



LST + ANTI-LIGATURE RADIATORS & GUARDS



Contour radiator & guard product selector

To assist with product selection we have produced a general guide based upon typical needs by application.

We would however recommend a thorough risk assessment of service user needs before final selection.

- Contour recommended radiator or guard for installation in these environments
- Can be installed in these environments
- Not advisable for installation in these environments

	DeepClean Anti-Ligature Radiator or Guard, Floor Mounted, Square Top	DeepClean Anti-Ligature Radiator or Guard, Wall Mounted, Square Top	DeepClean Anti-Ligature Radiator or Guard, Floor Mounted, Gradient Top	DeepClean Anti-Ligature Radiator or Guard, Wall Mounted, Gradient Top	DeepClean LST Radiator or Guard, Floor Mounted, Square Top	DeepClean LST Radiator or Guard, Wall Mounted, Square Top	DeepClean LST Radiator or Guard, Floor Mounted, Gradient Top	DeepClean LST Radiator or Guard, Wall Mounted, Gradient Top	Covora LST Radiator, Floor Mounted, Square Top
Airport passenger terminals									
Banks/Building societies									
Childrens' homes									
Cinemas, theatres and entertainment complexes									
Elderly peoples' homes									
GP surgeries and health centres									
Health centres									
Hospitals									
Hotel lobbies and public areas									
Leisure & sports centres									
Libraries									
Mental health units									
Nurseries, schools, colleges and universities									
Nursing & care homes and day care centres									
Offices and reception areas									
Police custody/prisons/remand/secure units/detention centres									
Public transport terminals									
Rehabilitation clinics & units									
Restaurants									
Retail spaces									
SEN schools									
Sheltered housing									
Student accommodation									
Young offenders institutions									

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Introduction

Contour has been at the forefront of Low Surface Temperature (LST) & anti-ligature radiator and radiator guard design, manufacture and installation, since 2003. During this time we have developed an extensive range of solutions to satisfy the changing needs of the market and our customers.

Our market leading DeepClean range of radiators and guards has since its launch in 2006, revolutionised the protection of vulnerable people from dangerously hot surface heating, in the healthcare, education and care home environments. In addition, the slim line system with its integral anti-microbial technology has potentially helped hospitals and care facilities throughout the UK save millions of Pounds in cleaning costs, with its quick and easy access for cleaning and maintenance.

A full pipe casing, HVAC & perimeter casing and manifold cabinet offer is also available to complete our safe surface temperature package.

Only Contour radiator guards are protected with BioCote®



Contour are exclusive partners with BioCote, the market leading providers of a patented anti-microbial coating. **This is applied to the powder coated finish of our guards, inside and out** and provides effective and permanent protection to the surface of the radiator guard against the growth of harmful microbes. This reduces the risk of cross contamination and infections in health sensitive environments.

Support

Contour offers free technical site surveys and can provide a LST and anti-ligature guard installation service*.

BIM

All Contour's radiators and guards are available as parametric BIM objects ready to be dropped into plans and our Technical and Customer Services teams are available by phone or email to answer any queries and ensure that projects, whether for first fit or refurbishment, are hassle free.

About Contour

We are specialists in the design, manufacture and installation of innovative high quality sheet metal building products, including architectural fabrications and column casings as well as safe surface temperature heating solutions. We have a 'can do' spirit and excel in meeting technically challenging specifications where quality is paramount.

Contour works in close partnership with architects, design consultants, contractors and specifying customers to deliver their vision. From our 32,000 sq ft facility, we have the design, manufacturing capabilities and capacity to tackle almost any project regardless of scale or technical complexity, anywhere in the UK or overseas.



Why specify Contour radiators and guards?

We are the innovation leaders in the UK LST & anti-ligature radiators and guards market

- The patented quick access design of our DeepClean radiator guards has potentially saved the NHS and other public bodies millions, every year in cleaning costs
- Contour was the **first** UK radiator guard manufacturer to incorporate anti-bacterial technology into its guards, setting new standards in hygiene and user protection
- Our specialist anti-ligature radiator guards, equipped with fully shrouded TRVs, security grilles and tamper-proof fixings to prevent unauthorised access, are widely recognised as setting the standard. **Contour guards have been used in over 90% of NHS Mental Health Trusts, across the UK.**



We provide free of charge surveys

Contour provides a UK wide free survey facility. A radiator guard only installation service is also available at competitive rates.

We design and manufacture in the UK

All our guards are designed and manufactured at our Midlands plant. This not only ensures a premium quality product but allows us to produce and deliver orders on short lead times throughout the UK.

We can offer bespoke guard designs

In addition to our standard ranges, Contour is well experienced in developing and installing radiator guards to meet specific requirements.

Warranties for total peace of mind

Contour radiator emitters and guards are respectively covered by 10 and 5 year product warranties*.



*Terms and conditions apply.

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Sector solutions & case studies

Hospitals & healthcare

Hospitals, clinics, GP surgeries, nursing homes and day centres are all environments where vulnerable users require protection from dangerously hot surfaces. It is therefore critical to service providers that LST products are clean, simple, easily controlled and require little maintenance. Poor design which neglects any of these essentials can compromise safety and have significant consequences for both end users and service providers.

1. Case study:

Royal Bournemouth NHS Foundation Trust

PROJECT:
Royal Bournemouth NHS Trust

M&E CONSULTANT:
Dixon Mechanical

MAIN CONTRACTOR:
Wilmott Dixon

SUMMARY:
Supply 44 complete DeepClean LST radiators for a new stroke unit

2. Case study:

Royal Gwent NHS Trust

PROJECT:
Survey and installation of radiator guards at 45 Sites across South Wales

CLIENT:
Aneurin Bevan Health Board

DESIGNER:
Contour

SUMMARY:
Supply & install of 1500 DeepClean LST radiator guards, survey and fixing of 2000m of plywood pipe boxing

Further details of these and other case studies can be found at www.contourcasings.co.uk/case-studies/



Proving the effectiveness of BioCote anti-microbial technology in hospitals



Independent laboratory tests regularly demonstrate that BioCote® anti-microbial protected materials deliver reductions in counts of bacteria, including *E. coli* and *S. aureus*, greater than 99%, compared with untreated materials. However a pilot study, conducted at the Heart of England NHS Foundation Trust over 18 months, sought to definitively investigate to what extent BioCote anti-microbial products could reduce microbial contamination in a live hospital environment.

Two outpatient units provided the environments for the study. Unit A was refurbished with a mix of BioCote treated products and a number of untreated products. A similar, refurbished outpatient ward containing untreated items (Unit B), served as a control. Both outpatient units were similar in terms of volume of people, layout and floor-surface area and were subjected to standard cleaning practice. Both were allowed to function for 12 months before swabbing commenced.

The results were clear: CFU (Colony Forming Unit) counts from BioCote treated products in unit A were up to 98% lower than from comparable, untreated products in Unit B.

These results suggest that BioCote treated products and surfaces will exhibit the same high level of anti-microbial efficacy in a real-life environment as seen in laboratory tests, that to say an average bacterial reduction of 95.8%.

In addition the bacterial contamination on untreated products in Unit A was on average 43.5% lower compared with untreated products in Unit B. This suggests that using BioCote anti-microbial treated products such as Contour radiator guards, can result in lower numbers of bacteria on other surfaces as there are fewer bacteria being transferred, thereby helping decontamination of the wider hospital environment.

As BioCote technology does not wear out or wipe off surfaces, it can provide a continuous decontamination effect for the effective lifetime of treated surfaces, including Contour radiator guards.



Sector solutions & case studies

Care and nursing homes

Case study: Meallmore Care

PROJECT:
Survey and supply of radiator guards into a care home environment

CLIENT:
Meallmore Ltd

DESIGNER:
Contour

SUMMARY:
Supply 88 gradient top DeepClean LST radiator guards in a nursing home over a five month period

Further details of these and other case studies can be found at www.contourcasings.co.uk/case-studies/



The proven effectiveness of BioCote in nursing homes



During refurbishment of a nursing home in Leicester, one residence (Unit A), comprising of a bedroom and bathroom, was refitted with a range of BioCote treated anti-microbial products, including radiator guards supplied by Contour. Another (Unit B) was fitted with comparable untreated products, to serve as the control. Both units were occupied by single residents for the length of the study and were cleaned by nursing home staff on a daily basis.

Swabs were collected from treated and untreated surfaces of each unit over a five month period and then processed for total counts of bacteria. The results were an impressive endorsement of the effectiveness of BioCote. **With specific reference to the radiator guards, the Contour guards in Unit A showed an 89% reduction in bacterial counts compared to the untreated guards in Unit B.**

Both treated and untreated products were cleaned according to the same regime, therefore what decontamination was achieved by BioCote products was in addition to the effect of a normal cleaning regime.

Mental health services and secure detention facilities

Case study: Hertfordshire Partnership University NHS Foundation Trust

PROJECT:
Kingfisher Court, Hertfordshire Partnership
University NHS Foundation Trust

M&E CONSULTANT:
The Barn Partnership

MAIN CONTRACTOR:
Medicing Osbourne

SUMMARY:
Supply 96 DeepClean anti-ligature radiator systems, fully shrouded TRVs and Rotarad rotating radiator valve kits

Further details of these and other case studies can be found at www.contourcasings.co.uk/case-studies/

Contour has developed a specialist range of radiator guards for use in environments where additional attention to design detail is required to ensure the safety of vulnerable people. Features available on our latest DeepClean anti-ligature radiators and guards include grilles designed to comply with British Standards IP3x tests, thereby preventing items 2.5mm in diameter or greater being inserted. This substantially reduces the potential for service users to attach cords or others materials to radiator guards, for the purpose of self harm or vandalism. In addition shrouded TVRs are fitted as standard on our anti-ligature guards and a wide range of anti-tamper locks and fasteners are available, designed to stop unauthorised access to inside the casing.

A separate range of products for other anti-ligature applications, such as ceiling grilles, has also been developed by Contour.





Sector solutions & case studies

Education

Our range of LST radiators and guards provide the ideal solution for ensuring the safe, effective and hygienic heating of nurseries, schools and college classrooms and buildings. All DeepClean radiator guards – a product of choice for many education sector specifiers – incorporate a BioCote coating in their ‘final finish’ as standard. This technology provides effective and permanent protection to the surface of the radiator guard, preventing the growth of harmful bacteria, so helping in the fight against the spread of infection.

1. Case study: Sandon Primary School

PROJECT:
Sandon Primary School, Stoke-on-Trent

MAIN CONTRACTOR:
Kier

SUMMARY:
Survey, design and installation of 91 LST radiator guards

2. Case study: The Maxwell Centre

PROJECT:
The Maxwell Centre, Cambridge University

MAIN CONTRACTOR:
SDC Builders Ltd

SUMMARY:
Survey, design and installation of bespoke HVAC casings for the Maxwell Centre’s natural vent system.

Further details of these and other case studies can be found at www.contourcasings.co.uk/case-studies/



Conclusive evidence of the anti-bacterial effectiveness of BioCote in classrooms



A controlled field study conducted by BioCote Partners in late 2014, found that the anti-microbial agent in the coating succeeded in wiping out virtually all the bacteria that are usually present in classrooms. The agent managed to eliminate almost 96% of the bacteria normally found in a classroom, when compared to an untreated control classroom that was also set up for the purpose of the trial study.

Contour, a long standing BioCote partner, was a lead participant in the study. The study was carried out at a UK primary school with one classroom completely refurbished with furniture, fixings and fittings all pre-treated with BioCote antibacterial technology. Swab samples from both classrooms were then regularly collected over a three-week period and taken to a laboratory for analysis.

The rationale for optimising hygiene standards in classrooms is obvious: healthier children should contribute to better educational outcomes. Part of this health dividend may be in the form of a reduction in school absenteeism and the study findings could also be considered positive with specific regards to this. When absenteeism figures for the two environments were compared the number of children reported absent due to illness in the BioCote protected classroom was some 20% less. The implications of maintaining cleaner classrooms could be good news for everyone including children, teaching staff, parents and probably even the wider economy.

Low surface temperature and anti-ligature heating solutions

Complete radiator systems

Contour's complete LST and anti-ligature radiator systems consist of three elements:

1. An internal heat emitter

Contour now uses the latest QRL Hi-Lo Round Top radiators in its complete range of LST and anti-ligature radiators. These have been designed with smaller water channels which mean they contain less water on average than 'compact' style panel emitters, allowing more metal to be in contact with the water, providing a faster warm-up time. Significantly, they can deliver considerably higher outputs for the same heat energy input compared to panel emitters. Indeed the **Round Top radiators in Contour units offer up to a 17% improvement in heating efficiency over older style panel emitters.**

All our emitters come with 4 bosses for valve fitting as required and are covered by a 10 year product warranty*

2. A radiator guard

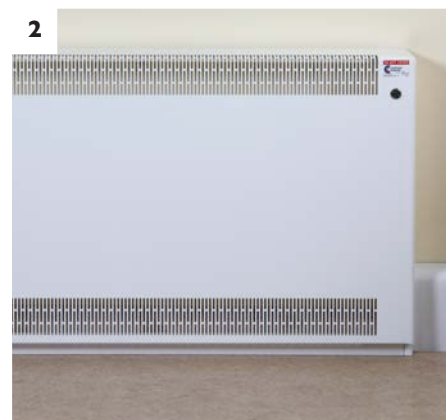
Our guards whether LST or anti-ligature, are designed to be robust, easy to clean and above all safe for users. They are available in mild steel in various gauges from 1.2mm up to 2mm and in aluminium if intended for use in humid installation environments. All Contour radiator guards are designed with rounded corners and edges to minimize the risk of injury should someone fall against a unit. For additional durability and corrosion resistance, Contour guards are all powder coated inside and out. The standard finish is white RAL 9003 however a large range of other RAL or BS colour finishes is available.

All Contour radiator guards are covered by a 5 year product warranty*

3. A radiator valve set

Contour's complete systems come with high quality Herz Thermostatic Radiator Valves (TRVs) for either internal or external fitting. For added user safety, Contour anti-ligature radiators are supplied with TRV sets with anti-ligature shrouds, as standard. For added peace of mind our TRV sets are covered by a manufacturer's 5 year product warranty*

Contour's DeepClean and Covora ranges are available as complete LST radiator systems. DeepClean models are also available as complete anti-ligature radiator systems.



Radiator guard only solutions

A radiator guard can be designed, manufactured and installed as a retrofit solution to encase an existing panel or fin radiator when a complete new system is not required.

To ensure a guard manufacture and subsequent installation of the highest quality, it is strongly recommended that the installation site is thoroughly surveyed to take into account possible obstructions such as window sills, existing pipework and immovable structures and to plan in for unique guard requirements, including cut-outs.

Contour can provide a UK wide free of charge survey facility*. A guard only installation service is also available at very competitive rates.

Contour's DeepClean range is available as both a LST and anti-ligature guard only solution.



DeepClean

The ultimate in safe surface temperature heating

Radiator guards have traditionally been basic, fixed units that make access difficult and time-consuming. Internal cleaning usually requires complete disassembly and assistance from a facilities Estates personnel. Ultimately, this impacts on cleaning schedules and hygiene standards. A radiator guard interior that has not been cleaned combined with the convection process, work together to form the perfect conditions for the growth and distribution of potentially dangerous bacteria and particles.

Radiator hygiene and infection control

There have been a number of reports in the healthcare sector expressing concern regarding uncleaned radiators and their implication in the spread of Healthcare Associated Infections (HCAIs).

The DeepClean radiator and guard range has been developed by Contour as a direct consequence of the hygiene maintenance issue.

Covered heat emitters raise the most infection control concern. Heat emitter covers allow dust to build up beneath and inside the grille. The dust has been found to contain MRSA and other potentially pathogenic organisms. When emitters are turned on during the winter, dust and bacteria are dispersed by convection to the ward area. Estates departments have had to prioritise their resources in line with decreasing budgets.

**Source: NHS Estates (2002)
Infection Control in the Built Environment guidelines**

MRSA can survive in a desiccated state in dust for long periods of time – up to 175 days.

Source: Long-term-in-vitro survival of an epidemic MRSA phage-group III-29 strain J.H.T Wagenvoort and R.J.R Penders

In less stringently cleaned environments airborne routes such as the convection process of an LST radiator have been identified as sources of microbial dissemination.

**Source: King et al (2013)
Bioaerosol Disposition in single and two-bed hospital rooms**



The benefits of DeepClean

I. Major cost savings through ease and speed of cleaning

Typically one traditional style radiator guard can take well over an hour to disassemble, remove, clean, reassemble and refit, including the removal and subsequent reapplication of silicon sealant between the wall and guard.

The DeepClean design makes it possible for a single cleaning operative to access every internal and external surface of the radiator guard without any support from a Facilities or Estates department.

This significantly improves cleaning efficiencies, helps reduce overheads and importantly raises hygiene standards. The DeepClean radiator guard itself has a unique, patented door design (UK Patent No. 2 410 544) with quick release locks, which allows the complete front of the radiator guard to lower and lie flat on the floor. The open hinge arrangement also permits front door removal if required.













In addition Rotarad™ rotating radiator valves can also be retrofitted to existing panel radiators to allow the emitter to fully pivot down to the floor – delivering access behind the radiator for unrivalled cleaning and maintenance.



The business case for specifying DeepClean

Contour has enabled the NHS to potentially save over £35 million since 2006*

We've done this by developing the revolutionary DeepClean LST and anti-ligature guard range. On this basis here's an example costing based on a hospital with 150 radiators that require a full weekly clean.

Traditional LST	DeepClean LST
 2 person job involving estates personnel.	 1 cleaning operative alone can now open the LST casing.
 Conservatively estimate at least 30 minutes to remove 1 LST casing, clean casing internally, clean radiator, clean wall, clean floor and refit casing (wall & back of radiator cannot be cleaned). Excludes replacing silicon sealant around unit.	 5 minutes to clean every internal surface of the casings and the radiator, including back of radiator and whole wall space. No need to replace sealant around units.
 7 hours working day = 14 LST radiator guards cleaned per day per team.	 In an average day of 7 working hours, 1 person can clean 84 radiators.
 Over 10 days required for 2 people to clean the 150 radiators in the property.	 Allow 2 days for 1 person to clean every radiator in the property.
 Weekly cleaning of these radiators would require 2 teams of two staff, both working at least 5 days a week to complete 1 cleaning cycle.	 Weekly cleaning would now realistically require only 1 dedicated cleaner, with little or no support from the estates department.
 An annual budget of at least £52,416 at the National Living Wage (£7.20 ph as of 1/4/16) would be required to clean all 150 radiators on a weekly basis.	 At the National Living Wage (£7.20 ph as of 1/4/16) weekly cleaning of these radiators would cost the hospital £5,241.60 per year.

In this example, replacing traditional LST units with DeepClean LST radiators or guards could save £47,174.40 in cleaning costs by the end of year 1, or over £314.50 per radiator/guard.

*Savings figure is based on the likely costs for cleaning traditional LST radiators to the required NHS standards, compared to the estimated cost of cleaning all the Contour DeepClean LST radiators supplied to NHS facilities since 2006, to the same standard. Standards based on NHS guidelines that state radiators should be cleaned on a weekly basis and that radiator guards should be removed as part of a 'damp-dusting' cleaning regime. For reference these specifications can be found in NHS National Patient Safety Agency documents 'The national specifications for cleanliness in the NHS: Guidance on setting and measuring performance outcomes in primary care medical and dental premises', August 2010 and 'The Revised Healthcare Cleaning Manual', June 2009.

The benefits of DeepClean

2. Reducing the risk of microbial cross contamination and infection with BioCote®



The DeepClean range incorporates BioCote anti-microbial protection, as standard into the paintwork of all the LST and anti-ligature radiator guards. BioCote technology is exclusive to Contour and provides effective and permanent protection to the surface of the radiator guard, preventing the growth of harmful microbes such as bacteria and fungi.

BioCote is:

Effective - The silver ions in BioCote damage the cell wall, disrupting energy production and other cellular functions and stop microbes from reproducing.

Proven - BioCote is a proven broad spectrum anti-microbial technology, effective against a wide range of bacteria, fungi and the H1N1 virus.

Fast acting and long lasting - BioCote treated surfaces show significant microbial reductions within just 15 minutes of exposure to living bacteria and up to 99.5% reduction in under 2 hours (see graph below). **This performance will last for the expected lifetime of the product.**

Safe - The active ingredient is the element silver which is a natural anti-microbial.

Efficacy

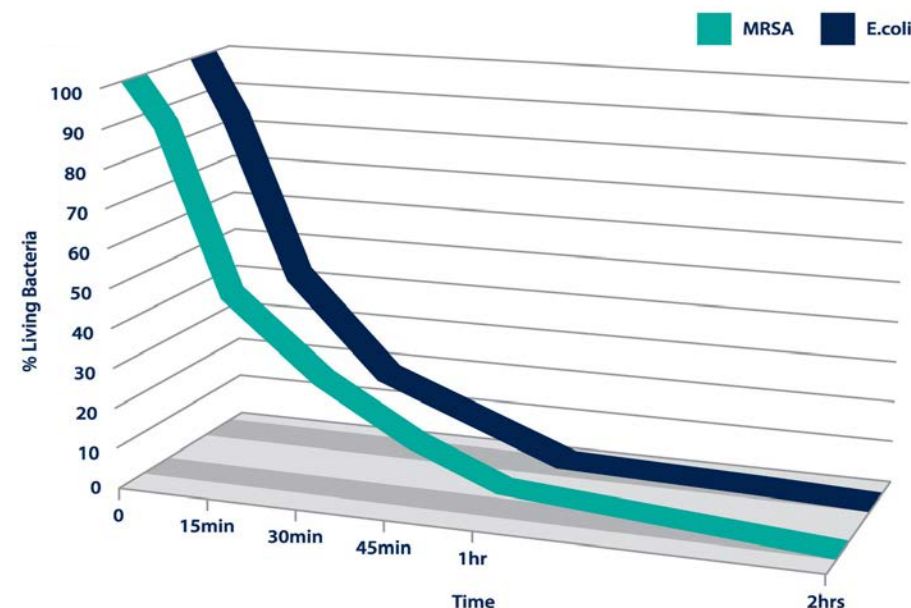
The active agents in BioCote have been used extensively in hospitals as excellent anti-microbials with low toxicity against non-target organisms. They do not function in the same way as antibiotics and there is no evidence to date to demonstrate that bacteria have become resistant to BioCote as they have to some antibiotics.

BioCote has been tested and seen to be effective against the following bacterium:

- Staphylococcus Aureus (including MRSA)
- Escherichia Coli (E-Coli)
- Listeria Monocytogenes
- Streptococcus faecalis
- Salmonella enteritides

Life time protection

Products treated with BioCote have been tested for the simulated life of the product / material with no significant reduction in the anti-microbial performance noted, therefore demonstrating anti-microbial efficacy for the life of the radiator guard.



Why choose BioCote?



BioCote is the market leading anti-microbial additive supplier with over 20 years' world wide experience.

BioCote specialize in the development and application of anti-microbial technology; nothing else. This has helped them become the supplier of choice to companies around the world and only products that demonstrate over a 95% reduction in bacteria are allowed to use the BioCote brand as a guarantee of superior anti-microbial performance. For additional peace of mind any additive supplied by BioCote goes through a regular and rigorous externally audited quality control process.

A regular schedule of independent laboratory-based QC testing is conducted to ensure the continual efficacy of Contour's LST guards treated with BioCote. Full test certification can be accessed through the archive on our website: www.contourcasings.co.uk/resource-library/biocote.

Following Contour's lead other manufactures have introduced radiator guards also treated with anti-microbial agents. However few, if any can, provide certification to prove the independently verified efficacy of their anti-microbial coatings. Contour can.

The DeepClean anti-ligature range

IP3x compliant and certified grilles available

Contour has developed a specialist range of DeepClean radiator & guard solutions for use in secure environments such as mental health facilities, prisons, custody and remand units where reducing the risk of potential ligature and tamper opportunities is of paramount importance.

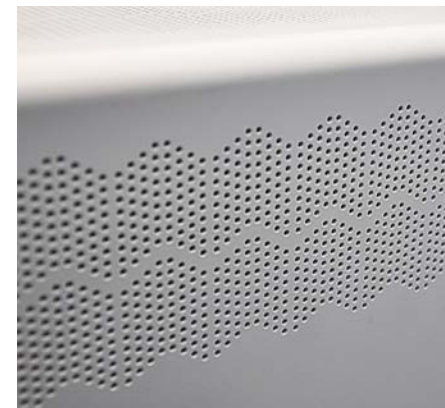
The 2012 Ministry of Justice report, "Safety in Custody", states that 9 in 10 prison suicides are as a result of hanging. As death from hanging can occur when an individual is not fully suspended, the inspection of psychiatric wards, detention and custodial facilities for potential ligature points, should focus on fixtures and fittings at all heights.

In order to minimize the risk of self harm, Contour's latest anti-ligature guard grille design incorporates 2mm holes at 4mm centres. This design has now been tested by a UKAS accredited laboratory and effectively exceeds IP3x standards (BS EN 60529) which tests for protection against the ingress of objects greater than 2.5mm in diameter.

Our new anti-ligature guard grille design means that Contour is well placed to meet the needs of UK prisons and secure custodial facilities. The Home Office Police Buildings Design Guide – Custody, July 2009, section PD3.02.14, details that grilles unless otherwise specified, should be perforated with 2mm diameter holes at 4mm centres.

DeepClean anti-ligature radiators & guards range, features:

- Secure anti-ligature guard grilles – decreasing the risk of the main grille being used as a ligature point. Our latest design has been tested to IP3x standards and certified to protect against the ingress of objects greater than 2.5mm in diameter.
- An anti-ligature TRV shroud has been developed – making it far more difficult to attach ligatures
- A wide range of security fixings and fasteners are available – designed to stop unauthorised personnel gaining access to inside the casing
- A secure base plate to stop access from below to inside the unit
- Internal fixings are used – preventing unauthorised removal or tampering of the casing





DeepClean – features and benefits at a glance

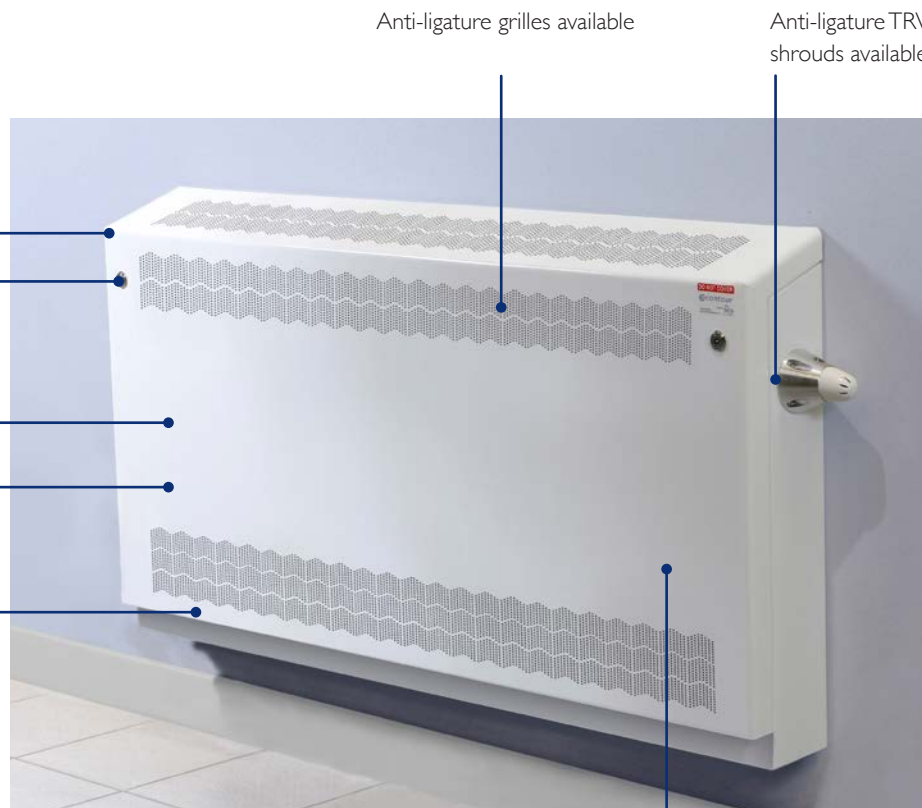
Radius corners make it safer if someone falls against the unit

Wide range of anti-tamper security locks available for high risk areas

Casings up to 2m in length are supplied in one piece - no site assembly required

Powder coated inside & outside with Biocote® protection on models finished in RAL 9003 White. Other RAL colours available subject to minimum order quantities.

Made from 1.5mm mild steel - gives strength and robustness. 2mm thick casings available for mental health and other secure facility applications. Casing also available in aluminium for wet and humid areas



Anti-ligature grilles available

Anti-ligature TRV shrouds available

Finished in RAL 9003 White as standard. Other colours available



Patented easy to open front panel that can lie flat to floor when fully open. The design also facilitates complete removal of the door if required.



Contoured side panels tailored to specific wall and flooring requirements.

DeepClean models

DeepClean LST and anti-ligature radiators and guards are available in four models:

1. Floor mounted / square top
2. Wall mounted / square top
3. Floor mounted / gradient top
4. Wall mounted / gradient top

DeepClean colour options

DeepClean radiator guards are available in a wide range of colours, including:



White
RAL 9003



Mint Green
RAL 6029



Oyster white
RAL 1013



Ultramarine Blue
RAL 5002



Tele Grey
RAL 7047



Jet Black
RAL 9005



Traffic Red
RAL 3020

DeepClean can be supplied in virtually any RAL available colour including metallics, subject to minimum order quantities.



Floor mounted / square top



Wall mounted / square top



Floor mounted / gradient top



Wall mounted / gradient top

Rotarad™ rotating radiator valves

Rotarad is a unique, WRAS, KTW and ACS approved rotating valve kit, which can be used on both new installation projects and retrofitted to existing radiators and eliminates many longstanding access problems.

By installing Rotarad, new or existing radiators can be rotated down to floor level for cleaning and maintenance, without having to drain or turn off the heating system, enabling fast and easy access to the rear of a radiator and the wall behind. Rotarad is fully compatible with Contour's DeepClean range.

The secret of Rotarad is the patented rotating valve fitting, which is used to adapt standard radiator valves and can be easily fitted to any standard panel radiator. This allows the radiator to pivot along the axis of the radiator valves, without putting any strain on the pipework or fittings. Radiators then become more practical, as they can be lowered quickly, simply and safely without the risk of causing a leak or worse. A robust bracket holds the emitter upright and against the wall.



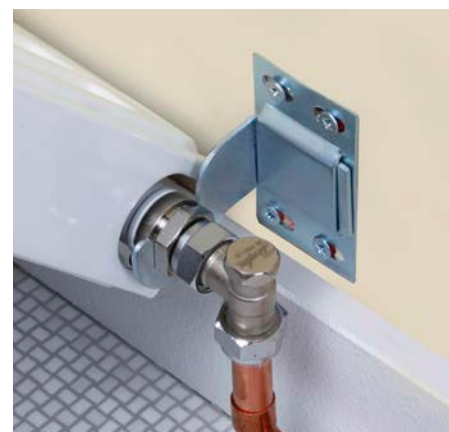
Rotarad key features

- Can be used in new and retrofit applications
- Flame-free installation
- Simple and fast to fit and operate
- Reliable, safe and economic to utilise
- WRAS approved
- WRAS, KTW, ACS approved 'O' ring
- **A design life of 50 years minimum**
- Can be rotated through 360 degrees
- Slimline, unobtrusive and paintable

Rotarad is ideal for specification and installation in virtually all building environments, particularly:

Healthcare

An undisturbed radiator and the convection process provide ideal conditions for the accumulation, growth and distribution of dirt, spores and harmful bacteria. This creates a greater risk to both end user and provider, with potentially higher infection rates.



Care homes

Vulnerable care home residents with potentially low immunity levels require protection from bacteria and infection. Therefore hygiene and cleanliness is of paramount importance to any product or service that is installed. Health Protection Agency guidelines (2011) recommend the "regular removal of radiator casings" in order to comply with current infection prevention procedures.

Social landlords

Redecorating between tenants can be an expensive and time-consuming process. During this process damage can also occur to pipework and plumbing, resulting in spiralling costs to landlords.

Schools & nurseries

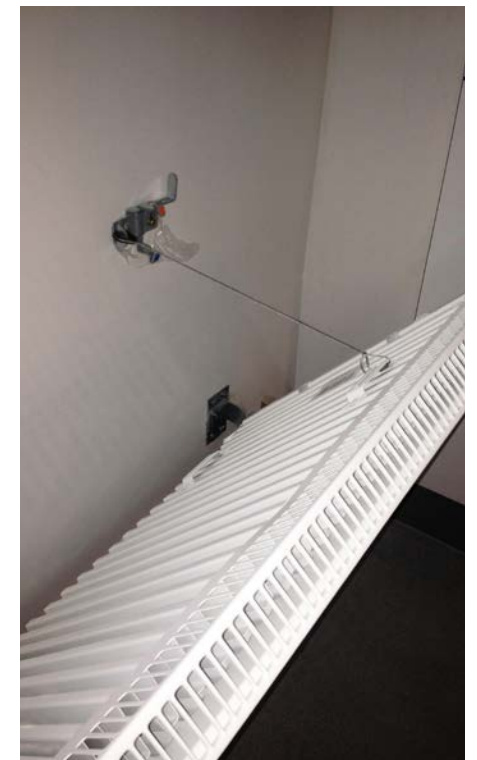
Young people can be placed at risk from harmful bacteria and infection if regular cleaning does not take place. Cleaning operatives conventionally did not have access to the rear of a radiator where small items are frequently inserted and dropped, requiring the assistance of the Estates department for effective removal.

Helping reduce airborne allergies

Importantly in terms of general healthcare millions of people in the UK receive treatment for asthma; dust mites, fungal spores, airborne residues and pet fur have all been identified as known triggers. Periodic cleaning behind radiators will help minimise symptoms and prevent attacks occurring.

Technical information

- Body available in either yellow brass (EN12164 CW614N), red brass (DIN 50930-6) or stainless steel (AISI 316. 4401.1)
- EPDM 'O' ring face seal (EN681-1)
- EPDM 'O' ring tube seal (EN681-1)
- Compatible with EN 1057 copper tube, soft, half-hard and hard
- Compatible with BS4127, DIN17455 and DIN17457
- Compatible with thin wall metallic tube that are dimensionally as EN1057
- WRAS approved
- WRAS, KTW, ACS approved 'O' rings
- Design life of 50 years minimum



Covora

A simple, high quality, low cost heating solution

Covora is Contour's new easy to fit, high quality LST radiator range, available at a value for money price.

Covora is the ideal LST heating solution for use in:

- GP surgeries and health centres
- Nursing & care homes and day care centres
- Nurseries, schools, colleges and universities
- Student accommodation
- Leisure centres
- Public libraries
- Offices and reception areas
- Hotel lobbies and public areas
- Restaurants
- Retail spaces
- Cinemas, theatres and entertainment complexes
- Public transport terminals

Designed to ensure safer environments



To help reduce the risk of infection transmission where the maintenance of hygiene is a priority, Covora LST radiators come with a BioCote anti-microbial coating on the guards as standard in models finished in White RAL 9003.

Built to last

Covora radiator guards are designed and manufactured in our UK factory in one piece from mild steel and finished internally and externally as standard in a white, easy to clean polyester powder coating.

For total peace of mind, all Contour radiator emitters and guards are respectively covered by 10 year and 5 year product warranties.



Developed for greater efficiency

As with all Contour LST radiators, the Covora range uses the latest round top heat emitters. The high-quality build of these units and exceptional thermal output make them the ideal choice as LST heat emitters.

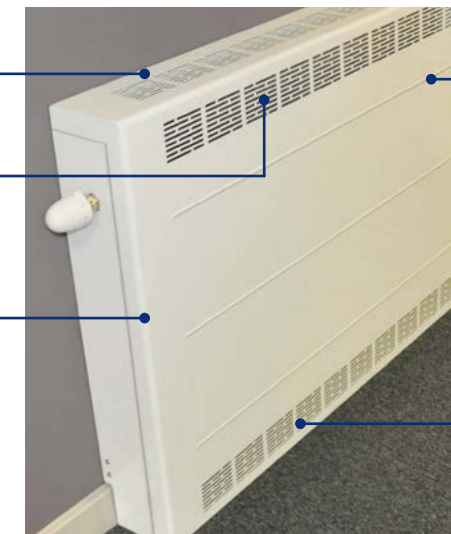
Ideal for new build and refurbishment projects

Available in over **140** sizes across three emitter types and in a range of guard colours there is a Covora LST radiator for virtually any room size and design environment.



Covora - features and benefits at a glance

- Available with BioCote coating as standard, the radiator guard is manufactured from 1.2mm mild steel and punched with 5.5mm wide radius grilles
- The radius grille design makes it easier to clean, and the narrow grille width prevents most small items and fingers being inserted
- Bullnose corners and half bullnose edges on the guard increase product strength and reduce the risk of injury in the event of a fall against the unit
- Inside round top emitters are used across the Covora range providing energy and space saving benefits



- The radiator guard is polyester powder coated to an average thickness of 60 microns internally and externally, in White RAL 9003 as standard
- A wide range of other RAL colours are also available to order
- Available in over 140 sizes across single convector, double panel plus and double convector emitter models
- Radiator guard is supplied as a one piece unit complete with pre-fabricated cut outs for valves, skirting boards and pipework, for ease and speed of installation

Covora colour options

Covora radiator covers are available in a wide range of colours on short lead times, including:



Mint Green RAL 6029



Oyster White RAL 1013



Jet Black RAL 9005



Traffic Red RAL 3020



Ultramarine Blue RAL 5002



Tele Grey RAL 7047



White RAL 9003

Covora can be supplied in virtually any RAL available colour including metallics, subject to minimum order quantities.

Technical information & specifications

Models and specifications - DeepClean radiators

Standard LST and anti-ligature radiators available as:

- Floor mounted / square top
- Wall mounted / square top
- Floor mounted / gradient top
- Wall mounted / gradient top

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Full height front access door
- Patented open hinge door (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 450mm to 1000mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

QRL Hi-Lo round top radiator with multiple connection options including BOE, and BBOE.

Valve options:

Thermostatic radiator valves

As standard we supply external head TRV for 2 pipe systems. We also offer a range of other sets for different applications.

For two pipe systems:

9231-41 External TRV kit (supplied as standard)

Comprising:

- 1 no. 9230-36 Design Sensor
- 1 no. 7724-91 TS-90 Angle Body 1/2"
- 1 no. 7350-60 Capillary & Fixing Adaptor
- 1 no. 3724-41 Return Valve Angle 1/2"
- 2 no. 6292-01 15mm Nut & Olive

9210-13 Internal TRV kit

Comprising:

- 1 no. 9200-30 Design Sensor
- 1 no. 7724-91 TS-90 Angle Body 1/2"
- 1 no. 3724-41 Return Valve Angle 1/2"
- 2 no. 6292-01 15mm Nut & Olive

7463-41 Remote sensing TRV kit

Comprising:

- 1 no. 9430-08 Remote Sensing Phial 2m
- 1 no. 7724-91 TS-90 Angle Body 1/2"
- 1 no. 3724-41 Return Valve Angle 1/2"
- 2 no. 6292-01 15mm Nut & Olive

9213-63 Anti-ligature TRV kit

Comprising:

- 1 no. Conical Aluminium Anti-Ligature TRV Shroud
- 1 no. 9200-03 Mini Turbo Sensor
- 1 no. 7724-91 TS-90 Angle Body 1/2"
- 1 no. 7350-60 Capillary & Fixing Adaptor
- 1 no. 3724-41 Return Valve Angle 1/2"
- 2 no. 6292-01 15mm Nut & Olive

For one pipe systems:

9230-01 External TRV kit

Comprising:

- 1 no. 9230-06 Design Sensor
- 1 no. 7724-11 TS-E Angle Body 1/2"
- 1 no. 7350-60 Capillary & Fixing Adaptor
- 1 no. 3724-01 RL-1E Return Valve 1/2"

9210-03 Internal TRV kit

Comprising:

- 1 no. 9200-30 Design Sensor
- 1 no. 7724-11 TS-E Angle Body 1/2"
- 1 no. 3724-01 RL-1E Return Valve 1/2"

7463-01 Remote Sensing TRV kit

Comprising:

- 1 no. 7430-08 Remote Sensing Phial 2m
- 1 no. 7724-11 TS-E Angle Body 1/2"
- 1 no. 3724-01 RL-1E Return Valve 1/2"

- Anti-ligature TRV kit & shroud 9213-63
- Rotarad rotating valve kit

External valve location

A 28mm diameter cut-out for the external valve / TRV shroud is located 80mm from the top of the right-hand side of the casing. If an alternative position or size is required, please advise at time of order.

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Exclusive use of patented BioCote® anti-microbial agent as standard (on RAL 9003 colour models)
- BioCote reduces bacteria on treated surfaces by up to 99.9% in under 2 hours and is independently laboratory tested on a regular basis to ensure anti-microbial efficacy.

Fixings:

- All fixings internal
- 6mm Allen key door locks (security locks also available including pin Hex fastenings and key locks.)

Anti-ligature radiator options:

- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- TRV shroud
- Base plate
- Security fastenings & fixings

Calculating alternative Delta T requirements

Method

- Add the flow water temperature and the return water temperature together.
- Divide the answer from a. by 2.
- From the answer b. subtract the room temperature. This gives your 'Delta T' temperature.
- Select the closest Delta T value to yours from the table, then multiply the corresponding factor by the output provided for the particular radiator to obtain the output for your calculated Delta T value.

Delta T	Factor
5°C	0.0501
10°C	0.1234
15°C	0.2091
20°C	0.3039
25°C	0.4061
30°C	0.5148
35°C	0.6290
40°C	0.7482
45°C	0.8720
50°C	1.0000
55°C	1.1319
60°C	1.2675
65°C	1.4065
70°C	1.5487
75°C	1.6940

Technical
information &
specifications

DeepClean LST radiator
size information and output
performance data

STANDARD

FLOOR MOUNTED

SQUARE TOP

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 550mm to 950mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- External TRV kit 9231-41
- Remote sensing TRV kit 7463-41
- Rotarad rotating valve kit

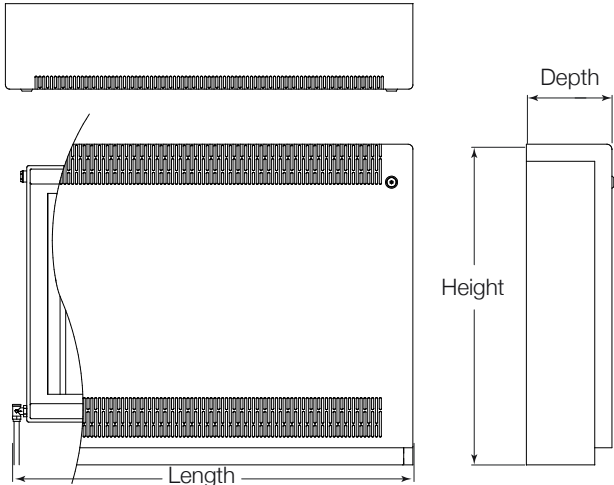
Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convector)				
Casing Length (mm)	Rad Length (mm)	Casing Height (mm)	550	650	750	850	950
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DSFI17505	DSFI18505	
		Watts T50			238	277	
600	400	Art. Code	DSFI15506	DSFI16506	DSFI17506	DSFI18506	DSFI19506
		Watts T50	202	262	317	370	418
700	500	Art. Code	DSFI15507	DSFI16507	DSFI17507	DSFI18507	DSFI19507
		Watts T50	251	327	397	462	522
800	600	Art. Code	DSFI15508	DSFI16508	DSFI17508	DSFI18508	DSFI19508
		Watts T50	302	392	476	554	627
900	700	Art. Code		DSFI16509	DSFI17509	DSFI18509	DSFI19509
		Watts T50		458	555	647	731
1000	800	Art. Code		DSFI16510	DSFI17510	DSFI18510	DSFI19510
		Watts T50		523	634	738	835
1100	900	Art. Code		DSFI16511	DSFI17511	DSFI18511	DSFI19511
		Watts T50		588	713	831	939
1200	1000	Art. Code	DSFI15512	DSFI16512	DSFI17512	DSFI18512	DSFI19512
		Watts T50	502	653	793	923	1044
1300	1100	Art. Code		DSFI16513	DSFI17513	DSFI18513	DSFI19513
		Watts T50		719	872	1015	1149
1400	1200	Art. Code		DSFI16514	DSFI17514	DSFI18514	DSFI19514
		Watts T50		784	951	1108	1253
1600	1400	Art. Code		DSFI16516	DSFI17516	DSFI18516	DSFI19516
		Watts T50		915	1109	1292	1461
1800	1600	Art. Code	DSFI15518	DSFI16518	DSFI17518	DSFI18518	DSFI19518
		Watts T50	804	1044	1268	1476	1670
2000	1800	Art. Code		DSFI16520	DSFI17520	DSFI18520	DSFI19520
		Watts T50		1175	1426	1660	1878
2200	2000	Art. Code		DSFI16522	DSFI17522	DSFI18522	DSFI19522
		Watts T50		1305	1585	1845	2087



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convector)				
650	750	850	950	550	650	750	850	950
400	500	600	700	300	400	500	600	700
						DSF227505	DSF228505	
						449	519	
DSF216506	DSF217506	DSF218506	DSF219506		DSF226506	DSF227506	DSF228506	DSF229506
381	453	520	583		501	599	693	781
DSF216507	DSF217507	DSF218507	DSF219507	DSF225507	DSF226507	DSF227507	DSF228507	DSF229507
476	566	650	729	497	626	749	866	976
DSF216508	DSF217508	DSF218508	DSF219508	DSF225508	DSF226508	DSF227508	DSF228508	DSF229508
571	679	780	875	596	752	899	1038	1171
DSF216509	DSF217509	DSF218509	DSF219509		DSF226509	DSF227509	DSF228509	DSF229509
665	792	910	1020		876	1048	1212	1366
DSF216510	DSF217510	DSF218510	DSF219510		DSF226510	DSF227510	DSF228510	DSF229510
761	905	1040	1166		1002	1198	1384	1562
DSF216511	DSF217511	DSF218511	DSF219511		DSF226511	DSF227511	DSF228511	DSF229511
856	1018	1170	1312		1126	1347	1557	1756
DSF216512	DSF217512	DSF218512	DSF219512	DSF225512	DSF226512	DSF227512	DSF228512	DSF229512
950	1131	1300	1457	993	1252	1497	1730	1951
	DSF217513	DSF218513			DSF226513	DSF227513	DSF228513	DSF229513
	1244	1430			1377	1646	1903	2146
DSF216514	DSF217514	DSF218514			DSF226514	DSF227514	DSF228514	DSF229514
1141	1357	1560			1502	1796	2076	2341
DSF216516	DSF217516	DSF218516			DSF226516	DSF227516	DSF228516	DSF229516
1330	1583	1820			1752	2095	2422	2732
DSF216518	DSF217518	DSF218518		DSF225518	DSF226518	DSF227518	DSF228518	DSF229518
1521	1809	2080		1588	2003	2395	2768	3122
DSF216520	DSF217520	DSF218520			DSF226520	DSF227520	DSF228520	
1710	2035	2339			2253	2694	3114	
					DSF226522	DSF227522	DSF228522	
					2503	2993	3459	

Casing Depths	
Type 11	155mm
Type 12	165mm
Type 22	195mm

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean LST radiator
size information and output
performance data

STANDARD

WALL MOUNTED

SQUARE TOP

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available
- Base plate available for wall mounted models

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 450mm to 850mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- External TRV kit 9231-41
- Remote sensing TRV kit 7463-41
- Rotarad rotating valve kit

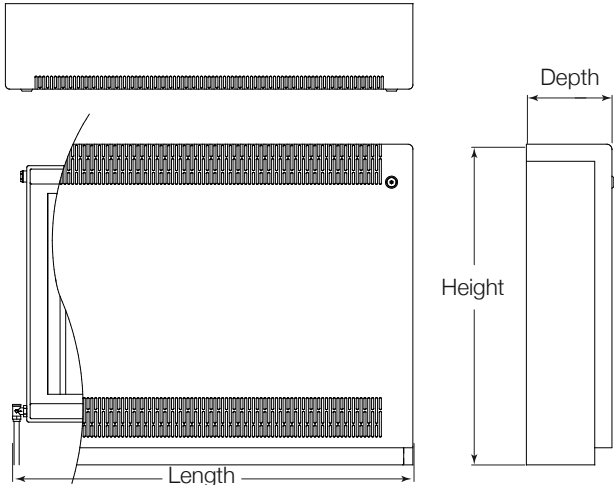
Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convactor)				
Casing Length (mm)	Rad Length (mm)	Casing Height (mm)	450	550	650	750	850
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DSW116505	DSW117505	
		Watts T50			243	284	
600	400	Art. Code	DSW114506	DSW115506	DSW116506	DSW117506	DSW118506
		Watts T50	206	268	324	378	427
700	500	Art. Code	DSW114507	DSW115507	DSW116507	DSW117507	DSW118507
		Watts T50	257	334	405	472	534
800	600	Art. Code	DSW114508	DSW115508	DSW116508	DSW117508	DSW118508
		Watts T50	309	401	486	567	641
900	700	Art. Code		DSW115509	DSW116509	DSW117509	DSW118509
		Watts T50		468	567	661	748
1000	800	Art. Code		DSW115510	DSW116510	DSW117510	DSW118510
		Watts T50		535	648	755	854
1100	900	Art. Code		DSW115511	DSW116511	DSW117511	DSW118511
		Watts T50		601	729	850	961
1200	1000	Art. Code	DSW114512	DSW115512	DSW116512	DSW117512	DSW118512
		Watts T50	514	668	810	943	1067
1300	1100	Art. Code		DSW115513	DSW116513	DSW117513	DSW118513
		Watts T50		735	891	1038	1174
1400	1200	Art. Code		DSW115514	DSW116514	DSW117514	DSW118514
		Watts T50		801	972	1133	1281
1600	1400	Art. Code		DSW115516	DSW116516	DSW117516	DSW118516
		Watts T50		935	1134	1321	1494
1800	1600	Art. Code	DSW114518	DSW115518	DSW116518	DSW117518	DSW118518
		Watts T50	822	1068	1296	1509	1708
2000	1800	Art. Code		DSW115520	DSW116520	DSW117520	DSW118520
		Watts T50		1202	1458	1698	1921
2200	2000	Art. Code		DSW115522	DSW116522	DSW117522	DSW118522
		Watts T50		1335	1620	1886	2134



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convactor)				
550	650	750	850	450	550	650	750	850
400	500	600	700	300	400	500	600	700
						DSW226505	DSW227505	
						459	531	
DSW215506	DSW216506	DSW217506	DSW218506		DSW225506	DSW226506	DSW227506	DSW228506
389	463	532	597		512	612	708	799
DSW215507	DSW216507	DSW217507	DSW218507	DSW224507	DSW225507	DSW226507	DSW227507	DSW228507
486	578	665	746	508	640	766	885	998
DSW215508	DSW216508	DSW217508	DSW218508	DSW224508	DSW225508	DSW226508	DSW227508	DSW228508
584	694	798	895	609	769	919	1062	1197
DSW215509	DSW216509	DSW217509	DSW218509		DSW225509	DSW226509	DSW227509	DSW228509
680	809	931	1043		896	1072	1239	1396
DSW215510	DSW216510	DSW217510	DSW218510		DSW225510	DSW226510	DSW227510	DSW228510
778	925	1063	1193		1024	1224	1416	1597
DSW215511	DSW216511	DSW217511	DSW218511		DSW225511	DSW226511	DSW227511	DSW228511
875	1041	1196	1342		1152	1377	1592	1796
DSW215512	DSW216512	DSW217512	DSW218512	DSW224512	DSW225512	DSW226512	DSW227512	DSW228512
971	1156	1329	1490	1015	1280	1530	1769	1995
	DSW216513	DSW217513			DSW225513	DSW226513	DSW227513	DSW228513
	1272	1462			1408	1683	1946	2195
DSW215514	DSW216514	DSW217514			DSW225514	DSW226514	DSW227514	DSW228514
1166	1387	1595			1536	1836	2123	2394
DSW215516	DSW216516	DSW217516			DSW225516	DSW226516	DSW227516	DSW228516
1360	1618	1861			1791	2142	2477	2793
DSW215518	DSW216518	DSW217518		DSW224518	DSW225518	DSW226518	DSW227518	DSW228518
1555	1850	2126		1624	2048	2448	2830	3192
DSW215520	DSW216520	DSW217520			DSW225520	DSW226520	DSW227520	
1749	2081	2392			2304	2754	3184	
					DSW225522	DSW226522	DSW227522	
					2559	3060	3537	

Casing Depths	
Type 11	155mm
Type 12	165mm
Type 22	195mm

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean LST radiator
size information and output
performance data

- STANDARD
- FLOOR MOUNTED
- GRADIENT TOP

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 580mm to 995mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Rotarad rotating valve kit

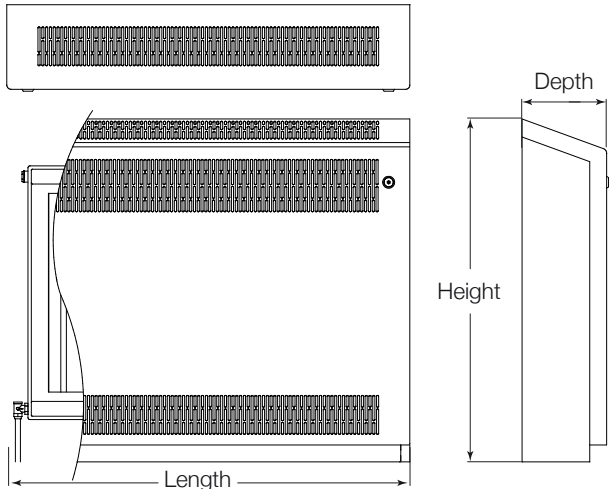
Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convactor)				
Casings Length (mm)	Rad Length (mm)	Casing Height (mm)	580	680	780	880	980
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DGF117805	DGF118805	
		Watts T50			246	287	
600	400	Art. Code	DGF115806	DGF116806	DGF117806	DGF118806	DGF119806
		Watts T50	208	271	328	382	432
700	500	Art. Code	DGF115807	DGF116807	DGF117807	DGF118807	DGF119807
		Watts T50	260	338	410	477	540
800	600	Art. Code	DGF115808	DGF116808	DGF117808	DGF118808	DGF119808
		Watts T50	312	405	492	573	648
900	700	Art. Code		DGF116809	DGF117809	DGF118809	DGF119809
		Watts T50		473	574	668	756
1000	800	Art. Code		DGF116810	DGF117810	DGF118810	DGF119810
		Watts T50		541	656	763	863
1100	900	Art. Code		DGF116811	DGF117811	DGF118811	DGF119811
		Watts T50		608	737	859	971
1200	1000	Art. Code	DGF115812	DGF116812	DGF117812	DGF118812	DGF119812
		Watts T50	519	675	819	954	1079
1300	1100	Art. Code		DGF116813	DGF117813	DGF118813	DGF119813
		Watts T50		743	901	1049	1187
1400	1200	Art. Code		DGF116814	DGF117814	DGF118814	DGF119814
		Watts T50		810	983	1145	1295
1600	1400	Art. Code		DGF116816	DGF117816	DGF118816	DGF119816
		Watts T50		945	1147	1335	1510
1800	1600	Art. Code	DGF115818	DGF116818	DGF117818	DGF118818	DGF119818
		Watts T50	831	1080	1311	1526	1726
2000	1800	Art. Code		DGF116820	DGF117820	DGF118820	DGF119820
		Watts T50		1215	1474	1716	1942
2200	2000	Art. Code		DGF116822	DGF117822	DGF118822	DGF119822
		Watts T50		1349	1638	1907	2157



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convactor)				
685	785	885	985	595	695	795	895	995
400	500	600	700	300	400	500	600	700
						DGF227905	DGF228905	
						464	537	
DGF216806	DGF217806	DGF218806	DGF219806		DGF226906	DGF227906	DGF228906	DGF229906
393	468	538	603		518	619	716	807
DGF216807	DGF217807	DGF218807	DGF219807	DGF225907	DGF226907	DGF227907	DGF228907	DGF229907
492	585	672	754	514	647	774	895	1009
DGF216808	DGF217808	DGF218808	DGF219808	DGF225908	DGF226908	DGF227908	DGF228908	DGF229908
590	702	806	905	616	777	929	1073	1210
DGF216809	DGF217809	DGF218809	DGF219809		DGF226909	DGF227909	DGF228909	DGF229909
688	818	941	1055		906	1083	1253	1412
DGF216810	DGF217810	DGF218810	DGF219810		DGF226910	DGF227910	DGF228910	DGF229910
786	935	1075	1206		1035	1238	1431	1614
DGF216811	DGF217811	DGF218811	DGF219811		DGF226911	DGF227911	DGF228911	DGF229911
885	1052	1209	1357		1164	1392	1610	1816
DGF216812	DGF217812	DGF218812	DGF219812	DGF225912	DGF226912	DGF227912	DGF228912	DGF229912
982	1169	1344	1507	1026	1294	1547	1788	2017
	DGF217813	DGF218813			DGF226913	DGF227913	DGF228913	DGF229913
	1286	1478			1424	1702	1967	2219
DGF216814	DGF217814	DGF218814			DGF226914	DGF227914	DGF228914	DGF229914
1179	1403	1612			1553	1856	2146	2420
DGF216816	DGF217816	DGF218816			DGF226916	DGF227916	DGF228916	DGF229916
1375	1636	1881			1811	2165	2504	2824
DGF216818	DGF217818	DGF218818		DGF225918	DGF226918	DGF227918	DGF228918	DGF229918
1572	1870	2150		1642	2070	2475	2861	3227
DGF216820	DGF217820	DGF218820			DGF226920	DGF227920	DGF228920	
1768	2104	2418			2329	2784	3219	
					DGF226922	DGF227922	DGF228922	
					2588	3094	3576	

Casing Depths	
Type 11	155mm
Type 12	165mm
Type 22	195mm

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean LST radiator
size information and output
performance data

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 480mm to 895mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Rotarad rotating valve kit

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

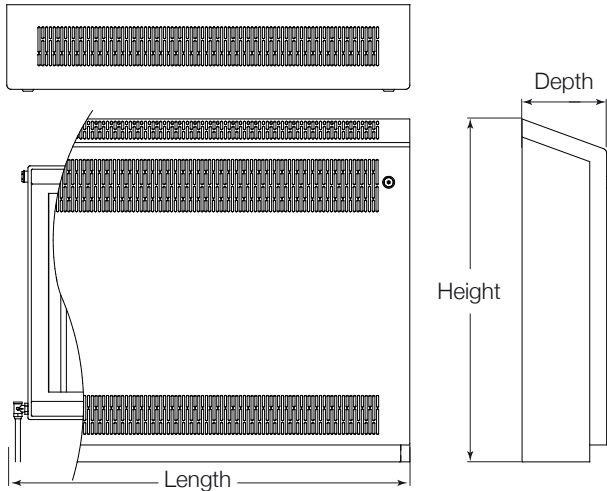
- All fixings internal
- 6mm Allen key door

STANDARD

WALL MOUNTED

GRADIENT TOP

			Type 11 (Single Convector)				
Casing Length (mm)	Rad Length (mm)	Casing Height (mm)	480	580	680	780	880
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DGW116805	DGW117805	
		Watts T50			246	287	
600	400	Art. Code	DGW114806	DGW115806	DGW116806	DGW117806	DGW118806
		Watts T50	208	271	328	382	432
700	500	Art. Code	DGW114807	DGW115807	DGW116807	DGW117807	DGW118807
		Watts T50	260	338	410	477	540
800	600	Art. Code	DGW114808	DGW115808	DGW116808	DGW117808	DGW118808
		Watts T50	312	405	492	573	648
900	700	Art. Code		DGW115809	DGW116809	DGW117809	DGW118809
		Watts T50		473	574	668	756
1000	800	Art. Code		DGW115810	DGW116810	DGW117810	DGW118810
		Watts T50		541	656	763	863
1100	900	Art. Code		DGW115811	DGW116811	DGW117811	DGW118811
		Watts T50		608	737	859	971
1200	1000	Art. Code	DGW114812	DGW115812	DGW116812	DGW117812	DGW118812
		Watts T50	519	675	819	954	1079
1300	1100	Art. Code		DGW115813	DGW116813	DGW117813	DGW118813
		Watts T50		743	901	1049	1187
1400	1200	Art. Code		DGW115814	DGW116814	DGW117814	DGW118814
		Watts T50		810	983	1145	1295
1600	1400	Art. Code		DGW115816	DGW116816	DGW117816	DGW118816
		Watts T50		945	1147	1335	1510
1800	1600	Art. Code	DGW114818	DGW115818	DGW116818	DGW117818	DGW118818
		Watts T50	831	1080	1311	1526	1726
2000	1800	Art. Code		DGW115820	DGW116820	DGW117820	DGW118820
		Watts T50		1215	1474	1716	1942
2200	2000	Art. Code		DGW115822	DGW116822	DGW117822	DGW118822
		Watts T50		1349	1638	1907	2157



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convector)			
585	685	785	885	495	595	695	795 895
400	500	600	700	300	400	500	600 700
						DGW226905	DGW227905
						464	537
DGW215806	DGW216806	DGW217806	DGW218806		DGW225906	DGW226906	DGW227906 DGW228906
393	468	538	603		518	619	716 807
DGW215807	DGW216807	DGW217807	DGW218807	DGW224907	DGW225907	DGW226907	DGW227907 DGW228907
492	585	672	754	514	647	774	895 1009
DGW215808	DGW216808	DGW217808	DGW218808	DGW224908	DGW225908	DGW226908	DGW227908 DGW228908
590	702	806	905	616	777	929	1073 1210
DGW215809	DGW216809	DGW217809	DGW218809		DGW225909	DGW226909	DGW227909 DGW228909
688	818	941	1055		906	1083	1253 1412
DGW215810	DGW216810	DGW217810	DGW218810		DGW225910	DGW226910	DGW227910 DGW228910
786	935	1075	1206		1035	1238	1431 1614
DGW215811	DGW216811	DGW217811	DGW218811		DGW225911	DGW226911	DGW227911 DGW228911
885	1052	1209	1357		1164	1392	1610 1816
DGW215812	DGW216812	DGW217812	DGW218812	DGW224912	DGW225912	DGW226912	DGW227912 DGW228912
982	1169	1344	1507	1026	1294	1547	1788 2017
	DGW216813	DGW217813			DGW225913	DGW226913	DGW227913 DGW228913
	1286	1478			1424	1702	1967 2219
DGW215814	DGW216814	DGW217814			DGW225914	DGW226914	DGW227914 DGW228914
1179	1403	1612			1553	1856	2146 2420
DGW215816	DGW216816	DGW217816			DGW225916	DGW226916	DGW227916 DGW228916
1375	1636	1881			1811	2165	2504 2824
DGW215818	DGW216818	DGW217818		DGW224918	DGW225918	DGW226918	DGW227918 DGW228918
1572	1870	2150		1642	2070	2475	2861 3227
DGW215820	DGW216820	DGW217820			DGW225920	DGW226920	DGW227920
1768	2104	2418			2329	2784	3219
					DGW225922	DGW226922	DGW227922
					2588	3094	3576

Casing Depths

Type 11	155mm
Type 12	165mm
Type 22	195mm

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean anti-ligature
radiator size information and
output performance data

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 550mm to 950mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Anti-ligature TRV kit & shroud 9213-63
- Rotarad rotating valve kit

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- Security fastenings & fixings

ANTI-LIGATURE

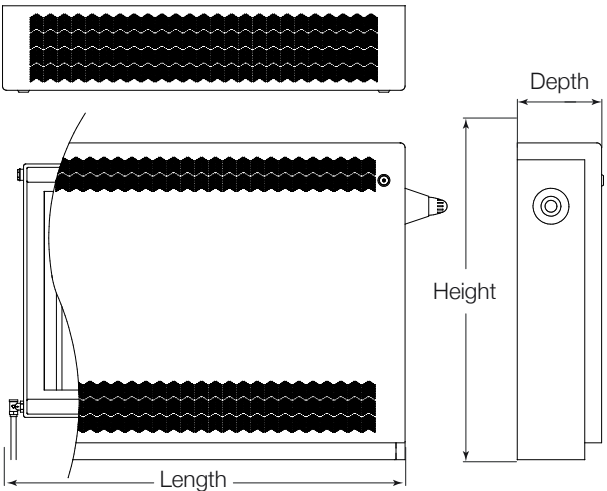
FLOOR MOUNTED

SQUARE TOP

			Type 11 (Single Convactor)				
Casing Length (mm)	Rad Length (mm)	Casing Height (mm)	550	650	750	850	950
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DSF117505-AL	DSF118505-AL	
		Watts T50			214	249	
600	400	Art. Code	DSF115506-AL	DSF116506-AL	DSF117506-AL	DSF118506-AL	DSF119506-AL
		Watts T50	181	236	285	332	376
700	500	Art. Code	DSF115507-AL	DSF116507-AL	DSF117507-AL	DSF118507-AL	DSF119507-AL
		Watts T50	226	294	356	415	469
800	600	Art. Code	DSF115508-AL	DSF116508-AL	DSF117508-AL	DSF118508-AL	DSF119508-AL
		Watts T50	272	352	428	498	564
900	700	Art. Code		DSF116509-AL	DSF117509-AL	DSF118509-AL	DSF119509-AL
		Watts T50		412	499	581	657
1000	800	Art. Code		DSF116510-AL	DSF117510-AL	DSF118510-AL	DSF119510-AL
		Watts T50		470	570	664	751
1100	900	Art. Code		DSF116511-AL	DSF117511-AL	DSF118511-AL	DSF119511-AL
		Watts T50		528	641	747	844
1200	1000	Art. Code	DSF115512-AL	DSF116512-AL	DSF117512-AL	DSF118512-AL	DSF119512-AL
		Watts T50	452	587	712	829	938
1300	1100	Art. Code		DSF116513-AL	DSF117513-AL	DSF118513-AL	DSF119513-AL
		Watts T50		646	784	912	1032
1400	1200	Art. Code		DSF116514-AL	DSF117514-AL	DSF118514-AL	DSF119514-AL
		Watts T50		704	855	996	1126
1600	1400	Art. Code		DSF116516-AL	DSF117516-AL	DSF118516-AL	DSF119516-AL
		Watts T50		822	997	1161	1313
1800	1600	Art. Code	DSF115518-AL	DSF116518-AL	DSF117518-AL	DSF118518-AL	DSF119518-AL
		Watts T50	723	939	1140	1327	1501
2000	1800	Art. Code		DSF116520-AL	DSF117520-AL	DSF118520-AL	DSF119520-AL
		Watts T50		1056	1282	1492	1688
2200	2000	Art. Code		DSF116522-AL	DSF117522-AL	DSF118522-AL	DSF119522-AL
		Watts T50		1173	1424	1658	1876

Please note:

The grille size used in anti-ligature radiator guards can inhibit the convection process. Therefore Contour cannot guarantee that the casing will not exceed a surface temperature of 43°C



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convactor)				
650	750	850	950	550	650	750	850	950
400	500	600	700	300	400	500	600	700
						DSF227505-AL	DSF228505-AL	
						404	467	
DSF216506-AL	DSF217506-AL	DSF218506-AL	DSF219506-AL		DSF226506-AL	DSF227506-AL	DSF228506-AL	DSF229506-AL
342	407	468	524		450	538	623	702
DSF216507-AL	DSF217507-AL	DSF218507-AL	DSF219507-AL	DSF225507-AL	DSF226507-AL	DSF227507-AL	DSF228507-AL	DSF229507-AL
428	508	584	656	447	563	673	778	877
DSF216508-AL	DSF217508-AL	DSF218508-AL	DSF219508-AL	DSF225508-AL	DSF226508-AL	DSF227508-AL	DSF228508-AL	DSF229508-AL
513	610	701	787	536	676	808	933	1052
DSF216509-AL	DSF217509-AL	DSF218509-AL	DSF219509-AL		DSF226509-AL	DSF227509-AL	DSF228509-AL	DSF229509-AL
598	712	818	917		788	942	1089	1228
DSF216510-AL	DSF217510-AL	DSF218510-AL	DSF219510-AL		DSF226510-AL	DSF227510-AL	DSF228510-AL	DSF229510-AL
684	813	935	1048		900	1076	1244	1404
DSF216511-AL	DSF217511-AL	DSF218511-AL	DSF219511-AL		DSF226511-AL	DSF227511-AL	DSF228511-AL	DSF229511-AL
769	915	1052	1180		1012	1211	1400	1579
DSF216512-AL	DSF217512-AL	DSF218512-AL	DSF219512-AL	DSF225512-AL	DSF226512-AL	DSF227512-AL	DSF228512-AL	DSF229512-AL
854	1016	1168	1310	892	1125	1345	1555	1754
	DSF217513-AL	DSF218513-AL			DSF226513-AL	DSF227513-AL	DSF228513-AL	DSF229513-AL
	1118	1285			1238	1480	1711	1929
DSF216514-AL	DSF217514-AL	DSF218514-AL			DSF226514-AL	DSF227514-AL	DSF228514-AL	DSF229514-AL
1025	1220	1402			1350	1614	1866	2104
DSF216516-AL	DSF217516-AL	DSF218516-AL			DSF226516-AL	DSF227516-AL	DSF228516-AL	DSF229516-AL
1196	1423	1636			1575	1883	2177	2456
DSF216518-AL	DSF217518-AL	DSF218518-AL		DSF225518-AL	DSF226518-AL	DSF227518-AL	DSF228518-AL	DSF229518-AL
1367	1626	1869		1428	1800	2152	2488	2806
DSF216520-AL	DSF217520-AL	DSF218520-AL			DSF226520-AL	DSF227520-AL	DSF228520-AL	
1537	1829	2103			2025	2421	2799	
					DSF226522-AL	DSF227522-AL	DSF228522-AL	
					2250	2690	3109	

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean anti-ligature
radiator size information and
output performance data

ANTI-LIGATURE

WALL MOUNTED

SQUARE TOP

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 450mm to 850mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Anti-ligature TRV kit & shroud 9213-63
- Rotarad rotating valve kit

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

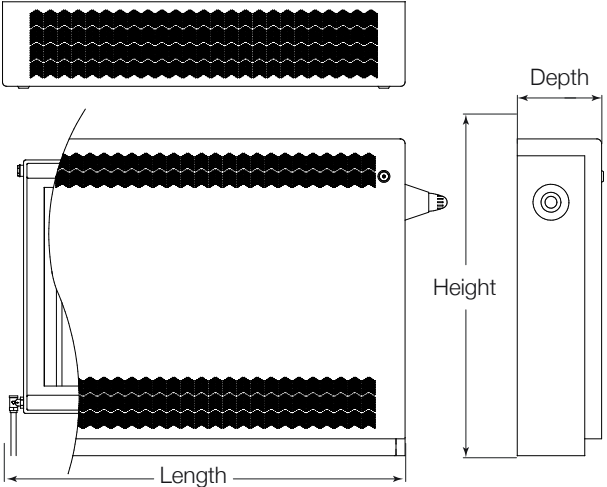
Fixings:

- All fixings internal
- Security fastenings & fixings

			Type 11 (Single Convector)				
Casing Length (mm)	Rad Length (mm)	Casings Height (mm)	450	550	650	750	850
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DSW116505-AL	DSW117505-AL	
		Watts T50			219	256	
600	400	Art. Code	DSW114506-AL	DSW115506-AL	DSW116506-AL	DSW117506-AL	DSW118506-AL
		Watts T50	186	242	292	341	385
700	500	Art. Code	DSW114507-AL	DSW115507-AL	DSW116507-AL	DSW117507-AL	DSW118507-AL
		Watts T50	232	301	365	425	481
800	600	Art. Code	DSW114508-AL	DSW115508-AL	DSW116508-AL	DSW117508-AL	DSW118508-AL
		Watts T50	278	361	438	511	578
900	700	Art. Code		DSW115509-AL	DSW116509-AL	DSW117509-AL	DSW118509-AL
		Watts T50		422	511	596	674
1000	800	Art. Code		DSW115510-AL	DSW116510-AL	DSW117510-AL	DSW118510-AL
		Watts T50		482	584	680	770
1100	900	Art. Code		DSW115511-AL	DSW116511-AL	DSW117511-AL	DSW118511-AL
		Watts T50		542	657	766	866
1200	1000	Art. Code	DSW114512-AL	DSW115512-AL	DSW116512-AL	DSW117512-AL	DSW118512-AL
		Watts T50	463	602	730	850	962
1300	1100	Art. Code		DSW115513-AL	DSW116513-AL	DSW117513-AL	DSW118513-AL
		Watts T50		662	803	935	1058
1400	1200	Art. Code		DSW115514-AL	DSW116514-AL	DSW117514-AL	DSW118514-AL
		Watts T50		722	876	1021	1154
1600	1400	Art. Code		DSW115516-AL	DSW116516-AL	DSW117516-AL	DSW118516-AL
		Watts T50		843	1022	1190	1346
1800	1600	Art. Code	DSW114518-AL	DSW115518-AL	DSW116518-AL	DSW117518-AL	DSW118518-AL
		Watts T50	741	962	1168	1360	1539
2000	1800	Art. Code		DSW115520-AL	DSW116520-AL	DSW117520-AL	DSW118520-AL
		Watts T50		1083	1314	1530	1731
2200	2000	Art. Code		DSW115522-AL	DSW116522-AL	DSW117522-AL	DSW118522-AL
		Watts T50		1203	1460	1700	1923

Please note:

The grille size used in anti-ligature radiator guards can inhibit the convection process. Therefore Contour cannot guarantee that the casing will not exceed a surface temperature of 43°C



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convector)				
550	650	750	850	450	550	650	750	850
400	500	600	700	300	400	500	600	700
						DSW226505-AL	DSW227505-AL	
						414	479	
DSW215506-AL	DSW216506-AL	DSW217506-AL	DSW218506-AL		DSW225506-AL	DSW226506-AL	DSW227506-AL	DSW228506-AL
351	417	479	538		461	552	638	720
DSW215507-AL	DSW216507-AL	DSW217507-AL	DSW218507-AL	DSW224507-AL	DSW225507-AL	DSW226507-AL	DSW227507-AL	DSW228507-AL
438	521	599	672	458	577	690	798	899
DSW215508-AL	DSW216508-AL	DSW217508-AL	DSW218508-AL	DSW224508-AL	DSW225508-AL	DSW226508-AL	DSW227508-AL	DSW228508-AL
526	625	719	807		549	693	828	957
DSW215509-AL	DSW216509-AL	DSW217509-AL	DSW218509-AL		DSW225509-AL	DSW226509-AL	DSW227509-AL	DSW228509-AL
613	729	839	940		807	966	1117	1258
DSW215510-AL	DSW216510-AL	DSW217510-AL	DSW218510-AL		DSW225510-AL	DSW226510-AL	DSW227510-AL	DSW228510-AL
701	834	958	1075		923	1103	1276	1439
DSW215511-AL	DSW216511-AL	DSW217511-AL	DSW218511-AL		DSW225511-AL	DSW226511-AL	DSW227511-AL	DSW228511-AL
789	938	1078	1209		1038	1241	1435	1618
DSW215512-AL	DSW216512-AL	DSW217512-AL	DSW218512-AL	DSW224512-AL	DSW225512-AL	DSW226512-AL	DSW227512-AL	DSW228512-AL
875	1042	1198	1343		915	1153	1379	1594
	DSW216513-AL	DSW217513-AL			DSW225513-AL	DSW226513-AL	DSW227513-AL	DSW228513-AL
	1146	1317			1269	1517	1754	1978
DSW215514-AL	DSW216514-AL	DSW217514-AL			DSW225514-AL	DSW226514-AL	DSW227514-AL	DSW228514-AL
1051	1250	1437			1384	1654	1913	2157
DSW215516-AL	DSW216516-AL	DSW217516-AL			DSW225516-AL	DSW226516-AL	DSW227516-AL	DSW228516-AL
1226	1458	1677			1614	1930	2232	2517
DSW215518-AL	DSW216518-AL	DSW217518-AL		DSW224518-AL	DSW225518-AL	DSW226518-AL	DSW227518-AL	DSW228518-AL
1401	1667	1916		1463	1845	2206	2550	2876
DSW215520-AL	DSW216520-AL	DSW217520-AL			DSW225520-AL	DSW226520-AL	DSW227520-AL	
1576	1875	2155			2076	2482	2869	
					DSW225522-AL	DSW226522-AL	DSW227522-AL	
					2306	2757	3187	

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical
information &
specifications

DeepClean anti-ligature
radiator size information and
output performance data

ANTI-LIGATURE

FLOOR MOUNTED

GRADIENT TOP

Specification
summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 580mm to 995mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Anti-ligature TRV kit & shroud 9213-63
- Rotarad rotating valve kit

Finish:

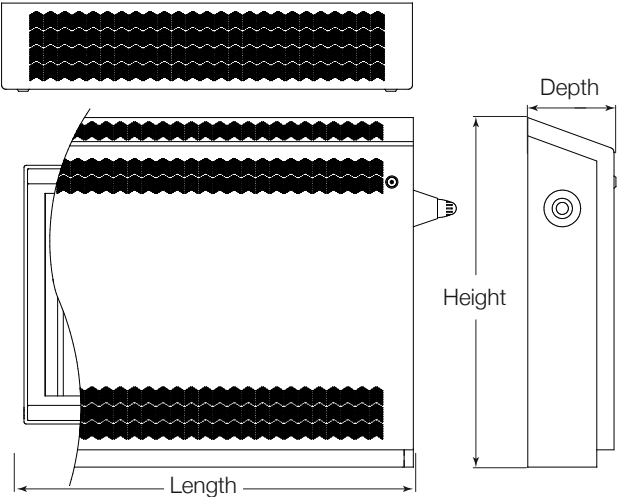
- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- Security Fastenings & fixings

Please note:

The grille size used in anti-ligature radiator guards can inhibit the convection process. Therefore Contour cannot guarantee that the casing will not exceed a surface temperature of 43°C



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convector)				
685	785	885	985	595	695	795	895	995
400	500	600	700	300	400	500	600	700
						DGF227905-AL	DGF228905-AL	
						414	479	
DGF216806-AL	DGF217806-AL	DGF218806-AL	DGF219806-AL		DGF226906-AL	DGF227906-AL	DGF228906-AL	DGF229906-AL
351	417	479	538		461	552	638	720
DGF216807-AL	DGF217807-AL	DGF218807-AL	DGF219807-AL	DGF225907-AL	DGF226907-AL	DGF227907-AL	DGF228907-AL	DGF229907-AL
438	521	599	672	458	577	690	798	899
DGF216808-AL	DGF217808-AL	DGF218808-AL	DGF219808-AL	DGF225908-AL	DGF226908-AL	DGF227908-AL	DGF228908-AL	DGF229908-AL
526	625	719	807	549	693	828	957	1079
DGF216809-AL	DGF217809-AL	DGF218809-AL	DGF219809-AL		DGF226909-AL	DGF227909-AL	DGF228909-AL	DGF229909-AL
613	729	839	940		807	966	1117	1258
DGF216810-AL	DGF217810-AL	DGF218810-AL	DGF219810-AL		DGF226910-AL	DGF227910-AL	DGF228910-AL	DGF229910-AL
701	834	958	1075		923	1103	1276	1439
DGF216811-AL	DGF217811-AL	DGF218811-AL	DGF219811-AL		DGF226911-AL	DGF227911-AL	DGF228911-AL	DGF229911-AL
789	938	1078	1209		1038	1241	1435	1618
DGF216812-AL	DGF217812-AL	DGF218812-AL	DGF219812-AL	DGF225912-AL	DGF226912-AL	DGF227912-AL	DGF228912-AL	DGF229912-AL
875	1042	1198	1343	915	1153	1379	1594	1798
	DGF217813-AL	DGF218813-AL			DGF226913-AL	DGF227913-AL	DGF228913-AL	DGF229913-AL
	1146	1317			1269	1517	1754	1978
DGF216814-AL	DGF217814-AL	DGF218814-AL			DGF226914-AL	DGF227914-AL	DGF228914-AL	DGF229914-AL
1051	1250	1437			1384	1654	1913	2157
DGF216816-AL	DGF217816-AL	DGF218816-AL			DGF226916-AL	DGF227916-AL	DGF228916-AL	DGF229916-AL
1226	1458	1677			1614	1930	2232	2517
DGF216818-AL	DGF217818-AL	DGF218818-AL		DGF225918-AL	DGF226918-AL	DGF227918-AL	DGF228918-AL	DGF229918-AL
1401	1667	1916		1463	1845	2206	2550	2876
DGF216820-AL	DGF217820-AL	DGF218820-AL			DGF226920-AL	DGF227920-AL	DGF228920-AL	
1576	1875	2155			2076	2482	2869	
					DGF226922-AL	DGF227922-AL	DGF228922-AL	
					2306	2757	3187	

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical information & specifications

DeepClean anti-ligature radiator size information and output performance data

Specification summary:

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Patented full height front access door with hinge (Pat. No. 2 410 544)
- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 480mm to 895mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Emitter:

- QRL Hi-Lo round top radiator

Valve options available:

- Internal TRV kit 9210-13
- Remote sensing TRV kit 7463-41
- Anti-ligature TRV kit & shroud 9213-63
- Rotarad rotating valve kit

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote® anti-microbial agent as standard

Fixings:

- All fixings internal
- Security Fastenings & fixings

ANTI-LIGATURE

WALL MOUNTED

GRADIENT TOP

		Type 11 (Single Convector)					
Casing Length (mm)	Rad Length (mm)	Casing Height (mm)	480	580	680	780	880
		Rad Height (mm)	300	400	500	600	700
500	300	Art. Code			DGW116805-AL	DGW117805-AL	
		Watts T50			222	259	
600	400	Art. Code	DGW114806-AL	DGW115806-AL	DGW116806-AL	DGW117806-AL	DGW118806-AL
		Watts T50	188	245	296	345	390
700	500	Art. Code	DGW114807-AL	DGW115807-AL	DGW116807-AL	DGW117807-AL	DGW118807-AL
		Watts T50	235	305	370	430	487
800	600	Art. Code	DGW114808-AL	DGW115808-AL	DGW116808-AL	DGW117808-AL	DGW118808-AL
		Watts T50	282	366	444	517	585
900	700	Art. Code		DGW115809-AL	DGW116809-AL	DGW117809-AL	DGW118809-AL
		Watts T50		427	518	603	682
1000	800	Art. Code		DGW115810-AL	DGW116810-AL	DGW117810-AL	DGW118810-AL
		Watts T50		488	591	689	779
1100	900	Art. Code		DGW115811-AL	DGW116811-AL	DGW117811-AL	DGW118811-AL
		Watts T50		548	665	775	876
1200	1000	Art. Code	DGW114812-AL	DGW115812-AL	DGW116812-AL	DGW117812-AL	DGW118812-AL
		Watts T50	469	609	739	860	973
1300	1100	Art. Code		DGW115813-AL	DGW116813-AL	DGW117813-AL	DGW118813-AL
		Watts T50		670	813	947	1071
1400	1200	Art. Code		DGW115814-AL	DGW116814-AL	DGW117814-AL	DGW118814-AL
		Watts T50		731	887	1033	1168
1600	1400	Art. Code		DGW115816-AL	DGW116816-AL	DGW117816-AL	DGW118816-AL
		Watts T50		853	1035	1205	1363
1800	1600	Art. Code	DGW114818-AL	DGW115818-AL	DGW116818-AL	DGW117818-AL	DGW118818-AL
		Watts T50	750	974	1182	1377	1558
2000	1800	Art. Code		DGW115820-AL	DGW116820-AL	DGW117820-AL	DGW118820-AL
		Watts T50		1096	1330	1548	1752
2200	2000	Art. Code	DGW115822-AL	DGW116822-AL	DGW117822-AL	DGW118822-AL	
		Watts T50		1217	1478	1720	1946

Heat Outputs to BS EN 442 Certification.

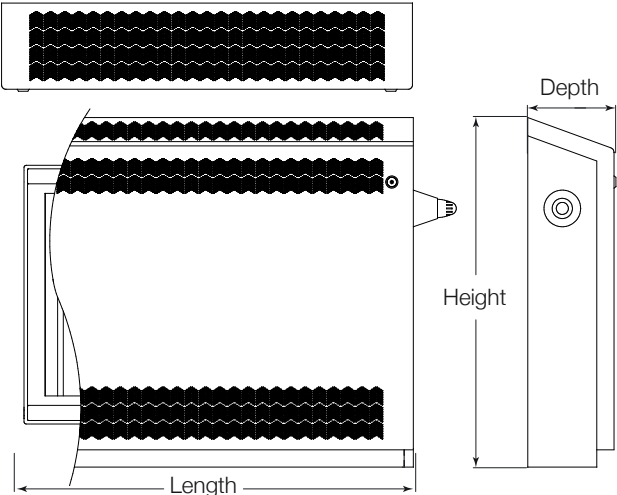
Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

To convert BTU to Watts multiply by 0.293. To convert Watts to BTU divide by 0.293

Type 12 (Double Panel +)				Type 22 (Double Convector)				
585	685	785	885	495	595	695	795	895
400	500	600	700	300	400	500	600	700
						DGW226905-AL	DGW227905-AL	
						419	484	
DGW215806-AL	DGW216806-AL	DGW217806-AL	DGW218806-AL		DGW225906-AL	DGW226906-AL	DGW227906-AL	DGW228906-AL
355	422	485	544		467	558	646	728
DGW215807-AL	DGW216807-AL	DGW217807-AL	DGW218807-AL	DGW224907-AL	DGW225907-AL	DGW226907-AL	DGW227907-AL	DGW228907-AL
444	528	606	680	464	584	699	807	910
DGW215808-AL	DGW216808-AL	DGW217808-AL	DGW218808-AL	DGW224908-AL	DGW225908-AL	DGW226908-AL	DGW227908-AL	DGW228908-AL
533	633	728	816	556	701	838	968	1092
DGW215809-AL	DGW216809-AL	DGW217809-AL	DGW218809-AL		DGW225909-AL	DGW226909-AL	DGW227909-AL	DGW228909-AL
621	738	849	952		817	977	1130	1274
DGW215810-AL	DGW216810-AL	DGW217810-AL	DGW218810-AL		DGW225910-AL	DGW226910-AL	DGW227910-AL	DGW228910-AL
709	844	970	1088		934	1117	1291	1456
DGW215811-AL	DGW216811-AL	DGW217811-AL	DGW218811-AL		DGW225911-AL	DGW226911-AL	DGW227911-AL	DGW228911-AL
798	949	1091	1224		1050	1256	1452	1638
DGW215812-AL	DGW216812-AL	DGW217812-AL	DGW218812-AL	DGW224912-AL	DGW225912-AL	DGW226912-AL	DGW227912-AL	DGW228912-AL
886	1055	1212	1359	926	1167	1396	1613	1820
	DGW216813-AL	DGW217813-AL			DGW225913-AL	DGW226913-AL	DGW227913-AL	DGW228913-AL
	1160	1333			1285	1535	1775	2002
DGW215814-AL	DGW216814-AL	DGW217814-AL			DGW225914-AL	DGW226914-AL	DGW227914-AL	DGW228914-AL
1064	1265	1455			1401	1675	1936	2183
DGW215816-AL	DGW216816-AL	DGW217816-AL			DGW225916-AL	DGW226916-AL	DGW227916-AL	DGW228916-AL
1241	1476	1697			1634	1953	2259	2548
DGW215818-AL	DGW216818-AL	DGW217818-AL		DGW224918-AL	DGW225918-AL	DGW226918-AL	DGW227918-AL	DGW228918-AL
1418	1687	1939		1481	1868	2233	2581	2911
DGW215820-AL	DGW216820-AL	DGW217820-AL			DGW225920-AL	DGW226920-AL	DGW227920-AL	
1595	1898	2182			2101	2512	2904	
					DGW225922-AL	DGW226922-AL	DGW227922-AL	
					2334	2791	3226	



Please note:

The grille size used in anti-ligature radiator guards can inhibit the convection process. Therefore Contour cannot guarantee that the casing will not exceed a surface temperature of 43°C

Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding QRL emitter (Type 11, Type 12 or Type 22 as specified) and the option of an anti-ligature TRV shroud and 9231-63 Herz External TRV kit (suitable for 15mm copper to copper connection on a two-pipe system) or a 9210-13 Herz internal TRV kit
- An optional Rotarad rotary valve is available
- Alternative Herz fittings can be quoted for and supplied upon request
- **Split delivery option:** to reduce the risk of radiators casings becoming damaged or lost on site, Contour offer split deliveries as standard on all LST and anti-ligature radiators. Radiators and valves are delivered first, then, once the heating system is installed, tested and commissioned, casings are delivered. This virtually eliminates storage problems and the risk of on-site damage.

Technical information & specifications

Covora LST radiator – size information and output performance data

COVORA LST FLOOR MOUNTED SQUARE TOP

		Type 11 (Single convector)			Type 12 (Double panel plus)			Type 22 (Double convector)		
Height	Length (mm)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)
650mm	600	CVL650611	115	256	CVL650613	135	372	CVL650617	175	489
	700	CVL650711	115	319	CVL650713	135	465	CVL650717	175	612
	800	CVL650811	115	383	CVL650813	135	557	CVL650817	175	735
	900	CVL650911	115	447	CVL650913	135	650	CVL650917	175	857
	1000	CVL651011	115	511	CVL651013	135	743	CVL651017	175	979
	1100	CVL651111	115	574	CVL651113	135	836	CVL651117	175	1101
	1200	CVL651211	115	638	CVL651213	135	929	CVL651217	175	1224
	1300	CVL651311	115	702	CVL651313	135	1022	CVL651317	175	1346
	1400	CVL651411	115	766	CVL651413	135	1114	CVL651417	175	1468
	1600	CVL651611	115	893	CVL651613	135	1300	CVL651617	175	1713
	1800	CVL651811	115	1021	CVL651813	135	1486	CVL651817	175	1958
	2000	CVL652011	115	1148	CVL652013	135	1671	CVL652017	175	2202
750mm	500	CVL750511	115	233				CVL750517	175	439
	600	CVL750611	115	310	CVL750613	135	442	CVL750617	175	585
	700	CVL750711	115	388	CVL750713	135	553	CVL750717	175	732
	800	CVL750811	115	465	CVL750813	135	663	CVL750817	175	878
	900	CVL750911	115	543	CVL750913	135	774	CVL750917	175	1024
	1000	CVL751011	115	620	CVL751013	135	884	CVL751017	175	1171
	1100	CVL751111	115	697	CVL751113	135	995	CVL751117	175	1317
	1200	CVL751211	115	775	CVL751213	135	1105	CVL751217	175	1463
	1300	CVL751311	115	852	CVL751313	135	1216	CVL751317	175	1609
	1400	CVL751411	115	930	CVL751413	135	1326	CVL751417	175	1755
	1500	CVL751511	115	1007				CVL751517	175	1901
	1600	CVL751611	115	1085	CVL751613	135	1547	CVL751617	175	2048
	1700	CVL751711	115	1162				CVL751717	175	2195
	1800	CVL751811	115	1239	CVL751813	135	1768	CVL751817	175	2341
	2000	CVL752011	115	1394	CVL752013	135	1989	CVL752017	175	2633

Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of 70°C and a room temperature of 20°C - Delta T 50°C

To achieve DeltaT60 increaseT50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

		Type 11 (Single convector)			Type 12 (Double panel plus)			Type 22 (Double convector)		
Height	Length (mm)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)
850mm	500	CVL850511	115	271				CVL850517	175	508
	600	CVL850611	115	361	CVL850613	135	509	CVL850617	175	677
	700	CVL850711	115	451	CVL850713	135	636	CVL850717	175	846
	800	CVL850811	115	541	CVL850813	135	763	CVL850817	175	1015
	900	CVL850911	115	631	CVL850913	135	890	CVL850917	175	1184
	1000	CVL851011	115	722	CVL851013	135	1017	CVL851017	175	1353
	1100	CVL851111	115	812	CVL851113	135	1144	CVL851117	175	1522
	1200	CVL851211	115	902	CVL851213	135	1271	CVL851217	175	1691
	1300	CVL851311	115	992	CVL851313	135	1398	CVL851317	175	1860
	1400	CVL851411	115	1082	CVL851413	135	1525	CVL851417	175	2029
	1500	CVL851511	115	1172				CVL851517	175	2198
	1600	CVL851611	115	1262	CVL851613	135	1779	CVL851617	175	2367
	1700	CVL851711	115	1352				CVL851717	175	2537
	1800	CVL851811	115	1443	CVL851813	135	2033	CVL851817	175	2705
	2000	CVL852011	115	1623	CVL852013	135	2287	CVL852017	175	3043
950mm	600	CVL950611	115	408	CVL950613	135	570	CVL950617	175	763
	700	CVL950711	115	510	CVL950713	135	713	CVL950717	175	954
	800	CVL950811	115	612	CVL950813	135	855	CVL950817	175	1145
	900	CVL950911	115	714	CVL950913	135	997	CVL950917	175	1335
	1000	CVL951011	115	816	CVL951013	135	1140	CVL951017	175	1526
	1100	CVL951111	115	918	CVL951113	135	1282	CVL951117	175	1717
	1200	CVL951211	115	1020	CVL951213	135	1425	CVL951217	175	1908
	1300	CVL951311	115	1122				CVL951317	175	2098
	1400	CVL951411	115	1224	CVL951413	135	1710	CVL951417	175	2289
	1600	CVL951611	115	1428				CVL951617	175	2671
	1800	CVL951811	115	1632				CVL951817	175	3052
	2000	CVL952011	115	1836						

Covora – valve kits and technical data

Valve kits	Ref
Standard Internal (BBOE)	CVK001
Internal c/w Remote Sensor	CVK002
Direct Fit External (TBOE)	CVK003
Close Coupled External	CVK004

Water content

Height	300mm (12")	400mm (16")	500mm (20")	600mm (24")	700mm (28")
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Litres/metre

Single Convector	1.81	2.24	2.67	3.1	3.53
Double Panel Plus	3.10	4.10	5.10	6.10	7.12
Double Convector	3.10	4.10	5.10	6.10	7.12

Radiator dry weight

Height	300mm (12")	400mm (16")	500mm (20")	600mm (24")	700mm (28")
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Kgs/metre

Single Convector	8.53	11.44	14.35	17.27	20.16
Double Panel Plus	14.9	19.04	23.75	28.47	33.18
Double Convector	16.92	22.73	28.55	34.36	40.18

Please note that Covora is not recommended for installation in bathrooms, wet rooms or high humidity environments.

Order lead times:

Lead times for Covora are from 10 days from receipt of order for standard model sizes finished in white. Longer lead times and minimum order quantities may apply for Covora radiator guards finished in other colours.



Technical information & specifications

DeepClean radiator guards

Models and specifications

Standard LST and anti-ligature guards available as:

- Floor mounted / square top
- Wall mounted / square top
- Floor mounted / gradient top
- Wall mounted / gradient top

Manufacture:

- 1.5mm Mild steel
- 10mm Radius edges / bullnose corners
- Full height front access door
- Patented open hinge door (Pat. No. 2 410 544)
- 5.5mm Punched grille
- Cut-outs programmed into manufacture
- External TRV apertures available

Sizes:

- Single casing length 500mm to 2000mm
- Single casing height 450mm to 1000mm
- Lengths over 2000mm can be achieved
- Bespoke solutions, extended guards & multiple door units available

Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Exclusive use of patented BioCote® anti-microbial agent as standard (on RAL 9003 colour models)
- BioCote reduces bacteria on treated surfaces by up to 99.9% in under 2 hours and is independently laboratory tested on a regular basis to ensure anti-microbial efficacy

Fixings:

- All fixings internal
- 6mm Allen key door locks (security locks also available including pin Hex fastenings and key locks)

Anti-ligature radiator options:

- IP3x test (to BS EN 60529) compliant guard grille available - designed to stop objects >2.5mm diameter being inserted
- TRV shroud
- Base plate
- Security fastenings & fixings

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Bespoke LST heating options and complementary products

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HVAC & perimeter casings

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Pipe boxing

- Aluminium
- Plywood

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Our services – the Contour difference

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Other Contour products

- Architectural fabrications
- Anti-climb protection
- Floor ducting
- Column casings



Bespoke LST heating options and complementary products

Contour regularly develops bespoke radiator guards for individual projects and which complement the standard ranges.

1. Wall to wall radiators and guards

Designed to protect service users from perimeter or finned pipe heating systems, or to bridge the space between a radiator guard and an adjoining wall.



2. Bay window radiator guards

Bay window radiator guards allow a low surface temperature system to follow angled or contoured walls by way of an innovative internal fixing bracket.



3. Free-standing radiators and guards

Designed for use where it is not possible to achieve a fixing behind the radiator guard, free standing radiator and guards use a floor mounted fixing system.



4. Vertical radiator guards

Applied to locations where wall space is at a premium, vertical LST radiator guards are engineered to include a grille located at the mid-point of the unit, allowing heat convection at the most efficient level.

5. Aluminium radiator guards

Wet or extremely humid environments require an aluminium solution; Contour's aluminium radiator guards remove the potential for rusting and can be fixed to the wall allowing cleaning beneath.



6. Alcove radiator guards

When a radiator is recessed into a wall, Contour's alcove radiator guard is a system designed to reduce loss of floor space.



7. Raised finned element pipe radiator guards

Designed to deliver a low surface temperature solution to existing raised fin pipe emitters, Contour's engineered system ensures an aesthetic appearance and complete protection for service users.



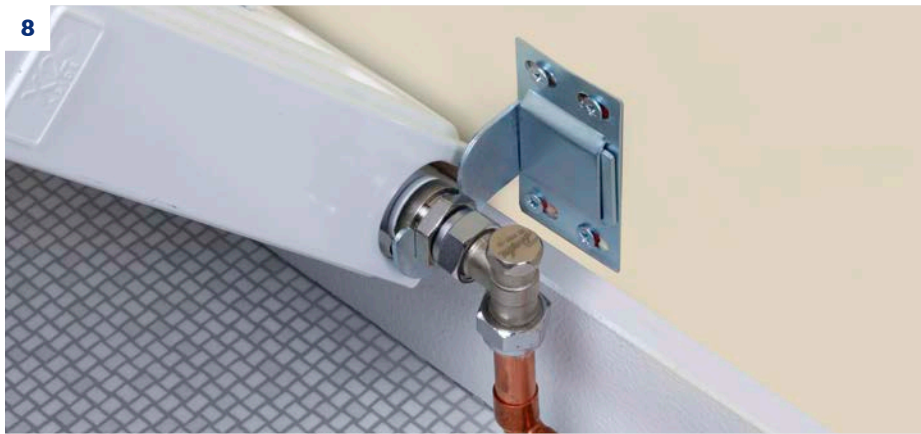
8. Corner fitted guards

Contour can provide guard units with an open shoulder design specifically for installation into corner areas.





Bespoke LST heating options and complementary products



8. Rotarad rotating radiator valves

Rotarad is a unique, WRAS, KTW and ACS approved rotating valve kit, which can be used on both new installation projects and retrofitted to existing radiators.

The rotating valve allows the emitter to pivot-down away from the wall to the floor; delivering complete access to the rear of the emitter and the wall behind for cleaning and maintenance.

See pages 24-25 for further details



9. Manifold casings

Contour design and manufacture casings to house exposed manifolds to under-floor heating systems.

10. Anti-ligature ceiling and wall grilles

Contour has developed ceiling and wall grilles for application in secure environments, such as mental health facilities and prisons. Designed to conceal fans and ventilation systems, we manufacture standard sizes on short lead times (see table), however these products can be manufactured in a wide variety of sizes and shapes to suit specific applications.

Anti-ligature ceiling and wall grilles - standard sizes	
Size	Product code
150 x 150mm	ALG150150
200 x 200mm	ALG200200
300 x 300mm	ALG300300
400 x 400mm	ALG400400
450 x 450mm	ALG450450
500 x 500mm	ALG500500
75 x 150mm	ALG075150
100 x 200mm	ALG100200
150 x 300mm	ALG150300
200 x 400mm	ALG200400
225 x 450mm	ALG225450
250 x 500mm	ALG250500

In order to minimize the risk of self harm, Contour's latest anti-ligature grille design uses perforated 2mm holes at 4mm centres. This design has been adopted into our latest anti-ligature radiator guard design which been tested by a UKAS accredited laboratory and effectively exceeds IP3x standards (BS EN 60529). This tests for protection against the ingress of objects greater than 2.5mm in diameter.

Security fixings on the grilles help to eliminate tamper points. In addition a BioCote anti-microbial additive in the paintwork reduces the risk of bacterial contamination and the spread of infection.

11. Security cables

Radiator guard door cables can be fitted to the inside of any of Contour's DeepClean models as an optional safety feature and which prevent the guard dropping to the floor when the casing is opened. This can be of particular benefit on oversized doors.

12. Special fastenings

A range of special fastenings is available for application in environments where security and safety are essential considerations; these include Allen key locks, pin Hex fastenings and key locks.

13. Universal valve adaptor

Contour has developed a universal valve adaptor which converts existing valves including Drayton, Myson and Danfoss brands, allowing them to accept our internal or external valve bodies.

14. Front-facing TRV

When access to the side of a radiator guard is restricted, TRV's can be positioned on the front of a unit.



HVAC & perimeter casings

Designing and manufacturing casings for Heating, Ventilation & Air conditioning (HVAC) systems requires more than simply producing a boxed housing for air treatment equipment. It requires careful design to ensure that the efficient functioning of an air movement system, will not be impeded by a casing form that suits the aesthetic of an interior environment.

Contour design and manufacture completely made to measure HVAC and perimeter casing to house all manner of heating and ventilation systems, whether for completely new air movement systems or as part of a repair or refurbishment project. In addition casings can be designed and manufactured on a modular basis to slot into an existing arrangement.

All Contour's HVAC and perimeter casings are designed and manufactured in the UK and are covered by a 5 year warranty for extra peace of mind.

Contour's designers can create casings that blend seamlessly into the overall aesthetic of a room setting or alternatively, stand out if required. Our advanced 3D CAD software allows the design of a casing that ensures optimal air movement both within the unit and in its expulsion, whilst computer controlled production ensures that grilles and vents are cut uniformly. We can offer a range of grille and vent options and positions depending on the casing's functional requirement.

A central benefit of choosing a Contour design is that easy access for cleaning and system maintenance is assured. Access to the interior of the casings can be facilitated by a patented front door (UK Patent No: 2 410 544) which lies flat on floor. However other access points can be designed for and programmed in during manufacture.

The open hinge arrangement on our patent front door allows removal if required. A selection of quarter-turn locks and other security fittings is also available to stop unauthorised access.

Casings can be manufactured in mild steel or aluminium, in a variety of gauges to suit the HVAC system and environment. In addition Contour can finish the casings in virtually any RAL or BS colour to suit an interior design. HVAC casings finished in RAL White 9003 can be supplied with a BioCote coating for added anti-microbial protection where required, for example in health clinics, GP surgeries and nursing homes.

We also can also provide a nationwide, cost effective HVAC and perimeter casing installation service using our experienced and fully certificated installers.



Pipe boxing

Contour can provide a range of metal and preformed plywood pipe boxing solutions. Robust and with a flawless finish, our pipe boxing excels in high-traffic areas and the smooth finish enables easy cleaning. Our pipe boxing is widely-specified across UK healthcare, education and local authority sectors.

We offer our pipe boxing in two profiles, L-shaped and U-shaped, both available in aluminium or plywood. In addition we can provide a complete turnkey solution for both our aluminium and plywood pipe boxing ranges, from survey, design and manufacture, through to expert installation.

Access panels for internal services can be programmed into manufacture, delivering a fast, clean, low disturbance installation. Venting can also be programmed into fabrication in both materials without compromising the lead time.

Aluminium pipe boxing

Contour aluminium pipe boxing is designed predominantly for exterior environments, where a robust, weatherproof solution is required. Manufactured from 2mm or 3mm aluminium, the pipe casings are lightweight, easy to install and supplied with a long lasting powder coated finish, in virtually any RAL or BS colour.

Designed and fabricated using the latest technology, our aluminium pipe boxing excels in hostile environments and is impervious to insect / rat attacks. Typical applications include covering pipes in district heating schemes, protecting soil and waste pipes or boxing in gas pipes.

Contour aluminium pipe boxing also has the substantial benefit of being covered by a 25 year product warranty.

Aluminium pipe boxing is available in a wide range of sizes, and in standard lengths of 2.5m or 3m. Bespoke lengths can also be supplied.

Standard profiles are:

- 90° L Sections
- 90° U Sections

Bespoke profiles can also be supplied.

A range of accessories is available for our aluminium pipe boxing, including;

- Internal corners – 90°, 135° or special angles
- External corners – 90°, 135° or special angles
- T-sections – 90°, 135° or special angles
- Stop ends
- Butt joint covers – internal (welded) or external (loose)
- Access doors
- Vented profiles – for gas installation

Security fixings can be provided for secure environments.



Contour's exclusive access to BioCote® anti-microbial technology means the additive can be incorporated into a boxing scheme's powder coating. This provides

for up to 99.99% protection against MRSA, E.coli, Listeria and other harmful bacteria and fungi. For this reason, the product is widely-specified across healthcare, education and local authority sectors.



Preformed plywood pipe boxing

Contour preformed plywood pipe boxing is available in 5mm and 8mm thicknesses. It provides a versatile and adaptable solution for concealing interior pipework in both domestic and commercial applications from bathrooms and bedrooms to major heating installations. It is particularly suitable for protecting vulnerable service users from low level exposed hot pipework. Current NHS guidance calls for all hot pipework below 2m to be boxed in. As with our aluminium boxing, vented plywood pipe boxing is also available.

Contour preformed plywood pipe casing is available in a choice of two standard lengths of 2.5m or 3m, to ensure suitability in a wide range of specifications and project requirements. Bespoke lengths can also be supplied. It is covered by a 2 year product warranty.

Standard profiles are:

- L Section in 90° & 115° Profiles
- U Channel in 180° profile. Double angles available

Pipe boxing material recommendations

Environment	Material	Thickness
Internal installation - dry low traffic	Plywood	5mm
Internal installation - dry high traffic	Plywood	8mm
Internal installation - damp or wet	Aluminium	2mm
External installation	Aluminium	3mm

A full range of dedicated accessories is also available, including:

- Internal corners – 90° angles
- External corners – 90° angles
- Stop ends
- Butt joint covers
- Access doors
- Timber fixing battens and fixing screws

Contour preformed plywood pipe boxing is finished with an attractive and durable white melamine surface as standard, which is hard wearing and easy to clean, making it ideal for

a broad range of applications, particularly where hygiene is a key consideration. Other coloured veneers are available as options, as is a BioCote® anti-microbial treated paint finish.

All products in our standard range are fully compliant with the latest EU Timber Regulations and manufactured, as standard, from FSC® certified timber to aid compliance with sustainable building codes and relevant timber procurement policies.



Pipe boxing

Aluminium

Standard specifications - metal

Materials:

- For interior applications pressed aluminium alloy sheet to BS EN 485/515/573, grade 1050A/H14/4015-812. Minimum thickness 2mm
- For exterior applications pressed aluminium alloy sheet to BS EN 485/515/573, grade 1050A/H14/4015-812. Minimum thickness 3mm

Shapes:

L Section / U Channel

Finish:

Polyester Powder Coated to all visible faces in any RAL or BS colour. Optional BioCote® anti-microbial agent is available in standard white PPC finish.

Accessories:

Stop-ends, welded internal and external corners, jointing straps and access panels.

Method of jointing:

Internal or external jointing straps with mechanical fix.

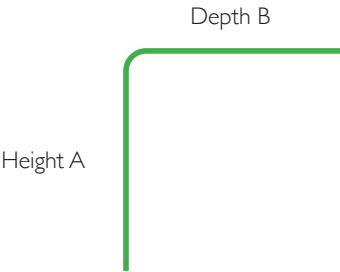
Installation:

90° angled fixing bracket.

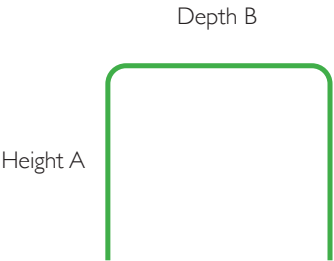
Sizes

Bespoke sizes are available, please contact us for details.

L section



U section



2mm and 3mm L section aluminium pipe boxing - standard sizes

Height A (mm)	Depth B (mm)	Thickness (mm)	Lengths (mm)		2.5m		3.0m		Finish
					Weight (kg)	Product code	Weight (kg)	Product code	
100	100	2	2500	3000	2.71	ABL1010252	3.25	ABL1010302	PPC Aluminium
150	100	2	2500	3000	3.39	ABL1510252	4.07	ABL1510302	
200	100	2	2500	3000	4.07	ABL2010252	4.88	ABL2010302	
250	100	2	2500	3000	4.74	ABL2510252	5.69	ABL2510302	
300	100	2	2500	3000	5.42	ABL3010252	6.50	ABL3010302	
400	100	2	2500	3000	6.78	ABL4010252	8.13	ABL4010302	
500	150	2	2500	3000	8.81	ABL5015252	10.57	ABL5015302	
200	200	2	2500	3000	5.42	ABL2020252	6.50	ABL2020302	
300	200	2	2500	3000	6.78	ABL3020252	8.13	ABL3020302	
400	200	2	2500	3000	8.13	ABL4020252	9.76	ABL4020302	
500	200	2	2500	3000	9.49	ABL5020252	11.38	ABL5020302	
300	300	2	2500	3000	8.13	ABL3030252	9.76	ABL3030302	
400	300	2	2500	3000	9.49	ABL4030252	11.38	ABL4030302	
100	100	3	2500	3000	4.07	ABL1010253	4.88	ABL1010303	
150	100	3	2500	3000	5.08	ABL1510253	6.10	ABL1510303	
200	100	3	2500	3000	6.10	ABL2010253	7.32	ABL2010303	
250	100	3	2500	3000	7.11	ABL2510253	8.54	ABL2510303	
300	100	3	2500	3000	8.13	ABL3010253	9.76	ABL3010303	
400	100	3	2500	3000	10.16	ABL4010253	12.20	ABL4010303	
500	150	3	2500	3000	13.21	ABL5015253	15.85	ABL5015303	
200	200	3	2500	3000	8.13	ABL2020253	9.76	ABL2020303	
300	200	3	2500	3000	10.16	ABL3020253	12.20	ABL3020303	
400	200	3	2500	3000	12.20	ABL4020253	14.63	ABL4020303	
500	200	3	2500	3000	14.23	ABL5020253	17.07	ABL5020303	
300	300	3	2500	3000	12.20	ABL3030253	14.63	ABL3030303	
400	300	3	2500	3000	14.23	ABL4030253	17.07	ABL4030303	
500	300	3	2500	3000	16.26	ABL5030253	19.51	ABL5030303	

2mm and 3mm U section aluminium pipe boxing - standard sizes

Height A (mm)	Depth B (mm)	Thickness (mm)	Lengths (mm)		2.5m		3.0m		Finish
					Weight (kg)	Product code	Weight (kg)	Product code	
100	150	2	2500	3000	4.74	ABU1015252	5.69	ABU1015302	PPC Aluminium
100	200	2	2500	3000	5.42	ABU1020252	6.50	ABU1020302	
100	250	2	2500	3000	6.10	ABU1025252	7.32	ABU1025302	
100	300	2	2500	3000	6.78	ABU1030252	8.13	ABU1030302	
100	400	2	2500	3000	8.13	ABU1040252	9.76	ABU1040302	
150	500	2	2500	3000	10.84	ABU1550252	13.01	ABU1550302	
200	250	2	2500	3000	8.81	ABU2025252	10.57	ABU2025302	
200	300	2	2500	3000	9.49	ABU2030252	11.38	ABU2030302	
200	400	2	2500	3000	10.84	ABU2040252	13.01	ABU2040302	
200	500	2	2500	3000	12.20	ABU2050252	14.63	ABU2050302	
300	350	2	2500	3000	12.87	ABU3035252	15.45	ABU3035302	
300	400	2	2500	3000	13.55	ABU3040252	16.26	ABU3040302	
300	500	2	2500	3000	14.91	ABU3050252	17.89	ABU3050302	
100	150	3	2500	3000	7.11	ABU1015253	8.54	ABU1015303	
100	200	3	2500	3000	8.13	ABU1020253	9.76	ABU1020303	
100	250	3	2500	3000	9.15	ABU1025253	10.98	ABU1025303	
100	300	3	2500	3000	10.16	ABU1030253	12.20	ABU1030303	
100	400	3	2500	3000	12.20	ABU1040253	14.63	ABU1040303	
150	500	3	2500	3000	16.26	ABU1550253	19.51	ABU1550303	
200	250	3	2500	3000	13.21	ABU2025253	15.85	ABU2025303	
200	300	3	2500	3000	14.23	ABU2030253	17.07	ABU2030303	
200	400	3	2500	3000	16.26	ABU2040253	19.51	ABU2040303	
200	500	3	2500	3000	18.29	ABU2050253	21.95	ABU2050303	
300	350	3	2500	3000	19.31	ABU3035253	23.17	ABU3035303	
300	400	3	2500	3000	20.33	ABU3040253	24.39	ABU3040303	
300	500	3	2500	3000	22.36	ABU3050253	26.83	ABU3050303	

Pipe boxing

Plywood

Standard specifications – preformed plywood

Materials:

5mm and 8mm preformed plywood.Vented boxing available.

Shapes:

- L Section in 90° & 115° Profiles
- U Channel in 180° profile. Double angles available

Finish:

White Melamine as standard.Veneers and anti-microbial paint are also available as options.

Accessories:

Stop-ends, internal and external corners, butt joint covers, timber fixing battens and fixing screws.

Method of jointing:

Butt joint, PVC shadow gap joint and aluminium shadow gap joint.

Installation:

Wooden battens.

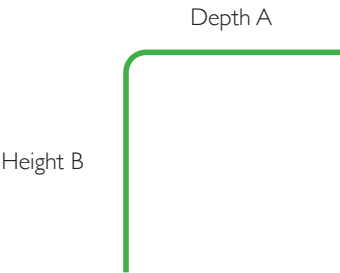
Sizes:

Bespoke sizes are available, please contact us for details.

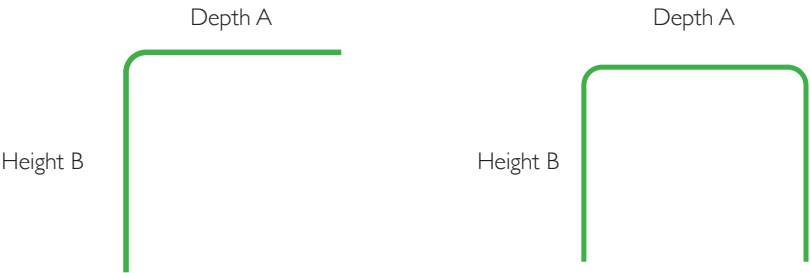
5mm and 8mm L section plywood pipe boxing - standard sizes

Depth A (mm)	Height B (mm)	Thickness (mm)	Lengths (mm)		2.5m		3.0m		Finish
					Weight (kg)	Product code	Weight (kg)	Product code	
75	150	5	2500	3000	1.4	PBL7515255	1.7	PBL7515305	White Melamine
75	200	5	2500	3000	1.7	PBL7520255	2.0	PBL7520305	
75	300	5	2500	3000	2.3	PBL7530255	2.8	PBL7530305	
100	100	5	2500	3000	1.2	PBL1010255	1.5	PBL1010305	
100	200	5	2500	3000	1.8	PBL1020255	2.2	PBL1020305	
100	300	5	2500	3000	2.4	PBL1030255	2.9	PBL1030305	
150	150	5	2500	3000	1.8	PBL1515255	2.2	PBL1515305	
150	200	5	2500	3000	2.1	PBL1520255	2.6	PBL1520305	
150	300	5	2500	3000	2.8	PBL1530255	3.3	PBL1530305	
200	200	5	2500	3000	2.4	PBL2020255	2.9	PBL2020305	
200	300	5	2500	3000	3.1	PBL2030255	3.7	PBL2030305	
300	300	5	2500	3000	3.7	PBL3030255	4.4	PBL3030305	
100	100	8	2500	3000	1.7	PBL1010258	2.0	PBL1010308	
100	200	8	2500	3000	2.5	PBL1020258	3.1	PBL1020308	
100	300	8	2500	3000	3.4	PBL1030258	4.1	PBL1030308	
100	400	8		3000		-	5.1	PBL1040308	
100	500	8		3000		-	6.1	PBL1050308	
150	150	8	2500	3000	2.5	PBL1515258	3.1	PBL1515308	
150	200	8	2500	3000	3.0	PBL1520258	3.6	PBL1520308	
150	300	8	2500	3000	3.8	PBL1530258	4.6	PBL1530308	
150	400	8		3000		-	5.6	PBL1540308	
150	500	8		3000		-	6.6	PBL1550308	
200	200	8	2500	3000	3.4	PBL2020258	4.1	PBL2020308	
200	300	8	2500	3000	4.2	PBL2030258	5.1	PBL2030308	
200	400	8		3000		-	6.1	PBL2040308	
200	500	8		3000		-	7.1	PBL2050308	
300	300	8	2500	3000	5.1	PBL3030258	6.1	PBL3030308	
300	400	8		3000			7.1	PBL3040308	
300	500	8		3000			8.1	PBL3050308	

L section



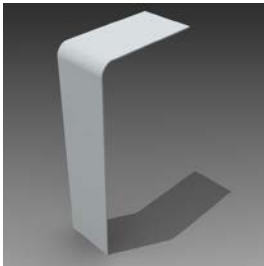
U section



8mm U Section plywood pipe boxing - standard sizes

Depth A (mm)	Height B (mm)	Thickness (mm)	Lengths (mm)	Weight (Kg)	Product code	Finish
100	200	8	3000	4.1	PBU1020308	White Melamine
150	200	8	3000	5.1	PBU1520308	
200	200	8	3000	6.1	PBU2020308	
100	400	8	3000	6.1	PBU1040308	
150	400	8	3000	7.1	PBU1540308	
200	400	8	3000	8.1	PBU2040308	

Standard profiles and shapes



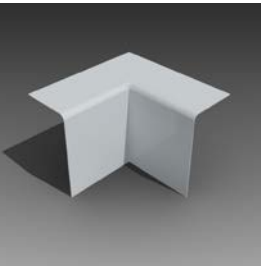
L Channel butt strap

Aluminium product code: ABLBS
Plywood product code: PBLBS



L Channel external corner

Aluminium product code: ABLEC
Plywood product code: PBLEC



L Channel internal corner

Aluminium product code: ABLIC
Plywood product code: PBLIC



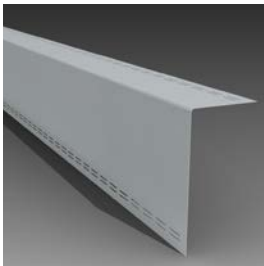
U Channel internal corner

Aluminium product code: ABUIC
Plywood product code: PBUIC



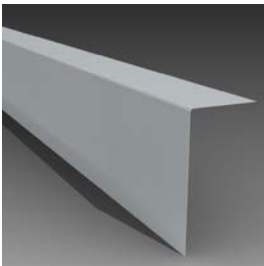
U Channel

Aluminium and plywood product code: see tables



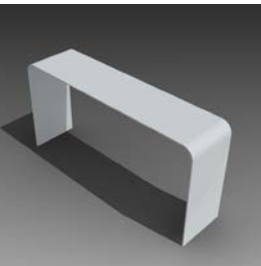
L Channel vented

Aluminium product code: ABLV
Plywood product code: PBLV



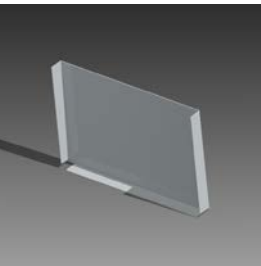
L Channel

Aluminium and plywood product code: see tables



U Channel butt strap

Aluminium product code: ABUBS
Plywood product code: PBUBS



U Channel stop end

Aluminium product code: ABUS
Plywood product code: PBUS



Our services – the Contour difference

At Contour, we don't just believe in supplying high quality, innovative products, we also aim to provide a comprehensive service - from conducting site surveys and collaborating to develop bespoke designs through to installation.

Technical design

Our design team is more than happy to help adapt our products and develop them in order to suit your specific applications. A team of technical experts and design specialists are available to discuss any of your development ideas and answer your questions, ensuring a product matching your exact criteria is produced.

LST product BIM objects

Contour's low surface temperature BIM objects are modelled as individual families, which can be manipulated and tailored to meet project requirements. Wall and floor mounted radiator guard BIM objects are available, with adjustable height, depth and length parameters. A range of internal and external TRV's can also be selected.

An array of fastening devices can be added to the models, with pipework / skirting cut-out options available for retrofit applications and to aid scheduling. Clearance zones show the amount of space required when positioning objects in high-traffic areas or plant rooms.

For secure environments, a range of anti-ligature options can also be selected. Metal and plywood pipe boxing BIM objects are also available to compliment Contour's radiator guard and LST radiator BIM components.

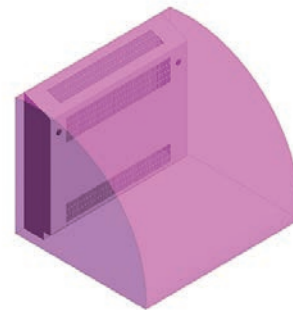
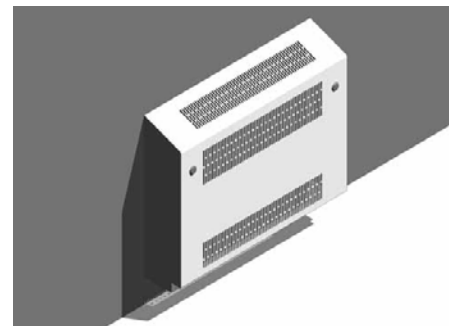
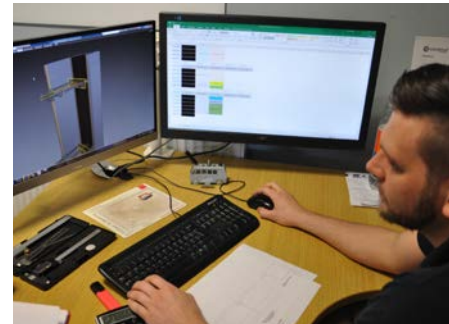
Site surveys

We undertake all site surveys free of charge as an integral part of our comprehensive service. Our surveyors, will identify the correct size and quantities of products required, and will take note of any special requirements that are necessary including cut-outs. Modifications can then be programmed into manufacture, making the installation process more efficient.

Radiator guard installation

If required, experienced installation and project management teams can handle the entire project for you through to completion. The project management team work closely with the contractor on all aspects of the installation, providing project programmes, method statements, risk assessments, COSHH documentation, flexible working practices and O&M manuals.

All installers are CRB checked and have manual handling, safety and asbestos awareness training. Contour's installation team has extensive experience operating in a wide range of sensitive environments (including live patient wards), minimising disruption to building occupants at all times.



Other Contour products

1. Architectural fabrications

Contour's architectural fabrications range includes parapet wall coping, fascia & soffits, flashings, pressed box guttering, downpipes and anti-climb protection.

We have worked alongside industry partners to develop products which combine robust performance, with a sleek aesthetic and fast installation. Our architectural aluminium range is fabricated in-house and supported by a comprehensive design service, allowing standard items to be supplied on short lead times and the flexibility for bespoke solutions to be created for individual projects.

Contour provide:

- Guarantees for up to 30 years on powder coating finishes
- "Secret" clip-fix solutions
- Free technical site consultations & surveys
- 3D design software and access to comprehensive BIM and DWG files
- An approved installation service

2. Anti-climb protection

Contour anti-climb fabrications offer protection to vulnerable pipework and roofing from vandalism and accidental damage. Both our anti-climb down pipe protectors and anti-climb bullnose fascia can be easily integrated to ensure a harmonious exterior building design.

Our anti-climb designs are suitable for high security locations such as prisons, police stations and mental health units. They also provide additional security where pipes and frontages could be scaled for unauthorised access, such as schools, hospitals, houses, shops, banks and offices.

For environments that are at high risk of abuse or damage, we are able to manufacture anti-climb protection in mild steel or stainless steel.

Our anti-climb range is supplied powder coated as standard, and is available in almost any RAL or BS colour. Contour is able to provide a 25 year powder coating warranty, and our pipe covers have an expected lifespan of up to 40 years.

3. Floor ducting

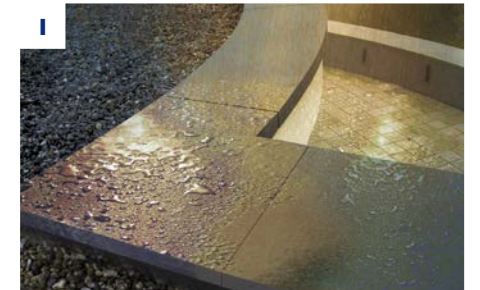
The Contour floor ducting system is a complete product line of galvanised steel flush ducting for laying pipework in screeded floors. The product is available with lids and a complete range of accessories, making it suitable for all types of refurbishment and new build projects. Designed to comply with byelaw 58-(1) of the Water Act and including a plywood cover board which can be simply removed to allow easy access to pipe work, our floor ducting eliminates the need for expensive and time consuming shuttering.

4. Column casings

Our column casings range has been carefully developed to provide customers with the palette they need to realise their visions. By combining design-led concepts with advanced British manufacturing technology, Contour can offer the most comprehensive column casing range available, capable of yielding either a striking visual statement, or a product which disappears effortlessly into an overall building aesthetic.

Our casings are manufactured in aluminium or stainless steel and are available in a variety of surface finishes including brushed, Polyester Powder Coating (PPC), anodized and Rimex* – a finish developed to provide vibrant finishes for design-led projects.

*Rimex is a trade name of Rimex Metals (UK) Ltd.



► Contour Casings Ltd
Stafford Park 15,
Telford,
Shropshire TF3 3BB

► T: +44 (0) 1952 290 498

► E: sales@contourcasings.co.uk

www.contourcasings.co.uk



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06/2016