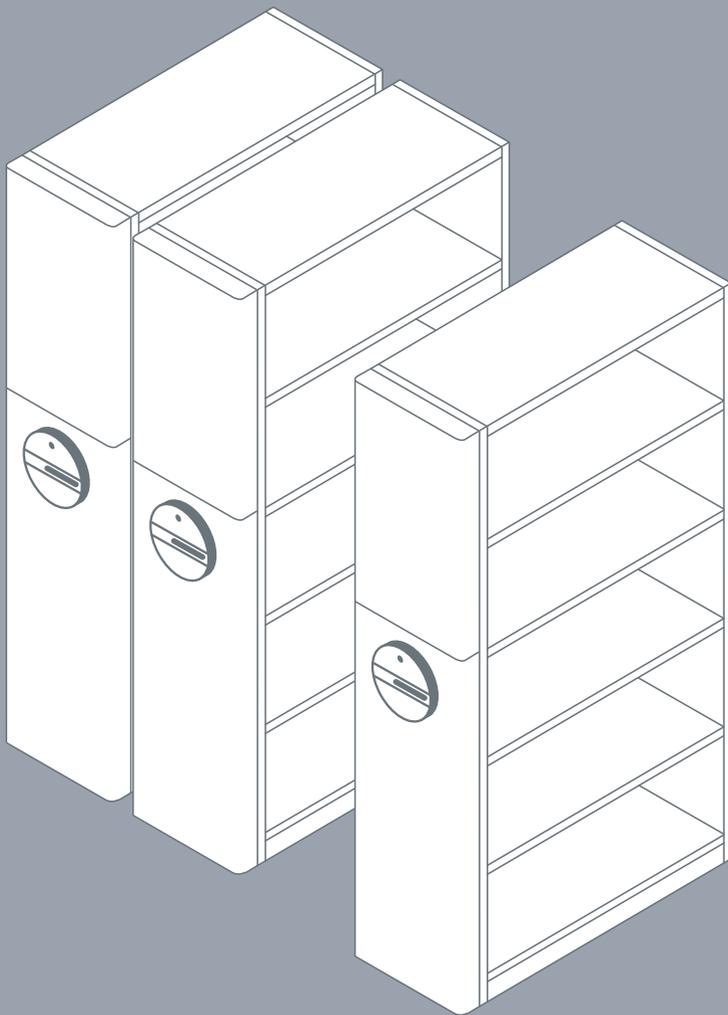


InnerSpace™



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# 1. PRODUCT OVERVIEW

## 1.a What is Bisley InnerSpace?

Bisley InnerSpace is a storage system that combines the high capacity of traditional mobile shelving with contemporary interior design. It is an attractive way of providing 'front office' storage without compromising on space or style.

## 1.b Designed for today's office environment

Bisley InnerSpace is the only truly modular solution developed specifically for the front office.

The system has been designed to offer levels of flexibility and ease-of-use that aren't available in other products. For example, product development was influenced by everything from cleaning requirements to the physical effort required when opening a storage bay. As a result, a brand-new drive mechanism was designed for opening and closing the units.

Storage components are available in a variety of widths, heights and depths, enabling bespoke high-density solutions to be created without unnecessary complexity. In addition, Bisley InnerSpace delivers a completely transportable design that's easy to relocate and reconfigure.

All this practicality is combined with visual symmetry and smooth lines that blend with virtually any office environment. The result is a versatile shelving product that's easy to specify, easy to install and easy to reconfigure.

Frames are of a fully welded modular design without unsightly fixings, providing high structural strength and fast, easy installation or reconfiguration.

The universal nature of the 360mm and 400mm depth shelves means they can accommodate either hanging lateral file pockets or conventional on-shelf storage. Support lugs for all shelves are enclosed within them, safeguarding users and documents by eliminating sharp projections within the storage area.

Roll-out fittings - comprising Filing Frames, Shallow Drawers and Reference Shelves – run on high-capacity linear ball bearing slides, with an interlock to prevent more than one fitting being extended at a time. Filing frames are A4 hanging file depth and are optionally available with moveable cross channels, to enable the storage of Folio and Foolscap pockets also.

InnerSpace has a lubrication-free drive mechanism, using toothed belts enclosed within the end panel to ensure cleaner and quieter operation than a chain drive. The colour-matched ergonomic handle enables a mere 1kg of physical effort to move 1.25 tonnes of archived records.

The track and floor comprises roll-formed galvanised steel rails, loose-laid on the building structural floor and separated by drop-over floor boards which precisely set up the bay spacing. Both rails and boards contain integral levelling adjusters, which means that the system can be precisely levelled (and re-levelled) from above once laid.

Flooring comes in a range of melamine décor finishes, or in a thinner plain board to accept carpeting. Approach edges are treated with anodised aluminium sloping ramps and other edges with aluminium trim sections.

Carriages consist of tubular skates containing precision diecast aluminium wheel blocks at each end, which feature ground steel shafts running in sealed roller bearings. Skates are interconnected via tubular steel axles, linked to the bearing shafts by expanding joints to eliminate running misalignment. Plates mounted on the skates run under the flanges of floor track, to eliminate tipping if the system is used in an abusive or overloaded manner.

## 1.c Adjustment and reconfiguration

The modular design of Bisley InnerSpace is easy to specify and easy to reconfigure, enabling office 'churn' to be dealt with inexpensively.

The system can be extended, reduced or relocated with a minimum amount of disruption. As described above the track system is levelled from above, ensuring uncomplicated assembly.

System internals are all based on a ladder-system frame with a 20mm pitch. This enables the optimum storage density for all media.

Almost any storage requirement can be handled, thanks to a wide range of internal accessories that includes pull-outs, filing frames, media drawers, reference shelves and dividers.

## 1.d Finishes

External InnerSpace components are available in a choice of 20 light-textured finishes and a smooth silver finish.

All internal components are supplied in a light grey colour (RAL7035) that has a smooth finish.

The powder coating used on Bisley InnerSpace products has been developed in partnership with the manufacturer to withstand everyday wear-and-tear. It's impact resistant to BS3900-E3 (25kg/cm), making it tougher than conventional 'wet paint' products. This coating is also corrosion resistant to BS3900-F2 (humidity) and BS3900-F7 at 40°C (water immersion).

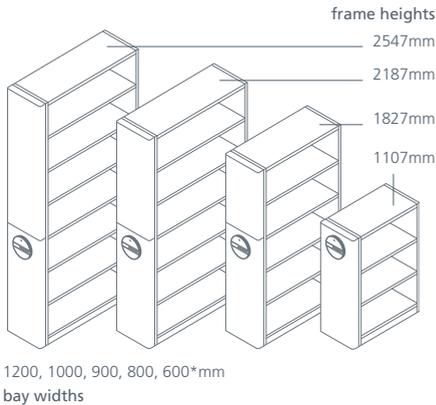
Powder coatings are applied using 'thin film' technology; a process that's solvent-free, unlike most conventional paints. Solids with high molecular weights are applied to tough base resins, resulting in a high glass transition period and high cross-link density. In simple terms, this means the coloured coating on Bisley InnerSpace products is tough, hard and extremely durable.

Bisley has invested heavily in modern, high-tech plant machinery and production facilities. The company operates three state-of-the-art powder plants within its Newport factory and one in its Woking headquarters. These are inherently waste-efficient, thanks to the solvent-free nature of the coatings. Surplus powder is collected and re-used as part of the production process, further reducing waste. Consequently, the powder coating processes used at Bisley are more responsible and more environmentally friendly than any solvent-based wet paint process.

## 1.e Range and component specifications

The InnerSpace system consists of six main components: tracks and floors, carriages, frames, fittings, drive units and claddings. Frame heights, bay depths and fitting widths can all be selected to fit your specific office environment.

### Frame heights and bay widths:



Nominal Deck unit height = frame height + 150mm track/floor/carriage + levelling adjustment

Nominal Access unit height = frame height + 85mm carriage

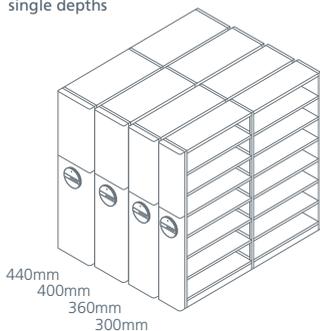
Maximum system depth = 7.2 m (6 bays at 1,200mm or any other combination)

System width = 80 (It is recommended that a static bay is specified every ??m)

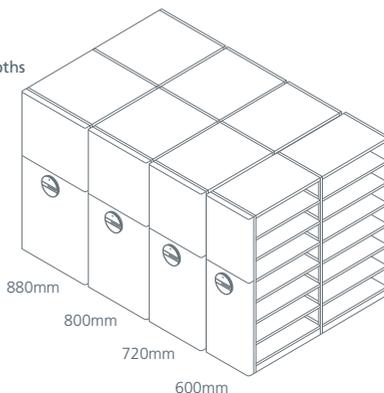
(\*InnerSpace Access only)

## Bay Depths:

single depths



double depths



**Single:** nominal fitting depths + 470mm cabinet depth

**Double:** nominal fitting depths + 940mm cabinet depth

**Fitting loading:** 45kg maximum load based on a 1000mm shelf;  
typical shelf loading 38kg

**Maximum load per single bay:** 400kg

## 2. USING BISLEY INNERSPACE

### 2.a Moving the storage bays

Each row of shelving/fitting is controlled by a drive handle that folds away when not in use. To access media that's stored in a particular Bisley InnerSpace aisle, simply turn the handles and roll the two adjacent bays away from each other.

Before starting, the user needs to pull the handle out (towards himself or herself) and should then release it slowly. This will engage the handle at 90 degrees to its original position. Reversing this process will return the handle to its storage position.

For the frailer user/heavier system the handle span can also be extended to increase the motive power per given input. This is achieved by pulling outwards on the extended fold-out handle. The system has two distinct positions, clearly recognisable by a distinct click and change in required effort when the retaining catches engage.

## 2.b Braking and locking

Every drive handle has a brake button to prevent people from being trapped between the storage bays. Pressing the button will lock the racking in place; turning the handle clockwise will release the button.

The brake must be engaged on both storage bays before anyone enters the aisle between them. It can be used when the handle is partly rotated, with a total of 36 possible positions (i.e. one every 10 degrees).

A lock with a removable key will normally be fitted on the drive handle for the last row of each InnerSpace unit. This allows the entire set of bays to be locked securely when fully closed.

[All dimensions are mm]

## 2.c Precautions during use

- Always make sure any aisle between two bays is empty before closing the storage bays or opening a new aisle.
- Always use the brake button to lock the adjacent bays when working in an aisle. Release the brake and close the bays when you've finished.
- Never leave objects unattended in an open aisle and always close any roll-out features (e.g. extending filing frames) after use.
- Do not climb on the shelving.
- Do not exceed maximum load limits (max. 400kg per bay; the total of individual shelf loads must not exceed 400kg).
- When adjusting shelves, make sure there are at least two shelves in each bay at any time.
- If the pitch of the shelves is changed after installation, take care to ensure all the shelf clips are inserted at the same height and that the shelves are fully pushed down onto the shelf clips.
- Report any structural damage to your supplier immediately.
- Please contact your supplier if you require additional shelving or other accessories.

## 3. MAINTENANCE AND CLEANING

Any operational issues should be reported immediately to your supplier.

In addition, an annual service inspection will help maintain your Bisley InnerSpace installation. It's recommended that the mechanical drive system, the mobile storage bays and the guide tracks are all checked at least once a year.

The tracks have been designed so that small items falling into the 'gutter' are unlikely to affect the smooth running of the storage bays. However, larger items on the 'shoulders' of the track could cause the bays to stick or jam. In either case, regular vacuum-cleaning of the track and floor will reduce any maintenance issues.

Shelves and panels should be cleaned occasionally with warm water and a mild detergent. A damp cloth can be used to remove dust. Please note that regularly polishing any matt components will increase their gloss level.

## 4. SAFETY AND SECURITY

Bisley InnerSpace has an ergonomically-designed drive handle that can multiply the user's effort over a thousand times, enabling 1kg of force to move 1¼ tonnes of archived records. The handle can be adjusted to two different positions (see above), providing a choice of drive torques. Use of this feature will depend on the size and strength of the operator relative to the bay depth and anticipated loading.

A brake mechanism is built into each drive handle, allowing the user to lock storage bays in position quickly and easily when working between them.

Anti-tilt 'pawl' devices are fitted to single mobile bays and closing double mobile bays. These are located under the track surface to prevent the system from toppling.

Finally, the closing mobile bay on each system has a key lock incorporated in the drive handle. Using this in conjunction with full-height side infill, dividing infill and back panels can provide complete security against any unauthorised access.

InnerSpace uses a cam lock system with 400 differs (i.e. 400 possible keys).

## 5. CERTIFICATION

### 5.a FIRA Test Certificate

The latest FIRA (Furniture Industry Research Association) test certificate for Bisley InnerSpace can be downloaded from [www.bisley.com/products/innerspace/pdfs](http://www.bisley.com/products/innerspace/pdfs)

### 5.b Standards

The unique nature of Bisley InnerSpace means there are no directly relevant British Standards when compared with conventional furnishings. The most appropriate standards are those in the SEMA (Storage Equipment Manufacturers' Association) Codes of Practice.

InnerSpace complies with:

- SEMA Code Of Practice: Design of Static Steel Shelving 1986
- SEMA Code Of Practice: Design of Mobile Shelving Systems 2000

It also complies with the European Federation of Materials Handling (Federation Europeenne de la Manutention) standards:

- FEM Code Of Practice: Design of Low-Rise Steel Static Shelving 2000

## 5.c Guarantees

Bisley InnerSpace is guaranteed for one year after installation has been completed. It is recommended that annual inspections are carried out to check mechanical and structural integrity. After a successful inspection it's possible to extend the guarantee period for a further 12 months. Please contact your Bisley InnerSpace supplier for further details of inspections and extended guarantees.

An annual inspection should check all the parts that could have become worn in the previous 12 months. This includes:

- Axles: check for any loosening of joint between skate and axle
- Drive handles: ensure smooth operation; test lock mechanism; check for loosening of handle parts or burrs on brake
- Drive mechanism: check tension of drive belt and rigidity of frame fixing
- Flooring: check for non-level installation, separation across a joint and physical damage through misuse
- Panels: check for physical damage or misalignment from misuse
- Plinths: check for any loosening of fixing; check for physical damage from misuse
- Roll-out fitments: ensure smooth operation; check for physical damage from misuse or overloading
- Shelves: check for physical damage from misuse or overloading
- Tracks: monitor wear; remove dirt and debris; check for non-level installation or separation across a joint

The process will involve:

1. An initial overview of the installation with comments about the current state.
2. Testing the installation to identify any problems. All mobile bays and roll-out components will be operated. Braking, locking and anti-tilt mechanisms will also be checked.
3. Depending on the results of points 1 and 2, it may be necessary to remove protective covers for a more detailed inspection.

Bisley maintains the right to change the specification of its storage systems in accordance with a policy of continuous product development and improvement.

However, the company guarantees continuity of supply for at least ten years after any InnerSpace product is removed from the current product range.

## 6. Modification and Disposal

### 6.a Modification

The InnerSpace system comprises six main components:

- Track and Floor (rails, boards, ramps and edging)
- Carriages (skates, axles, plinths and anti-tip plates)
- Frames (support structure and bracing)
- Fittings (shelves, roll-out shelves, roll-out frames, roll-out drawers and accessories)
- Drive units (belts, pulleys, bearings, drive wheel, brake and lock)
- Claddings (end panels, back panels, side infills and back infills)

The frames have a modular design that's fully welded. This allows easy and quick shelf repositioning without compromising structural strength or requiring unsightly fixings.

When adjusting shelves, always make sure there are at least two shelves in each bay at any time.

### 6.b Disposal

All metal parts can be recycled. The front ramps, the skate wheel blocks and the drive handles are aluminium. The remaining metal components are steel.

The flooring below the carpeting is chipboard. This should be recycled where local facilities exist; alternatively it can be sent to landfill.

The frame end-plugs, roll-out filing frame handles and the anti-tilt mechanism locaters are manufactured from plastic; these components can easily be disassembled and recycled.

## 7. SERVICE RECORD

Date	Description, Comments	Technician	Signature	Next Service Due Date
	Installation			
	Service Year 1			
	Service Year 2			
	Service Year 3			
	Service Year 4			
	Service Year 5			
	Service Year 6			
	Service Year 7			
	Service Year 8			
	Service Year 9			