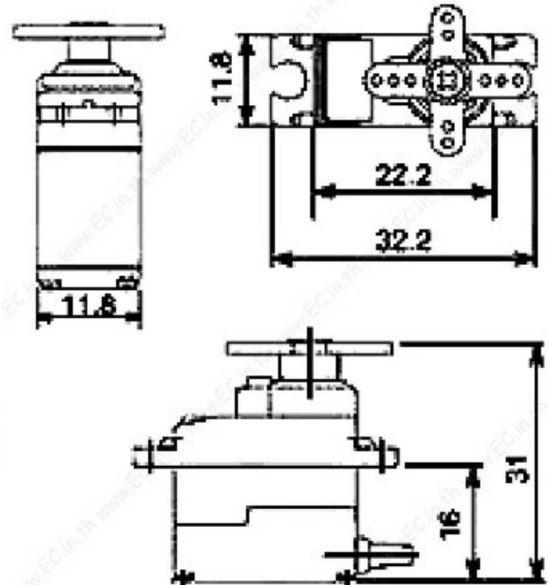# SG90 9 g Micro Servo

Tiny and lightweight with high output power. Servo can rotate approximately 180 degrees (90 in each direction), and works just like the standard kinds but *smaller*. You can use any servo code, hardware or library to control these servos. Good for beginners who want to make stuff move without building a motor controller with feedback & gear box, especially since it will fit in small places. It comes with a 3 horns (arms) and hardware.

Specifications
• Weight: 9 g
• Dimension: 22.2 x 11.8 x 31 mm approx.
• Stall torque: 1.8 kgf·cm
• Operating speed: 0.1 s/60 degree
• Operating voltage: 4.8 V (~5V)
• Dead band width: 10 µs
• Temperature range: 0 ºC – 55 ºC
Position "0" (1.5 ms pulse) is middle, "90" (~2ms pulse) is all the way to the left. ms pulse) is all the way to the right, ""-90" (~1ms pulse) is all the way to the left.

TowerPro SG90 - Micro Servo

Basic Information

Modulation: Analog

Torque: **4.8V:** 25.0 oz-in (1.80 kg-cm)

Speed: **4.8V:** 0.10 sec/60°

Weight: 0.32 oz (9.0 g)

Dimensions:

Length: 0.91 in (23.1 mm)

Width: 0.48 in (12.2 mm)

Height: 1.14 in (29.0 mm)

Motor Type: 3-pole
Gear Type: Plastic
Rotation/Support: Bushing

Additional Specifications

Rotational Range: 180°
Pulse Cycle: ca. 20 ms
Pulse Width: 500-2400 µs

T-Pro Mini Servo SG-90 9G Servo

The **TP SG90** is similar in size and weight to the Hitec HS-55, and is a good choice for most park flyers and helicopters. Hobbyists from around the world has used the SG90 on famous planes like GWS Slow Stick, E-Flite Airplanes, Great Planes, Thunder Tiger, Align, EDF jets and more. If you are looking for a servo that won't break your arm or leg, this is the perfect choice for you!

The **TP SG90** servo weighs 0.32 ounces (9.0 grams). Total weight with wire and connector is 0.37 ounces (10.6 grams).

The **TP SG90** has the universal "S" type connector that fits most receivers, including Futaba, JR, GWS, Cirrus, Blue Bird, Blue Arrow, Corona, Berg and Hitec.

The wire colors are **Red = Battery(+) Brown = Battery(-) Orange = Signal**

TP SG90 Specifications:

Dimensions (L x W x H) = 0.86 x 0.45 x 1.0 inch (22.0 x 11.5 x 27 mm)

Weight = 0.32 ounces (9 grams)

Weight with wire and connecter = 0.37 ounce (10.6 grams)

Stall Torque at 4.8 volts = 16.7 oz/in (1.2 kg/cm)

Operating Voltage = 4.0 to 7.2 volts

Operating Speed at 4.8 volts (no load) = 0.12 sec/ 60 degrees

Connector Wire Length = 9.75 inches (248 mm)
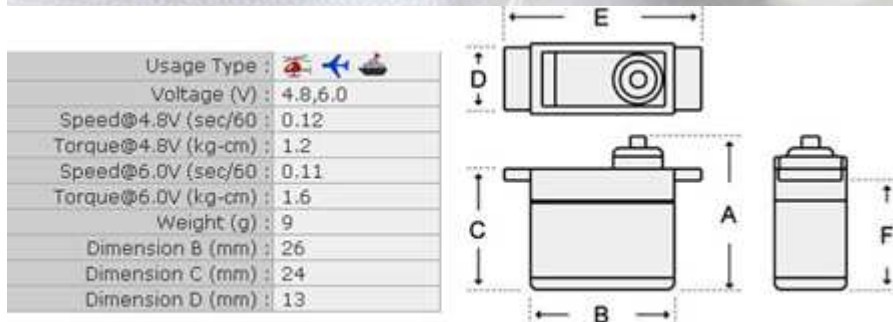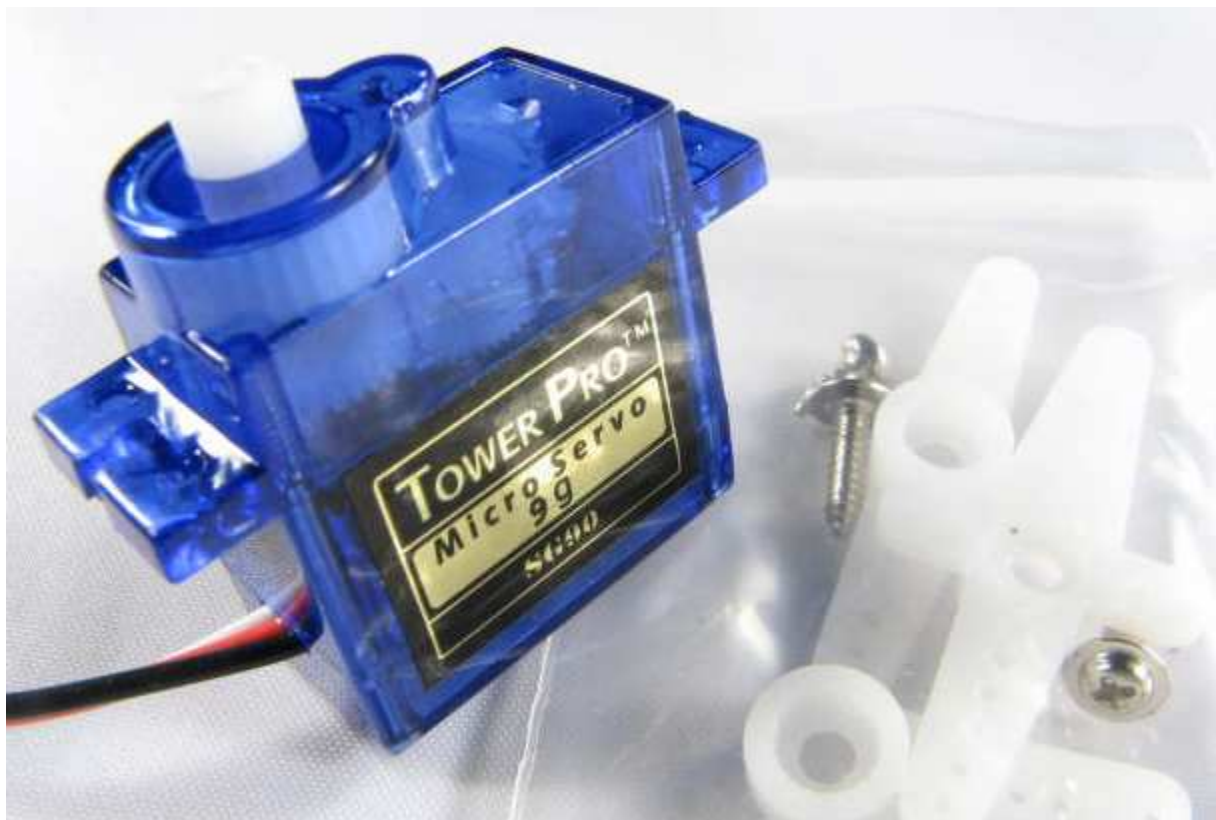
Universal "S" type connector fits most receivers

9g Tower Pro Servo

Tower Pro 9g servo
These Micro strong and made to last, great for planes. The servos include 3 servo arms.
Specs:

- DIMENSION: 26mm*13mm*24mm
- WEIGHT: 9G
- OPERATING SPEED: 0.12sec/60degree(4.8V);0.11sec/60degree(6V)
- STALL TORQUE: 1.2kg/cm or 17oz-in. (4.8V) 1.6kg/cm or 22oz-in.(6.0V)
- OPERATING VOLTAGE: 4.8V~6.0V
- FEATURE: 3 pole wire, all nylon gear, connector wire length: 15cm

Usage Type :	
Voltage (V) :	4.8,6.0
Speed@4.8V (sec/60 :	0.12
Torque@4.8V (kg-cm) :	1.2
Speed@6.0V (sec/60 :	0.11
Torque@6.0V (kg-cm) :	1.6
Weight (g) :	9
Dimension B (mm) :	26
Dimension C (mm) :	24
Dimension D (mm) :	13

The TG9e boasts the same performance as other servo's 10x the price with a .10sec travel time and up to 1.5kg in torque and an ultra narrow dead bandwidth!

The TG9e performance is on par with the famous HXT900, however the TG9e isn't as resistant to crashes or over-loading.

Please always ensure your control surfaces are bind free.

Spec.

Dimension: 23x12.2x29mm

Torque: 1.5kg/cm (4.8V)

Operating speed: 0.10sec/60 degree 0.09sec/60 degree(6.0V)

Operating voltage: 4.8V
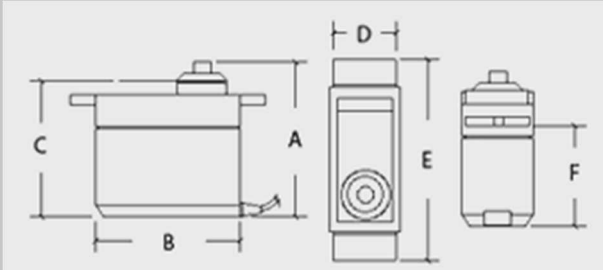
Temperature range: 0-55C
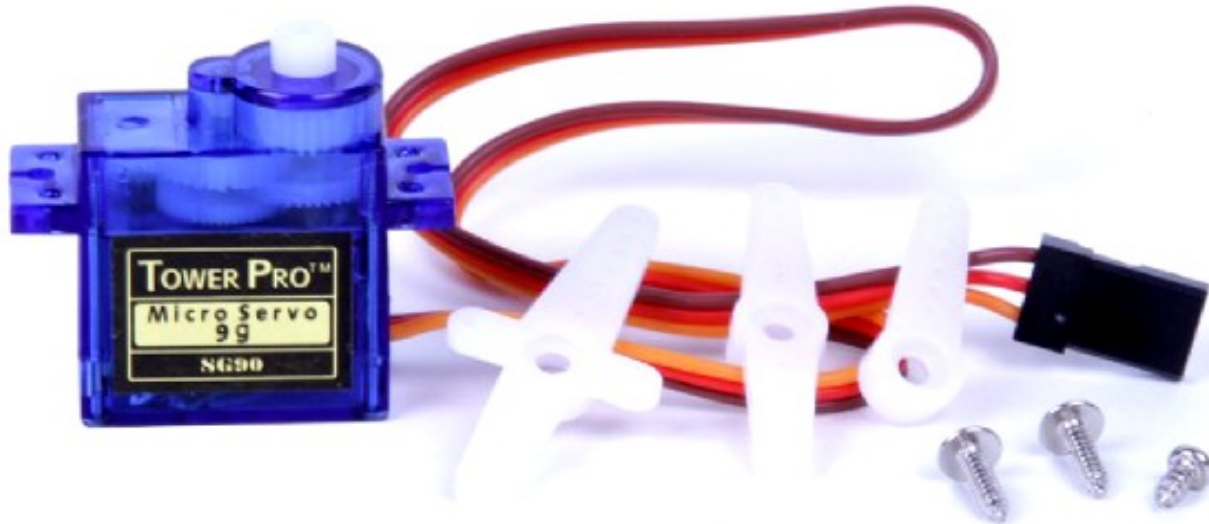
Dead band-width: 7us

Lead Length: 260mm

Important.
The TG9e does not have the same strength and longevity as the HXT900.

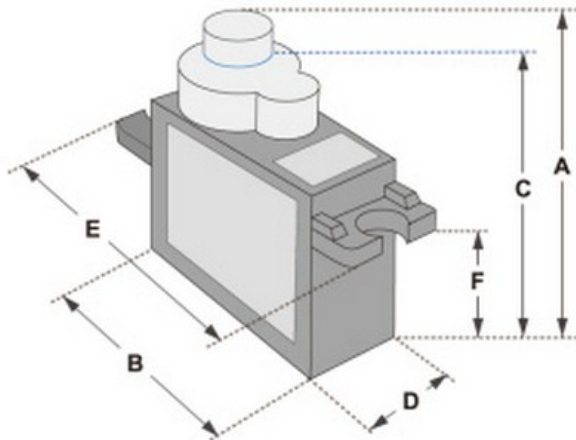**Please ensure your control surfaces are bind-free and always check servos after a hard landing or crash!**

Weight (g)	9
Torque (kg)	1.5
Speed(Sec/60deg)	0.09
A(mm)	30
B(mm)	23
C(mm)	27
D(mm)	12
E(mm)	33
F(mm)	16

Tiny and lightweight with high output power. Servo can rotate approximately 180 degrees (90 in each direction), and works just like the standard kinds but smaller. You can use any servo code, hardware or library to control these servos. Good for beginners who want to make stuff move without building a motor controller with feedback & gear box, especially since it will fit in small places. It comes with a 3 horns (arms) and hardware.

Dimensions & Specifications
A (mm) : 32
B (mm) : 23
C (mm) : 28.5
D (mm) : 12
E (mm) : 32
F (mm) : 19.5
Speed (sec) : 0.1
Torque (kg-cm) : 2.5
Weight (g) : 14.7
Voltage : 4.8 - 6

Position "0" (1.5 ms pulse) is middle, "90" (~2ms pulse) is middle, is all the way to the right, "-90" (~1ms pulse) is all the way to the left.

PWM=Orange (⎍)
Vcc = Red (+)
Ground=Brown (–)

1 - 2 ms
Duty Cycle

4.8 V (~5 V)
Power
and Signal

20 ms (50 Hz)
PWM Period