

Quick guide

# COMPONENTS FOR MEDICAL FURNITURE



**When designing for a hospital environment, it is essential to consider the small components that enable your application to perform to a high level. Hospital furniture has different users, so it's not only patients you need to think about, but also caregivers.**

This means your hospital-furniture designs need to incorporate certain elements. Examples include safety and security – think of how your design can protect patients and staff or prevent tampering. You'll also need to think of adjustability, where relevant, so that furniture can work for a range of patient needs. Ergonomics will help caregivers use furniture repeatedly without incurring injuries. Consider, too, infection control. Hospitals must be hygienic environments, so the materials you choose for your design should be easy to clean and able to withstand heat and chemicals.

Hospital furniture and medical equipment for patient use should also aid their mobility, such as grab rails on beds. You'll also want to ensure that key components within your applications are easy to access for maintenance or repair. Finally, your components should be hard wearing and robust to ensure your application's performance, while delivering quality and value.

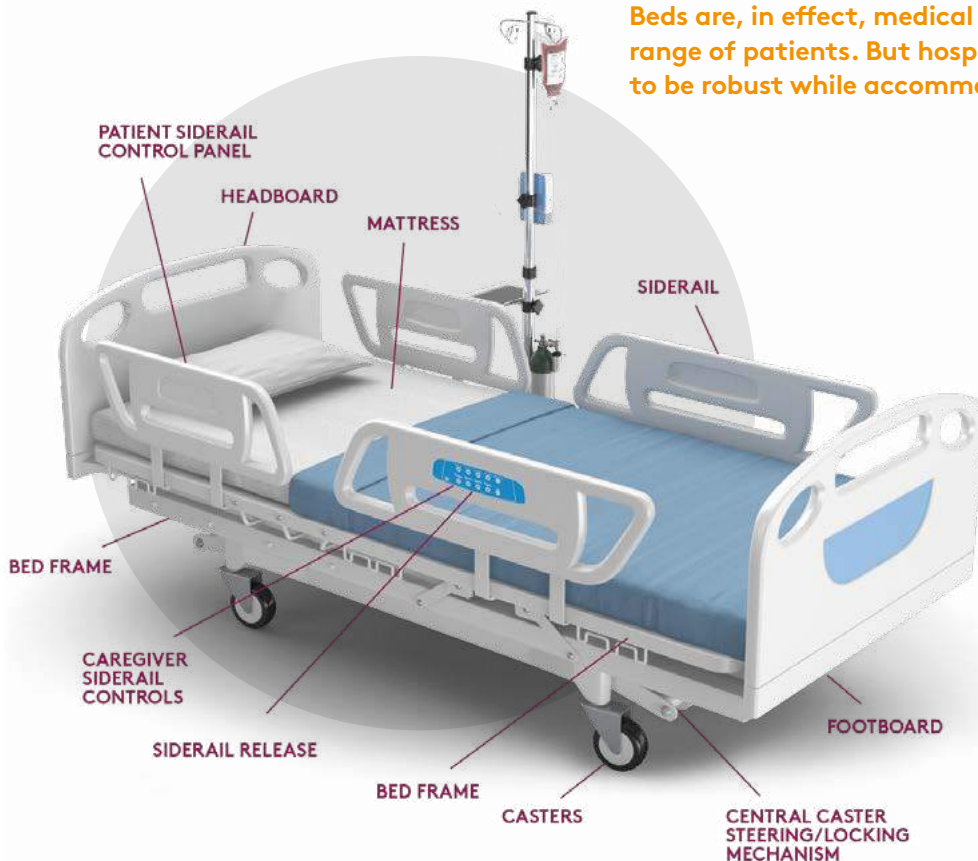
We've designed this guide to help you select the components you'll need for hospital beds, hospital lighting and hospital medical cabinets. Most of the components shown here can be used in all three applications. If you're unsure which products work best for your project, we're here to answer any questions you have and offer guidance and expert advice.

## FREE SAMPLES AND CAD DOWNLOADS

To make your job easier, we've made available [free samples](#) on most of our solutions, so you can try before you buy. You can also download [free CADs](#) of our solutions to help with designing your medical furniture.

# HOSPITAL BEDS

Beds are, in effect, medical devices, aiding in the recovery of a range of patients. But hospital bed design standards also need to be robust while accommodating caregivers.



According to a [2020 study published by the European Agency for Safety and Health at Work](#), high rates of musculoskeletal disorders in the healthcare sector – specifically among nurses and nursing assistants – suggests the reason is due to handling patients with limited mobility. So you need to factor ergonomics into adjustable bed parts, bariatric hospital beds and other medical furniture designs while thinking of the patients’ needs. Consider the following components to produce an ideal bed, which can also be used for a patient stretcher trolley, dental chair design, stair chair lift, motorised wheelchair and more.

## STANDARD CABLE TIES

[View online](#)

Cable management is a vital component of your hospital bed design, keeping cables away from moving parts. Our natural and black nylon cable ties are high-quality and come with a built-in lock system to prevent accidental removal. Nylon 6/6, UV94 V-0. Also available: [releasable cable ties](#), which can quickly be detached to clean surfaces and reused to maximise value.

**Typically used:** underneath bed, footboard control panel, caregiver siderail control panel, patient siderail control panel



## ADHESIVE-MOUNT WIRE CLIPS

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Adhesive wire clips, also called adhesive cable clamps, are suitable for securing power cables of 16 mm in diameter for hospital bed motor parts. The top flips over to securely hold the wires or cables in place. Also ideal for isolating the remote-control cord for an electrical hospital bed by attaching to the side or underneath the bed. Design with minimal crevices is ideal for maintaining cleanliness. Nylon 6/6. UL94 V-2.

**Typically used:** underneath bed, footboard control panel, caregiver siderail control panel and patient siderail control panel



## TWIST TIES

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Hospital bed design features often incorporate peripheral elements and controls that benefit from quality twist ties to keep cables and wires in place. Simply twist the arms to secure fastening. Releasable and reusable for better value. Nylon. UL94 V-2.

**Typically used:** underneath bed, footboard control panel, caregiver siderail control panel, patient siderail control panel



**CABLE DUCT**

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Slotted cable duct used within the beds or for mounting on walls or ceilings, to enhance adjustable bed design and patient mobility by keeping cables bundled and out of the way. The flexible ribbed design allows for wires to break out when necessary. Screw mount with optional adhesive back. Made of PP with acrylic-based adhesive. UL94 V-2.

**Typically used:** bed frames, on walls and ceilings behind or above headboard



**PUSH-FIT FEET**

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Push-Fit Bumper Feet can be used as glides, bumpers, closures, slides, and stops in various applications. The press fit design holds the bumper securely in place to protect surfaces from contact, with anti-skid and scratch resistant properties to prevent scratches that can harbour bacteria. Ideal for protecting tube ends, especially on adjustable bed frame parts. Made of TPE.

**Typically used:** bed frame and legs, tube ends, adjustable framework



**FIR-TREE PUSH-IN RIVET**

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Fir-tree rivets are ideal for threaded, non-threaded, drilled, or punched holes. Designed to be non-removable, hardwearing and robust. As push rivets, these are easily installed without tools to speed up assembly of hospital bed components. Operating temperature range: -40°C to 85°C. Nylon 6/6. UL94 V-2.

**Typically used:** external fabrication – metalwork, bed frame



**PCB SUPPORTS**

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Hospital bed parts with circuit boards, such as touchscreens or control panels, will need PCB hardware components. These robust, mini PCB support posts are mounted on both sides with a low profile two-prong fastener. One side is a locking PCB support and the other is a releasable snap fit. Operating temperature range: -40°C to 85°C. Natural nylon 6/6.

**Typically used:** touchscreens, peripheral electronics, footboard control panel, caregiver siderail control panel, patient siderail control panel



**BALL KNOBS**

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These plastic threaded knobs come in a wide selection of diameters and moulded-in steel inserts. Ball knobs are an aesthetic and ergonomic option for controlling, clamping and making adjustments on beds. Made of PP, an ideal material for hospital environments. It resists cleaning chemicals and is lightweight for repeated use.

**Typically used:** hospital bed handles, levers or shafts



**CASTOR WHEELS**

[View online](#)

Hospital furniture, such as beds, medical cabinets, hospital bedside tables and patient wheelchairs rely on castor wheels for ease of movement. We offer castor wheels that swivel and have brakes, in stainless steel housings, and grey non-marking rubber that provide excellent floor protection and quiet operation.

**Typically used:** underneath furniture



**HIGH-TEMPERATURE MASKING PLUGS**

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Masking is a key part of the finishing and production process in manufacturing and fabrication. Our extensive range of high-temperature masking solutions include tapered plugs, available as solid or hollow core to fit threaded or unthreaded holes. Our push-fit caps are available in numerous thread sizes. These reusable plugs are available as premium high-temp silicone tapered plugs or in economical reduced-temp EPDM. To mask irregular shapes, try our [masking tapes and discs](#).

**Typically used:** for shot blasting, powder coating, e-coating, anodizing, plating or wet painting processes

# LIGHTING



**Healthcare environments are incredibly complex requiring a diverse range of lighting solutions.**

For example, surgical lights need high illumination levels, while the lights in ward areas need to strike a balance between allowing patients to rest and consideration for caregivers, who need to see clearly to perform their duties.

Halls, reception, dining and other areas have different demands, while adjustability, safety and security are yet other concerns. Whatever those demands are, your hospital lighting design will need quality components to ensure it performs as you intend, while delivering quality and value.

## HEAT-STABILISED CABLE TIES

[View online](#)

Ideal for hospital lighting, which is used 24/7 in many areas of the building. Use these quality cable ties wherever heat is generated or present. Heat-stabilised nylon 6/6. UL94 V-2.

**Typically used:** inside fixtures



## UNSCREWING RIVETS

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A combination screw and nylon grommet nut for easy accessibility to panels and components that need to be replaced or opened for maintenance, such as ceiling lights. When tightened the grommet nut base expands to secure together. A Phillips crosshead screwdriver easily loosens these rivets, which can be reused. Operating temperature range: -30°C to 85°C. Nylon 6/6.

**Typically used:** panels, covers and fixtures



## FLAT MACHINE SCREWS

[View online](#)

Phillips and flat-head countersunk machine screws are suitable for securing lighting fixtures. Quality and value driven, providing vibration, chemical, electrical and corrosion resistance. Lightweight, made of nylon 6/6.

**Typically used:** panels, covers and fixtures



**ROUND SNAP PUSH-IN RIVET**

[View online](#)

Snap rivets provide value with fast and easy installation without any tools to speed up assembly. The round, minimal design provides a finished look, while aiding in maintaining hygiene. Operating temperature range: -40°C to 115°C. Nylon 6. UL94 V-2 or UL94 V-0 and also in heat-stabilised material.

**Typically used:** panels, covers and fixtures



**NYLON FLAT WASHERS**

[View online](#)

Strong, hardwearing plastic flat washers are used in conjunction with screws, bolts or nuts and offer electrical and moisture insulation, spacing and load distribution for your hospital lighting fixtures. Nylon 6/6. UL94 V-2.

**Typically used:** fastening applications, panels and fixtures



**BRAIDED CABLE SLEEVES**

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Fully closed, self-closing, and hook & loop fastened cable sleeves increase safety by bundling cables or wires, protecting them from high temperatures. This cable wrap can be cut with scissors and still maintain a frayless end. Polyester. UL224 VW-1.

**Typically used:** wire harnesses, cable bundles and moving parts that may cause abrasion



**STRAIN RELIEF BUSHINGS**

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Standard cable strain relief bushings protect electronic products by absorbing the forces of pull, push, and twist that may be exerted on a flexible power cord. These bushings easily snap into a round or anti-rotation hole. Nylon. UL94 V-2.

**Typically used:** mobile, adjustable position lighting



**PCB SUPPORT – LOCKING ARROWHEAD**

[View online](#)

Wireless lighting controls' printed circuit board design should also include quality locking PCB supports. This support snaps into place on both the chassis and the board and requires no fastening screws. Operating temperature range: -40°C to 85°C. Nylon 6/6.

**Typically used:** control systems, inside fixtures



**OPEN CABLE GROMMETS**

[View online](#)

Pendant lighting, illuminated signage and recessed ceiling lights are just a few other examples of lighting enabling accessibility and you'll need standard grommets. Snap-in design allows quick and easy installation for better value. EPDM.

**Typically used:** panels and fixture, especially where cables transition between product sections



**PCB STANDOFFS - HEXAGONAL /INSULATOR/NYLON & BRASS**

[View online](#)

Wireless lighting controls serve different functions, from reducing energy costs to enhancing comfort for a range of patients. Ensure the controls' high performance with robust nylon PCB standoffs with brass inserts. These male-to-female hexagonal standoffs can be installed by hand. Ideal for use when high mechanical strength is required and provide sturdy, insulated spacing for high-power electronic applications. UL94 V-2.

**Typically used:** control systems, inside fixtures

# HOSPITAL CABINETS



**Hospital-furniture manufacturers have to design cabinets that will meet the high demands and diverse needs of the medical industry.**

Applications include hospital bedside cabinets, hospital PPE cabinets, medical office cabinets, storage cabinets, hospital bedside table with drawers and more. We can make your job easier with the small components that meet the demand for what you need most, from hard-wearing materials and design to enhancing safety in your application.

In addition to the solutions below – and depending on what you’re designing – you might also need [gas springs](#), [rotary dampers](#), and [sealing gaskets](#). You can also explore our full range of [access solutions online](#).

## HYGIENIC COMPRESSION LOCKS

[View online](#)

Specially designed for hygiene requirements and cabinets that require tighter sealing under vibrating conditions.

**Typically used:** cabinet doors where cleanliness and security are required



## PULL HANDLES

[View online](#)

Cabinet pull handles are rear mounted with ergonomic profiles for pleasing aesthetics and comfort when pulling out drawers in medical cabinets. The one-piece design is strong, durable and is easily cleaned. Female right angle is rounded with a shoulder and two-threaded mounting holes. Made of aluminium.

**Typically used:** external fabrication – doors, trolleys, carts



## HYGIENIC LEVELLING FEET

[View online](#)

Hygienic feet are suitable in the pharmaceutical and medical industries. All feet are USDA accepted and certain items also have 3A certification. Concealed threads provide enhanced cleanliness. Also available: [Stud-mount levelling feet](#)

**Typically used:** underneath cabinets



## SCREW-ON FEET

[View online](#)

Robust, quality screw-on rubber feet prevent surface damage with anti-skid and scratch-resistant properties, maintaining cleanliness by preventing places for bacteria to grow. Ideal for medical storage cabinets and hospital bedside tables. Can be fastened with a screw bolt or rivet to secure the foot in place and protect surfaces. Available in neoprene rubber or ABS.

**Typically used:** underneath cabinets



### LEDGE HANDLE

[View online](#)

Ledge cabinet pull handles are ideal for drawers. Choose personalised profile with labelling or blank profile. These are screw mounted onto a channel to allow multi-position when a longer profile is selected. Different finishes available.

**Typically used:** cabinet doors



### UNISCREW CAPS

[View online](#)

Uniscrew caps provide a neat finish while maintaining cleanliness by preventing bacteria from growing on the screw head. Also promotes safety by preventing snagging of clothes and skin. Accepts a range of screw sizes, reducing stock requirements. Available in white or black PP.

**Typically used:** external fabrication, panels



### SPRING-LOADED REMOVABLE CONCEALED HINGE

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Spring hinges with a retractable pin under a spring load allows the door or panel of hospital storage cabinets to be removed for quick and easy access. The design allows for tool-free removal of the door or panel, providing extra value. Stainless steel with a natural finish.

**Typically used:** cabinet doors



### KEY LOCK CABINET CAM LATCHES

[View online](#)

These medical cabinet locks with cam latches have a 90° cam rotation and contain five disk tumblers for security. Keyed cam locks are available offset or straight. Zinc alloy die-cast housing and cylinder with stainless steel bezel. Brass keys are keyed alike. Also available: hygienic compression locks, [left-handed](#) and [right-handed](#).

**Typically used:** cabinet doors



### PCB SPACERS – NON-THREADED

[View online](#)

If your medical office cabinets or automatic dispensing cabinets will have a control panel and various moving parts, you'll need robust, quality non-threaded round spacers, designed to be installed by hand without the need for assembly equipment. Available in nylon or PA in a wide array of sizes.

**Typically used:** control panels, drawers



### SHOULDER WASHERS

[View online](#)

When electric and heat insulation is critical in assemblies, use our self-lubricating and corrosion- and abrasion-resistant shoulder washers, ensuring improved safety, a longer life and more value from your application. Available in natural nylon 6/6.

**Typically used:** external fabrication, panels, drawer assemblies



### SQUARE TUBE INSERT GLIDES

[View online](#)

Protect your hospital furniture with square tube inserts, available in both ribbed and straight-wall designs. Available in black or white. Choose LDPE material, which can stand up to impact and many hazardous chemicals used in cleaning. Also available: [round tube insert glides](#).

**Typically used:** external fabrication, tube ends



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## QUESTIONS?

Email us at [sales@essentracomponents.co.uk](mailto:sales@essentracomponents.co.uk) or speak to one of our experts for further information on the ideal solution for your application **0845 758 5070**