailed drawings:

- Available on the internet.

## Applications:

- Network Rail

## CS Outdoor enclosures – PADS approved

	Packs of	Type A	Type B
Width mm*		600	1200
Height mm*		1200	1200
Depth mm*		600	600
<b>Model No. CS</b>	<b>1</b>	<b>9751.009</b>	<b>9752.009</b>

Supply includes

Enclosure		9751.125	9752.125
Single door, front & rear		■	-
Double door front & rear		-	■
19" Rails front & rear (24 U usable space)		■	-
2 x 19" Rails front & rear (48 U usable space)		-	■
Louvered side panles		■	■
Fan and filter L/H panel		3344.100	3244.100
Filter R/H panel, high level		3243.200	3243.200
Thermostat		3110.000	3110.000
Heater 800W		3105.400	3105.400

Accessories

Door switch	1		
Light	1		
Concrete base plinth	1	9765.083	9765.087
Equipment shelves	1		

\*Alternative sizes available on request for projects specification - Please ask for more details.

PADS approved enclosure designed specifically for outdoor environments. Used on a number of Network Rail projects for electrification, signalling power and telecommunications.



# Outdoor enclosures for Network Rail Projects



Outdoor enclosures for wall or pole mounting. Enclosure-within-an-enclosure concept, outer enclosure with cut-out at the bottom and integrated louvres on the rear panel and side panels for ventilation.

#### Material:

- Enclosure: Aluminium AlMg3
- Mounting plate: Sheet steel, zinc-plated

#### Surface finish:

- Powder-coated UV-resistant pure polyester
- Mounting plate: Zinc plated

#### Colour:

- RAL 7035

#### Protection category:

- IP 55 to IEC 60 529

#### Supply includes:

Double-walled outdoor enclosure, fully preconfigured:

- Inner enclosure with mounting plate, gland plate and security lock (CS 9791.045 with 2 security locks
- Mounting bracket for thermostat or hygostat
- Outer enclosure with designer cover and security lock 3524 E
- 2 C rails on the rear panel

#### Detailed drawings:

- Available on the internet

#### Applications:

- Network Rail

## CS wall & pole mounted enclosure – Double walled

Outer enclosure					
Width (B1) mm	Packs of	370	420	530	630
Height (H1) mm		522	560	700	780
Depth (T1) mm		210	210	265	380
Inner enclosure					
Width (B2) mm		300	350	460	580
Height (H2) mm		400	440	565	580
Depth (T2) mm		170	170	220	333
Clearance width mm		280	330	440	560
Clearance height mm		380	420	545	560
Clearance depth mm		145	145	195	308
Mounting plate width (B3) mm		270	320	430	550
Mounting plate height (H3) mm		380	410	535	550
<b>Model No. CS</b>	<b>1</b>	<b>9791.015</b>	<b>9791.025</b>	<b>9791.035</b>	<b>9791.045</b>
Accessories					
Wall mounting bracket	4	9765.120	9765.120	9765.120	9765.120
Pole clamp	1 set	2584.000	2584.000	2584.000	2584.000
Enclosure heaters	1	3105.330	3105.330	3105.330	3105.330
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000
Hygostat	1	3118.000	3118.000	3118.000	3118.000
Socket	2	2506.100	2506.100	2506.100	2506.100
LED system light	1	4140.810	4140.810	4140.810	4140.810
LED connection cable	1	4315.800	4315.800	4315.800	4315.800
Adaptor power pack	1	4315.860	4315.860	4315.860	4315.860

Wall & pole mounted enclosure designed specifically for the outdoor environment.

Used on a number of Network Rail projects.

# Enclosure Cooling & Heating for London Underground & Network Rail



**Colour:**

- RAL 7035

**Supply includes:**

- Complete unit ready to install, including filter mat

**Approvals:**

- Available on the internet.

**Detailed drawings:**

- Available on the internet.

**Performance diagrams:**

- Available on the internet.

**Applications:**

- London Underground & Network Rail

**Note:**

- For energy efficient operation of the fan-and-filter units, we recommend using the enclosure internal thermostat, 3110.000, or the speed control, 3120.200 (AC control unit)

**Approvals:**

- UR
- C-UR
- CSA

## TopTherm fan-and-filter units

Model No. SK	Outlet filter model no.	Fan-and-filter unit dimensions W x H x D (mm)	Rated operating voltage (V, ~, Hz)	Air throughput (m³/h)			Protection category to IEC 60 529	IP Outdoor double skin
				Unimpeded	1 x Outlet filter	2 x Outlet filter		
3237.100	3237.200	148.5 x 148.5 x 16	230, 1, 50/60	20 / 25	15/18	-	IP54	IP56
3238.100	3238.200	148.5 x 148.5 x 16	230, 1, 50/60	55/66	43/50	46/56	IP54	IP56
3239.100	3239.200	204 x 204 x 25	230, 1, 50/60	105/120	87/100	93/108	IP54	IP56
3240.100	3240.200	255 x 255 x 25	230, 1, 50/60	180/160	138/121	165/140	IP54	IP56
3241.100	3241.200	255 x 255 x 25	230, 1, 50/60	230/250	183/205	203/230	IP54	IP56
3243.100	3243.200	323 x 323 x 25	230, 1, 50/60	550/600	465/510	508/548	IP54	IP56
3244.100	3243.200	323 x 323 x 25	230, 1, 50/60	700/770	544/587	614/662	IP54	IP56

Alternative voltages available, 115V & 24V DC

A full range of enclosure cooling products are available from rack and roof mounted fans, heat exchangers and air conditioning units for indoor and outdoor applications.

### Hygrostat

The hygrostat switches on the heater and/or fan when a pre-set relative humidity in the enclosure is exceeded. In this way, the relative humidity is reduced and condensation on assemblies or electronic components is avoided.

Rated operating voltage V, ~	Model No.
24 - 230, 1~ 12 - 75 (DC)	3118.000



### Enclosure internal thermostat

Particularly suitable for controlling fan-and-filter units, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

Rated operating voltage V, ~	Model No.
24 - 230, 115, 1~ 24 - 60 (DC)	3110.000



### Speed Control

Temperature-dependent speed control for fan-and-filter units, air/air heat exchangers, rack-mounted fans and tagential fans to reduce noise and save energy in part-load operation

Rated operating voltage V, ~	Model No.
100 - 230.	3120.200



# Enclosure heaters for London Underground & Network Rail Projects



## Supply includes:

- PTC heater
- Quick-connection terminal
- Assembly parts

## Approvals:

- UR
- C-UR
- CSA
- VDE

## Technical details:

- Available on the internet.

## Applications:

- London Underground & Network Rail

## Note:

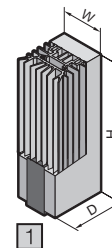
- For precise temperature control inside the enclosure, we recommend using the enclosure internal thermostat, 3110.000, or the digital enclosure internal temperature display and thermostat, 3114.200
- In order to prevent condensation forming on assemblies, a hydrostat, 3118.000, is recommended to regulate heating
- In larger enclosures, even heat distribution is best achieved by installing several low-output heaters
- The installation of heaters is generally advisable to prevent condensation

## Enclosure heaters

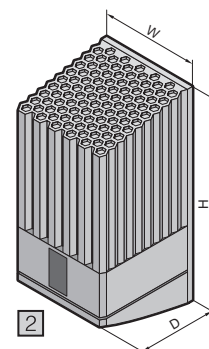
Model No.	Rated operating voltage (V, ~, Hz)	Dimensions W x H x D (mm)	Continuous thermal output at ambient temp of 10 °C (W)	
3105.310	110-240, 1, 50/60	45 x 120 x 46	8 – 10	
3105.320			18 – 20	
3105.330		64 x 155 x 56	23 – 30	
3105.340			49 – 50	
3105.350			64 x 230 x 56	63 – 75
3105.360			90 x 165 x 75	86 – 100
3105.370	90 x 180 x 75	130 – 150		

Model No.	Rated operating voltage (V, ~, Hz)	Dimensions W x H x D (mm)	Continuous thermal output at ambient temp of 10 °C (W)
3105.380	230, 1, 50/60	103 x 200 x 103	250 / 265
3105.390	230, 1, 50/60		400 / 415
3105.400	230, 1, 50/60		800 / 870

### 1 Without fan, continuous thermal output 10-150 W



### 2 With fan, continuous thermal output 250-800 W



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