

contego

A vital first defence in infection prevention and control. Contego is a range of door hardware with the antimicrobial properties of copper and the clinical appearance of stainless steel.





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Contego from Allgood - a vital first defence in infection control

Contego is a comprehensive range of ironmongery with all the antimicrobial properties of copper and the clinical appearance of stainless steel.

Antimicrobial copper is scientifically proven to be the most effective touch surface material in the fight against healthcare-associated infections (HCAIs), killing greater than 99.9% of bacteria - including MRSA - within minutes of exposure: no other material comes close¹.

Copper also plays a vital role in preventing antimicrobial resistance (AMR) by destroying the genetic material of bacteria. AMR takes hold as bacteria pass resistance messages via their DNA to other microbes when in proximity, such as on surfaces in a healthcare environment. Copper and $\geq 60\%$ copper alloys kill bacteria and destroy its genetic material; making it impossible for AMR to develop.

Contego is made from a 70% copper-nickel alloy to match the clinical aesthetic of stainless steel and improve strength and durability, with no loss in antimicrobial performance.

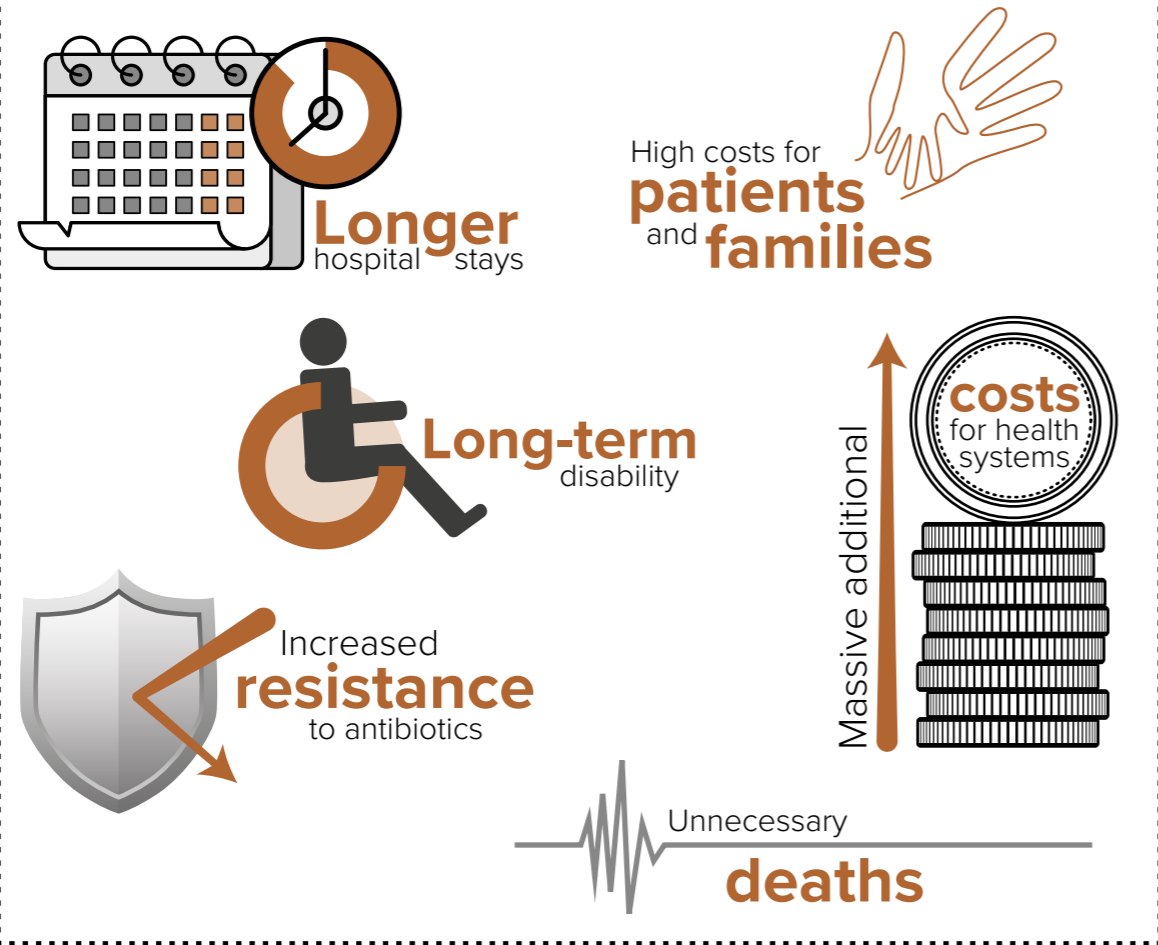
Contego is also highly cost-effective, with evidence that the financial investment of installation could be recouped as quickly as two months, through savings from fewer infections and the resulting shorter lengths of stay².

The design of Contego echoes the clean simplicity of Allgood's iconic Modric range, also keeping the stainless steel appearance preferred in healthcare environments. The entire range is made in the UK at our factory in Birmingham.

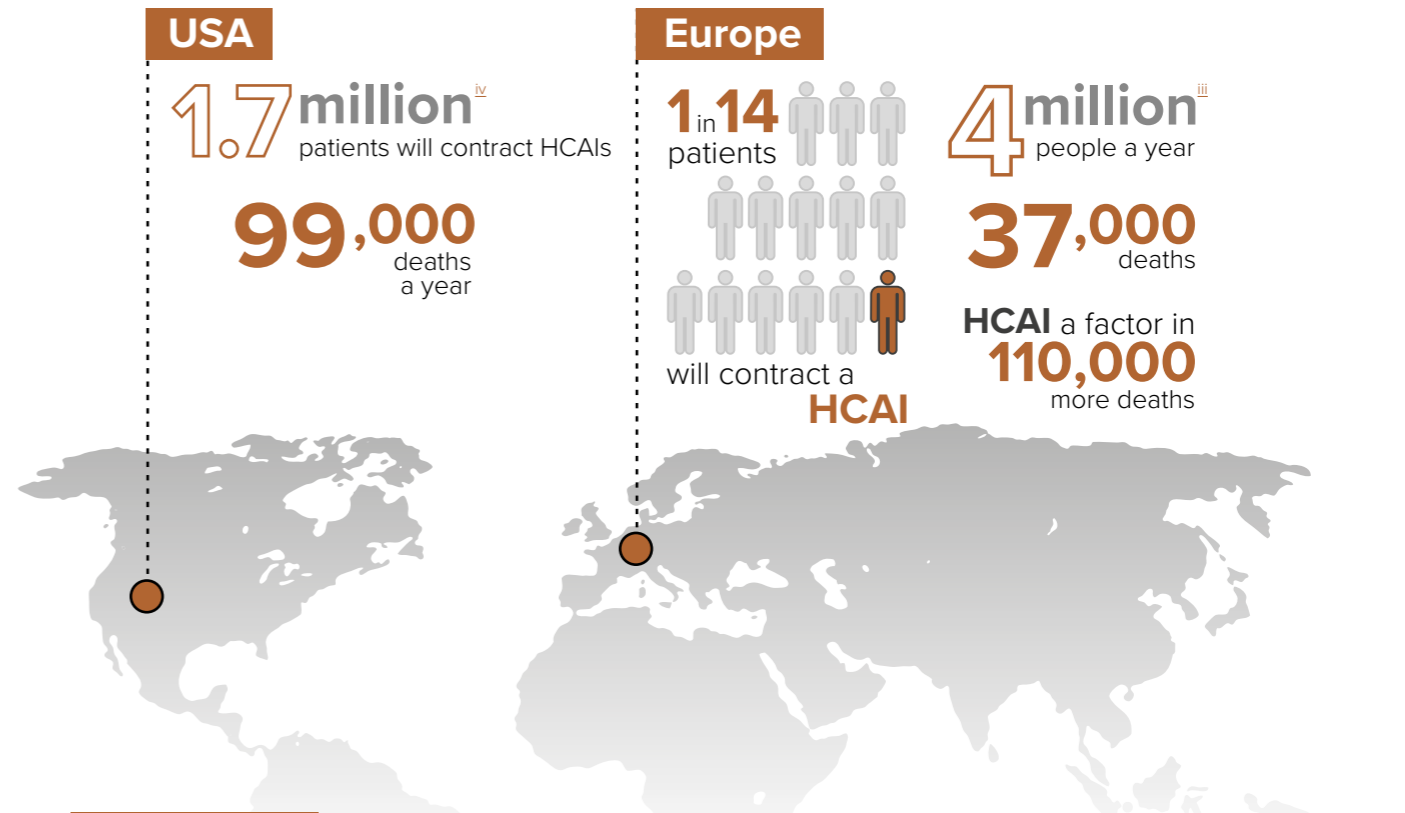
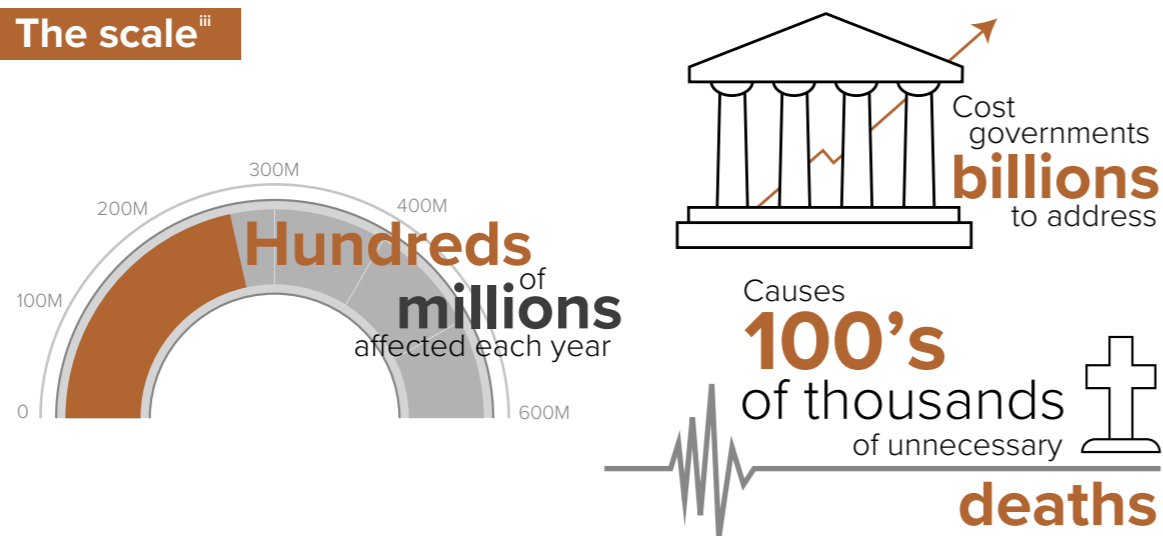
The scale of the HCAI problem

HCAIs are a major threat in healthcare environments, particularly with the rise of AMR.

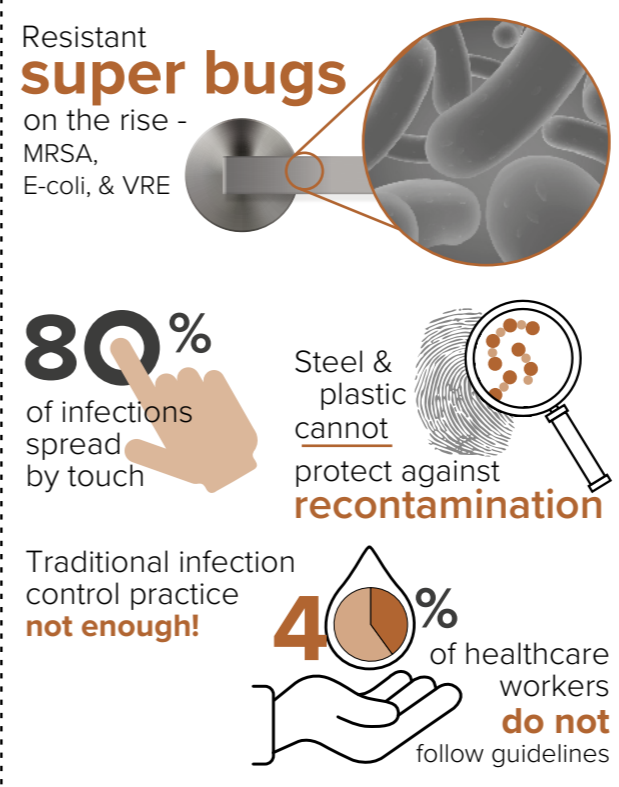
HCAIs will cause:



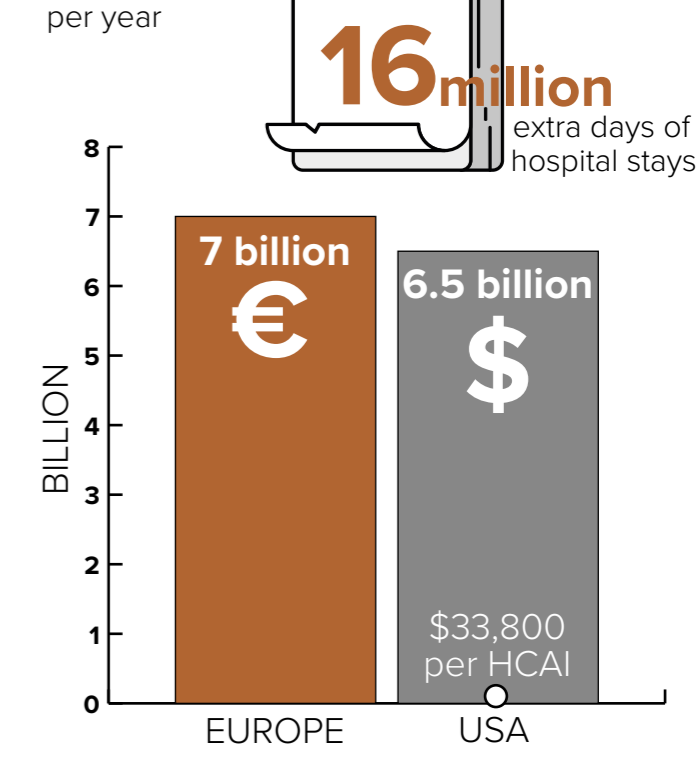
The scaleⁱⁱⁱ



The cause



The cost



+ contego = **An holistic approach to infection prevention & control**



The major benefits of antimicrobial copper

Three main characteristics make antimicrobial copper the most effective touch surface material:

Scientifically proven performance

- Antimicrobial efficacy is scientifically proven in over 200 studies
- The only solid metal touch surface registered by the U.S. Environmental Protection Agency (EPA)^v
- Kills bacteria including MRSA in minutes
- Recognised by the NHS as an effective antimicrobial material^{vi}

Continuously kills microbes

- Antimicrobial action never stops nor weakens
- Remains effective even after repeated wet and dry abrasion and re-contamination
- Natural oxidation does not impair efficacy

Safe to use

- Not harmful to people or the environment
- Inherently antimicrobial, no chemicals added
- Completely recyclable

Copper vs other materials

Copper outperforms any other material in antimicrobial performance^{vii}

- Silver, used in certain antimicrobial coatings, cannot kill MRSA on dry touch surfaces
- Silver's antimicrobial properties require humidity in excess of 95% and ambient temperature of 37 degrees or more
- **Silver-based products show no significant response at the lower temperature and humidity levels typical of indoor clinical environments**

The scientific evidence

There is now a robust body of laboratory and clinical evidence to demonstrate the antimicrobial efficacy of copper - and the copper alloy used in Contego - against the most important pathogens endangering public health, including:

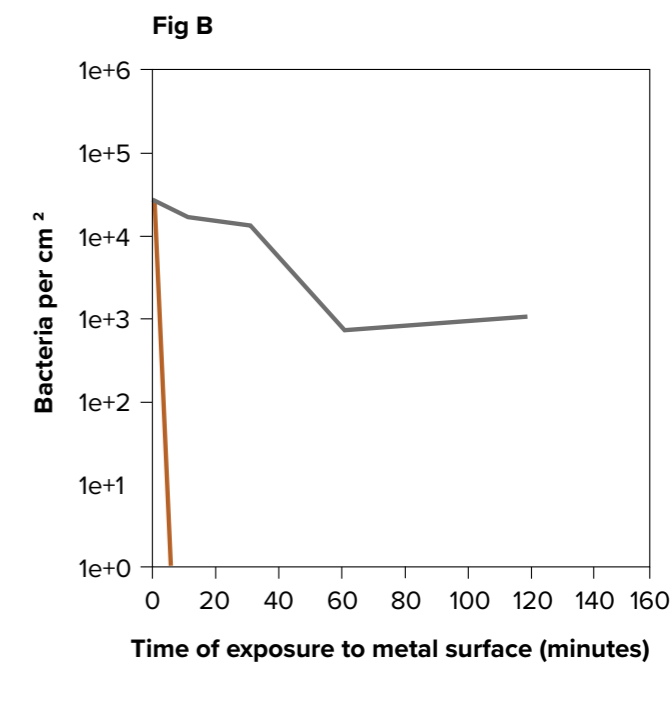
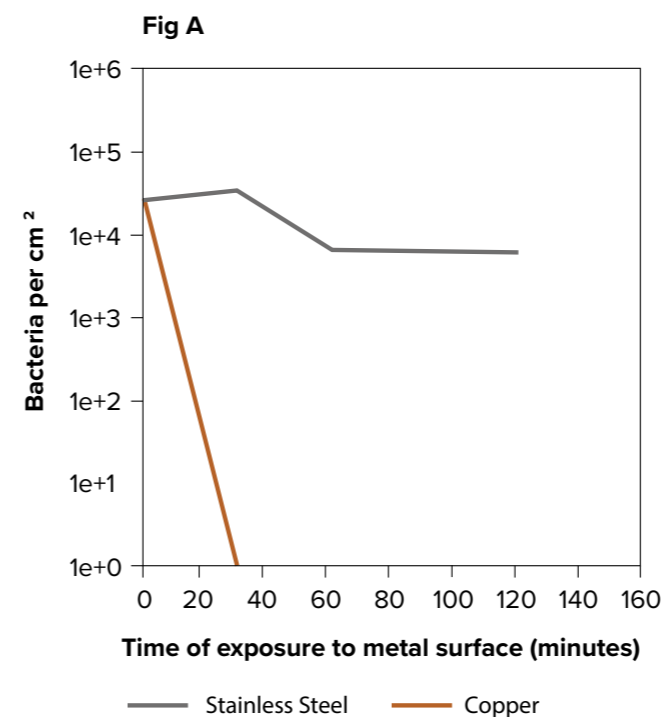
- Acinetobacter baumannii
- Adenovirus
- Candida albicans
- Campylobacter jejuni
- Carbapenem-resistant Enterobacteriaceae (CRE)
- Clostridium difficile (including spores)
- Coronavirus (Human 229E)
- Enterobacter aerogenes
- Escherichia coli O157:H7
- Helicobacter pylori
- Influenza A (H1N1)
- Klebsiella pneumoniae
- Legionella pneumophila
- Listeria monocytogenes
- Mycobacterium tuberculosis
- Norovirus or Norwalk-like virus
- Penicillium chrysogenum
- Poliovirus
- Pseudomonas aeruginosa
- Salmonella enterica
- Staphylococcus aureus (MRSA, E-MRSA and MSSA)
- Tubercle bacillus
- Vancomycin-resistant enterococcus (VRE)
- Vibrio cholerae

Laboratory trials

In a study overseen by the US Environmental Protection Association and supported by the Copper Development Association, several copper alloys - including the one used in Contego - were treated with a bovine synthetic broth containing MRSA and left at room temperature of 20°C for two hours. After this period, each sample alloy was tested to see how much of the bacteria remained. The Contego alloy had a 99.99% reduction in MRSA bacteria, clearly demonstrating its antimicrobial properties^{viii}.

The concentrations of MRSA in this laboratory study were far greater than those likely to be found on any surface in a healthcare environment. In laboratory tests closely simulating a dry touch, kill times on solid copper surfaces have been demonstrated at under five minutes for real-world levels of contamination.

In 2013, Professor Keevil and the Centre for Biological Sciences at the University of Southampton, simulated a wet touch - a level of bacteria common in a sneeze - and dry touch of pathogenic microbes on a surface material. The results showed the copper killed all bacteria within 30 minutes for the wet test (**Fig A.**) and within minutes for a dry touchⁱ. (**Fig B.**)



Clinical trials

In the largest trial to date, a two-year study by the University of Virginia at a local community hospital showed a 78% reduction in HCAs in a ward using antimicrobial copper fixtures than a ward that was unmodified^{ix}. The 25-month study monitored rates of patient HCAs in a new hospital wing fitted with copper fixtures (14,479 patient-days; 72 beds) and an unmodified hospital wing (19,177 patient-days) which were both compared with data from the baseline period (46,391 patient-days).

The new wing had 78% fewer HCAs related to multi-drug resistant organisms (MDROs) or C difficile, 83% fewer cases of C difficile infection, and 68% fewer infections due to MDROs, relative to the baseline period.

No changes in rates of HCAs were observed in the unmodified hospital wing.

A clinical trial was undertaken at Selly Oak Hospital - part of University Hospitals Birmingham NHS Trust - under the control of Professor Tom Elliott and supported by Copper Development Association^x.

The results showed conclusively that copper is antimicrobial in a real ward situation and that copper-containing surfaces had 90-100% less contamination than conventional materials such as plastic, aluminium and chrome plate.

A multi-centre trial in US hospitals in 2012^{xi} further showed that replacing only six touch surfaces in an ICU room with antimicrobial copper items reduced a patient's risk of acquiring a HCAI by 58%.

Evidence-based infection prevention and control guidance

Copper is now recognised as an effective antimicrobial material by the NHS in the latest epic3 Guidelines (National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England)^{vi}.

It is also the only hard surface material to be recognised for antimicrobial performance by the US Environmental Protection Agency^v.

The financial case for antimicrobial copper

A major study presented at the World Health Organisation's International Conference on Prevention and Infection Control (ICPIC) in Geneva in 2013¹⁰, demonstrated rapid payback on capital investment from refurbishing healthcare environments with antimicrobial copper products.

York Health Economics Consortium (YHEC) - world-leading global health economists based at the University of York - reported a very short payback time and significant ongoing savings from upgrading key touch surfaces to antimicrobial copper.

Using UK data, the model predicted that the cost of replacing six key, frequently touched surfaces in a 20-bed ICU with antimicrobial copper equivalents will be recouped in less than two months, based on fewer infections and the resulting shorter lengths of stay.

Example: 20-bed ICU in the UK, six items upgraded to Antimicrobial Copper, planned refurbishment

Benefit	Value
Infections avoided per annum	60
Bed days saved per annum	360
Cost per bed day saved	£85
Return on investment	<2 months

Dr Matthew Taylor, YHEC's Director and one of the paper's authors, notes: "After the initial two months, ongoing cost savings will accrue from the reduction in blocked beds and better-directed staff resources."

Over five years, the copper intervention is shown to save almost £2 million in reduced cost of HCAs compared to traditional components, if fitted during a planned build or refurbishment.

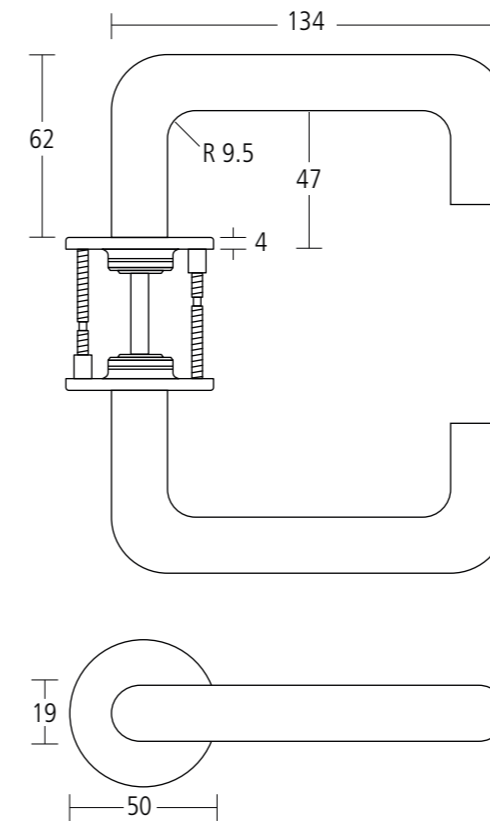




CS3510 Contego Lever Handle

Description

- Quadaxial™ concealed fixing roses
- Supplied with spindle and bolt through fixings to suit 32-55mm thick doors
- Adheres to the dimensional guidelines of BS 8300 & approved Doc M
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year mechanical warranty



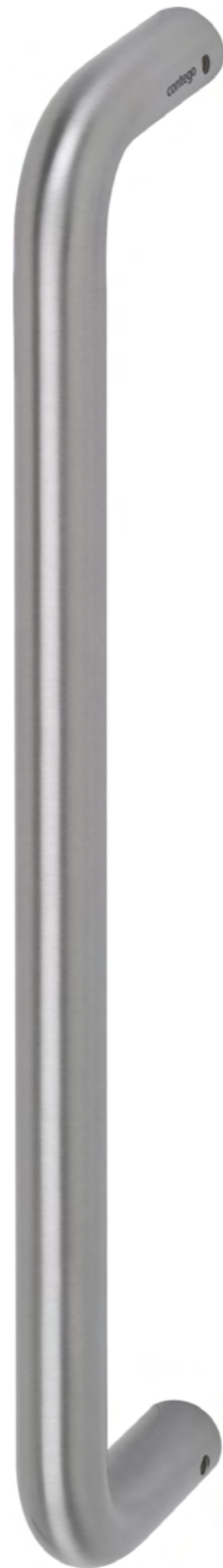
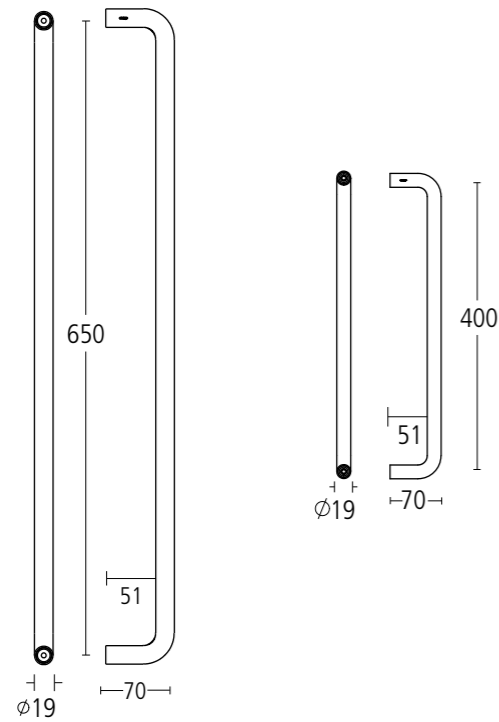
CS6598/CS6599 Contego Pull Handle

Description

- Secret face, bolt through or back-to-back fixings
- Adheres to the dimensional guidelines of BS 8300 and approved Doc M
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty

Available Sizes

400mm / 650mm



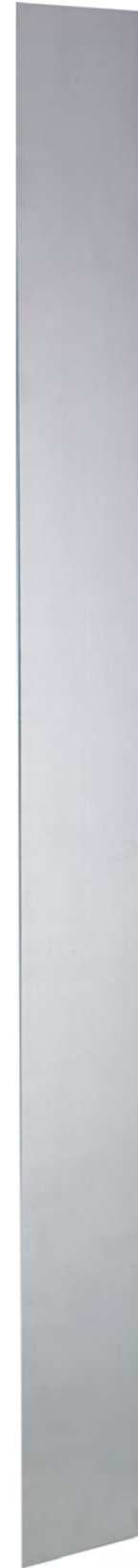
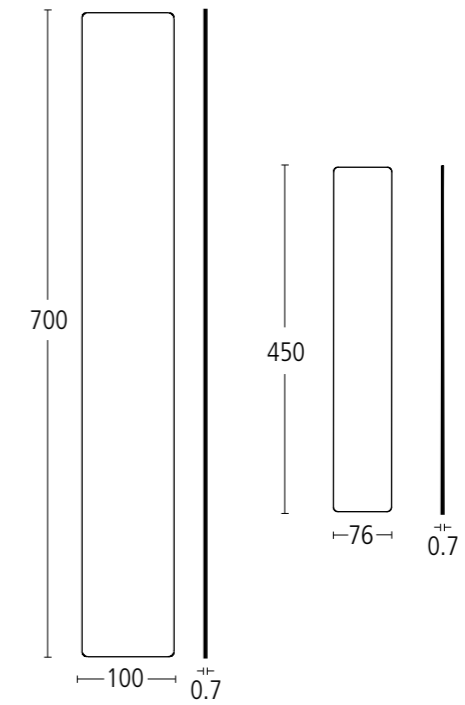
CS6805G/CS6806K Contego Push Plate

Description

- Supplied with self-adhesive fixing
- 0.7mm thick
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty

Available Sizes

450mm / 700mm

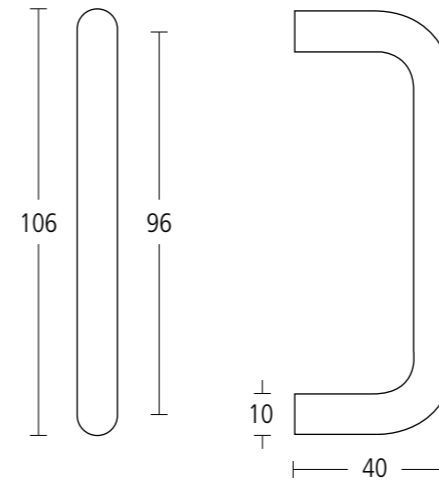




CS1005 Contego Cabinet Pull Handle

Description

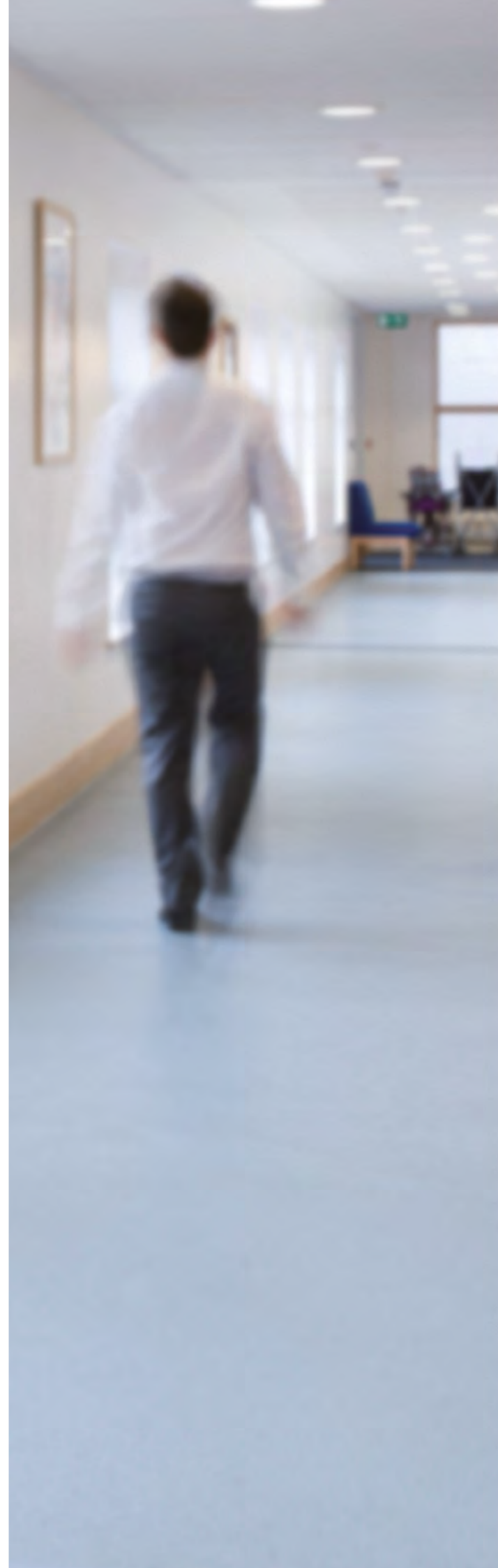
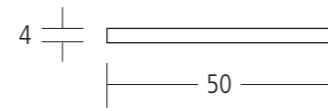
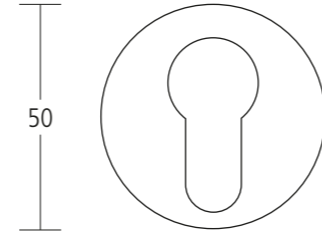
- Supplied with M5x50 bolt through fixings
- 10mm dia
- Suitable for doors up to 40mm thick
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty



CS796Q Circular Escutcheon For Euro Profile Cylinder

Description

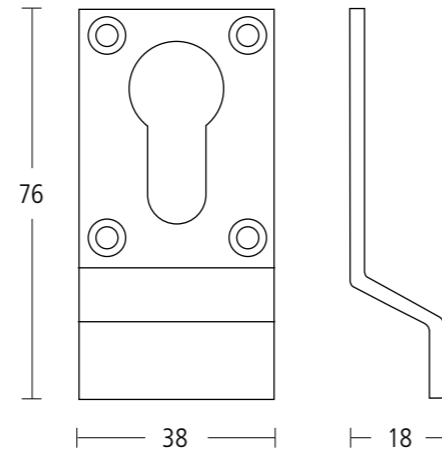
- Supplied with concealed face fixings
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty



CS8 Contego Cylinder Pull

Description

- Supplied with visible Torx screw fixings
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty



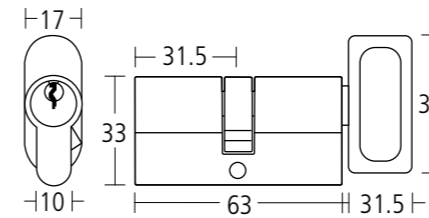
CS7429A Contego Cylinder

Description

- Euro Profile Cylinder with thumbturn
- Independently tested to BS EN 1303
- Incorporated in a successful fire test and assessed to BS EN 1634-1 & BS 476 Pt 22
- Patented 6 pin cylinder with hardened drivers and body insert
- Available individually keyed or as part of a Master Key system to customer requirements
- Supplied with 2 keys
- Key operation at one end and thumbturn operation at the other end
- Thumbturn formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 1 year warranty

Variations (mm)

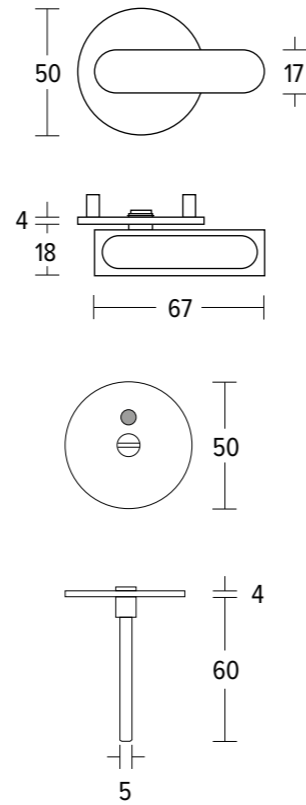
	v	w
a	63	31.5 (standard)
b	71	35.5
c	80	40



CS97874 Contego Disabled WC Turn & Indicator Set

Description

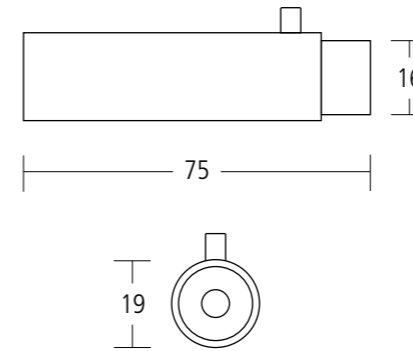
- Concealed bolt through fixings to suit doors 32-55mm thick
- Suitable for 5 and 8mm lock followers
- Formed from antimicrobial copper alloy
- Aesthetic of stainless steel
- 5 year warranty



CS6552N Contego Bumper Hook

Description

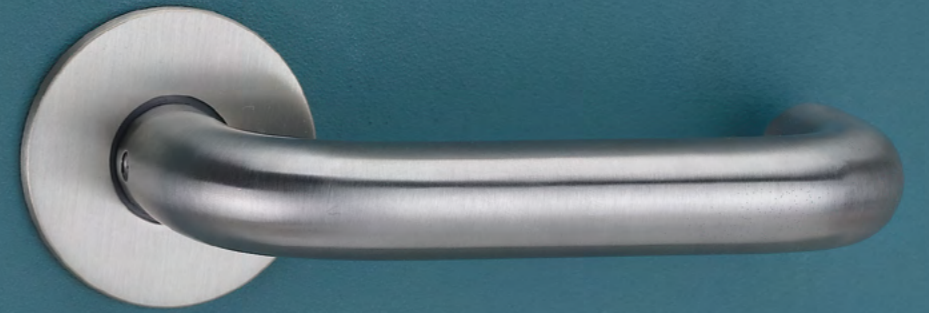
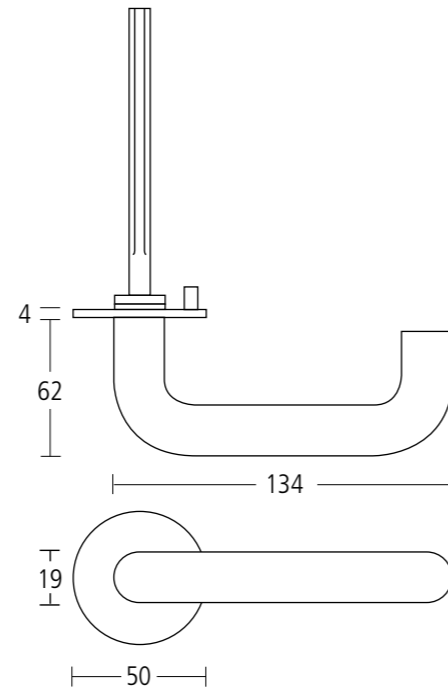
- Supplied with concealed face fixings
- Formed from Contego antimicrobial copper alloy
- Aesthetic of stainless steel
- 25 year warranty



CS6625 Contego Cistern Handle

Description

- In accordance with the recommendations of BS 8300 and approved Doc M
- Formed from Contego antimicrobial copper alloy
- Complete with cistern spindle
- Aesthetic of stainless steel
- 10 year warranty



The Francis Crick Institute

Named after Francis Crick, the scientist who helped discover the structure of DNA, the institute is an ambitious collaboration of six founding research partners: the Medical Research Council, Cancer Research UK, Wellcome Trust, UCL (University College London), Imperial College London and King's College London.

The world-class biomedical research facility aims to discover how and why disease develops in order to find new ways to prevent, diagnose and treat conditions such as cancer, heart disease and stroke, as well as infections and neurodegenerative conditions. Located in central London, the steel, glass and terracotta clad building occupies a full city block and creates strong architectural links to historic local buildings. Large cantilevered bay windows and tall glass atria reduce the building's impact at street level and maintain natural light in workspaces and public areas. The challenge for Allgood on this project was to create an ironmongery specification in keeping with the facility's elite standards.

The Contego range is an antimicrobial copper product, made from a copper alloy, giving it the appearance of stainless steel while incorporating the bacteria fighting qualities of copper.

Killing 99.9% of bacteria within minutes of exposure, the range offered a unique functional capability to the research centre, while still matching the interior aesthetic. Contego lever and pull handles were supplied to glass doors including: office and lab doors, while push plates were supplied to the auditorium and back of house areas. Additionally, Allgood Secure supplied automatic door operators to the main entrances of the labs, with fob readers fitted for Contego lever handles in higher security areas.



Client: The Francis Crick Institute
Sector: Healthcare
Location: London
Architect: HOK International Ltd
Products: Contego lever handles, pull handles and push plates



Sir Robert Ogden Macmillan Centre

SROMC is the new cancer support and information centre based at Harrogate and District NHS Foundation Trust, providing state of the art facilities for patients and their families across North Yorkshire. Designed by IBI Group and constructed by Sir Robert McAlpine, the centre provides day-case cancer treatments including chemotherapy, alongside supportive care and complementary therapies.

As always in a healthcare environment, it is imperative that good hand hygiene is maintained at all times to stop the cross contamination of bacteria between users of the hospital. As door furniture is an item that is frequently touched by many different people, IBI Group wanted an ironmongery solution that would protect patients and visitors against the cross contamination of Healthcare Acquired Infections (HCAIs) while having a matching finish to complement mechanical hardware.

Antimicrobial Copper is the most effective touch surface material in the fight against pathogenic microbes, killing greater than 99.9% of bacteria within minutes of exposure. No other material comes close. Historically, most antimicrobial copper door furniture has a copper-like appearance, but this would not meet the requirement of a stainless steel aesthetic.

By using our unique Contego range of ironmongery formed from a proven antimicrobial copper alloy that has the appearance of stainless steel, Allgood were able to provide a solution that met the architect's requirements.

A full specification was created using Contego lever handles, push plates, pull handles, WC turns and escutcheons complemented with satin stainless steel mechanical hardware such as signage, door closers, locks and kick plates.

By specifying the Contego range, Allgood supplied an ironmongery package that matched the aesthetic throughout and helped protect users of the building from the risk of infection.

Client: Sir Robert Ogden Macmillan Centre

Sector: Healthcare

Location: Harrogate

Architect: IBI Group

Products: Contego lever handles, push plates, pull handles, WC turns and escutcheons



References

- i Keevil et al (2013) Inactivation of Norovirus on Dry Copper Alloy Surfaces <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0075017>
- ii York Health Economics Consortium (2013) Health economics assessment of antimicrobial copper for infection control <https://www.york.ac.uk/news-and-events/news/2013/research/antimicrobial-copper/>
- iii World Health Organisation (2011) The burden of health care-associated infection worldwide https://www.who.int/gpsc/country_work/burden_hcai/en/
- iv Health Environment Research & Design Journal (2015) From Laboratory Research to a Clinical Trial - Copper Alloy Surfaces Kill Bacteria and Reduce Hospital-Acquired Infections <https://journals.sagepub.com/doi/10.1177/1937586715592650>
- v Infection Today (2008) EPA Approves Registration of Antimicrobial Copper Alloys <https://www.infectioncontrolday.com/hand-hygiene/epa-approves-registration-antimicrobial-copper-alloys/>
- vi epic3 (2017) National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England <https://improvement.nhs.uk/resources/epic3-guide-lines-preventing-healthcare-associated-infections/>
- vii U.S. National Institutes of Health's National Library of Medicine (2009) Effects of temperature and humidity on the efficacy of MRSA challenged antimicrobial materials containing silver and copper <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2779462/>
- viii ATS Labs/CDA (2010) Evaluation of copper materials <https://www.allgood.co.uk/cda-test.pdf>
- ix American Journal of Infection Control (2016) Copper surfaces are associated with significantly lower concentrations of bacteria on selected surfaces within a paediatric intensive care unit [https://www.ajicjournal.org/article/S0196-6553\(15\)00981-5/fulltext](https://www.ajicjournal.org/article/S0196-6553(15)00981-5/fulltext)
- x Aston University (2008) Hospital trial shows copper reduces contamination <https://www2.aston.ac.uk/news/releases/2008/october/copper>
- xi MD magazine (2013) Copper Surfaces Reduce ICU Infections by 60 Percent <https://www.mdmag.com/medical-news/copper-surfaces-reduce-icu-infections-by-60-percent>



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