

ACTUATORS

DESIGNED TO OUT LIVE THE LIFE OF THE ENGINE

When a GAC actuator is installed on an engine and electronically connected to compatible GAC governing system components, a high performance speed control system results. The design baseline for GAC actuators incorporates fast responses, multi-voltage usage, and proven reliability to allow for more precise control. All of GAC actuators are easy to install with no maintenance required.

THROTTLE BODY

The ATB Series integral throttle body electric actuators are designed to control the air or air/fuel mixture to a gas or gaseous-fueled engine. They are typically used to control an engine by working in tandem with a conventional fuel mixer. The design baseline for the ATB Series incorporates fast response and proven reliability to allow for efficient and more precise control. The ATB Series actuator directly drives the integrated throttle plate. Internal return springs provide for a normally closed valve for fail-safe operation. This ensures that the throttle plate returns to the minimum fuel position when the actuator becomes de-energized. Available with throttle plate position feedback sensor, higher temperature rating, or internal sealing for turbo-charged applications.

ATB T1 Series



- ▶ 12 or 24 VDC
- ▶ 25mm to 40mm Bore Size
- ▶ Packard Connector

ATB251T1N-12 or -24	25mm
ATB251T1F-12 or -24	25mm / Position Feedback Sensor
ATB301T1N-12 or -24	30mm
ATB301T1F-12 or -24	30mm / Position Feedback Sensor
ATB351T1N-12 or -24	35mm
ATB351T1F-12 or -24	35mm / Position Feedback Sensor
ATB401T1N-12 or -24	40mm
ATB401T1F-12 or -24	40mm / Position Feedback Sensor

ATB T2 Series



- ▶ 12 or 24 VDC
- ▶ 45mm to 65mm Bore Size
- ▶ Packard Connector

ATB452T2N-12 or -24	45mm
ATB452T2N14-12 or -24	45mm / High Temperature / Sealed
ATB452T2F14-12 or -24	45mm / Position Feedback Sensor / High Temperature / Sealed
ATB552T2N-12 or -24	55mm
ATB552T2N14-12 or -24	55mm / High Temperature / Sealed
ATB552T2F14-12 or -24	55mm / Position Feedback Sensor / High Temperature / Sealed
ATB652T2N-12 or -24	65mm
ATB652T2N2-12 or -24	65mm / Mechanical Position Indicator
ATB652T2N124-12 or -24	65mm / High Temperature / Sealed Mechanical Position Indicator
ATB652T2N14-12 or -24	65mm / High Temperature / Sealed
ATB652T2F14-12 or -24	65mm / Position Feedback Sensor / High Temperature / Sealed

ATB T3 Series



- ▶ 12 or 24 VDC
- ▶ 75mm Bore Size
- ▶ Packard Connector

ATB753T3N4-12 or -24	75mm / Sealed
ATB753T3N24-12 or -24	75mm / Mechanical Position Indicator / Sealed
ATB753T3N14-12 or -24	75mm / High Temperature / Sealed
ATB753T3N124-12 or -24	75mm / High Temperature / Sealed / Mechanical Position Indicator
ATB753T3F14-12 or -24	75mm / Position Feedback Sensor / Sealed High Temperature

* Call GAC for sizes 95mm and above

ATB T4 Series



- 12 or 24 VDC
- 85mm to 120mm Bore Size
- Packard Connector
- High Temperature

ATB85T4N14-12 or -24	85mm / Sealed	ATB95T4N14-12 or -24	95mm / Sealed
ATB85T4N124-12 or -24	85mm / Sealed / Mechanical Position Indicator	ATB95T4N124-12 or -24	95mm / Sealed / Mechanical Position Indicator
ATB85T4F14-12 or -24	85mm / Sealed / Position Feedback Sensor	ATB95T4F14-12 or -24	95mm / Sealed / Position Feedback Sensor
		ATB110T4N14-12 or -24	110mm / Sealed
		ATB110T4N124-12 or -24	110mm / Sealed / Mechanical Position Indicator
		ATB110T4F14-12 or -24	110mm / Sealed / Position Feedback Sensor
		ATB120T4N14-12 or -24	120mm / Sealed
		ATB120T4N124-12 or -24	120mm / Sealed / Mechanical Position Indicator
		ATB120T4F14-12 or -24	120mm / Sealed / Position Feedback Sensor

PUMP MOUNTED

GAC's Pump Mounted Actuators are field proven proportional actuators designed to mount directly to fuel injection pumps to achieve an integrated proportional servo fuel package. Since the design has no sliding parts and its components are sealed; outstanding reliability results with no maintenance required.

100 Series



- For Stanadyne 'D' Series Pumps
- For Delphi DPG Pumps
- 12 or 24 VDC

ADC100-12 or -24	Stanadyne 'D' Series Pump / Commercial Connector
ADD103B-12 or -24	Delphi DPG / DP210G Pumps / Packard Connector / Mating Connector
ADE103B-12 or -24	Delphi DPG / DP210G Pumps / Packard Connector with Mating Connector Harness

175/176 Series



- For Bosch 'P' and 'A' Pumps
- Connects Directly to the Fuel Rack
- Manual Shut-Off Mechanism
- 12 or 24 VDC

ADD175A-12 or -24	Bosch 'P' Pump / Packard Connector
ADE175A-12 or -24	Bosch 'P' Pump / Packard Connector with Mating Connector
ADD176A-12 or -24	Bosch 'A' Pump / Left Hand Rack / Packard Connector
ADE176A-12 or -24	Bosch 'A' Pump / Left Hand Rack / Packard Connector with Mating Connector
ADE176AA-12 or -24	Bosch 'A' Pump / Left Hand Rack / Packard Connector with Mating Connector / Cold Start Assist

275 Series



- Bosch 'P' 3000 - 7000 Fuel Injection Pump
- Controls Pumps on Engines up to 12-Cylinders
- Manual Shut-Off Mechanism

ACB275H	Multi VDC / MIL Connector
ACE275H-24	24 VDC / Packard Connector
ACE275HD-24	24 VDC / Packard Connector / Heavy Duty Bearing Retention
ACE275J-24	24 VDC / High Torque Return Spring with Oil Drain Fitting
ACE275K	24 VDC / Heavy Duty Bearing Retention / Packard Connector / Position Feedback Sensor

295 Series



- Bosch 'P' 9 and 10 Pumps
- Control Pumps on Engines up to 16 Cylinders
- 24 VDC

ACE295-24	Packard Connector
ACE295F-24	Packard Connector / Position Feedback Sensor

ENGINE MOUNTED

GAC's Engine Mounted Actuators exhibit a high quality construction design for high temperature applications and are uniquely optimized to outperform externally mounted electric actuators and other competitive designs. Since GAC's fast responding fuel control design has no sliding parts and its components are sealed; outstanding reliability results with no maintenance required.

110 Series



- For Deutz 1011 Engines
- For 2,3, and 4 Cylinder.
- 12 or 24 VDC

ACD110-12 or -24

Deutsch Connector

ACE110-12 or -24

Deutsch Connector with Mating Connector

180 Series



- 12 or 24 VDC
- Deutz 1012/1013 & 2012 Engines
- Volvo 520/720 Engines

ADD180G-12 or -24

Packard Connector with Mating Connector

ALR Series



- Pull Electrical Linear Actuators
- Mounts Directly to Engine's Fuel Pump
- Utilizes Precision Linear Ball Bearings instead of Bushings

ALR160-S03-12 or -24

12 or 24 VDC / Spade Connector / Shibaura Series

ALR190-I03-12 or -24

12 or 24 VDC / Spade Connector / Isuzu L-Series 3LB1 3LD1 3LD2 4LE1 4LE2

ALR190-I04-12 or -24

12 or 24 VDC / Packard Connector / Isuzu L-Series 3LB1 3LD1 3LD2 4LE1 4LE2

ALR190-K04-12 or -24

12 or 24 VDC / Packard Connector / Kubota Super 5 Series D905, D1005, D1105, D1105-T, V1305, V1505, V1505-T 3300 Series 3800

ALR190-KM03-12 or -24

12 or 24 VDC / Packard Connector / M03 Engines

ALR190-KV2403-12 or -24

12 or 24 VDC / Packard Connector / V2403 Engines

ALR190-KV3073-12 or -24

12 or 24 VDC / Packard Connector / V3073 Engines

ALR190-KV3307-12 or -24

12 or 24 VDC / Packard Connector / V3307 Engines

ALR190-M04-12 or -24

12 or 24 VDC / Packard Connector / Mitsubishi L-Series L2E L3E, S3L Series S3L, S4L Series S4L S4L2

ALR190-P04-12 or -24

12 or 24 VDC / Packard Connector / Perkins 404 700

ALR190-Y03-12 or -24

12 or 24 VDC / Spade Connector / Yanmar TNV Series 2TNV70 3TNV70 3TNV76 3TNV82A 3TNV84 3TNV84T 3TNV88 4TNV84 4TNV94L 4TNV88 4TNV98 4TNV98T / Isuzu C-Series 2CA 3CA 3CB 3CD 3CDT

ALR190-Y04-12 or -24

12 or 24 VDC / Packard Connector / Yanmar TNV Series 2TNV70 3TNV70 3TNV76 3TNV82A 3TNV84 3TNV84T 3TNV88 4TNV84 4TNV94L 4TNV88 4TNV98 4TNV98T / Isuzu C-Series 2CA 3CA 3CB 3CD 3CDT

UNIVERSAL

GAC's Universal actuators are proportional electro servo designed for mechanical actuation of fuel system control levers. They exhibit GAC's uniquely optimized fuel control and will outperform externally mounted electric actuators. GAC's sealed integral actuators are simple to install and possess no sliding parts, resulting in outstanding reliability and no maintenance required.

104 Series



- ▶ Briggs & Stratton Engines
- ▶ Kohler 12 - 30 HP Engines
- ▶ <25 msec Response
- ▶ Environmentally Sealed

ADD104-12 12 VDC / 0.29 lb-ft Torque / Male Spade

120 Series



- ▶ Rotary Actuators
- ▶ Sized for Engines up to 150 hp
- ▶ 1.0 lb-ft Torque
- ▶ For Small Inline Fuel Pumps or Carburetors

ACB120 Multi VDC / MIL Connector / 25° Rotation

ADB120 Multi VDC / MIL Connector / 25° Rotation

ADB120E4 Multi VDC / MIL Connector / Fuel Metering / Cummins PT Fuel System

ADC120S -12 or -24 12 or 24 VDC / Commercial Connector / 25 ° Rotation / Serrated Shaft

2001 Series



- ▶ Rotary Actuator
- ▶ 12.0 lb-ft Torque
- ▶ < 80 msec Response
- ▶ Sized for engines from 400 - 1800 hp

ACB2001 24 VDC / 12.0 Max lb-ft Torque / 35 ° Rotation

225 Series



- ▶ 2.2 lb-ft Torque
- ▶ 25° Rotation
- ▶ < 45 msec Response
- ▶ For Multi-Plunger Fuel Pumps & Carburetors

ACB225 Multi VDC / MIL Connector

ADB225 Multi VDC / MIL Connector / Diecast Housing

ADC225S -12 or -24 12 or 24 VDC / Commercial Connector / Serrated Shaft

ADC225GS -12 or -24 12 or 24 VDC / Commercial Connector / Serrated Shaft / Lesser Rate Return Spring

ADC225JS -12 or -24 12 or 24 VDC / Commercial Connector / Serrated Shaft / Greater Rate Return Spring

ADC225KS -12 or -24 12 or 24 VDC / Commercial Connector / Serrated Shaft / High Temperature Applications

ALN Series



- ▶ Push Linear Actuators
- ▶ High Quality Antifriction Bearings
- ▶ Replaces Competitive Models
- ▶ 22mm Stroke

ALN025-12 or -24 12 or 24 VDC / 0.25 ft.lb. / Spade Connector

ALN025A-12 or -24 12 or 24 VDC / 0.25 ft.lb. / Spade Connector / Clevis Kit

ALN050-12 or -24 12 or 24 VDC / 0.50 ft.lb. / Spade Connector

ALN050A-12 or -24 12 or 24 VDC / 0.50 ft.lb. / Spade Connector / Clevis Kit

ACCESSORIES - ACTUATORS

Cable Harnesses



CH1203	Actuator - 12' - 6 pin MIL Connector ACB/ADB Actuators (MIL)
CH1210	Actuator - 12' - 90° Connector (MIL)
CH1212	Actuator - 30' - 6 pin MIL Connector
CH1215	Packard - Actuator Mating Half
CH1515	AB Position Sensor Mating Half - 6' Shielded / Feedback Sensor

Installation Kits



KT130	ALN Series Actuators
KT153	ACE175A Series - Motorpal Pump PP4M10P1N13021
KT175-RS-R	ADD175 Series / Bosch 'A' Pump / Right Hand Rack
KT176A	ADE176A Series - Bosch 'A' Pump
KT231J	Bosch RSV - Left Side - Used With ALN050
KT232J	Bosch RSV - Right Side
KT275	ACB275 - Bosch 3000 Pump / Camshaft Bearing Kit
KT276	ACB275 - Bosch 7000 Pump / Camshaft Bearing Kit
KT278	ACB275 Actuators - RB RP21 with RB Plate
KT278-1	ACB275 Actuators - RP21
KT283	ACD175 BYC 'P' Pump
KT295	ACE295 Actuators
KT289	ADD175 - Bosch 'P' Pump / Governor Only

Custom Specific Installation Kits Available, Contact GAC

Service Items



GA102	Mounting Gasket for 100 Series
HW13-001	5 Star Torx Bit / Stanadyne
KT6724	Fuel Valve Only / ADB120E4

Mating Connectors



EC1000	Actuator Straight / Military Style Connector
EC1010	Actuator 90° / Military Style Connector
EC1120	110 Series - Mating Half
EC1300	Packard - Electric Actuator
EC1515	AB Feedback Sensor Mating Half Connector

Levers



LE1100-3	4.8" - ADC Actuators - 3/16" Holes / Smooth Shaft
LE1200-3	4.8" - ACB/ADB Actuators - 1/4" Holes / Serrated Shaft
LE1400-1	4.3" - ACB/ADB Actuators - 3/16" Holes / Serrated Shaft
LE1400-2	4.3" - ACB/ADB Actuators - 1/4" Holes / Serrated Shaft
LE1400-4	3.3" - ACB/ADB Actuators - 1/4" Holes / Smooth Shaft
LE1500-1	4.3" - ADC Actuators - 3/16" Holes / Smooth Shaft
LE1500-2	4.3" - ADC Actuators - 1/4" Holes / Smooth Shaft
LE2000	4.4" - ACB2001 - M8 Holes

Threaded Rod



RD100	1/4 - 28 (Price per Inch of Length)
RD102	1/4 - 28 - Precut to 12"

Bearing Rod Ends



BR100	3/16" I.D. - 10-32 Thread
BR101	3/16" I.D. - 10-32 Left Hand Thread
BR200	1/4" I.D. - 1/4-28 Thread
BR201	1/4" I.D. - 1/4-28 Left Hand Thread
BR300	M5 I.D. and Thread
BR400	M6 I.D. and Thread