



# Pedal Robots

## AB Dynamics Pedal Robot Range:

RBR600, BR1000, RBR1500, CBAR600, CBAR1000, CBAR600L, AR1, CR

### CBAR

Combined Brake and Accelerator Robots are single actuator units with two output levers to control a vehicle's brake and throttle. The CBAR600 is designed to provide vehicle speed control and has a lower peak brake force than the BR1000 / RBR1500 but can also be used for accurate brake force inputs up to 600N. The CBAR1000 is slightly larger in size but offers an increase in performance over the CBAR600. The CBAR600 is available in a low configuration (CBAR600L) which offer the same brake performance with a smaller space claim. Compared to separate brake and throttle actuators, the CBAR is more compact, lighter and quicker to install.



CBAR

### BR

A Brake Robot is used to apply accurate inputs to a vehicle's brake pedal for braking characterisation and handling behaviour measurement. It is typically used to apply step or ramped force or position inputs to the brake pedal. It can also be used to control vehicle deceleration or brake-line pressure with a suitable feedback transducer. The BR1000 can be combined with an AR1 to give control of a vehicle's speed. The BR1000 brake robot is the original model and is available in two configurations. The on-seat configuration is optimised to allow quick installation in a wide range of vehicles, while the under-seat configuration gives the most rigid installation and includes a racing bucket seat for the driver. It offers a reliable, high-performance actuator suitable for most brake testing.



Brake Robot (BR1000)

### RBR

A Rotary Brake Robots use compact rotary actuators which provide a very high apply rate. The RBR1500 offers the highest performance of any AB Dynamics brake robot and is designed to give the combination of high force and rapid apply rate needed for Brake Assist System testing. The RBR600 uses the same actuator as a CBAR600 for moderate brake force testing.



Rotary Brake Robot (RBR1500)

### CR

The clutch robot is available with the CBAR600 or the CBAR1000. It is used in conjunction with the Gearshift Robot to enable driverless testing in cars with manual gearboxes. Clutch engage / declutch profiles can be defined to suit the test vehicle.



Clutch Robot (CR)

### AR

The AR1 accelerator robot uses a compact rotary actuator to control throttle pedal position. Used on its own it can give accurate speed control for constant speed / acceleration, and it can be combined with a BR1000 to give full speed control (including deceleration). It can also be used for control of throttle pedal position.



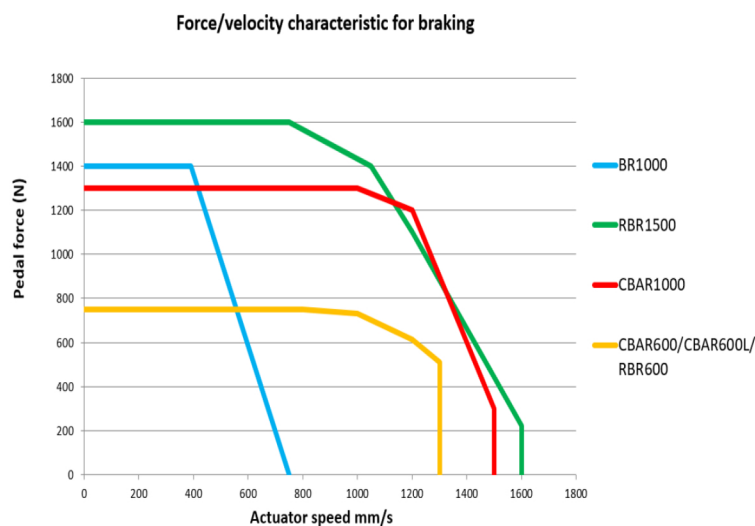
Accelerator Robot (AR)

# Which Pedal Robot is Suitable for You?

- CBAR600** Controls both the brake and accelerator pedal, with enough power to replicate typical driving pedal inputs. Perfect for AEB and other ADAS testing. The CBAR600 can be upgraded for driverless testing.
- CBAR600L** Offers the same brake performance as the CBAR600 in a more compact package. Not suitable for the driverless upgrade.
- CBAR1000** As CBAR600 but with >1000N force capability and increased speed capability. The CBAR1000 can be upgraded for driverless testing.
- BR1000** The standard brake robot model in use around the world. High force capability allows aggressive brake tests but can also be used for more subtle tests such as pedal-feel quantification. Available in on-seat or under-seat configuration.
- RBR1500** For customers needing the ultimate in aggressive brake testing. High-power rotary actuator gives the highest braking force and speed. Well-suited for brake fade testing.
- RBR600** Compact brake robot which gives high speed (over 1000mm/s) but lower peak force than BR1000 or RBR1500.

## Performance Characteristics

### Pedal Robots Force/Speed Curves



### Accelerator Robots

	Accelerator Robots	CBAR600 CBAR1000	CBAR600L
Maximum Force	150N	-	-
Maximum Speed	300mm/s	-	-
Maximum Pedal Stroke	130mm	-	-
Maximum Throttle Force	-	200N	175N
Maximum Throttle Speed	-	650mm/s	715mm/s
Maximum Throttle Stroke	-	125mm	125mm