

Pedal Robots

Precise and repeatable control of brake, throttle and clutch inputs



Combined Brake and Accelerator Robot (CBAR)

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Combined Brake and Accelerator Robots are single actuator units with two output levers to control a vehicle's brake and throttle. The CBAR 600 is designed to provide vehicle speed control and has a lower peak brake force than the RBR 1500 but can also be used for accurate brake force inputs up to 600N. The CBAR 600 is available in a low configuration (CBAR 600L) which offer the same brake performance with a smaller space claim. The CBAR 1000 is slightly larger in size but offers an increase in performance over the CBAR 600. Compared to separate brake and throttle actuators, the CBAR is more compact, lighter and quicker to install.

Rotary Brake Robots (RBR)

Rotary Brake Robots use compact rotary actuators which provide a very high apply rate. The RBR 1500 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 RBR 600 uses the same actuator as a CBAR 600 for moderate brake force testing.



Rotary Brake Robot (RBR)

Clutch Robot (CR)

The Clutch Robot is available with the CBAR 600 or the CBAR 1000. 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)

Accelerator Robot (AR)

The Accelerator Robot (AR 1) uses a compact rotary actuator to control throttle pedal position. It gives accurate speed control for constant speed/acceleration, and can also be used for control of throttle pedal position.



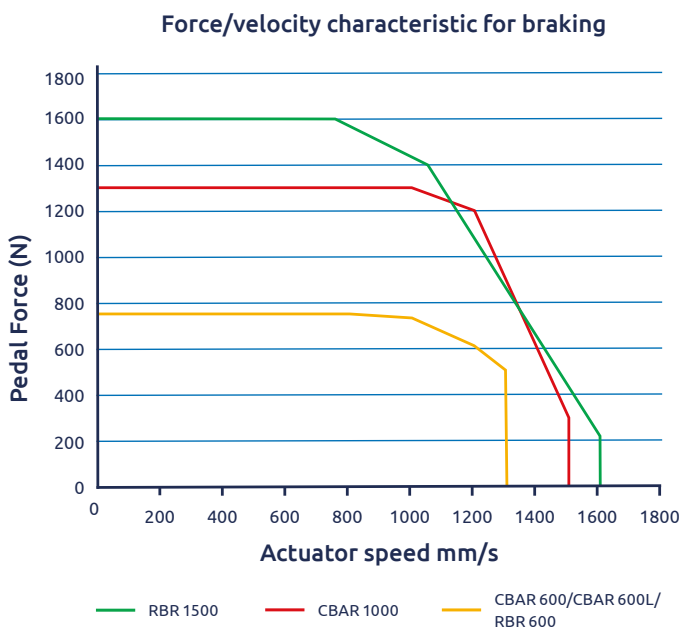
Accelerator Robot (AR)

CBAR and RBR comparison

CBAR 600	Controls both the brake and accelerator pedal, with enough power to replicate typical driving pedal inputs. Perfect for AEB and other ADAS testing. The CBAR 600 can be upgraded for driverless testing.
CBAR 600L	Offers the same brake performance as the CBAR 600 in a more compact package. Not suitable for the driverless upgrade.
CBAR 1000	As CBAR 600 but with >1000N force capability and increased speed capability. The CBAR 1000 can be upgraded for driverless testing.
RBR 600	Compact brake robot which gives high speed (over 1000mm/s) but lower peak force than the RBR 1500.
RBR 1500	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.

Performance characteristics

Pedal Robots force/speed curves



Accelerator Robot comparison

	Accelerator Robots	CBAR 600 CBAR 1000	CBAR 600L
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

About AB Dynamics

AB Dynamics is a leading global provider of automotive test and verification solutions that facilitate the development of vehicles that are safer, more efficient and sustainable. As part of the AB Dynamics Group of companies we enable customers to develop and test in virtual environments, validate on the track and then evaluate vehicles on public roads.

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