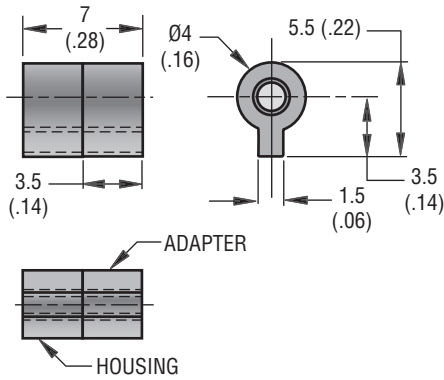


# CEMA™ ST-4A Hinge

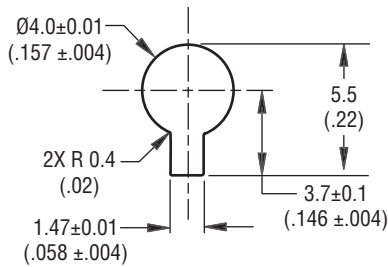
## Position Control, Constant Torque

- Smooth consistent operation
- Extremely compact, fits the smallest applications
- Never requires adjustment



PART NUMBER	Static Torque
ST-4A-3S-33	0.35 kg-cm (.3 in - lbf)

### Panel Preparation



### Application:



### Material & Finish

HOUSING : Zinc alloy, natural  
 ADAPTER: Aluminum alloy, natural  
 SHAFT: Hardened steel, natural  
 TORQUE ELEMENTS: Hardened steel, natural

### Product Strength Guidelines

(To assist in your product selection; samples are available for your evaluation.)

#### Radial Load

Maximum Static Load: 200 N (45 lbf)

#### Cycle Performance:

20,000 cycles within 0.23 kg-cm (.2 in-lbf) of static torque specification

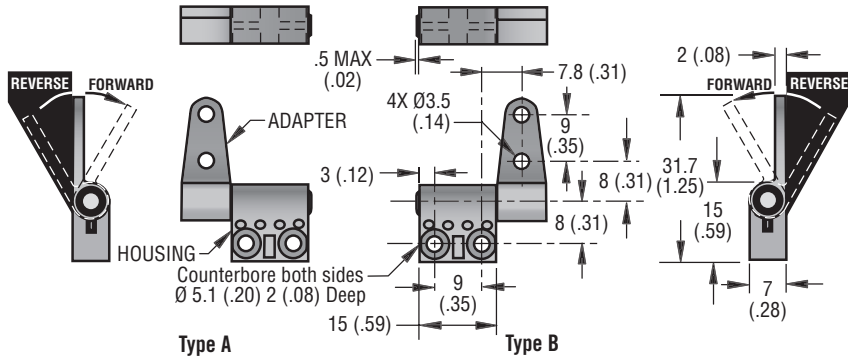
millimeter (inch)  
 millimeter  
 (inch)

Dimensions without tolerances are for reference only.

# CEMA™ ST-7A Hinge

## Position Control, Constant Torque

- Smooth, zero backlash operation
- Space efficient design provides high torque in minimum space
- Constant torque, never needs adjusting



### Material and Finish

HOUSING and ADAPTER: Zinc alloy, natural  
SHAFT: Hardened steel, natural  
TORQUE ELEMENTS: Hardened steel, natural

### Product Strength Guidelines

(To assist in your product selection; samples are available for your evaluation.)

### Radial Load

Maximum Static Load: 400 N (90 lbf)

### Axial Load

Maximum Static Load: 300 N (67 lbf)

### Cycle Performance:

20,000 cycles within  $\pm 20\%$  of static torque specification

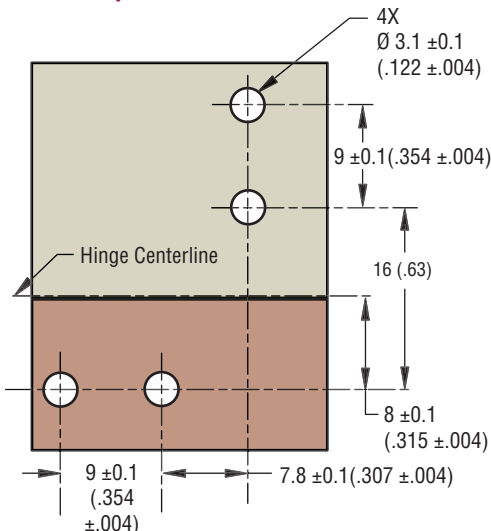
SYMMETRIC TORQUE VERSIONS		
PART NUMBERS		STATIC TORQUE (FORWARD and REVERSE)
TYPE A	TYPE B	
ST-7A-30SA-33	ST-7A-30SB-33	3.5 kg-cm (3 in-lbf)
ST-7A-40SA-33	ST-7A-40SB-33	4.6 kg-cm (4 in-lbf)
ST-7A-50SA-33 •	ST-7A-50SB-33 •	5.8 kg-cm (5 in-lbf)

ASYMMETRIC TORQUE VERSIONS			
PART NUMBERS		STATIC TORQUE	
TYPE A	TYPE B	FORWARD	REVERSE
ST-7A-40FA-33	ST-7A-40FB-33	4.6 kg-cm (4 in-lbf)	2.8 kg-cm (2.4 in-lbf)*
ST-7A-50FA-33	ST-7A-50FB-33	5.8 kg-cm (5 in-lbf)	3.5 kg-cm (3 in-lbf)*
ST-7A-60FA-33 •	ST-7A-60FB-33 •	6.9 kg-cm (6 in-lbf)	4.1 kg-cm (3.6 in-lbf)*
ST-7A-40RA-33	ST-7A-40RB-33	2.8 kg-cm (2.4 in-lbf)*	4.6 kg-cm (4 in-lbf)
ST-7A-50RA-33	ST-7A-50RB-33	3.5 kg-cm (3 in-lbf)*	5.8 kg-cm (5 in-lbf)
ST-7A-60RA-33 •	ST-7A-60RB-33 •	4.1 kg-cm (3.6 in-lbf)*	6.9 kg-cm (6 in-lbf)

NOTE: \*Tolerance in low-torque direction  $\pm 30\%$

• Products identified with this symbol are stocked subject to prior sale in one or more of our global locations. If unavailable from our facility, allow shipping time from another facility.

### Panel Preparation



### Installation

1. Prepare Panel as shown
2. Install hinge using #4 socket head cap screw
3. For proper function, assembly must include (1) type A and (1) type B hinge

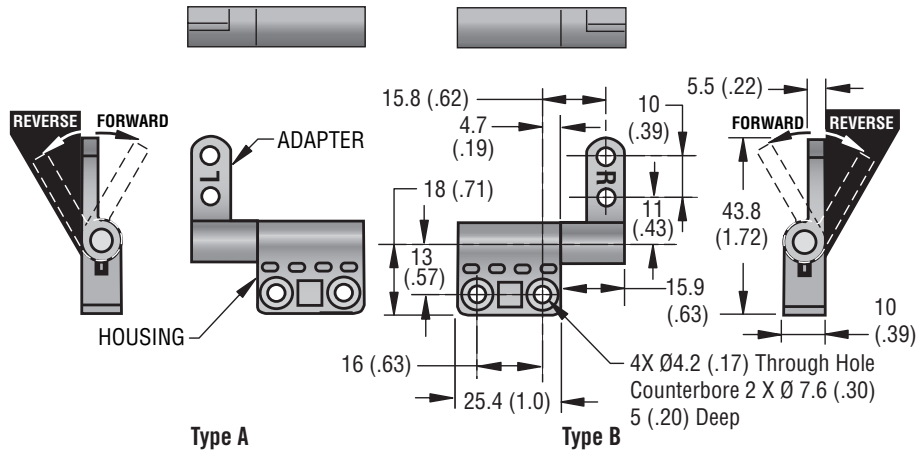
millimeter (inch)  
millimeter  
(inch)

Dimensions without tolerances are for reference only.

# CEMA™ ST-10A Hinge

## Position Control, Constant Torque

- Smooth, zero backlash operation
- Space efficient design provides high torque in minimum space
- Constant torque, never needs adjusting



SYMMETRIC TORQUE VERSIONS		
PART NUMBERS		STATIC TORQUE (FORWARD and REVERSE)
TYPE A	TYPE B	
ST-10A-80SA-33	ST-10A-80SB-33	9.2 kg-cm (8 in-lbf)
ST-10A-120SA-33	ST-10A-120SB-33	13.8 kg-cm (12 in-lbf)
ST-10A-160SA-33 •	ST-10A-160SB-33 •	18.4 kg-cm (16 in-lbf)

ASYMMETRIC TORQUE VERSIONS			
PART NUMBERS		STATIC TORQUE	
TYPE A	TYPE B	FORWARD	REVERSE
ST-10A-120FA-33	ST-10A-120FB-33	13.8 kg-cm (12 in-lbf)	8.3 kg-cm (7.2 in-lbf)*
ST-10A-160FA-33	ST-10A-160FB-33	18.4 kg-cm (16 in-lbf)	11.1 kg-cm (9.6 in-lbf)*
ST-10A-200FA-33 •	ST-10A-200FB-33 •	23 kg-cm (20 in-lbf)	13.8 kg-cm (12 in-lbf)*
ST-10A-120RA-33	ST-10A-120RB-33	8.3 kg-cm (7.2 in-lbf)*	13.8 kg-cm (12 in-lbf)
ST-10A-160RA-33	ST-10A-160RB-33	11.1 kg-cm (9.6 in-lbf)*	18.4 kg-cm (16 in-lbf)
ST-10A-200RA-33 •	ST-10A-200RB-33 •	13.8 kg-cm (12 in-lbf)*	23 kg-cm (20 in-lbf)

NOTE: \*Tolerance in low-torque direction  $\pm 30\%$

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### Material & Finish

HOUSING and ADAPTER: Zinc alloy, natural  
SHAFT: Hardened steel, natural  
TORQUE ELEMENTS: Hardened steel, natural

### Product Strength Guidelines

(To assist in your product selection; samples are available for your evaluation.)

#### Radial Load

Maximum Static Load: 500 N (112 lbf)

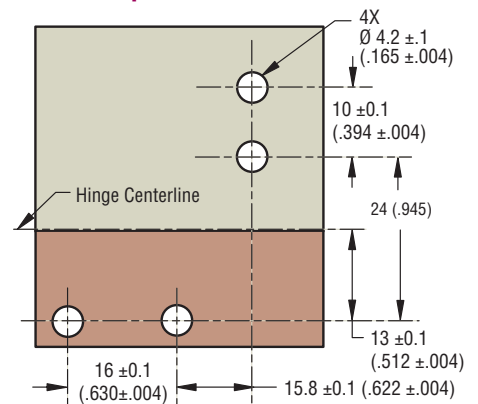
#### Axial Load

Maximum Static Load: 1000 N (225 lbf)

#### Cycle Performance:

20,000 cycles within  $\pm 20\%$  of static torque specification

### Panel Preparation



### Installation

1. Prepare Panel as shown
2. Install hinge using #8 or M4 socket head cap screw
3. For proper function, assembly must include (1) type A and (1) type B hinge

millimeter (inch)  
millimeter  
(inch)

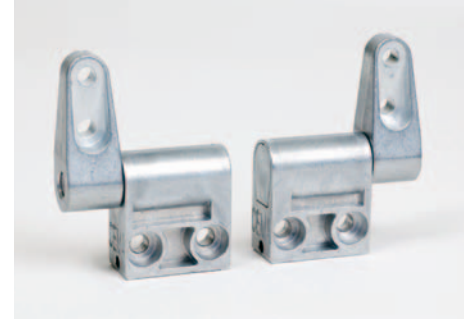
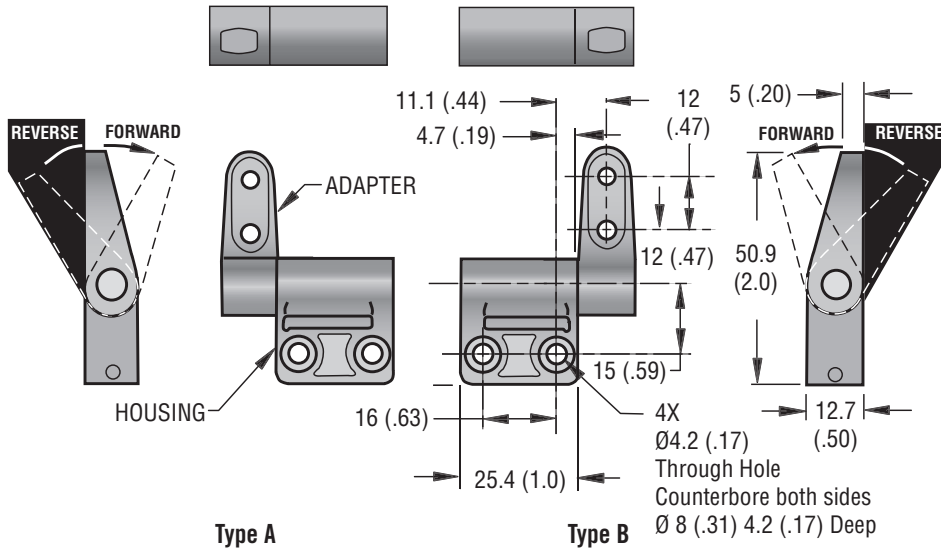
Dimensions without tolerances are for reference only.

For additional specifying and ordering information, downloadable CAD files, and 3-D solid models visit: [www.southco.com](http://www.southco.com) or e-mail: [info@southco.com](mailto:info@southco.com)

# CEMA™ ST-12A Hinge

## Position Control, Constant Torque

- Smooth, zero backlash operation
- Space efficient design provides high torque in minimum space
- Constant torque, never needs adjusting



### Material & Finish

HOUSING and ADAPTER: Zinc alloy, natural  
SHAFT: Hardened steel, natural  
TORQUE ELEMENTS: Hardened steel, natural

### Product Strength Guidelines

(To assist in your product selection; samples are available for your evaluation.)

### Radial Load

Maximum Static Load: 1000 N (225 lbf)

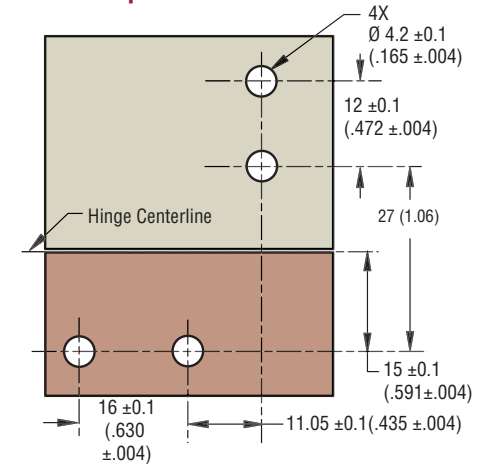
### Axial Load

Maximum Static Load: 1200 N (270 lbf)

### Cycle Performance:

20,000 cycles within  $\pm 20\%$  of static torque specification

### Panel Preparation



### Installation

1. Prepare Panel as shown
2. Install hinge using #8 or M4 socket head cap screw
3. For proper function, assembly must include (1) type A and (1) type B hinge

millimeter (inch)  
millimeter  
(inch)

Dimensions without tolerances are for reference only.

SYMMETRIC TORQUE VERSIONS		
PART NUMBERS		STATIC TORQUE (FORWARD and REVERSE)
TYPE A	TYPE B	
ST-12A-120SA-33	ST-12A-120SB-33	13.8 kg-cm (12 in-lbf)
ST-12A-200SA-33	ST-12A-200SB-33	23 kg-cm (20 in-lbf)
ST-12A-280SA-33	ST-12A-280SB-33	32.3 kg-cm (28 in-lbf)
ST-12A-360SA-33 •	ST-12A-360SB-33 •	41.5 kg-cm (36 in-lbf)

ASYMMETRIC TORQUE VERSIONS			
PART NUMBERS		STATIC TORQUE	
TYPE A	TYPE B	FORWARD	REVERSE
ST-12A-200FA-33	ST-12A-200FB-33	23 kg-cm (20 in-lbf)	13.8 kg-cm (12 in-lbf)*
ST-12A-280FA-33	ST-12A-280FB-33	32.3 kg-cm (28 in-lbf)	19.4 kg-cm (16.8 in-lbf)*
ST-12A-360FA-33	ST-12A-360FB-33	41.5 kg-cm (36 in-lbf)	24.9 kg-cm (21.6 in-lbf)*
ST-12A-440FA-33 •	ST-12A-440FB-33 •	50.7 kg-cm (44 in-lbf)	30.4 kg-cm (26.4 in-lbf)*
ST-12A-200RA-33	ST-12A-200RB-33	13.8 kg-cm (12 in-lbf)*	23 kg-cm (20 in-lbf)
ST-12A-280RA-33	ST-12A-280RB-33	19.4 kg-cm (16.8 in-lbf)*	32.3 kg-cm (28 in-lbf)
ST-12A-360RA-33	ST-12A-360RB-33	24.9 kg-cm (21.6 in-lbf)*	41.5 kg-cm (36 in-lbf)
ST-12A-440RA-33 •	ST-12A-440RB-33 •	30.4 kg-cm (26.4 in-lbf)*	50.7 kg-cm (44 in-lbf)

NOTE: \*Tolerance in low-torque direction  $\pm 30\%$

• Products identified with this symbol are stocked subject to prior sale in one or more of our global locations. If unavailable from our facility, allow shipping time from another facility.

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