

ACR3 auto change rack



System description

- 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 forms part of the modular rack system (MRS) and is an auto change rack for probes and extension bars that incorporate the Renishaw autojoint.
- 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 rail. Driven by the motion of the CMM, it locks and unlocks the autojoint between the probe and the probe head.

System features

- The ACR3 is a passive rack and installation is cable-free allowing straightforward set-up of the rack.
- The modular design of the MRS allows 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.
- Two ACR3s can be linked to provide an eight port unit.

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







Data sheet

ACR3 auto change rack

Choosing your ACR3 / MRS system (see back page for more details on MRS)

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.

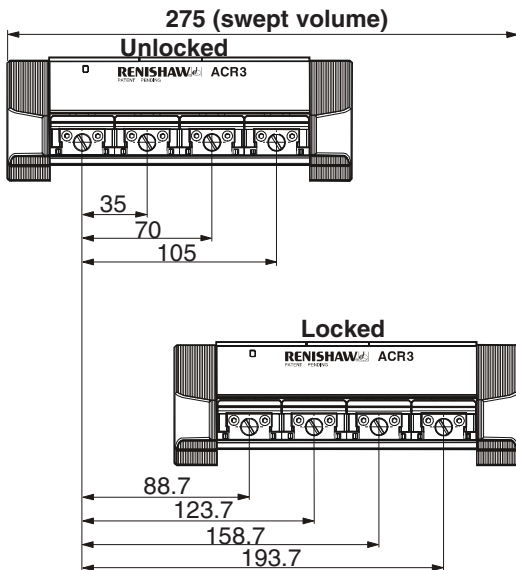
MRS rail - The MRS rail is available in 400, 600 and 1000 mm lengths. Step back adapters (included in the MRS kits) allow you to use this full working length. The MRS legs can be placed anywhere along the rail depending on the hole spacings of the bed of your machine. Select the length of rail you require based on the following combinations.

	Direct mount	Step back adapter
400 mm	 1 x ACR3 or 4 x SCP600	 1 x ACR3 + 1 x SCP600 or 5 x SCP600
600 mm	 2 x ACR3 or 1 x ACR3 + 3 x SCP600 or 6 x SCP600	 2 x ACR3 + 1 x SCP600 or 1 x ACR3 + 4 x SCP600 or 7 x SCP600
1000 mm	 2 x ACR3 + 5 x SCP600 or 1 x ACR3 + 8 x SCP600 or 11 x SCP600	 2 x ACR3 + 6 x SCP600 or 1 x ACR3 + 9 x SCP600 or 12 x SCP600

If your requirements are not covered by the above combinations please use the dimensions below to help choose your system:

Four port system

Dimensions in mm

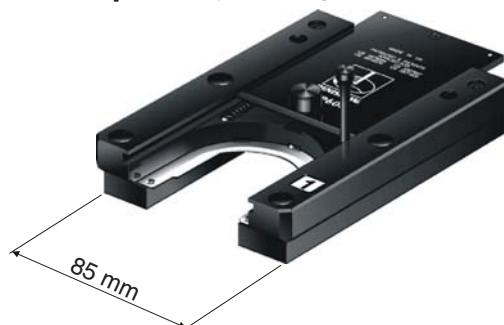


Eight port system



Maximum swept volume of 8 port system is **460 mm**

SCP600 port - stylus change port for SP600



Choosing your system components

MRS legs - 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.

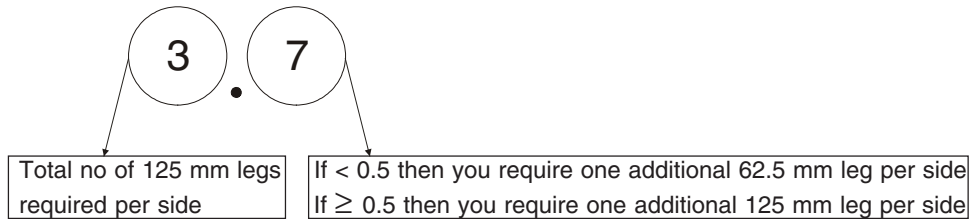
2. Total length of combination / 125 mm** = number of legs per side
**125 mm = height of leg.

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.

Remember: All MRS kits include 2 x MRS feet, 4 x 125 mm legs and 2 x step back adapters 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	
MRS kit 1	400 mm rail	1	A-4192-0001	
MRS kit 2	600 mm rail	1	A-4192-0002	
MRS kit 3	1000 mm rail	1	A-4192-0003	
MRS legs (additional)	62.5 mm	1	A-4192-0061	
MRS legs (additional)	125 mm	1	A-4192-0053	
SCP600	Port	1	A-2098-0933	

Compatible Renishaw products:

Heads: PH10M, PH10MQ and PH6M
Probes*: SP600M, TP7M, TP6A, OTP6M
 (with PAA1): TP20, TP200, TP2, TP6
Extension bars: PAA / PEM ranges

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.

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

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MRS

For more information on Renishaw's modular rack system (MRS), 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-1000-5097 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.

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