

All of our desking and tables is suitable for wiring up with cables and sockets for power, data and voice.

Each desking section in the Price Lists illustrate the various styles of cable management on offer. These can be transposed into the matching range of tables unless indicated otherwise.

Below is guidance on the issues this raises with regard to cabling. Also listed is the variety of cables and sockets we can supply. Note that the sockets are split into desk under, desk top and through desk with further choice relating to whether you need them to accommodate power, data and voice or only power.

Note that the modules also vary in the degree they can be customised ranging from choosing the length of the hard-wired cables through to the specific nature of sockets, etc required.

It is assumed in the listings that the voice cabling will be via Cat5e sockets but this can be changed on request to LRJ11 or LJ46C sockets.

## safety

All electrical equipment and installations must be designed and tested to ensure their safety and to comply with the statutory regulations, in particular the Electricity at Work Regulations. Relevant British Standards may be used as a means of demonstrating safety and compliance with the regulations. In the case of electrical systems in office furniture the relevant standard for systems connected to the mains supply by means of a 13A plug is BS 6396:2002. Consequently, electrical accessories including the power modules must meet the electrical standards as set out in BS 6396 as part of the requirements for overall compliance of the desk or workstation electrical system.

## testing

Office furniture electrical installations must be tested when completed to ensure compliance with the Electricity at Work Regulations and BS 6396. Section 7 of BS 6396 sets out the procedures. These tests should also be carried out on reconfigured desks and screens as well as new installations. Periodic inspections and tests must also be carried out to fulfil the requirements for maintaining a safe working environment.

Tests should be performed by trained competent personnel and the results of the tests documented. Copies of the documentation should be passed to the client for safe keeping and future reference.

## specification

The power modules need to be manufactured to BS 5733 with production and quality traceability to assist with ensuring compliance of the completed office furniture installation in accordance with BS 6396.

## fuses

With the publication of the 2002 edition of BS 6396, all power sockets installed in office furniture must now be individually fused.

In our experience, office equipment rarely pulls more than the following current.

These figures are typical because the actual amount will vary depending on the precise nature of the equipment and the manufacturer:

personal computer	2amp
laptop	0.6amp
fax machine	2amp
mobile phone charger	0.05amp
desk lamp 60W tungsten	0.25amp
desk lamp low voltage	0.1amp
fan	0.25amp

Therefore, all our modules are supplied with a fuse rating as low as approximately 3amp unless 5amp is specifically requested.

The fuse rating of 3.15amp is the result of the following formula:

$$750\text{Watts} / \text{UK voltage } 240\text{volts} = 3.15\text{amps}$$

## loading

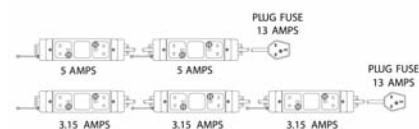
The above assumptions on the current being drawn by typical office equipment also dictates the number of sockets which can be run off the same power lead. BS6396 phrases it in terms of the following fuse ratings:

Six power sockets with 3.15amp fuses

OR

Four power sockets with 5amp fuses.

The diagrams below illustrate the maximum number of power sockets and their relevant fuse ratings that may be connected from a single power cable:



These rules apply to both desk under and desk top modules. Remember that the power sockets in a desk top unit count towards the total if they are powered from the under-desk power module instead of having their own power lead.

Also, no single item of equipment is to be plugged into the power sockets where it has a rated current exceeding the fuse rating. Therefore, the power modules must be used to feed office equipment only – not kettles, coffee makers, vacuum cleaners, fan heaters, etc.

Equipment with ratings which exceed the fuses in the power modules must be provided with its own dedicated power feed. However, it is acceptable to run this power cable through the same cable management system as all the other cables.

## segregation

The Standard calls for the segregation of the power cable from the data and voice cables because of the risk of inference from electromagnetic waves arising from flow of electricity through the power cable. The segregation is to be a physical barrier or a 50mm air gap. Also, if the segregation cannot be continuous then any gaps are to no more than 150mm wide. However, segregation is regarded as unnecessary nowadays because the cables are now screened to protect against interference.

## earthing

Our desking with metal leg frames is to be connected to an earth route in case a problem should occur and the furniture becomes 'live'. All the power modules are supplied with an external earth lead or it can be incorporated as an optional extra. This external earth lead provides the facility to earth the furniture via the power module should it be deemed necessary. The external earth lead is not the earth for the module.

## trip hazards

BS 6396 also stipulates that trip hazards should be minimised by ensuring that the supply socket on the wall or floor is no further than 2metres from the point of entry to the desking. Care should be taken to not have the cables trailing loose along the floor. Moreover, the cable should be clamped at the point of entry. Where a run of desks is involved, this applies to the initial point of entry provided that all the desks in a run are secured together. For additional safety, our power modules include clips to restrain the cable connections.

The European Directive on Working with Computers and the Health and Safety legislation which enacts the guidelines in the UK calls for the working environment to be modified ergonomically to best serve people's needs.

## safety & stability

The basic requirement is for office furniture to be safe and stable and not expose users to the possible risk of injury. The furniture is judged to satisfy this requirement if it is tested and certified to the appropriate European or British Standards for structural strength, safety and stability

## worksurface size & shape

The worksurface needs to be large enough to accommodate all equipment and paperwork and give the user the freedom to re-arrange both to best suit the job in hand. Ideally, the shape of the furniture should fit the anatomy of the user depending upon the nature of the task they are undertaking. For example, a job which requires people's arms to move in an arc would benefit from desking which curves around the user to allow comfortable access to a large area.

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## clearance underneath

There needs to be sufficient clearance under the worksurface and it is generally recognised that a space of 650mm will allow most users change position to maintain their comfort and ease their use of the computer equipment and associated tasks.

## clearance along length

The width of legroom required across the front of the desk must not be less than 600mm but 1000mm is the ergonomically preferred dimension to leave more room for movement.

## working height

The height of the desking also needs to be suitable for 90 per cent of the population and this is judged to be approximately 720mm high. Shorter users would require a chair adjustable in height and a footrest to enable them to achieve a satisfactory working posture. A height adjustable desk up to 900mm can accommodate all of the tall and wheel chair users who present themselves as in need of special consideration.

## working depth

As the majority of office tasks today involve the use of computers, the depth of the worksurface should ensure that the user is not too close to the monitor screen. The optimum eye to monitor distance for a small CRT monitor (15 inch) is 600mm. However, users have different preferences and distances between 500mm and 750mm can be expected. There should also be an additional space of 100mm in front of the keyboard for users to rest their wrists if they wish. Also, the use of flat screens does not mean that you can reduce the desk depth because there still needs to be room underneath for the users' legs.

## monitor height

Users will vary in their preferences but a useful rule of thumb is to line up the top of the monitor with their horizontal line of vision and then adjust it to a satisfactory position for the task in hand and the prevalent lighting conditions. This is likely to require the monitor to be mounted on an articulated arm or placed on an adjustable stand. Users will also benefit from having their documents in a holder on a similar plane to their monitors.

## laptop height

Current legislation in some countries limits laptop use to as little as 2 hours. In the UK, commonsense tells laptop users to be careful not to stay in the same posture for any extended length of time. However, placing their laptops in a stand will raise the height of the screen. When used in conjunction with a separate keyboard, it enables laptop users to achieve a more satisfactory posture and viewing distance for work thereby avoiding fatigue in their hands, arms, neck and eyes. This overcomes all restrictions in the use of laptops. In addition, most of the stands are foldable and sufficiently light to be packed away in the same case as the laptops when travelling.