

ACR3 autochange rack

The ACR3 forms part of the modular rack system (MRS / MRS2) and is an autochange rack for probes and extension bars that incorporate the Renishaw autojoint.

Renishaw's ACR3 is mounted within the CMM's working envelope and facilitates fast, automatic probe exchange without the need for probe re-qualification. In addition, the ACR3 provides covered storage for probes and extension bars. The ACR3 is a passive rack and installation is cable-free allowing straightforward set-up of the rack.

The autojoint is a highly repeatable kinematic joint, one half of which is attached to the probe head, the other half to a probe, extension bar or adaptor.

The ACR3 is a four port mechanical design that traverses the MRS or MRS2 rail. Driven by the motion of the CMM, it locks and unlocks the autojoint between the probe and the probe head. Two ACR3s can be linked to provide an eight port unit.

The modular design of the MRS and MRS2 allow the ACR3 to be combined with other Renishaw products and enables systems to be built to your specific requirements. This gives ultimate flexibility in probe and stylus changing.

Overall extension bar / probe / stylus combinations of up to 480 mm long.



NOTE: The ACR3 requires full integration with front end software (FES) provided by the CMM supplier.

MRS and MRS2 module rack systems

For more information on Renishaw MRS, MRS2, ACR3 and the SCP600 please consult the following documents:

H-1000-5087	ACR3 system installation and user's guide
H-1000-5088	MRS installation and user's guide
H-1000-5255	MRS2 installation guide
H-1000-5097	SCP600 user's leaflet

They can be found in documents and downloads at www.renishaw.com.

NOTE: For vertical mount solutions please contact your supplier or Renishaw office for further details.

Compatible Renishaw products

Heads	PH10M PLUS, PH10MQ PLUS and PH6M
Probes*	SP600M, TP7M, TP6A, TP20, TP200, TP2, TP6
Extension bars	PAA / PEM ranges

* Some non-Renishaw probes are also supported. Contact your CMM supplier for details.

NOTE: While it is possible to change complete extension bar and probe combinations using the ACR3, it is not always possible to remove a probe from the end of an extension bar and replace it with another.

Choosing your ACR3 / MRS system

ACR3

Firstly determine the number of probes that you wish to change automatically. The ACR3 is capable of holding up to four probes, however probes greater than 34 mm diameter, such as SP600, will affect the use of the neighbouring port. Should you require more than four ports, two four port units can be linked to provide an eight port system.

MRS / MRS2 rail

MRS / MRS2 rails are available in 400 mm, 600 mm and 1000 mm lengths. MRS step back adaptors (included in the MRS kits) and front spaced MRS2 rails allow you to use this full working length. The legs can be placed anywhere along the rail depending on the hole spacings of the bed of your machine. Select the length of rail you require based on the following combinations. The space available on MRS2 back spaced rails is not noted here and will depend on the leg position.

MRS direct mount

400 mm



1 x ACR3
or 4 x SCP600

600 mm



2 x ACR3
or 1 x ACR3 + 3 x SCP600
or 6 x SCP600

1000 mm



2 x ACR3 + 5 x SCP600
or 1 x ACR3 + 8 x SCP600
or 11 x SCP600

MRS step back adaptor and MRS2 front spaced rails



1 x ACR3 + 1 x SCP600
or 5 x SCP600

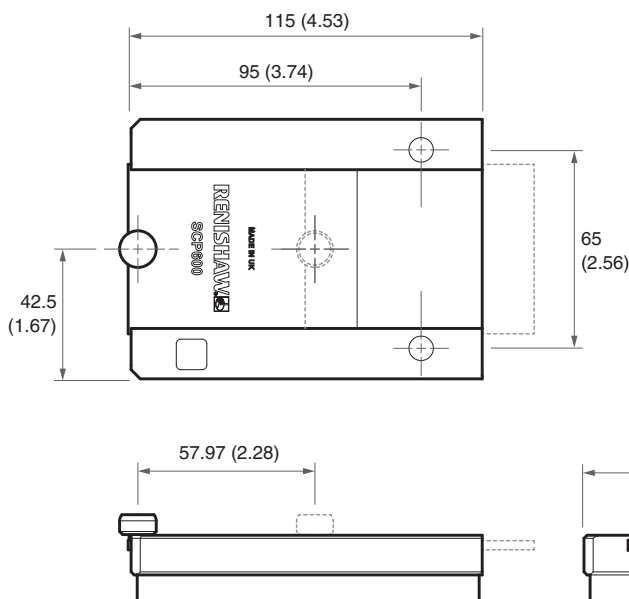


2 x ACR3 + 1 x SCP600
or 1 x ACR3 + 4 x SCP600
or 7 x SCP600



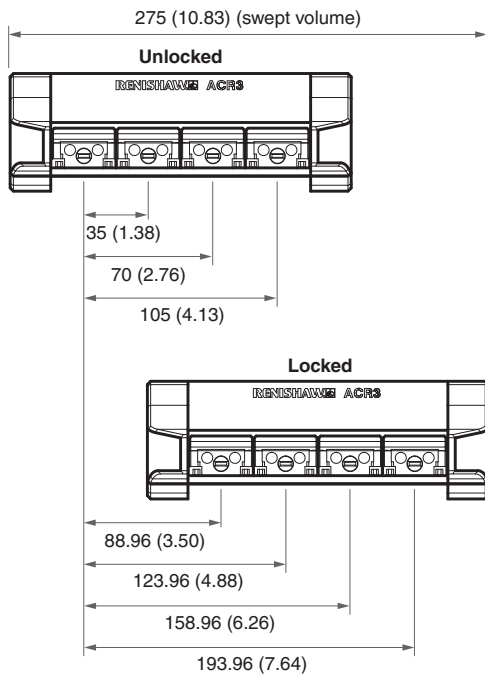
2 x ACR3 + 6 x SCP600
or 1 x ACR3 + 9 x SCP600
or 12 x SCP600

SCP600 dimensions



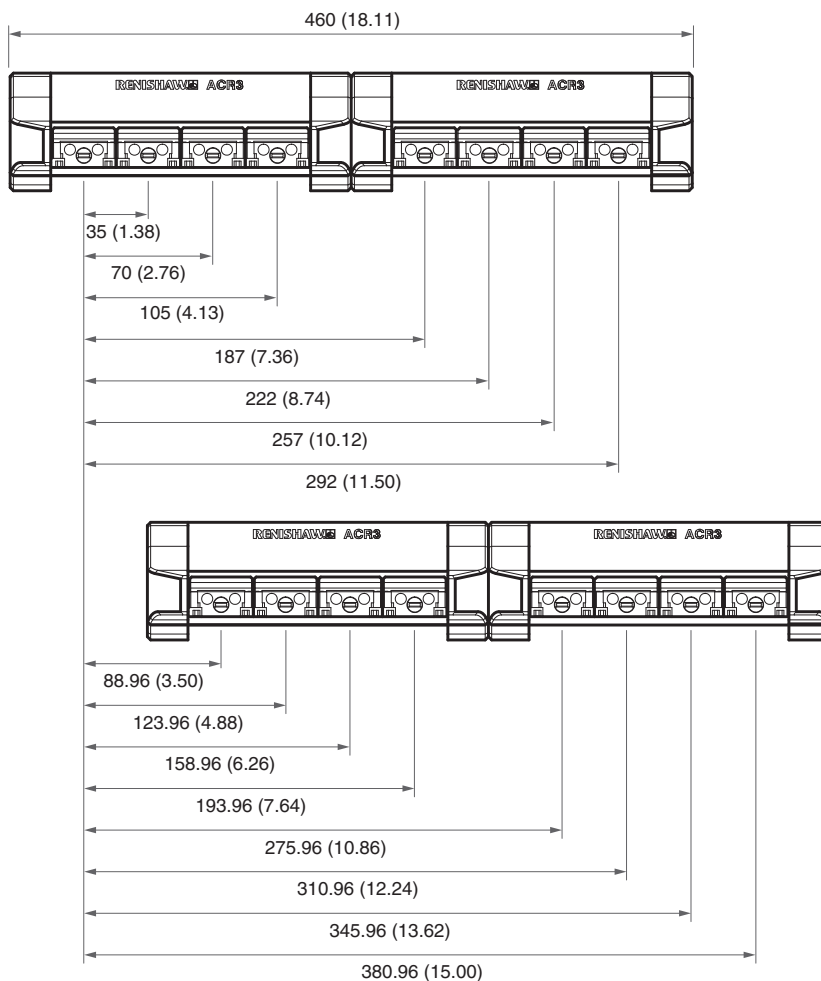
Dimensions in mm (in)

Four port system dimensions



Dimensions in mm (in)

Eight port system dimensions



Dimensions in mm (in)

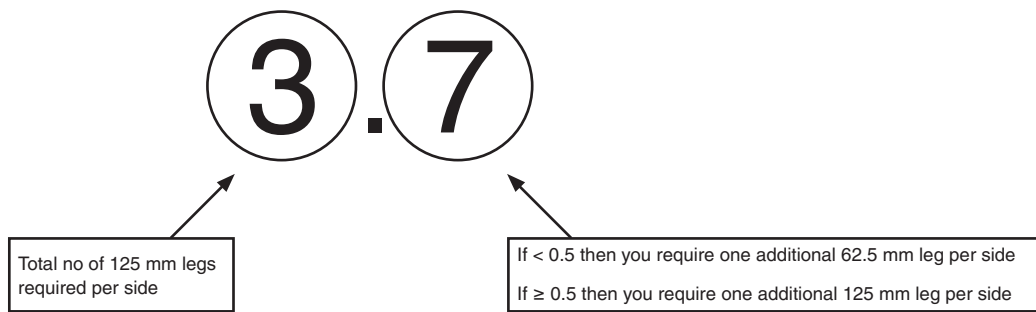
Choosing your system components

To determine the number of MRS legs required for your system, identify the longest extension bar / probe / stylus combination you wish to use and then apply the formula below:

1. Extension bar + probe + stylus + 15 mm* = total length of combination
* 15 mm = rack clearance
2. Total length of combination / 125 mm** = number of legs per side
**125 mm = height of leg
3. Number of legs per side x 2 = number of legs per system

Example:

1. PAA3 + TP200 + 100 mm stylus + 15 mm = total length of combination
300 mm + 43 mm + 100 mm + 15 mm = 458 mm
2. 458 mm / 125 mm = 3.67



Therefore, in this case 4 x 125 mm legs are required per side.

3. 4 x 2 = 8
8 x 125 mm legs are required for this system. This is the maximum recommended number of legs.

Once you have calculated your requirements, complete the table below prior to ordering your system.

NOTE: All MRS kits include 2 x MRS feet, 4 x 125 mm legs and 2 x step back adaptors as standard. Therefore, you only need to order additional components should your system require it.

Parts list

Please quote the part number when ordering equipment.

Type	Description	Unit	Part No.	Your system requirements
ACR3	4 port unit	1	A-5036-0005	

www.renishaw.com/ACR3



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