

KRSS Engineering is the British manufacturing company of the KRSS Group, specialising in Mass Spectrometry and Chromatography products.

Recognising a need for first class products and consumables led us to develop and manufacture several innovative products including vacuum pump noise reduction systems, bench-top Mass Spec workstations, service kits and components. KRSS Engineering also refurbishes turbos, power supplies and vacuum pumps as well as repair boards. These capabilities enable KRSS Engineering to provide affordable products of OEM quality.



### Did you know?

- Typical office noise is approx. 40 dB(A)
- A normal conversation is approx. 60 dB(A)
- Noise from a single vacuum pump can reach 75 dB(A)
- Regulations require action to be taken for noise levels above 85 dB(A)

Loud noise at work can damage your hearing. The Noise Regulations 2005 requires employers to prevent or reduce risks to health and safety from exposure to noise at work. Employees have duties under the regulations too.

# The regulations requires employers to:

- Assess the risks to employees from noise at work:
- Take action to reduce the noise exposure that produces those risks;
- Provide employees with hearing protection if you cannot reduce the noise exposure enough by using other methods;
- Make sure the legal limits on noise exposure are not exceeded;
- Provide employees with information, instruction and training; carry out health surveillance where there is a risk to health.

# What are the action levels and limit values?

The Noise Regulations require employers to take specific action at certain action values. These relate to:

- The levels of exposure to noise of employees averaged over a working day or week; and
- The maximum noise (peak sound pressure) to which employees are exposed in a working day.

#### The values are:

Lower exposure action values:

- Daily or weekly exposure of 80 dB(A);
- Peak sound pressure of 135 dB(A).

Upper exposure action values:

- Daily or weekly exposure of 85 dB(A);
- Peak sound pressure of 137 dB(A).

There are also levels of noise exposure which must not be exceeded:

Exposure limit values:

- Daily or weekly exposure of 87 dB(A);
- Peak sound pressure of 140 dB(A).





Vibration dampers



Total Isolation Solution (TIS) Feet down - pumps isolated



Total Isolation Solution (TIS) Feet up - system can be relocated

#### Save valuable lab space

Features include a retractable keyboard and mouse table, LCD screen mounting, and space for PC, optional solvents cupboard (single vacuum pump model only) and fused power outlets which together provide up to 30% saving in laboratory space.

# No need to leave access space at the rear of the mass spec

Mounted on solid lockable casters the MS-Workstation<sup>™</sup> / LC-Workstation<sup>™</sup> allows for the instruments to be located against a wall or other system, when required the complete system can be moved for maintenance or relocation purposes.

#### All round access

Magnetic access panels allows for easy access to the control PC.

#### Unique slide out pump tray

A sliding pump tray allows full access to the pumps, filters and connectors.

#### **Quieter working environment**

The MS-Workstation features a built in MS-QuietBox  $II^{\text{TM}}$  noise reduction system (where specified) available for single or double vacuum pumps which reduces noise by 15 dB(A) (75%) and maintains pump temperature with integral fans.

#### Maintain optimum pump temperature

Automatic thermal fans adjust speed to the ambient temperature. Designed to keep power consumption and noise levels at minimum and deliver high performance cooling when required.

#### Audible & visual alarm (on a battery back-up)

The MS-QuietBox II features a digital temperature display with a battery backup and audible/visual alarm as standard.

#### Fire resistant not fire retardant

Our high density '0' fire rated foam is manufactured by impregnating standard foam with liquid carbon which is then dried leaving a fire resistant sound absorption material able to withstand various ignition sources. This end product is fire resistant not fire retardant, the difference being that fire retardant foam will burn until the ignition source is removed, whereas our foam will not burn.

#### **Anti-vibration options**

The MS-Workstation offers two solutions to concerns over vibration from the pump interfering with the Mass Spec. Although this is not a problem for the majority of systems, as standard the MS-Workstations feature vibration dampers under the oil tray which removes 99% of the vibration from a standard pump. The vibration dampers comprise of two flat parallel flanges connected by a bonded rubber core and are designed so that the radial and axial elasticity are aligned, providing excellent vibration absorption and noise reduction. For TOF and QTOF machines where sensitivity is more of an issue we recommend the Total Isolation Solution (TIS) available exclusively with MS-Workstation.

#### **Total Isolation Solution (TIS)**

The Total Isolation Solution allows the MS-QuietBox II to be completely detached from the MS-Workstation resulting in 100% of the pump vibration being isolated from the Mass Spec. This unique design allows the MS-QuietBox II to be integrated into the MS-Workstation to allow for easy relocation/maintenance, then once the MS-Workstation is in position, simply wind the TIS stabilisation feet down to isolate the MS-QuietBox II and pump.

#### **Delivery and installation**

Unlike some mobile workbench manufacturers, our innovative design allows us to install the MS-Workstation within your laboratory\* rather than just delivering to your goods in. Our standard frame size is only 770cm (30.3 inches) deep and if necessary your on-site maintenance team can remove the top surface to manoeuvre the MS-Workstation into your designated laboratory. \*Subject to survey.



# KRSS Mass Spec and LC Workstations are ergonomically designed to make it easier to use your LC/GC/MS by providing a number of unique features and benefits.

These purpose built workstations are available for all major manufacturer bench-top Mass Spec instruments and HPLC stacks up to 450 kg and are constructed from durable materials including a Trespa<sup>TM</sup> chemically resistant work surface.



Mobile Laboratory Bench

- Constructed from durable materials including a Trespa<sup>™</sup> chemically resistant worktop
- Built-in MS-QuietBox II<sup>™</sup> noise reduction
- Retractable keyboard and mouse table
- LCD screen mounting
- Solvent waste cupboard
- Mounted on solid lockable casters for easy relocation/maintenance





Digital temperature display



Heavy duty slide out vacuum pump tray



Magnetic detachable access panels



MS-QuietBox II with integrated thermal fans



Solvent preparation draw

## **Technical Specifications**

- Manufactured from Trespa\* chemically resistant work top (\*where specified)
- Mounted on lockable wheels
- Supports loads up to 450Kg
- Sound insulation using 'O' fire rated foam
- Foil lined interior to prevent oil contamination
- CF Marked
- 3 year warranty



## **Options**

## Intelligent Temperature Sensor and Alarm

Quick to configure and connect to your WIFI network, the intelligent sensor will send you an email should the pump temperature go above the pre-set limits.

#### **Custom Sizes**

As we manufacture every part of the MS-Workstation/LC-Workstation we can customise the size to meet your requirements.

#### **Drawers**

Add either three drawer or one drawer system to you MS-Workstation/LC-Workstation.

# FREE customised label with your system name

Let us know the name of your system and we will add it to the MS-Workstation badge FREE of Charge for easy identification.

Dimensions		Frame Dimensions MSWS-01		Work Surface Dime	Work Surface Dimensions MSWS-01	
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## **LC-Workstation™**

Mobile Laboratory Bench for HPLC/UHPLC

- Constructed from durable materials including a Trespa™ chemically resistant worktop
- Optional built-in solvent cupboard
- Mounted on solid lockable casters for easy relocation/maintenance
- Available for single and double stack configurations



## MS-QuietBox II™

Ventilated Vacuum Pump Noise Reduction System

- Manufactured from 6mm UVPC
- Sound insulation using '0' fire rated foam
- Foil lined heat resistant interior to prevent oil contamination
- Unique flat-pack design
- CE Marked
- 3 year warranty

www.ms-quietbox.com







KRSS Engineering is the British manufacturing company of the KRSS Group, specialising in Mass Spectrometry and Chromatography products.





Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.