



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

#### 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

or Guard, Hoor Mounted, Square Top

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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\*.

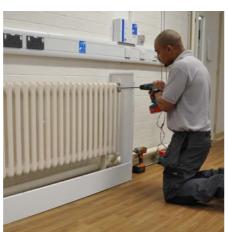
All Contour's radiators and guards are available as parametric BIM objects ready to be dropped into plans and our Technical and Customer Services teams are available by phone or email to answer any queries and ensure that projects, whether for first fit or refurbishment, are hassle free.

#### **About Contour**

We are specialists in the design, manufacture and installation of innovative high quality safe surface temperature heating solutions. We have a 'can do' spirit and excel in meeting technically challenging specifications where quality is



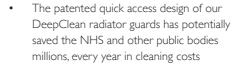






## Why specify Contour radiators and guards?

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





• 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\*.











<sup>\*</sup>Terms and conditions apply.

### 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.

## I. 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 I 500 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.contourheating.com/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.contourheating.com/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

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 antiligature applications, such as ceiling grilles, has also been developed by Contour.

## Case study: Hertfordshire Partnership University NHS Foundation Trust

PROIFCT:

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.contourheating.com/case-studies/



### 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.

#### I. 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

PROIECT:

The Maxwell Centre, Cambridge University

MAIN CONTRACTOR: SDC Builders Ltd

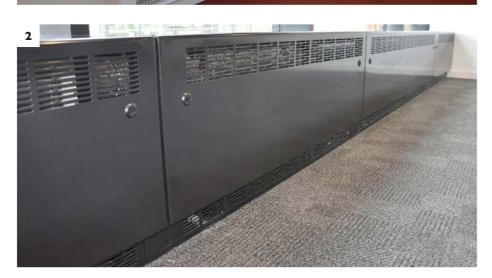
#### **SUMMARY:**

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.contourheating.com/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:

#### I. 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

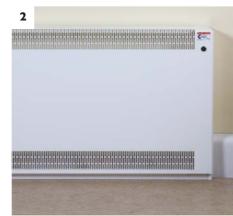
All Contour radiator guards are covered by a 5 year product warranty\*

#### 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.







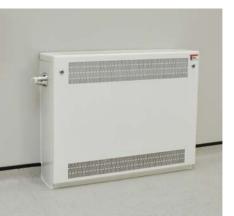
## Radiator guard only solutions

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.











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## **DeepClean**

## The ultimate in safe surface temperature heating

Radiator guards have traditionally been basic, fixed units that make access difficult and timeconsuming. 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 emitter covers allow dust to build up beneath and inside the grille. The beneath and inside the grille. The dust has been found to contain MRSA and other potentially pathogenic 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 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)
Bioaerosal 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**



2 person job involving estates personnel.



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.



7 hours working day = 14 LST radiator guards cleaned per day per team.



Over 10 days required for 2 people to clean the 150 radiators 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.



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.

### DeepClean LST



I cleaning operative alone can now open the LST casing.



the casings and the radiator, including back of radiator and whole wall space. No need to replace sealant around units.



In an average day of 7 working hours, I person can clean 84 radiators.



Allow 2 days for 1 person to clean every radiator in the property.



require only I dedicated cleaner, with little or no support from the estates department.



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**

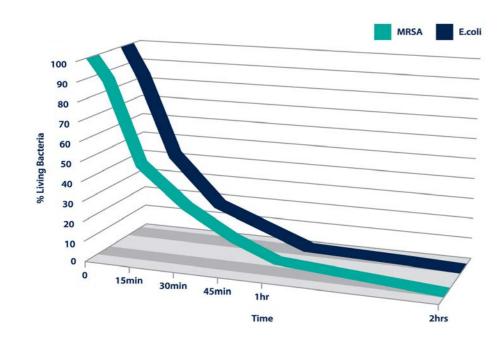
The active agents in BioCote have been used extensively in hospitals as excellent antimicrobials with low toxicity against non-target organisms. They do not function in the same way as antibiotics and there is no evidence to date to demonstrate that bacteria have become resistant to BioCote as they have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





## 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

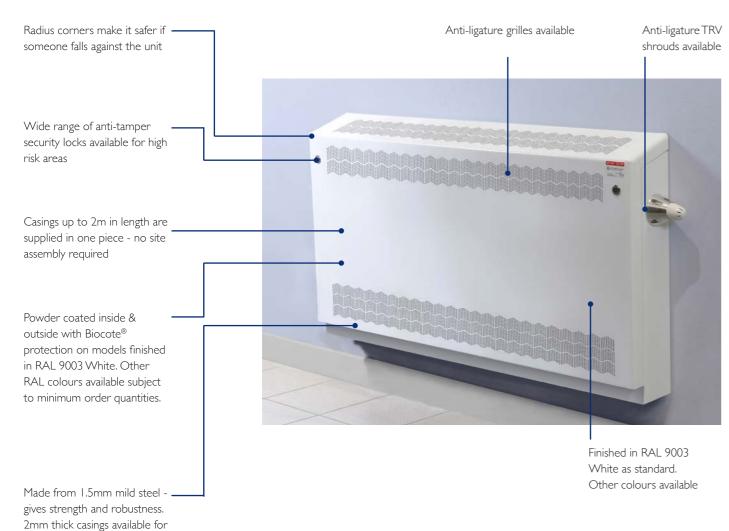








# DeepClean – features and benefits at a glance





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:

- I. 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:

Mint Green

RAL 6029

Ultramarine Blue

RAL 5002

let Black

RAL 9005



White RAL 9003



Oyster white RAL 1013



Tele Grey RAL 7047

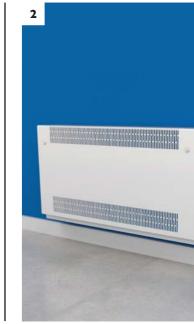


Traffic Red RAL 3020

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

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mental health and other secure facility applications. Casing also available in aluminium for wet

and humid areas

## Rotarad<sup>™</sup> 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**

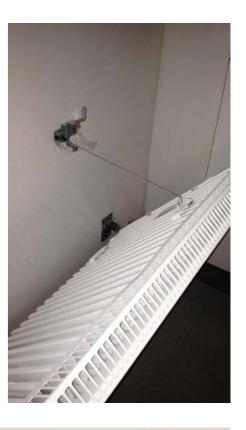
Young people can be placed at risk from harmful bacteria and infection if regular cleaning does not take place. Cleaning operatives conventionally did not have access to the rear of a radiator where small items are frequently inserted and dropped, requiring the assistance of the Estates department for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

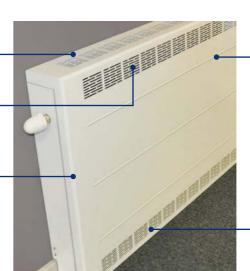
Available in over **I 40** sizes across three emitter types and in a range of guard colours there is a Covora LST radiator for virtually any room size and design environment.





# 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:



Jet Black RAL 9005



Tele Grey RAL 7047



Mint Green RAL 6029



Traffic Red RAL 3020



White RAL 9003



Oyster White RAL 1013



Ultramarine Blue RAL 5002

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

### 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:

I no. 9230-36 Design Sensor I no. 7724-9 I TS-90 Angle Body 1/2" I no. 7350-60 Capillary & Fixing Adaptor I no. 3724-41 Return Valve Angle 1/2" 2 no. 6292-01 15mm Nut & Olive

#### 9210-13 Internal TRV kit Comprising:

I no. 9200-30 Design Sensor I no. 7724-9 I TS-90 Angle Body 1/2" I no. 3724-41 Return Valve Angle 1/2" 2 no. 6292-01 15mm Nut & Olive

#### 7463-41 Remote sensing TRV kit Comprising:

I no. 9430-08 Remote Sensing Phial 2m I no. 7724-9 I TS-90 Angle Body 1/2" I no. 3724-41 Return Valve Angle 1/2" 2 no. 6292-01 15mm Nut & Olive

#### 9213-63 Anti-ligature TRV kit

#### Comprising:

I no. Conical Aluminium Anti-Ligature **TRV Shroud** 

I no. 9200-03 Mini Turbo Sensor

I no. 7724-91 TS-90 Angle Body I/2"

I no. 7350-60 Capillary & Fixing Adaptor

I 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:

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

#### 9210-03 Internal TRV kit

#### Comprising:

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

#### 7463-01 Remote Sensing TRV kit Comprising:

I no. 7430-08 Remote Sensing Phial 2m I no. 7724- I I TS-E Angle Body I/2" I 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

#### **Method**

a. Add the flow water temperature and the return water temperature together.

Calculating alternative

Delta T requirements

- b. Divide the answer from a. by 2.
- c. From the answer b. subtract the room temperature. This gives your 'Delta T' temperature.
- d. 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.

DeltaT	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

# DeepClean LST radiator size information and output performance data

STANDARD	FLOOR MOUNTED	SQUARE TOP

## Specification summary:

#### Manufacture:

- I.5mm Zintec 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:

Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV
   Kit c/w Remote Sensor
- 19330-41 Contour External TRV Kit
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

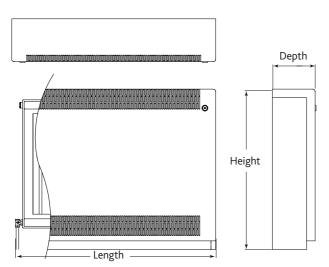
#### Finish:

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

#### Fixings:

- All fixings internal
- 6mm Allen key door

			Type II (Single Convector)					
Casing Length	Rad Length	Casing Height (mm)	550	650	750	850	950	
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750	
500	300	Art. Code Watts T50						
		Art. Code	DSF115506	DSF116506	DSF117506	DSF118506	DSF119506	
600	400	Watts T50	187	241	291	339	383	
	<del>                                     </del>	Art. Code	DSF115507	DSF116507	DSF117507	DSF118507	DSF119507	
700	500	Watts T50	234	300	364	423	479	
	100	Art. Code	DSF115508	DSF116508	DSF117508	DSF118508	DSF119508	
800	600	Watts T50	280	361	437	508	575	
000	700	Art. Code		DSF116509	DSF117509	DSF118509		
900	700	Watts T50		421	509	592		
1000	800	Art. Code	DSF115510	DSF116510	DSF117510	DSF118510	DSF119510	
1000	000	Watts T50	326	481	582	677	766	
1100	900	Art. Code		DSF116511	DSF117511	DSF118511		
1100	700	Watts T50		541	654	761		
1200	1000	Art. Code	DSF115512	DSF116512	DSF117512	DSF118512	DSF119512	
1200	1000	Watts T50	466	601	727	846	957	
1300	1100	Art. Code		DSF116513	DSF117513	DSF118513		
	1100	WattsT50		661	799	931		
1400	1200	Art. Code	DSF115514	DSF116514	DSF117514	DSF118514	DSF119514	
	1200	Watts T50	559	721	872	1015	1149	
1600	1400	Art. Code	DSF115516	DSF116516	DSF117516	DSF118516	DSF119516	
	1 100	Watts T50	652	842	1017	1184	1349	
1800	1600	Art. Code	DSF115518	DSF116518	DSF117518	DSF118518	DSF119518	
		Watts T50	745	961	1162	1353	1531	
2000	1800	Art. Code		DSF116520	DSF117520	DSF118520	DSF119520	
	1000	Watts T50		1081	1308	1522	1724	
2200	2000	Art. Code	DSF115520	DSF116522	DSF117522	DSF118522		
		Watts T50	931	1201	1453	1691		



Heat Outputs to BS EN 442 Certification. Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ C To achieve Delta T  $60^{\circ}$  increase T  $50^{\circ}$ C 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 21 (Double Panel +)			Type 22 (Double Convector)					
650	750	850	950	550	650	750	850	950
400	500	600	750	300	400	500	600	750
DSF216506	DSF217506	DSF218506	DSF219506	DSF225506	DSF226506	DSF227506	DSF228506	DSF229506
368	439	504	579	374	475	568	654	739
DSF216507	DSF217507	DSF218507	DSF219507		DSF226507	DSF227507	DSF228507	DSF229507
460	549	631	723		593	710	817	924
DSF216508	DSF217508	DSF218508	DSF219508	DSF225508	DSF226508	DSF227508	DSF228508	DSF229508
551	658	756	867	560	712	851	980	1109
DSF216509	DSF217509	DSF218509	DSF219509		DSF226509	DSF227509	DSF228509	DSF229509
643	769	882	1012		831	994	1143	1294
DSF216510	DSF217510	DSF218510	DSF219510	DSF225510	DSF226510	DSF227510	DSF228510	DSF229510
735	878	1002	1157	747	949	1135	1307	1478
DSF216511	DSF217511	DSF218511	DSF219511		DSF226511	DSF227511	DSF228511	DSF229511
826	988	1134	1302		1068	1278	1470	1663
DSF216512	DSF217512	DSF218512	DSF219512	DSF225512	DSF226512	DSF227512	DSF228512	DSF229512
918	1097	1260	1446	934	1187	1419	1634	1847
DSF216513	DSF217513	DSF218513			DSF226513	DSF227513	DSF228513	DSF229513
1010	1206	1386			1305	1562	1797	2032
DSF216514	DSF217514	DSF218514		DSF225514	DSF226514	DSF227514	DSF228514	DSF229514
1102	1317	1512		1121	1424	1703	1960	2217
DSF216516	DSF217516	DSF218516		DSF225516	DSF226516	DSF227516	DSF228516	DSF229516
1286	1536	1764		1308	1661	1987	2287	2586
DSF216518	DSF217518	DSF218518		DSF225518	DSF226518	DSF227518	DSF228518	DSF229518
1469	1756	2015		1495	1898	2271	2613	2955
DSF216520	DSF217520	DSF218520			DSF226520	DSF227520	DSF228520	
1652	1975	2267			2136	2554	2939	
DSF216522	DSF217522	DSF218522		DSF225522	DSF226522	DSF227522	DSF228522	
1837	2193	2519		1868	2372	2838	3266	

#### Casing Depths

Туре 11	155mm
Type 21	165mm
Type 22	195mm

#### **Standard delivery**

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# DeepClean LST radiator size information and output performance data

STANDARD	WALL MOUNTED	SQUARE TOP

## Specification summary:

#### Manufacture:

- I.5mm Zintec steel
- I 0mm 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:

Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV
   Kit c/w Remote Sensor
- 19330-41 Contour External TRV Kit
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

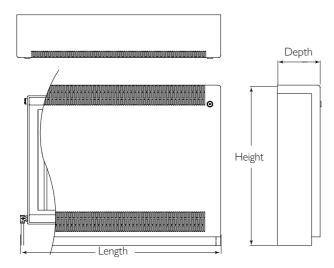
#### Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote<sup>®</sup> antimicrobial agent as standard

#### Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convector)				
Casing Length	Rad Length	Casing Height (mm)	450	550	650	750	900
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750
500	300	Art. Code					
500	300	Watts T50					
600	400	Art. Code	DSW114506	DSW115506	DSW116506	DSW117506	DSW118506
	100	Watts T50	191	246	297	346	392
700	500	Art. Code	DSW114507	DSW115507	DSW116507	DSW117507	DSW118507
700	300	Watts T50	239	307	372	433	490
800	600	Art. Code	DSW114508	DSW115508	DSW116508	DSW117508	DSW118508
800	600	Watts T50	286	369	446	519	587
900	700	Art. Code		DSW115509	DSW116509	DSW117509	
900	700	Watts T50		430	520	606	
1000	800	Art. Code	DSW114510	DSW115510	DSW116510	DSW117510	DSW118510
1000	000	Watts T50	334	492	595	692	783
1100	900	Art. Code		DSW115511	DSW116511	DSW117511	
1100	900	Watts T50		553	668	779	
1200	1000	Art. Code	DSW114512	DSW115512	DSW116512	DSW117512	DSW118512
1200	1000	Watts T50	476	615	743	865	979
1200	1100	Art. Code		DSW115513	DSW116513	DSW117513	
1300	1100	Watts T50		676	817	951	
1400	1200	Art. Code	DSW114514	DSW115514	DSW116514	DSW117514	DSW118514
1400	1200	Watts T50	572	738	891	1038	1174
1600	1400	Art. Code	DSW114516	DSW115516	DSW116516	DSW117516	DSW118516
1600	1400	Watts T50	667	860	1040	1211	1370
1800	1600	Art. Code	DSW114518	DSW115518	DSW116518	DSW117518	DSW118518
1800	1600	Watts T50	762	982	1188	1384	1566
2000	1000	Art. Code		DSW115520	DSW116520	DSW117520	DSW118520
2000	1800	Watts T50		1105	1337	1557	1762
2200	2000	Art. Code	DSW114522	DSW115522	DSW116522	DSW117522	
2200	2000	Watts T50	952	1228	1486	1729	



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ 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 21 (Double Panel +)				Туре	22 (Double Conve	ector)	
550	650	750	900	450	550	650	750	900
400	500	600	750	300	400	500	600	750
						DSW226505	DSW227505	
						459	531	
DSW215506	DSW216506	DSW217506	DSW218506	DSW224506	DSW225506	DSW226506	DSW227506	DSW228506
376	449	516	592	383	486	581	668	756
DSW215507	DSW216507	DSW217507	DSW218507		DSW225507	DSW226507	DSW227507	DSW228507
470	561	645	739		607	726	835	945
DSW215508	DSW216508	DSW217508	DSW218508	DSW224508	DSW225508	DSW226508	DSW227508	DSW228508
564	673	773	887	573	728	870	1002	1133
DSW215509	DSW216509	DSW217509	DSW218509		DSW225509	DSW226509	DSW227509	DSW228509
658	786	902	1035		850	1016	1169	1323
DSW215510	DSW216510	DSW217510	DSW218510	DSW224510	DSW225510	DSW226510	DSW227510	DSW228510
751	898	1031	1183	764	971	1161	1336	1511
DSW215511	DSW216511	DSW217511			DSW225511	DSW226511	DSW227511	DSW228511
845	1010	1160			1092	1306	1508	1700
DSW215512	DSW216512	DSW217512	DSW218512	DSW224512	DSW225512	DSW226512	DSW227512	DSW228512
939	1122	1288	1478	955	1214	1451	1670	1889
DSW215513	DSW216513	DSW217513			DSW225513	DSW226513	DSW227513	DSW228513
1032	1234	1417			1335	1597	1837	2078
DSW215514	DSW216514	DSW217514		DSW224514	DSW225514	DSW226514	DSW227514	DSW228514
1127	1346	1546		1146	1456	1741	2004	2266
DSW215516	DSW216516	DSW217516		DSW224516	DSW225516	DSW226516	DSW227516	DSW228516
1315	1570	1803		1337	1699	2032	2338	2644
DSW215518	DSW216518	DSW217518		DSW224518	DSW225518	DSW226518	DSW227518	DSW228518
1502	1795	2061		1528	1941	2322	2671	3022
DSW215520	DSW216520	DSW217520			DSW225520	DSW226520	DSW227520	
1689	2019	2318			2184	2611	3005	
DSW215522	DSW216522	DSW217522		DSW224522	DSW225522	DSW226522	DSW227522	
1878	2243	2576		1910	2426	2902	3339	

#### Casing Depths

	F
Туре I I	155mm
Type 21	165mm
Type 22	195mm

#### Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# DeepClean LST radiator size information and output performance data

**STANDARD** 

FLOOR MOUNTED

**GRADIENT TOP** 

### Specification summary:

#### Manufacture:

- I.5mm Zintec 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:

• Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV
   Kit c/w Remote Sensor
- 19330-41 Contour External TRV Kit
- 1935241 Anti-Ligature
  TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

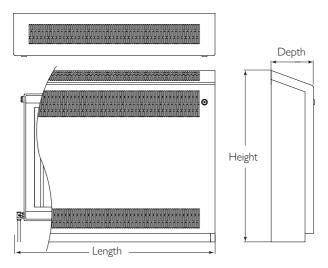
#### Finish:

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

#### Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convector)				
Casings Length	Rad Length	Casing Height (mm)	580	680	780	880	980
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750
500	300	Art. Code					
	300	Watts T50					
600	400	Art. Code	DGF115806	DGF116806	DGF117806	DGF118806	DGF119806
	700	Watts T50	191	246	297	346	392
700	500	Art. Code	DGF115807	DGF116807	DGF117807	DGF118807	DGF119807
700	300	Watts T50	239	307	372	433	490
800	600	Art. Code	DGF115808	DGF116808	DGF117808	DGF118808	DGF119808
000	600	Watts T50	286	369	446	519	587
900	700	Art. Code		DGF116809	DGF117809	DGF118809	
700	700	Watts T50		430	520	606	
1000	800	Art. Code	DGF115810	DGF116810	DGF117810	DGF118810	DGF119810
1000	800	Watts T50	334	492	595	692	783
1100	900	Art. Code		DGF116811	DGF117811	DGF118811	
1100	900	Watts T50		553	668	779	
1200	1000	Art. Code	DGF115812	DGF116812	DGF117812	DGF118812	DGF119812
1200	1000	Watts T50	476	615	743	865	979
1200	1100	Art. Code		DGF116813	DGF117813	DGF118813	
1300	1100	Watts T50		676	817	951	
1.400	1200	Art. Code	DGF115814	DGF116814	DGF117814	DGF118814	DGF119814
1400	1200	Watts T50	572	738	891	1038	1174
1,400	1.400	Art. Code	DGF115816	DGF116816	DGF117816	DGF118816	DGF119816
1600	1400	Watts T50	667	860	1040	1211	1370
1000	1,600	Art. Code	DGF115818	DGF116818	DGF117818	DGF118818	DGF119818
1800	1600	Watts T50	762	982	1188	1384	1566
2000	1000	Art. Code		DGF116820	DGF117820	DGF118820	DGF119820
2000	1800	Watts T50		1105	1337	1557	1762
2200	2000	Art. Code	DGF115822	DGF116822	DGF117822	DGF118822	
2200	2000	Watts T50	952	1228	1486	1729	



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ 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 21 (Double Panel +)					Туре	22 (Double Conv	ector)	
685	785	885	985	595	695	795	895	995
400	500	600	750	300	400	500	600	750
DGF216806	DGF217806	DGF218806	DGF219806	DGF225906	DGF226906	DGF227906	DGF228906	DGF229906
376	449	516	592	383	486	581	668	756
DGF216807	DGF217807	DGF218807	DGF219807		DGF226907	DGF227907	DGF228907	DGF229907
470	561	645	739		607	726	835	945
DGF216808	DGF217808	DGF218808	DGF219808	DGF225908	DGF226908	DGF227908	DGF228908	DGF229908
564	673	773	887	573	728	870	1002	1133
DGF216809	DGF217809	DGF218809	DGF219809		DGF226909	DGF227909	DGF228909	DGF229909
658	786	902	1035		850	1016	1169	1323
DGF216810	DGF217810	DGF218810	DGF219810	DGF225910	DGF226910	DGF227910	DGF228910	DGF229910
751	898	1031	1183	764	971	1161	1336	1511
DGF216811	DGF217811	DGF218811	DGF219811		DGF226911	DGF227911	DGF228911	DGF229911
845	1010	1160	1331		1092	1306	1503	1700
DGF216812	DGF217812	DGF218812	DGF219812	DGF225912	DGF226912	DGF227912	DGF228912	DGF229912
939	1122	1288	1478	955	1214	1451	1670	1889
	DGF217813	DGF218813			DGF226913	DGF227913	DGF228913	DGF229913
	1234	1417			1335	1597	1837	2078
DGF216814	DGF217814	DGF218814		DGF225914	DGF226914	DGF227914	DGF228914	DGF229914
1127	1346	1546		1146	1456	1741	2004	2266
DGF216816	DGF217816	DGF218816		DGF225916	DGF226916	DGF227916	DGF228916	DGF229916
1315	1570	1803		1337	1699	2032	2338	2644
DGF216818	DGF217818	DGF218818		DGF225918	DGF226918	DGF227918	DGF228918	DGF229918
1502	1795	2016		1528	1941	2322	2671	3022
DGF216820	DGF217820	DGF218820		İ	DGF226920	DGF227920	DGF228920	İ
1689	2019	2318		i	2184	2611	3005	ĺ
DGF216822	DGF217822	DGF218822		DGF225922	DGF226922	DGF227922	DGF228922	İ
1878	2243	2576		1910	2426	2902	3339	İ

#### Casing Depths

Туре I I	155mm
Type 21	165mm
Type 22	195mm

#### **Standard delivery**

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# DeepClean LST radiator size information and output performance data

STANDARD	WALL MOUNTED	GRADIENT TOP

## Specification summary:

#### Manufacture:

- I.5mm Zintec 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

Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV Kit c/w Remote Sensor
- 19330-41 Contour External TRV Kit
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

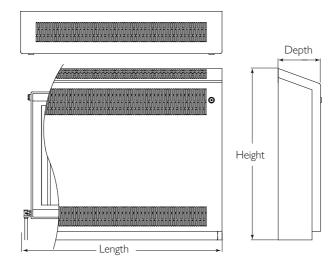
#### Finish:

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

#### Fixings:

- All fixings internal
- 6mm Allen key door

			Type 11 (Single Convector)					
Casing Length	Rad Length	Casing Height (mm)	480	580	680	780	930	
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750	
500	300	Art. Code						
300	300	Watts T50						
600	400	Art. Code	DGW114806	DGW115806	DGW116806	DGW117806	DGW118806	
600	400	Watts T50	193	249	300	350	396	
700	F00	Art. Code	DGW114807	DGW115807	DGW116807	DGW117807	DGW118807	
700	500	Watts T50	242	311	376	437	495	
000	600	Art. Code	DGW114808	DGW115808	DGW116808	DGW117808	DGW118808	
800	600	Watts T50	289	374	451	525	594	
000	700	Art. Code		DGW115809	DGW116809	DGW117809		
900	700	Watts T50		435	526	612		
1000	000	Art. Code	DGW114810	DGW115810	DGW116810	DGW117810	DGW118810	
1000	800	Watts T50	337	497	601	700	792	
1100	000	Art. Code		DGW115811	DGW116811	DGW117811		
1100	900	Watts T50		559	676	787		
1200	1000	Art. Code	DGW114812	DGW115812	DGW116812	DGW117812	DGW118812	
1200	1000	Watts T50	482	621	751	874	989	
1200	1100	Art. Code		DGW115813	DGW116813	DGW117813		
1300	1100	Watts T50		683	826	962		
1.400	1000	Art. Code	DGW114814	DGW115814	DGW116814	DGW117814	DGW118814	
1400	1200	Watts T50	578	746	901	1049	1187	
		Art. Code	DGW114816	DGW115816	DGW116816	DGW117816	DGW118816	
1600	1400	Watts T50	674	870	1051	1224	1385	
1000	1,400	Art. Code	DGW114818	DGW115818	DGW116818	DGW117818	DGW118818	
1800	1600	Watts T50	77	993	1201	1399	1583	
2000	1000	Art. Code		DGW115820	DGW116820	DGW117820		
2000	1800	Watts T50		1117	1352	1574		
2200	2000	Art. Code	DGW114822	DGW115822	DGW116822	DGW117822	DGW118822	
2200	2000	Watts T50	963	1242	1502	1748	1782	



Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ C To achieve Delta T  $60^{\circ}$  increase T  $50^{\circ}$ C 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 21 (Do	uble Panel +)		Type 22 (Double Convector)				
585	685	785	935	495	595	695	795	945
400	500	600	750	300	400	500	600	750
DGW215806	DGW216806	DGW217806	DGW218806	DGW224906	DGW225906	DGW226906	DGW227906	DGW228906
380	454	521	598	387	491	587	676	764
DGW215807	DGW216807	DGW217807	DGW218807		DGW225907	DGW226907	DGW227907	DGW228907
475	567	652	748		613	734	844	955
DGW215808	DGW216808	DGW217808	DGW218808	DGW224908	DGW225908	DGW226908	DGW227908	DGW228908
570	680	782	897	579	736	880	1013	1146
DGW215809	DGW216809	DGW217809	DGW218809		DGW225909	DGW226909	DGW227909	DGW228909
665	794	912	1047		859	1027	1182	1337
DGW215810	DGW216810	DGW217810	DGW218810	DGW224910	DGW225910	DGW226910	DGW227910	DGW228910
759	908	1042	1196	772	981	1173	1351	1528
DGW215811	DGW216811	DGW217811	DGW218811		DGW225911	DGW226911	DGW227911	DGW228911
854	1021	1173	1346		1104	1321	1519	1719
DGW215812	DGW216812	DGW217812	DGW218812	DGW224912	DGW225912	DGW226912	DGW227912	DGW228912
949	1134	1302	1495	966	1227	1467	1689	1901
DGW215813	DGW216813	DGW217813			DGW225913	DGW226913	DGW227913	DGW228913
1044	1247	1433			1349	1614	1857	2101
DGW215814	DGW216814	DGW217814		DGW224914	DGW225914	DGW226914	DGW227914	DGW228914
1139	1361	1563		1159	1472	1760	2026	2291
DGW215816	DGW216816	DGW217816		DGW224916	DGW225916	DGW226916	DGW227916	DGW228916
1329	1587	1823		1352	1717	2054	2364	2673
DGW215818	DGW216818	DGW217818		DGW224918	DGW225918	DGW226918	DGW227918	DGW228918
1518	1815	2083		1545	1962	2347	2701	3055
DGW215820	DGW216820	DGW217820			DGW225920	DGW226920	DGW227920	İ
1708	2041	2344			2208	2640	3038	İ
DGW215822	DGW216822	DGW217822		DGW224922	DGW225922	DGW226922	DGW227922	İ
1898	2267	2604		1931	2452	2933	3376	İ

#### Casing Depths

0	
Туре 11	155mm
Type 21	165mm
Type 22	195mm

#### **Standard delivery**

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

DeepClean anti-ligature radiator size information and output performance data

Specification	
summary:	

#### Manufacture:

- I.5mm Zintec steel
- I 0mm 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:

• Kartell Kompact Radiator

#### Valve options available:

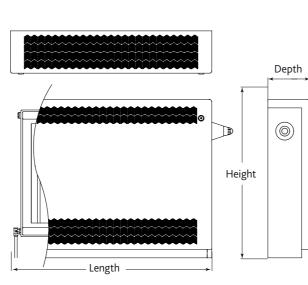
- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV Kit c/w Remote Sensor
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

#### Finish:

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

#### Fixings:

- All fixings internal
- Security fastenings & fixings



1306

1520

# ANTI-LIGATURE FLOOR MOUNTED SQUARE TOP Rad Length (mm) Casing Height (mm) 550 650 750 850 950 Height (mm) 4

Length	Length	Height (mm)					
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750
F00	300	Art. Code					
500	300	Watts T50					
600	400	Art. Code	DSF115506-AL	DSF116506-AL	DSF117506-AL	DSF118506-AL	DSF119506-AL
600	400	Watts T50	168	216	261	304	344
700	500	Art. Code	DSF115507-AL	DSF116507-AL	DSF117507-AL	DSF118507-AL	DSF119507-AL
700	300	Watts T50	210	270	327	380	431
800	600	Art. Code	DSF115508-AL	DSF116508-AL	DSF117508-AL	DSF118508-AL	DSF119508-AL
000	600	Watts T50	252	324	392	456	516
900	700	Art. Code		DSF116509-AL	DSF117509-AL	DSF118509-AL	
900	900 /00	Watts T50		378	457	532	
1000	800	Art. Code	DSF115510-AL	DSF116510-AL	DSF117510-AL	DSF118510-AL	DSF119510-AL
1000	1000 800	Watts T50	293	432	523	608	688
1100	1100	Art. Code		DSF116511-AL	DSF117511-AL	DSF118511-AL	
1100	900	Watts T50		486	588	684	
1200	1000	Art. Code	DSF115512-AL	DSF116512-AL	DSF117512-AL	DSF118512-AL	DSF119512-AL
1200	1000	Watts T50	419	540	653	760	860
1300	1100	Art. Code		DSF116513-AL	DSF117513-AL	DSF118513-AL	
1300	1100	Watts T50		594	718	836	
1400	1200	Art. Code	DSF115514-AL	DSF116514-AL	DSF117514-AL	DSF118514-AL	DSF119514-AL
1400	1200	Watts T50	503	648	784	912	1032
1600	1400	Art. Code	DSF115516-AL	DSF116516-AL	DSF117516-AL	DSF118516-AL	DSF119516-AL
1600	1400	Watts T50	586	757	914	1064	1204
1800	1600	Art. Code	DSF115518-AL	DSF116518-AL	DSF117518-AL	DSF118518-AL	DSF119518-AL
1000	1600	Watts T50	670	864	1044	1216	1376
2000	1800	Art. Code		DSF116520-AL	DSF117520-AL	DSF118520-AL	DSF119520-AL
2000	1800	Watts T50		972	1176	1368	1549
2200	2000	Art. Code	DSF115522-AL	DSF116522-AL	DSF117522-AL	DSF118522-AL	
//(//	1 /000						

1080

#### 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

Watts T50

837

Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ 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 21 (Dou	ble Panel +)		Type 22 (Double Convector)				
650	750	850	950	550	650	750	850	950
400	500	600	750	300	400	500	600	750
DSF216506-AL	DSF217506-AL	DSF218506-AL	DSF219506-AL	DSF225506-AL	DSF226506-AL	DSF227506-AL	DSF228506-AL	DSF229506-AL
331	395	453	520	336	427	511	588	664
DSF216507-AL	DSF217507-AL	DSF218507-AL	DSF219507-AL		DSF226507-AL	DSF227507-AL	DSF228507-AL	DSF229507-AL
413	493	567	650		533	638	734	831
DSF216508-AL	DSF217508-AL	DSF218508-AL	DSF219508-AL	DSF225508-AL	DSF226508-AL	DSF227508-AL	DSF228508-AL	DSF229508-AL
496	592	680	780	504	640	765	881	996
DSF216509-AL	DSF217509-AL	DSF218509-AL	DSF219509-AL		DSF226509-AL	DSF227509-AL	DSF228509-AL	DSF229509-AL
578	691	793	910		747	893	1028	1163
DSF216510-AL	DSF217510-AL	DSF218510-AL	DSF219510-AL	DSF225510-AL	DSF226510-AL	DSF227510-AL	DSF228510-AL	DSF229510-AL
660	789	906	1040	672	853	1020	1175	1328
DSF216511-AL	DSF217511-AL	DSF218511-AL	DSF219511-AL		DSF226511-AL	DSF227511-AL	DSF228511-AL	DSF229511-AL
743	888	1020	1170		960	1148	1321	1495
DSF216512-AL	DSF217512-AL	DSF218512-AL	DSF219512-AL	DSF225512-AL	DSF226512-AL	DSF227512-AL	DSF228512-AL	DSF229512-AL
825	986	1132	1300	840	1067	1276	1468	1660
DSF216513-AL	DSF217513-AL	DSF218513-AL			DSF226513-AL	DSF227513-AL	DSF228513-AL	DSF229513-AL
908	1084	1246			1173	1404	1615	1827
DSF216514-AL	DSF217514-AL	DSF218514-AL		DSF225514-AL	DSF226514-AL	DSF227514-AL	DSF228514-AL	DSF229514-AL
991	1184	1359		1008	1280	1531	1762	1992
DSF216516-AL	DSF217516-AL	DSF218516-AL		DSF225516-AL	DSF226516-AL	DSF227516-AL	DSF228516-AL	DSF229516-AL
1156	1380	1585		1176	1494	1786	2056	2324
DSF216518-AL	DSF217518-AL	DSF218518-AL		DSF225518-AL	DSF226518-AL	DSF227518-AL	DSF228518-AL	DSF229518-AL
1320	1578	1812		1344	1706	2041	2348	2656
DSF216520-AL	DSF217520-AL	DSF218520-AL			DSF226520-AL	DSF227520-AL	DSF228520-AL	
1485	1775	2038			1920	2296	2642	
DSF216522-AL	DSF217522-AL	DSF218522-AL		DSF225522-AL	DSF226522-AL	DSF227522-AL	DSF228522-AL	
1651	1972	2264		1679	2132	2551	2936	

#### Casing Depths

	F
Туре I I	155mm
Type 21	165mm
Type 22	195mm

#### Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# DeepClean anti-ligature radiator size information and output performance data

ANTI-LIGATURE	WALL MOUNTED	SQUARE TOP

## Specification summary:

#### Manufacture:

- 1.5mm Zintec 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
   Respekt solutions
- Bespoke solutions, extended guards & multiple door units available

#### Emitter:

Kartell Kompact Radiator

#### Valve options available:

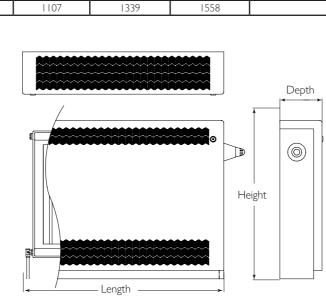
- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV Kit c/w Remote Sensor
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

#### Finish:

- Polyester powder coated RAL 9003 as standard. Other colour finishes available
- Patented BioCote<sup>®</sup> antimicrobial agent as standard

#### Fixings:

- All fixings internal
- Security fastenings & fixings



			Type 11 (Single Convector)					
Casing Length	Rad Length	Casings Height (mm)	450	550	650	750	900	
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750	
500	300	Art. Code						
		Watts T50						
600	400	Art. Code	DSW114506-AL	DSW115506-AL	DSW116506-AL	DSW117506-AL	DSW118506-AL	
		Watts T50	172	222	268	312	353	
700	500	Art. Code	DSW114507-AL	DSW115507-AL	DSW116507-AL	DSW117507-AL	DSW118507-AL	
		Watts T50	215	277	335	390	442	
800	600	Art. Code	DSW114508-AL	DSW115508-AL	DSW116508-AL	DSW117508-AL	DSW118508-AL	
	000	Watts T50	258	333	402	468	529	
900	700	Art. Code		DSW115509-AL	DSW116509-AL	DSW117509-AL		
700	700 700	Watts T50		388	469	546		
1000	800	Art. Code	DSW114510-AL	DSW115510-AL	DSW116510-AL	DSW117510-AL	DSW118510-AL	
1000	000	Watts T50	301	443	536	624	706	
1100	900	Art. Code		DSW115511-AL	DSW116511-AL	DSW117511-AL		
1100	700	Watts T50		498	602	702		
1200	1000	Art. Code	DSW114512-AL	DSW115512-AL	DSW116512-AL	DSW117512-AL	DSW118512-AL	
1200	1000	Watts T50	429	554	670	779	882	
1300	1100	Art. Code		DSW115513-AL	DSW116513-AL	DSW117513-AL		
1300	1100	Watts T50		609	736	857		
1400	1200	Art. Code	DSW114514-AL	DSW115514-AL	DSW116514-AL	DSW117514-AL	DSW118514-AL	
1400	1200	Watts T50	515	665	803	935	1058	
1700	1400	Art. Code		DSW115516-AL	DSW116516-AL	DSW117516-AL	DSW118516-AL	
1600	1400	Watts T50		775	937	1019	1235	
1000	1400	Art. Code	DSW114518-AL	DSW115518-AL	DSW116518-AL	DSW117518-AL	DSW118518-Al	
1800	1600	Watts T50	687	885	1071	1247	1411	
2000	1000	Art. Code		DSW115520-AL	DSW116520-AL	DSW117520-AL	DSW118520-AL	
2000	1800	Watts T50		996	1205	1403	1588	
2222	2000	Art. Code	DSW114522-AL	DSW115522-AL	DSW116522-AL	DSW117522-AL		
2200	2000							

#### 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

Watts T50

858

Heat Outputs to BS EN 442 Certification.

Outputs based on a mean radiator water temperature of  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ C To achieve Delta T  $60^{\circ}$  increase T  $50^{\circ}$ C 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 21 (Do	uble Panel +)			Type 22 (Double Convector)				
550	650	750	900	450	550	650	750	900	
400	500	600	750	300	400	500	600	750	
DSW215506-AL	DSW216506-AL	DSW217506-AL	DSW218506-AL	DSW224506-AL	DSW225506-AL	DSW226506-AL	DSW227506-AL	DSW228506-AL	
339	405	465	533	345	438	524	602	681	
DSW215507-AL	DSW216507-AL	DSW217507-AL	DSW218507-AL		DSW225507-AL	DSW226507-AL	DSW227507-AL	DSW228507-AL	
424	506	581	666		547	654	752	852	
DSW215508-AL	DSW216508-AL	DSW217508-AL	DSW218508-AL	DSW224508-AL	DSW225508-AL	DSW226508-AL	DSW227508-AL	DSW228508-AL	
508	606	697	799	516	656	784	903	1021	
DSW215509-AL	DSW216509-AL	DSW217509-AL	DSW218509-AL		DSW225509-AL	DSW226509-AL	DSW227509-AL	DSW228509-AL	
593	708	813	933		766	916	1053	1192	
DSW215510-AL	DSW216510-AL	DSW217510-AL	DSW218510-AL	DSW224510-AL	DSW225510-AL	DSW226510-AL	DSW227510-AL	DSW228510-AL	
677	809	929	1066	688	875	1046	1204	1362	
DSW215511-AL	DSW216511-AL	DSW217511-AL	DSW218511-AL		DSW225511-AL	DSW226511-AL	DSW227511-AL	DSW228511-AL	
761	910	1045	1199		984	1177	1354	1532	
DSW215512-AL	DSW216512-AL	DSW217512-AL	DSW218512-AL	DSW224512-AL	DSW225512-AL	DSW226512-AL	DSW227512-AL	DSW228512-AL	
846	1011	1161	1332	861	1094	1308	1505	1702	
DSW215513AL	DSW216513-AL	DSW217513-AL			DSW225513-AL	DSW226513-AL	DSW227513-AL	DSW228513-AL	
930	1112	1277			1203	1439	1655	1873	
DSW215514-AL	DSW216514-AL	DSW217514-AL		DSW224514-AL	DSW225514-AL	DSW226514-AL	DSW227514-AL	DSW228514-AL	
1016	1213	1393		1033	1312	1569	1806	2042	
DSW215516-AL	DSW216516-AL	DSW217516-AL		DSW224516-AL	DSW225516-AL	DSW226516-AL	DSW227516-AL	DSW228516-AL	
1185	1415	1625		1205	1531	1831	2107	2383	
DSW215518-AL	DSW216518-AL	DSW217518-AL		DSW224518-AL	DSW225518-AL	DSW226518-AL	DSW227518-AL	DSW228518-AL	
1353	1618	1857		1377	1749	2092	2407	2723	
DSW215520-AL	DSW216520-AL	DSW217520-AL			DSW225520-AL	DSW226520-AL	DSW227520-AL		
1522	1819	2089			1968	2353	2708		
DSW215522-AL	DSW216522-AL	DSW217522-AL		DSW224522-AL	DSW225522-AL	DSW226522-AL	DSW227522-AL		
1692	2021	2321		1721	2186	2615	3009		

#### Casing Depths

	F		
Туре I I	155mm		
Type 21	l 65mm		
Type 22	195mm		

#### **Standard delivery**

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# DeepClean anti-ligature radiator size information and output performance data

## ANTI-LIGATURE FLOOR MOUNTED GRADIENT TOP

## Specification summary:

#### Manufacture:

- I.5mm Zintec 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:

• Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV Kit c/w Remote Sensor
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

#### Finish:

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

#### Fixings:

- All fixings internal
- Security Fastenings & fixings

LS I J U		770	1203	1703	1300
Code	DGF115822-AL	DGF116822-AL	DGF117822-AL	DGF118822-AL	
ts T50	858	1107	1339	1558	
					Dept
		ZARRA CONTRACTOR OF THE PARTY O	*********	AAAAA	
				He	eight
ture radia	itor				
ion proce	ess.		***	22222	
arantee					
d a surface	е				<u> </u>
		<del></del>	<ul><li>Length ———</li></ul>		

## Type 11 (Single Convector)

Casing Length	Rad Length	Casing Height (mm)	580	680	780	880	980
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750
500	300	Art. Code					
300	300	Watts T50					
600	400	Art. Code	DGF115806-AL	DGF116806-AL	DGF117806-AL	DGF118806-AL	DGF119806-AL
	700	Watts T50	172	222	268	312	353
700	500	Art. Code	DGF115807-AL	DGF116807-AL	DGF117807-AL	DGF118807-AL	DGF119807-AL
700	300	Watts T50	215	277	335	390	442
800	600	Art. Code	DGF115808-AL	DGF116808-AL	DGF117808-AL	DGF118808-AL	DGF119808-AL
	600	Watts T50	258	333	402	468	529
900	700	Art. Code		DGF116809-AL	DGF117809-AL	DGF118809-AL	
900	700	Watts T50		388	469	546	
1000	000	Art. Code	DGF115810-AL	DGF116810-AL	DGF117810-AL	DGF118810-AL	DGF119810-AL
1000	800	Watts T50	301	443	536	624	706
1100	900	Art. Code		DGF116811-AL	DGF117811-AL	DGF118811-AL	
1100	900	Watts T50		498	602	702	
1200	1000	Art. Code	DGF115812-AL	DGF116812-AL	DGF117812-AL	DGF118812-AL	DGF119812-AL
1200	1000	Watts T50	429	554	670	779	882
1300	1100	Art. Code		DGF116813-AL	DGF117813-AL	DGF118813-AL	
1300	1100	Watts T50		609	736	857	
1400	1200	Art. Code	DGF115814-AL	DGF116814-AL	DGF117814-AL	DGF118814-AL	DGF119814-AL
1400	1200	Watts T50	515	655	803	935	1058
1600	1400	Art. Code		DGF116816-AL	DGF117816-AL	DGF118816-AL	DGF119816-AL
1600	1400	Watts T50		775	937	1091	1235
1800	1600	Art. Code	DGF115818-AL	DGF116818-AL	DGF117818-AL	DGF118818-AL	DGF119818-AL
1800	1600	Watts T50	687	885	1071	1247	1411
2000	1800	Art. Code		DGF116820-AL	DGF117820-AL	DGF118820-AL	DGF119820-AL
2000	1800	Watts T50		996	1205	1403	1588
2200	2000	Art. Code	DGF115822-AL	DGF116822-AL	DGF117822-AL	DGF118822-AL	
2200	2000	Watts T50	858	1107	1339	1558	

#### 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  $70^{\circ}$ C and a room temperature of  $20^{\circ}$ C - Delta T  $50^{\circ}$ C To achieve Delta T  $60^{\circ}$  increase T  $50^{\circ}$ C 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 21 (Do	ouble Panel +)			Туре	22 (Double Conve	ector)	
685	785	885	985	595	695	795	895	995
400	500	600	750	300	400	500	600	750
DGF216806-AL	DGF217806-AL	DGF218806-AL	DGF219806-AL	DGF219812-AL	DGF226906-AL	DGF227906-AL	DGF228906-AL	DGF229906-AL
339	405	465	533	1702	438	524	602	681
DGF216807-AL	DGF217807-AL	DGF218807-AL	DGF219807-AL		DGF226907-AL	DGF227907-AL	DGF228907-AL	DGF229907-AL
424	506	581	666		547	654	752	851
DGF216808-AL	DGF217808-AL	DGF218808-AL	DGF219808-AL	DGF225908-AL	DGF226908-AL	DGF227908-AL	DGF228908-AL	DGF229908-AL
508	606	671	799	516	656	784	903	1021
OGF216809-AL	DGF217809-AL	DGF218809-AL	DGF219809-AL		DGF226909-AL	DGF227909-AL	DGF228909-AL	DGF229909-AL
593	708	813	933		766	916	1053	1192
OGF216810-AL	DGF217810-AL	DGF218810-AL	DGF219810-AL	DGF225910-AL	DGF226910-AL	DGF227910-AL	DGF228910-AL	DGF229910-AL
677	809	929	1066	688	875	1046	1204	1362
OGF216811-AL	DGF217811-AL	DGF218811-AL	DGF219811-AL		DGF226911-AL	DGF227911-AL	DGF228911-AL	DGF229911-AL
761	910	1045	1199		984	1177	1354	1532
OGF216812-AL	DGF217812-AL	DGF218812-AL	DGF219812-AL	DGF225912-AL	DGF226912-AL	DGF227912-AL	DGF228912-AL	DGF229912-AL
846	1011	1161	1332	861	1094	1308	1505	1702
DGF216813-AL	DGF217813-AL	DGF218813-AL			DGF226913-AL	DGF227913-AL	DGF228913-AL	DGF229913-AL
930	1112	1277			1203	1439	1655	1873
OGF216814-AL	DGF217814-AL	DGF218814-AL			DGF226914-AL	DGF227914-AL	DGF228914-AL	DGF229914-AL
1016	1213	1393			1312	1569	1806	2042
OGF216816-AL	DGF217816-AL	DGF218816-AL			DGF226916-AL	DGF227916-AL	DGF228916-AL	DGF229916-AL
1185	1415	1625			1531	1831	2107	2383
OGF216818-AL	DGF217818-AL	DGF218818-AL		DGF225918-AL	DGF226918-AL	DGF227918-AL	DGF228918-AL	DGF229918-AL
1353	1618	1857		1377	1749	2092	2407	2723
OGF216820-AL	DGF217820-AL	DGF218820-AL			DGF226920-AL	DGF227920-AL	DGF228920-AL	
1522	1819	2089			1968	2353	2708	
DGF216822-AL	DGF217822-AL	DGF218822-AL		DGF217820-AL	DGF226922-AL	DGF227922-AL	DGF228922-AL	
1692	2021	2321		1721	2186	2615	3009	

#### Casing Depths

Туре П	155mm
Type 21	165mm
Type 22	195mm

#### Standard delivery

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

### DeepClean anti-ligature radiator size information and output performance data

#### **Specification** summary:

#### Manufacture:

- 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:

• Kartell Kompact Radiator

#### Valve options available:

- 9210-13 Standard Internal TRV Kit
- 7463-41 Internal TRV Kit c/w Remote Sensor
- 1935241 Anti-Ligature TRV Kit c/w BTW Shroud
- Rotarad Rotating Valves

#### Finish:

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

Please note:

temperature of 43°C

Therefore Contour cannot guarantee

#### Fixings:

- All fixings internal
- Security Fastenings & fixings

WALL MOUNTED

**GRADIENT TOP** 

**ANTI-LIGATURE** 

				Type 11 (Single Convector)					
Casing Length	Rad Length	Casing Height (mm)	480	580	680	780	930		
(mm)	(mm)	Rad Height (mm)	300	400	500	600	750		
500	300	Art. Code							
300	300 300	Watts T50							
600	400	Art. Code	DGW114806-AL	DGW115806-AL	DGW116806-AL	DGW117806-AL	DGW118806-AL		
600	400	Watts T50	174	225	271	316	357		
700	500	Art. Code	DGW114807-AL	DGW115807-AL	DGW116807-AL	DGW117807-AL	DGW118807-AL		
700	300	Watts T50	218	280	339	395	447		
800	600	Art. Code	DGW114808-AL	DGW115808-AL	DGW116808-AL	DGW117808-AL	DGW118808-AL		
800	600	Watts T50	261	337	407	474	536		
000	900 700	Art. Code		DGW115809-AL	DGW116809-AL	DGW117809-AL			
900		Watts T50		392	474	552			
1000	000	Art. Code	DGW114810-AL	DGW115810-AL	DGW116810-AL	DGW117810-AL	DGW118810-AL		
1000	800	Watts T50	304	449	542	631	714		
1100	000	Art. Code		DGW115811-AL	DGW116811-AL	DGW117811-AL			
1100	900	Watts T50		504	610	710			
1200	1000	Art. Code	DGW114812-AL	DGW115812-AL	DGW116812-AL	DGW117812-AL	DGW118812-AL		
1200	1000	Watts T50	435	561	678	789	893		
1200	1100	Art. Code		DGW115813-AL	DGW116813-AL	DGW117813-AL			
1300	1100	Watts T50		616	745	868			
1.400	1200	Art. Code	DGW114814-AL	DGW115814-AL	DGW116814-AL	DGW117814-AL	DGW118814-AL		
1400	1200	Watts T50	522	673	813	947	1071		
1,400	1.400	Art. Code		DGW115816-AL	DGW116816-AL	DGW117816-AL	DGW118816-AL		
1600	1400	Watts T50		785	948	1104	1250		
1000	1,400	Art. Code	DGW114818-AL	DGW115818-AL	DGW116818-AL	DGW117818-AL	DGW118818-AL		
1800	1600	Watts T50	695	896	1084	1262	1428		
2000	1000	Art. Code		DGW115820-AL	DGW116820-AL	DGW117820-AL	DGW118820-AL		
2000	1800	Watts T50		1008	1220	1420	1607		
2200	2000	Art. Code	DGW114822-AL	DGW115822-AL	DGW116822-AL	DGW117822-AL			
2200	2000	Watts T50	869	1120	1355	1577			

# Depth (0) Height

The grille size used in anti-ligature radiator guards can inhibit the convection process. that the casing will not exceed a surface

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 21 (Do	uble Panel +)			Туре	22 (Double Conve	ctor)	
585	685	785	935	495	595	695	795	945
400	500	600	750	300	400	500	600	750
DGW215806-AL	DGW216806-AL	DGW217806-AL	DGW218806-AL	DGW224906-AL	DGW225906-AL	DGW226906-AL	DGW227906-AL	DGW228906-AL
343	410	470	540	349	443	530	610	689
DGW215807-AL	DGW216807-AL	DGW217807-AL	DGW218807-AL		DGW225907-AL	DGW226907-AL	DGW227907-AL	DGW228907-AL
429	512	588	674		553	662	762	862
DGW215808-AL	DGW216808-AL	DGW217808-AL	DGW218808-AL	DGW224908-AL	DGW225908-AL	DGW226908-AL	DGW227908-AL	DGW228908-AL
514	614	705	809	523	664	794	914	1034
DGW215809-AL	DGW216809-AL	DGW217809-AL	DGW218809-AL		DGW225909-AL	DGW226909-AL	DGW227909-AL	DGW228909-AL
600	717	823	944		775	927	1066	1206
DGW215810-AL	DGW216810-AL	DGW217810-AL	DGW218810-AL	DGW224910-AL	DGW225910-AL	DGW226910-AL	DGW227910-AL	DGW228910-AL
685	819	940	1079	697	885	1059	1219	1378
DGW215811-AL	DGW216811-AL	DGW217811-AL	DGW218811-AL		DGW225911-AL	DGW226911-AL	DGW227911-AL	DGW228911-AL
771	921	1058	1214		996	1192	1371	1551
DGW215812-AL	DGW216812-AL	DGW217812-AL	DGW218812-AL	DGW224912-AL	DGW225912-AL	DGW226912-AL	DGW227912-AL	DGW228912-AL
856	1023	1175	1348	871	1107	1324	1524	1723
DGW215813-AL	DGW216813-AL	DGW217813-AL			DGW225913-AL	DGW226913-AL	DGW227913-AL	DGW228913-AL
942	1125	1293			1217	1456	1675	1895
DGW215814-AL	DGW216814-AL	DGW217814-AL		DGW224914-AL	DGW225914-AL	DGW226914-AL	DGW227914-AL	DGW228914-AL
1028	1228	1410		1045	1328	1588	1828	2067
DGW215816-AL	DGW216816-AL	DGW217816-AL		DGW224916-AL	DGW225916-AL	DGW226916-AL	DGW227916-AL	DGW228916-AL
1199	1432	1645		1220	1549	1853	2133	2412
DGW215818-AL	DGW216818-AL	DGW217818-AL		DGW224918-AL	DGW225918-AL	DGW226918-AL	DGW227918-AL	DGW228918-AL
1370	1637	1880		1394	1770	2118	2437	2756
DGW215820-AL	DGW216820-AL	DGW217820-AL			DGW225920-AL	DGW226920-AL	DGW227920-AL	
1541	1841	2115			1992	2382	2741	
DGW215822-AL	DGW216822-AL	DGW217822-AL		DGW224922-AL	DGW225922-AL	DGW226922-AL	DGW227922-AL	
1713	2046	2349		1742	2212	2647	3046	

#### Casing Depths

Туре 11	155mm
Type 21	165mm
Type 22	195mm

#### **Standard delivery**

- Standard delivery comprises radiator guard of choice, corresponding Kartell emitter (Type 11, Type 21 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.

# Covora LST radiator – size information and output performance data

**COVORA LST** 

FLOOR MOUNTED

SQUARE TOP

		Туре	11 (Single co	onvector)	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)
	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
650mm	1100	CVL651111	115	574	CVL651113	135	836	CVL651117	175	1101
650	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
	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
Ε	1100	CVL751111	115	697	CVL751113	135	995	CVL751117	175	1317
750mm	1200	CVL751211	115	775	CVL751213	135	1105	CVL751217	175	1463
7.	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 Delta T60 increase T50 figures by 20.5%

To calculate alternative Delta T requirements please refer to page 29

		Туре	II (Single co	nvector)	Туре	12 (Double p	anel plus)	Type 22 (Double convector)		
Height	Length (mm)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)	Ref	Depth (mm)	Output (T50)
	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
ء	1100	CVL851111	115	812	CVL851113	135	1144	CVL851117	175	1522
850mm	1200	CVL851211	115	902	CVL851213	135	1271	CVL851217	175	1691
82	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
	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
950mm	1100	CVL951111	115	918	CVL951113	135	1282	CVL951117	175	1717
950	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

Wat	er	CO	nte	n

Lloight	300mm	400mm	500mm	600mm	700mm
Height	(12'')	(16'')	(20'')	(24'')	(28'')
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	400mm	500mm	600mm	700mm				
Height	(12'')	(16'')	(20'')	(24'')	(28'')				
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.

# 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:

- I.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<sup>®</sup> 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:

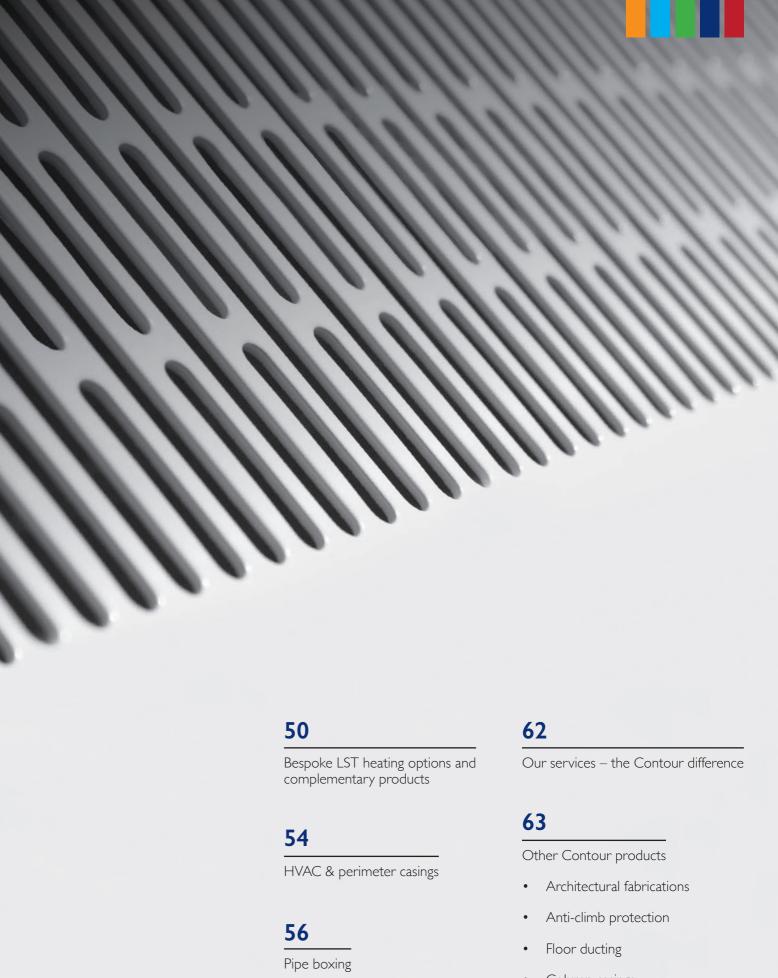
- All fixings internal
- 6mm Allen key door locks (security locks also available including pin Hex fastenings and key locks)

## Anti-ligature radiator options:

- P 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

- Aluminium
- Plywood

• Column casings



# Bespoke LST heating options and complementary products

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

## I. 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.



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

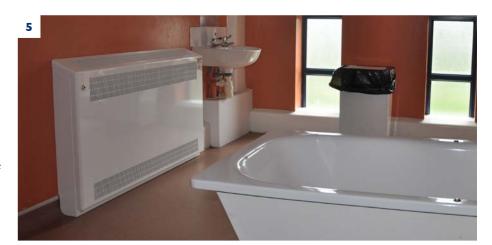
## 7. Raised finned element pipe radiator guards

Designed to deliver a low surface temperature solution to existing raised finn 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







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

## 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 pivotdown 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.

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.

#### II. 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.



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 A central benefit of choosing a Contour 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

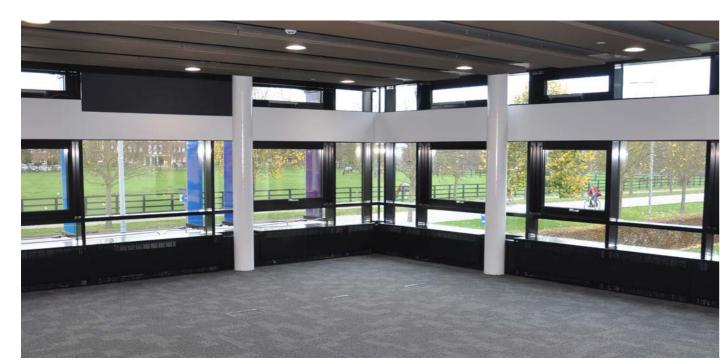
Contour's designers can create casings that blend seamlessly into the overall aesthetic of a room setting or alternatively, stand out if required. Our advanced 3D CAD software allows the design of a casing that ensures optimal air movement both within the unit and in its expulsion, whilst computer controlled 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.

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.





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## 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.

# Height A Height A

**L** section

Depth B

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

11:14	D 11 D	T1 . 1	ess Lengths Woight World		2.5m		3.0m		
Height A (mm)	Depth B (mm)	Thickness (mm)				Product code		Product code	Finish
100	100	2	2500	3000	2.71	ABL1010252	3.25	ABL1010302	
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	PPC Aluminium
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

Depth B

**U** section

I Ι - : - Ι - Δ	Depth B (mm)	Thistory	1			2.5m		3.0m	
Height A (mm)				gths im)	Weight (kg)	Product code	Weight (kg)	Product code	Finish
100	150	2	2500	3000	4.74	ABU1015252	5.69	ABU1015302	
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	DDC Al
100	150	3	2500	3000	7.11	ABU1015253	8.54	ABU1015303	PPC Aluminium
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 antimicrobial 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

	2.5m 3.0m								
Depth A (mm)	Height B (mm)	Thickness (mm)		igths nm)	Weight (kg)	Product code	Weight (kg)	Product code	Finish
75	150	5	2500	3000	1.4	PBL7515255	1.7	PBL7515305	
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	White Melamine
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	

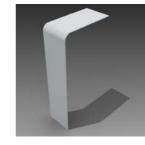
#### L section **U** section



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	
150	200	8	3000	5.1	PBU1520308	
200	200	8	3000	6.1	PBU2020308	White Melamine
100	400	8	3000	6.1	PBU1040308	vville i leiamine
150	400	8	3000	7.1	PBU1540308	
200	400	8	3000	8.1	PBU2040308	

## Standard profiles and shapes



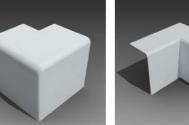
L Channel butt strap

Aluminium product code: ABLBS Plywood product code: PBLBS



L Channel external corner

Aluminium product code: ABLEC Plywood product code: PBLEC



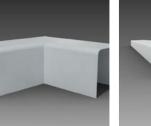
L Channel internal corner

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

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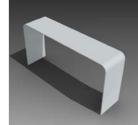
L Channel vented

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** will identify the correct size and quantities 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 antiligature 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

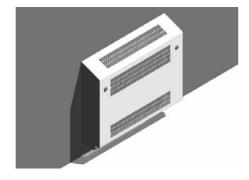
We undertake all site surveys free of charge as an integral part of our comprehensive service. Our surveyors, of products required, and will take note of any special requirements that are necessary including cut-outs. Modifications can then be programmed into manufacture, making the installation process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

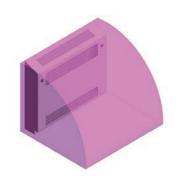


If required, experienced installation and project management teams can handle the entire project for you through to completion. The project management team work closely with the contractor on all aspects of the installation, providing project programmes, method statements, risk assessments, COSHH documentation,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









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