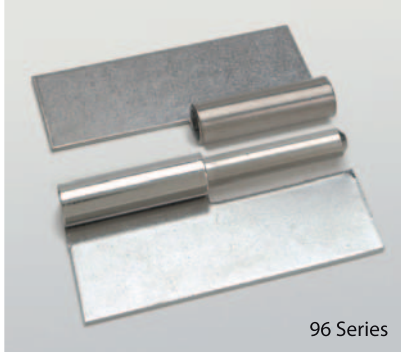


# Southco® 96 Hinge

## Free Operating, Door Removal

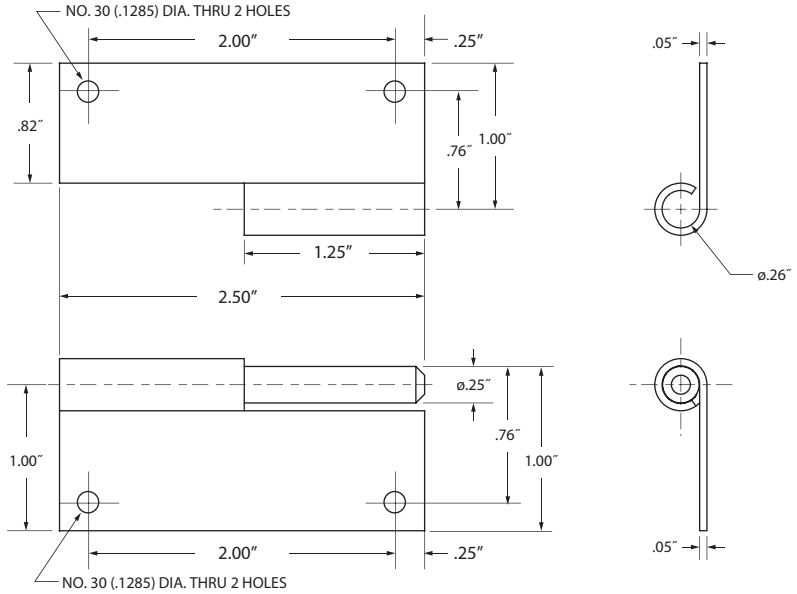


- Excellent accessibility
- Easy to remove and replace
- All metal construction

### Material & Finish

**Hinge:** Low carbon steel with zinc plate, or stainless steel

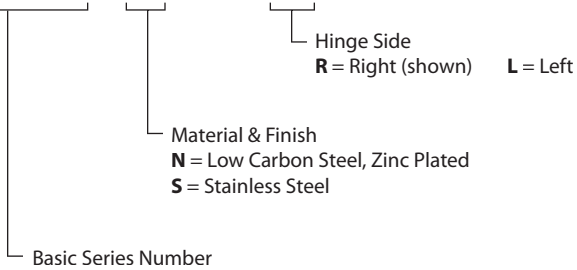
**Note:** Consult factory for special sizes, holes, pins, materials, or finishes.



**Note:**  
Drawing and dimensions are simplified and are for reference use only.

### Hinge Part Numbers

# 96 - 04 - N 1 W R



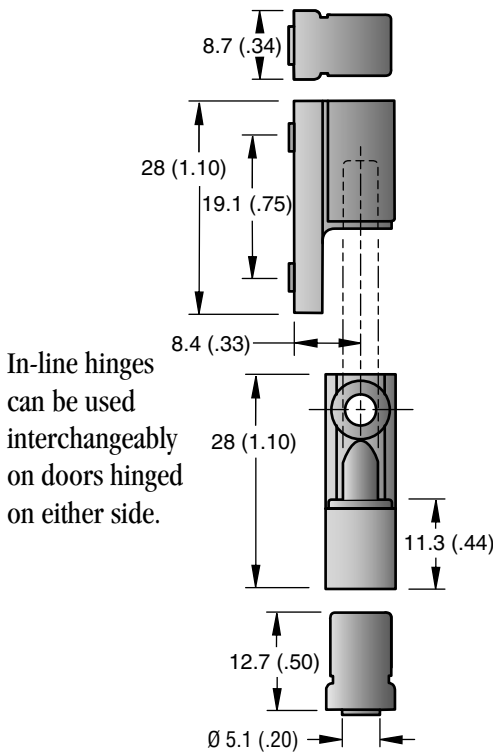
All dimensions on this page are in inches.

# Southco® Hinges

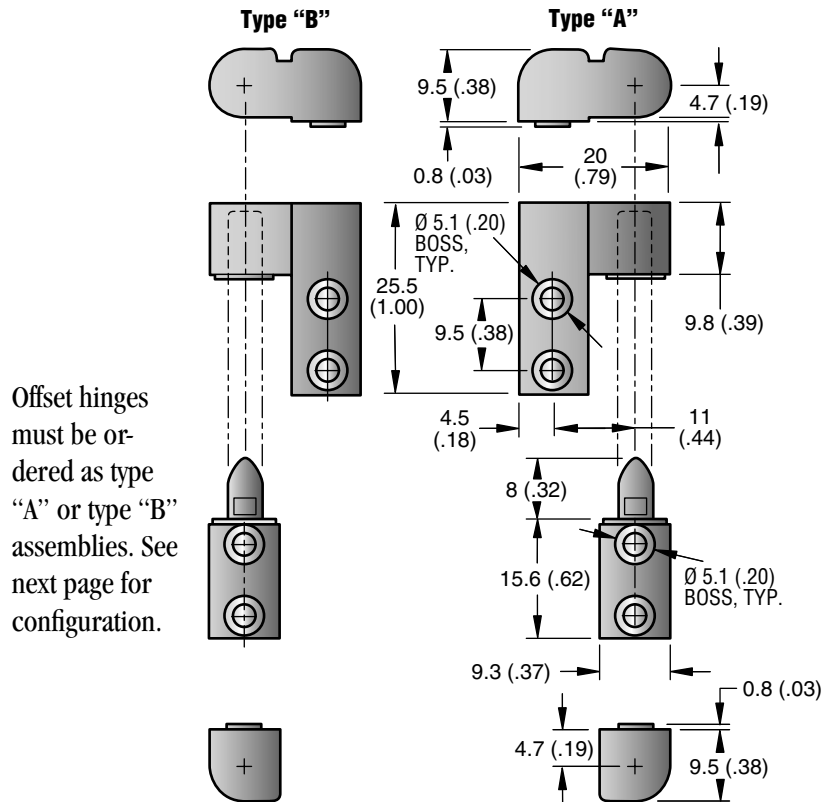
## Miniature Size

- Allows the door to be removed from the hinge side
- Compact size with high strength/size ratio
- All mounting hardware is concealed
- Door can also be permanently installed

### In-line Hinges



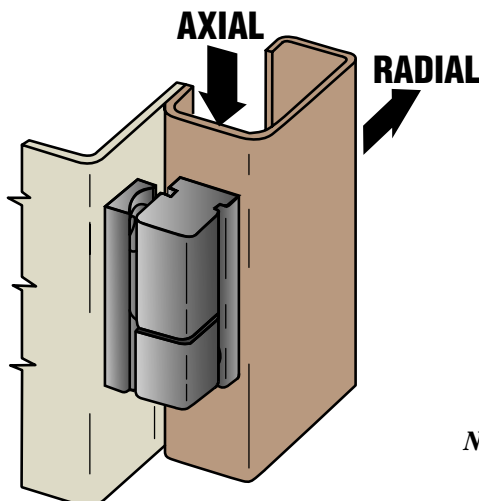
### Offset Hinges



Use screw size	PART NUMBERS
6-32	96-110 •
M4x0.7	96-140 •

Use screw size	PART NUMBERS	
	Type "A"	Type "B"
6-32	96-111 •	96-112 •
M4x0.7	96-141 •	96-142 •

Hinges  
Lift-off



### Product Strength Guidelines

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

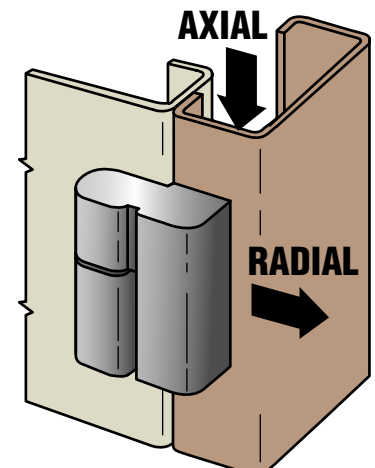
#### RADIAL

Maximum static load  
1100 N (250 lbs.)  
Average ultimate load  
2400 N (530 lbs.)

#### AXIAL

Maximum static load  
1250 N (280 lbs.)  
Average ultimate load  
2600 N (580 lbs.)

**NOTE:** Maximum recommended tightening torque for mounting screws: 1.1 N•m (10 in.-lbs.)



## Door and Frame Preparation

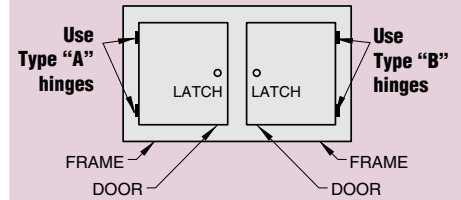
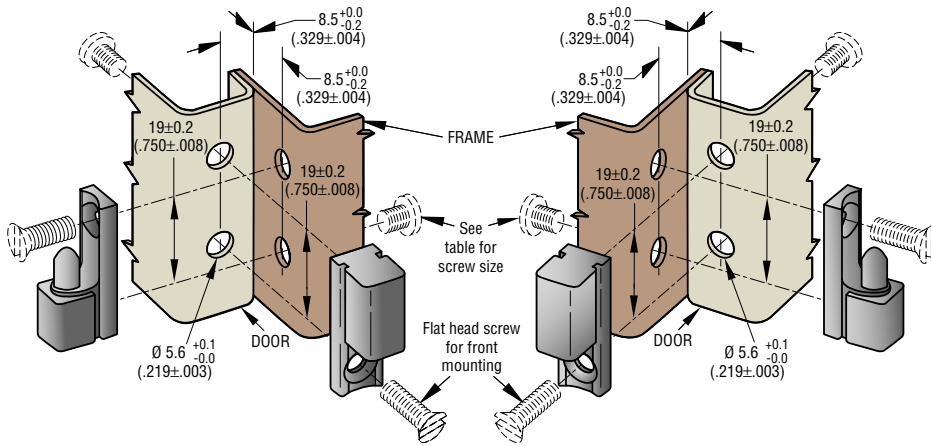
**NOTE:** To assure lift-off capability, the *lower* knuckles must be installed on frame, *upper* knuckles on the door.

**NOTE:** For non-lift-off mounting, one upper knuckle and one lower knuckle must be mounted to frame. One knuckle must be installed *AFTER* door is hung.  
**For non lift-off offset hinges only:** Use one type "A" and one type "B" hinge per door.

### In-line Hinge... Type "B"

### In-line Hinge... Type "A"

Screw length = door or frame thickness + 5 (.200)  
 (screws not supplied).



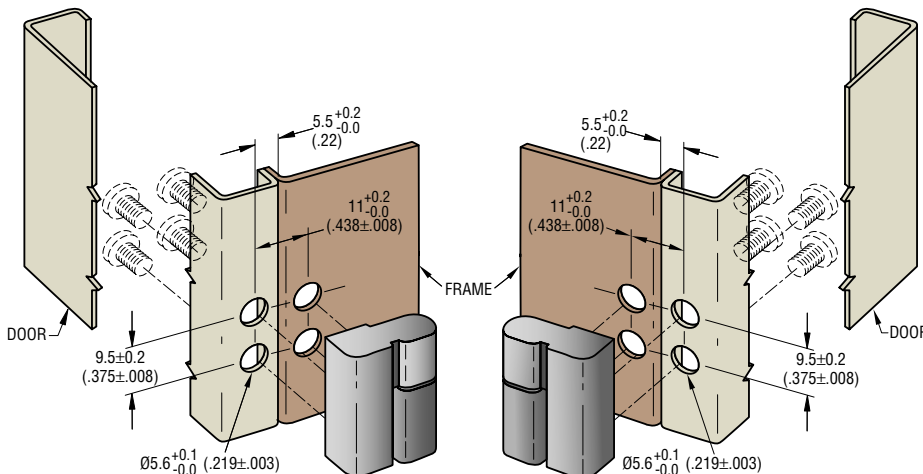
### Material and Finish

Die-cast zinc, black powder coated.

### Offset Hinge... Type "B"

### Offset Hinge... Type "A"

Screw length = door or frame thickness + 5 (.200)  
 (screws not supplied).



millimeter (inch)  
 millimeter  
 (inch)

Dimensions without tolerances are for reference only.

# Southco® Hinges

## Large Size

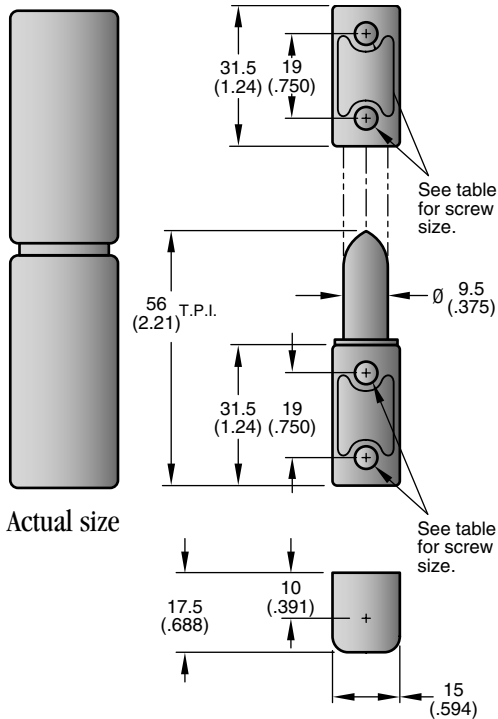
- Allows the door to be removed from the hinge side
- All mounting hardware is concealed
- Door can also be permanently installed

## Offset Hinges

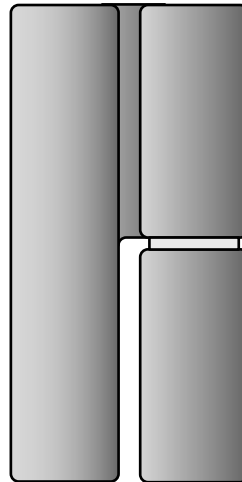
Offset hinges must be ordered as Type "A" or Type "B" assemblies. See next page for configuration.

### In-line Hinges

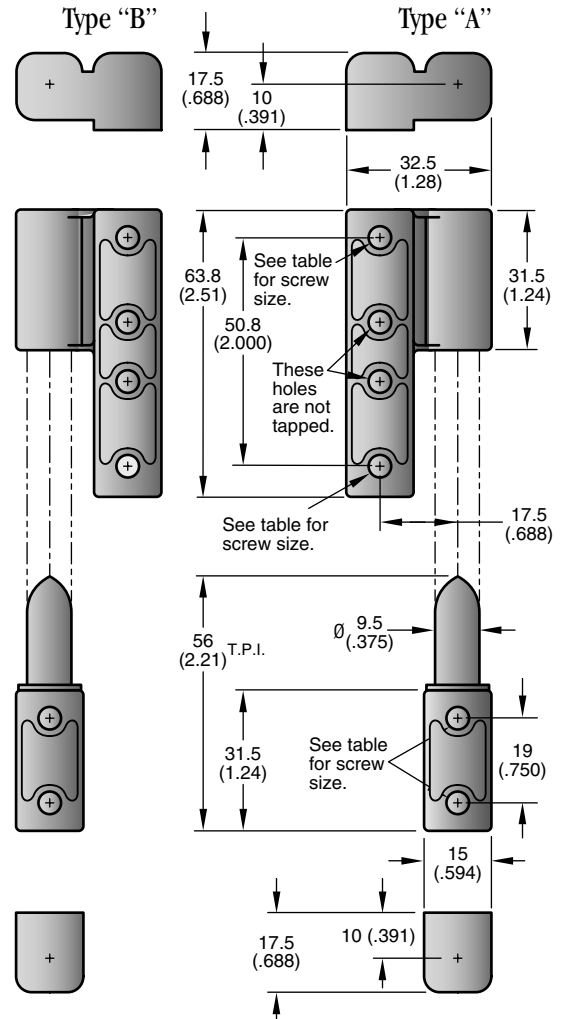
In-line hinges can be used interchangeably on doors hinged on either side.



Actual size



Actual size

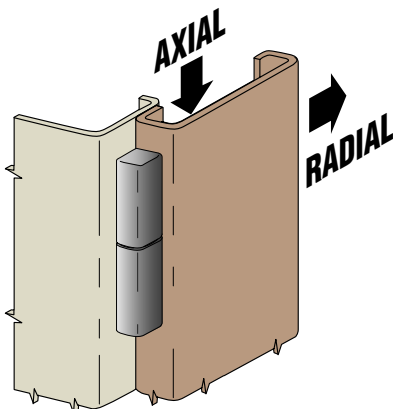


### In-line hinges

Use screw size	PART NUMBERS
M5	96-50-500-50 •
No. 10-32	96-10-500-50 •

### Product Strength Guidelines

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



#### RADIAL

Maximum static load  
1300 N (300 lbs.)  
Average ultimate load  
3300 N (750 lbs.)

#### AXIAL

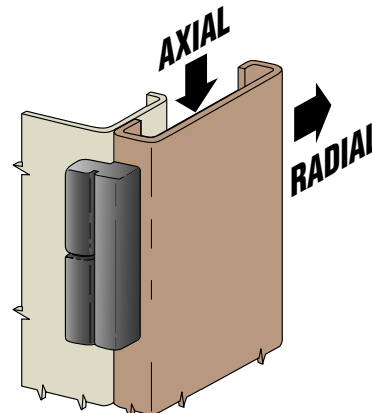
Maximum static load  
2200 N (500 lbs.)  
Average ultimate load  
9300 N (2100 lbs.)

### Offset hinges

Use screw size	PART NUMBERS	
	Type "A"	Type "B"
M5	96-50-510-50 •	96-50-520-50 •
No. 10-32	96-10-510-50 •	96-10-520-50 •

### Product Strength Guidelines

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



#### RADIAL

Maximum static load  
1300 N (300 lbs.)  
Average ultimate load  
3500 N (800 lbs.)

#### AXIAL

Maximum static load  
2200 N (500 lbs.)  
Average ultimate load  
9300 N (2100 lbs.)

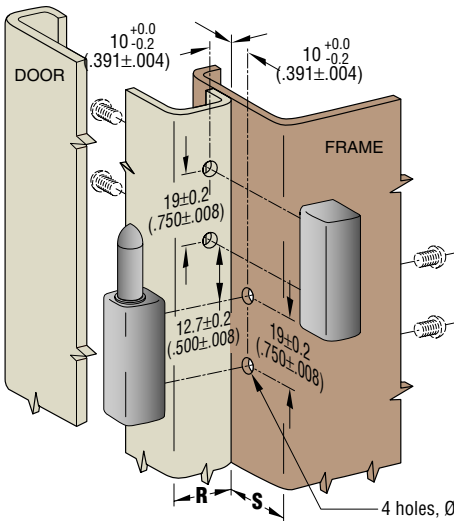
Hinges Lift-off

## Door and frame preparation

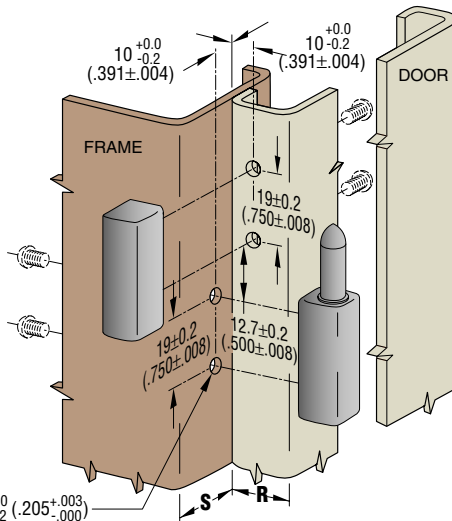
**NOTE:** To insure lift-off capability, the *lower* knuckle must be installed on the frame, the *upper* knuckle on the door.

**NOTE:** For non lift-off mounting use one type "A" and one type "B" hinge per door. One hinge knuckle must be mounted *AFTER* the door is hung.

### In-line Hinge...Type "B"

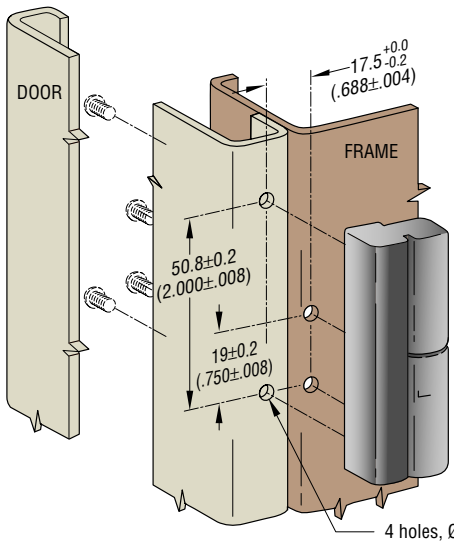


### In-line Hinge...Type "A"

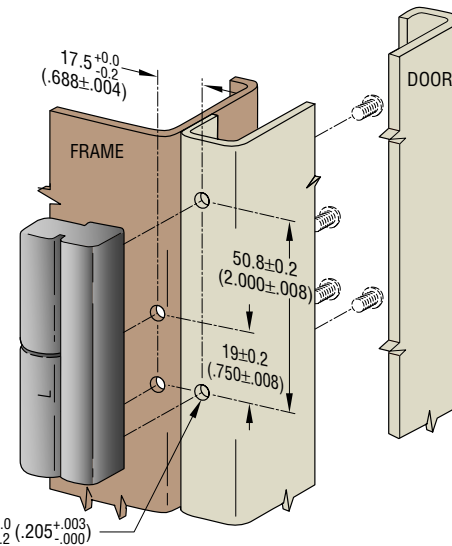


Maximum screw length = door (or frame) thickness + 5 (.200). (Screws not supplied).  
For door to open a full 180°, one of the two dimensions, **R** or **S**, must be less than 19.9 (.782).

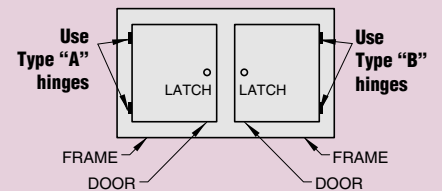
### Offset Hinge...Type "B"



### Offset Hinge...Type "A"



Maximum screw length = door (or frame) thickness + 10 (.400).  
(Screws not supplied.)



### Material and Finish

KNUCKLES: Die-cast zinc, black powder coating.  
WASHER: Black nylon.

millimeter (inch)  
millimeter  
(inch)

Dimensions without tolerances are for reference only.

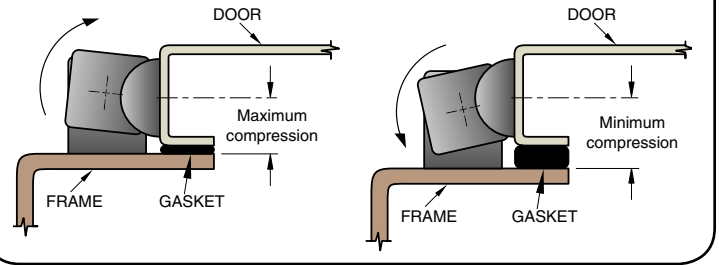
# Southco® Hinges

## Adjustable Compression

- Adjustable compression for the hinge side of the door
- Allows the door to be removed from the hinge side
- Accommodates application and gasket variances
- Front and concealed mounting
- Door can also be permanently installed

### How it works:

These hinges provide 5 mm (.20 in) of total adjustment.

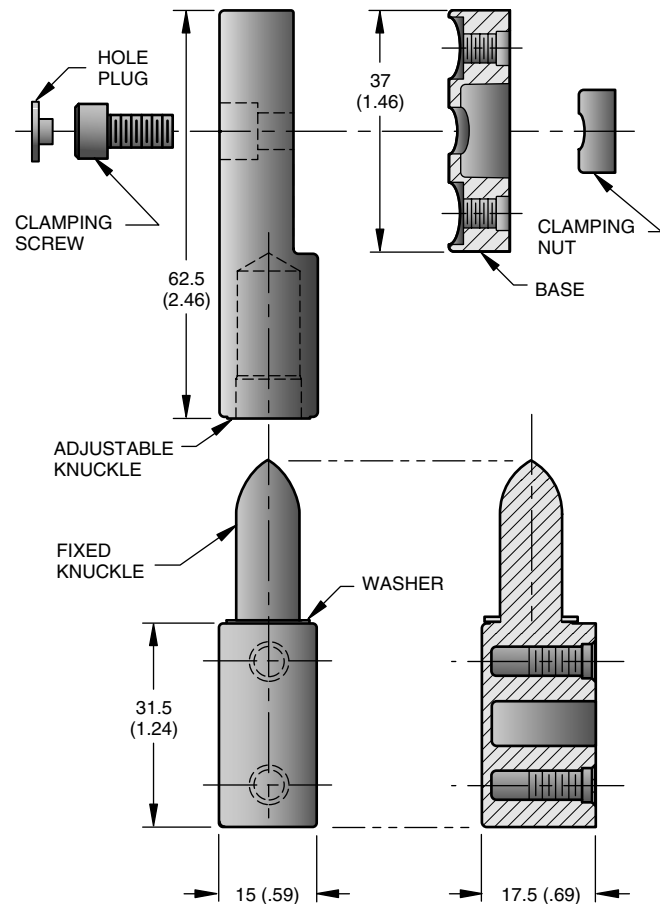
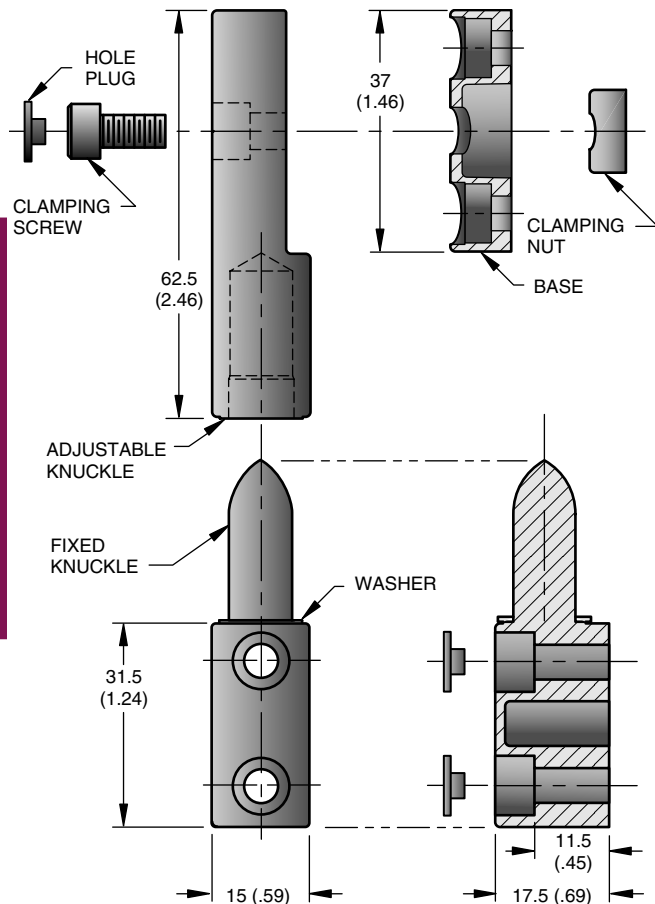


### Front-mount hinge

Thread size	Part number
No. 10 or M5	96-10-572 •

### Concealed-mount hinge

Thread size	Part number
10-32 UNF-2B	96-10-570 •
M5x0.8 6H	96-50-570 •



Hinges  
Lift-off

## Product Strength

### Guidelines

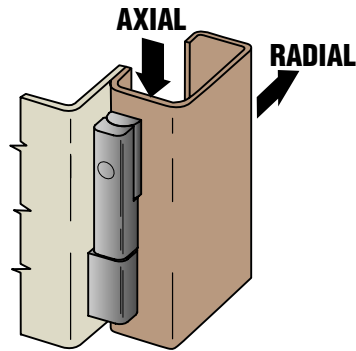
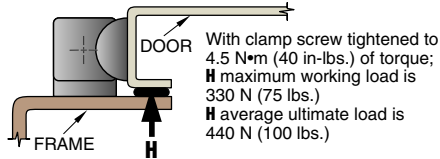
(To assist in your product selection; samples are available for your evaluation.)

#### RADIAL

Maximum static load = 1000 N (225 lbs.)  
Average ultimate load = 1550 N (350 lbs.)

#### AXIAL

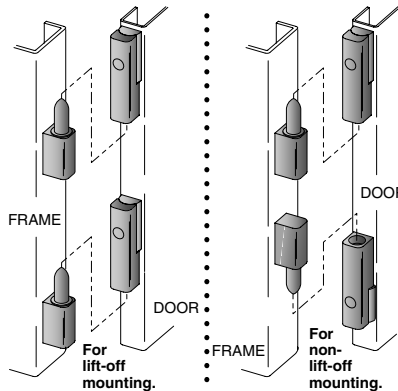
Maximum static load = 2200 N (500 lbs.)  
Average ultimate load = 14,000 N (3200 lbs.)



Maximum recommended tightening torque of mounting screws: 4.5 N•m (40 in.-lbs.)

To assure lift-off capability, the pin of the fixed knuckles must point up when installed on frame.

For non-lift-off mounting, the pin of one fixed knuckle must point in a direction opposite the other(s) when mounted to frame. One of the fixed knuckles must be installed *AFTER* door is hung.



These hinges can be mounted on either side of door.

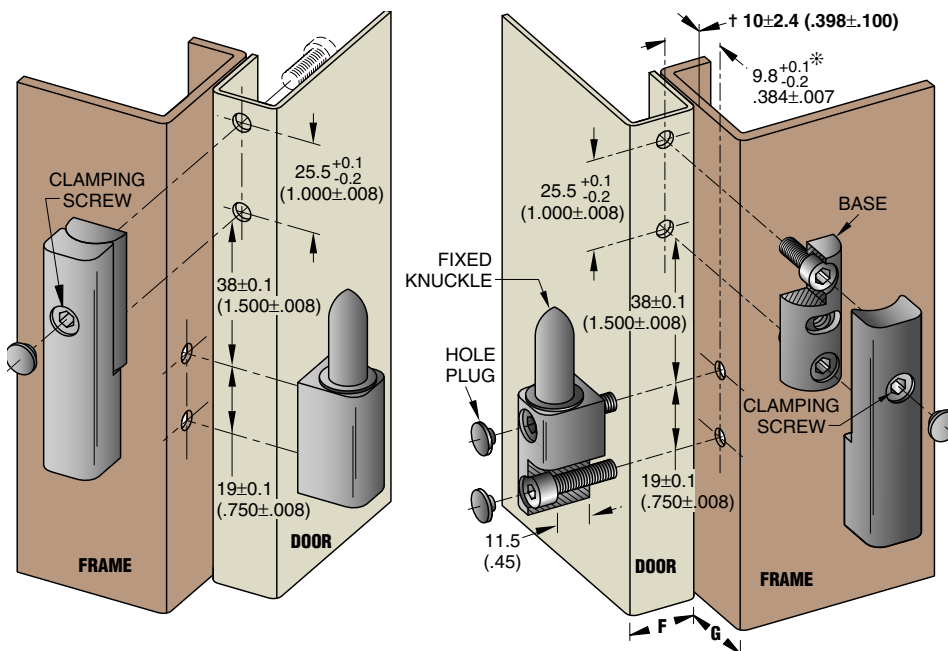
### Concealed-mount hinge

Screw length = frame thickness plus 7.5 mm (.30 in.)

### Front-mount hinge

No. 10 or M5 socket head cap screws must be used to attach front-mount hinge assemblies.

Mounting screws are *not* supplied.



**NOTES:** Either **F** Dimension or **G** dimension must be less than 19.8 (.78) for the door to open a full 180°. \* Dimension will vary as † dimension is adjusted through its range. The door and frame design must allow for this variation.



## Material and Finish

KNUCKLES and BASE: Die-cast zinc, black powder coated.

WASHER: Nylon, black.

HOLE PLUG: Thermoplastic Elastomer, black.

CLAMPING SCREW: Stainless steel, black oxide.

CLAMPING NUT: Low carbon steel, zinc plate, chromate plus coricone sealer.

## Installation and Adjustment

- Adjustable knuckles must always be mounted to the door.
- Front mounted adjustable knuckles must be disassembled before installation.
- Use hole plugs to deter unnecessary adjustment and enhance appearance. Hole plugs press into screw sockets with thumb pressure.
- To adjust hinges: Pivot adjustable knuckle with respect to the base to desired position, then tighten knuckle in place with a 4 mm or (5/32) hex wrench. Recommended tightening torque of clamping screw is 4.5 N•m (40 in.-lbs.)

millimeter (inch)  
millimeter (inch)

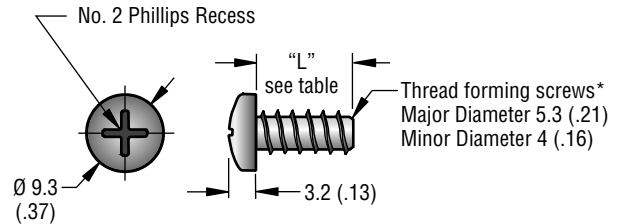
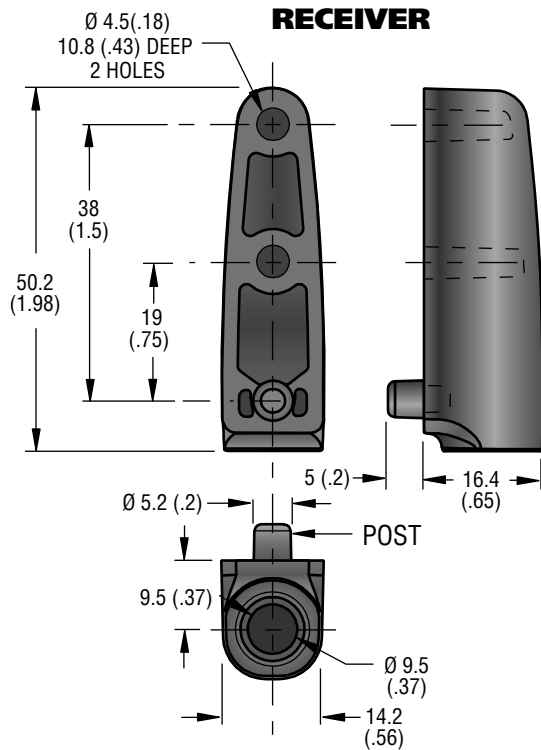
Dimensions without tolerances are for reference only.

# Southco® Hinges

## Medium Size, Nylon

- Allows for quick, easy door removal
- Ergonomic design offers high strength to size ratio
- Corrosion-resistant materials
- Use in a wide range of panel thicknesses
- Door can also be permanently installed

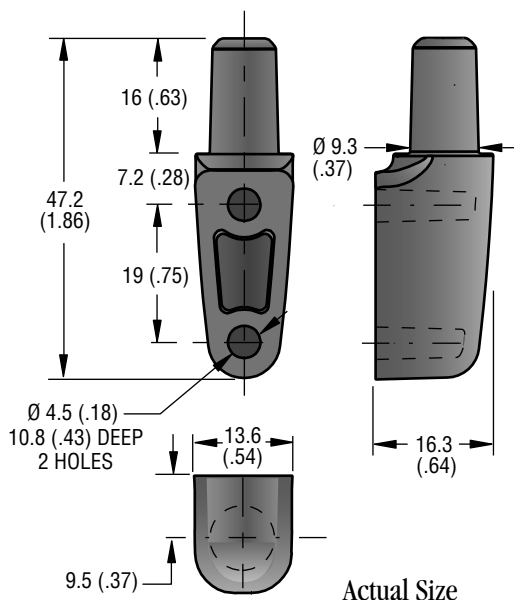
Hinge Element	PART NUMBER	
	Black	Chrome plated
Receiver	96-720 •	96-721 •
Pin	96-710 •	96-711 •



Mounting Screws		
"L" Screw Length	Panel Thickness	PART NUMBER
11.4 (.45)	1 - 4 (.04 - .16)	96-79-1 •
14.4 (.57)	4 - 7 (.16 - .28)	96-79-2 •
17.4 (.69)	7 - 10 (.28 - .39)	96-79-3 •
20.4 (.80)	10 - 13 (.39 - .51)	96-79-4 •

\* Designed to be used with these Southco® hinges. Select the appropriate size screws for your panel thickness. Thicker panels require longer thread forming screws; contact Southco for details. Order (1) Pin, (1) Receiver and (4) Screws per (1) Complete assembly.

### PIN



Actual Size

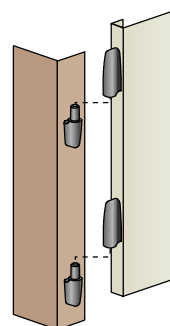
## Installation Instructions

1. Prepare holes as shown in mounting preparations.
2. Install 2 screws for each pin and receiver.
3. For permanent installation, install last pin or receiver mounting screws while door is in place.

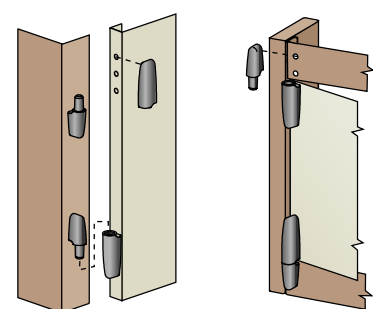
**Note:** Recommended tightening torque for mounting screws: 1.6 N•m (14 in.lbs.)

Tightening torque not to exceed: 2.8 N•m (25 in.lbs.)

### LIFT-OFF INSTALLATION



### PERMANENT INSTALLATION



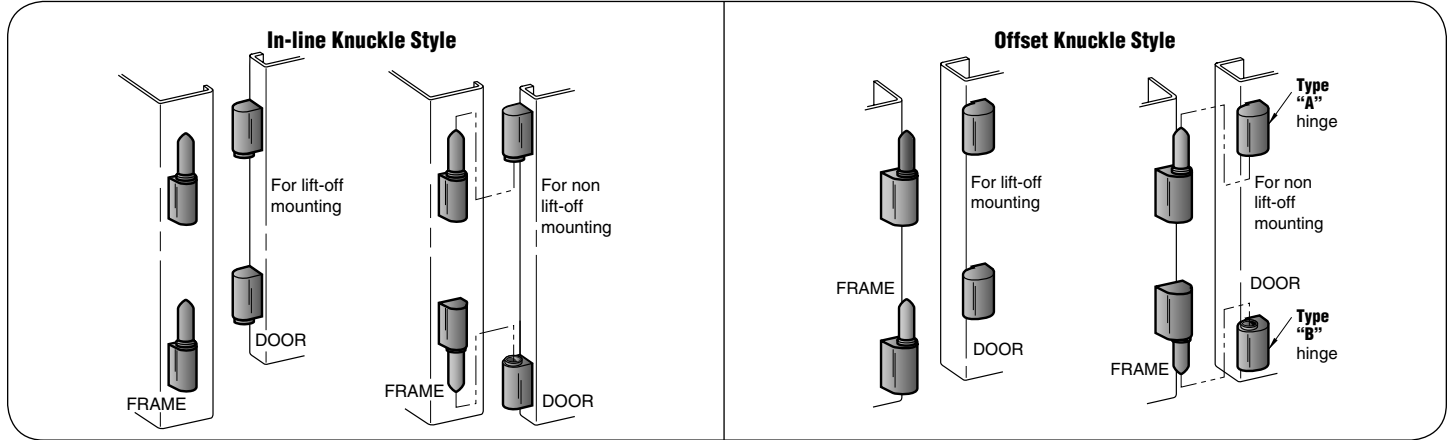
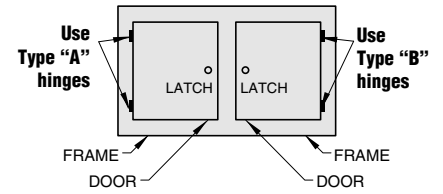




# Southco® Hinges

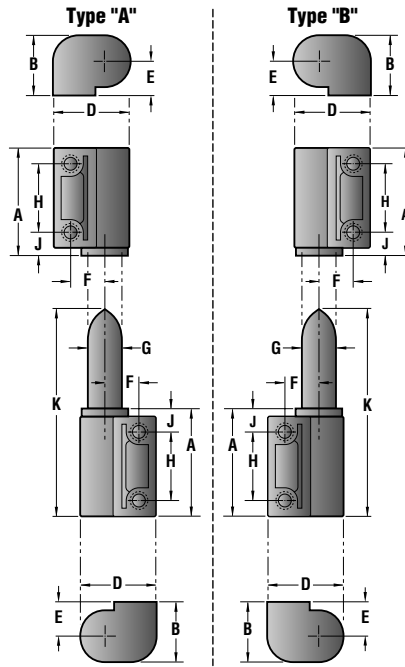
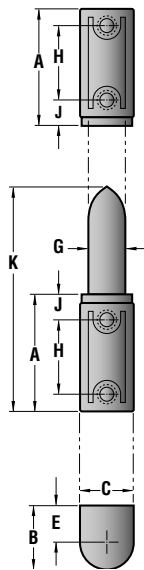
## Medium and Large Sizes, Nylon

- Allows the door to be removed from the hinge side
- Corrosion-resistant materials
- Door can also be permanently installed



**IN-LINE KNUCKLE STYLE**

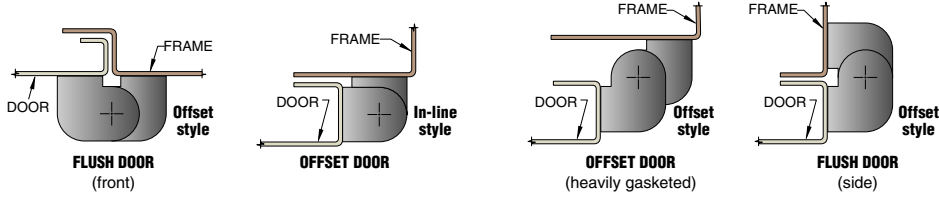
**OFFSET KNUCKLE STYLE**



DIMENSIONS									PART NUMBERS			
Screw thread size	A	B	C	D	E, F & G	H	J	K	In-line Knuckle Style	Offset Knuckle Style		
										Type "A"	Type "B"	
<b>300 Series</b>												
M5	31	16.7	14.3	21.5	9.5	19	7	58	96-50-300-11•	96-50-310-11•	96-50-320-11•	
10-24	(1.22)	(.66)	(.56)	(.84)	(.38)	(.75)	(.28)	(2.28)	96-10-300-11•	96-10-310-11•	96-10-320-11•	
<b>400 Series</b>												
M6	41.3	22.2	19	28.5	12.7	25.5	9.5	78	96-50-400-11•	96-50-410-11•	96-50-420-11•	
1/4-20	(1.63)	(.88)	(.75)	(1.13)	(.50)	(1.00)	(.38)	(3.06)	96-10-400-11•	96-10-410-11•	96-10-420-11•	

Hinges Lift-off

## Mounting Variations



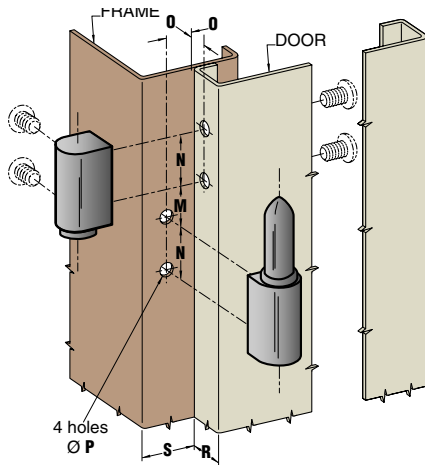
## Door and Frame Preparation

NOTE: To insure lift-off capability, the lower knuckle must be installed on the frame, the upper knuckle on the door.

NOTE: For non-lift-off mounting one hinge knuckle must be mounted AFTER the door is hung.

SERIES	INSTALLATION DIMENSIONS				Screw thread size
	M	N	O	Ø P	
300	14.3 <sup>+0.0</sup> <sub>-0.3</sub> (.563±.008)	19 <sup>+0.2</sup> <sub>-0.1</sub> (.750±.008)	9.5 <sup>+0.3</sup> <sub>-0.1</sub> (.375±.005)	5.4 <sup>+0.1</sup> <sub>-0.0</sub> (.205 <sup>+0.003</sup> <sub>-.000</sub> )	M5 (10-24)
400	19.0 <sup>+0.0</sup> <sub>-0.3</sub> (.750±.008)	25.5 <sup>+0.1</sup> <sub>-0.2</sub> (1.000±.008)	12.7 <sup>+0.2</sup> <sub>-0.1</sub> (.500±.005)	6.7 <sup>+0.1</sup> <sub>-0.0</sub> (.264 <sup>+0.003</sup> <sub>-.000</sub> )	M6 (1/4-20)

### In-Line Knuckle Style...



For 300 series: Screw length = panel thickness + 4.8 (.186). (Screws not supplied).

For 400 series: Screw length = panel thickness + 6.4 (.250). (Screws not supplied).

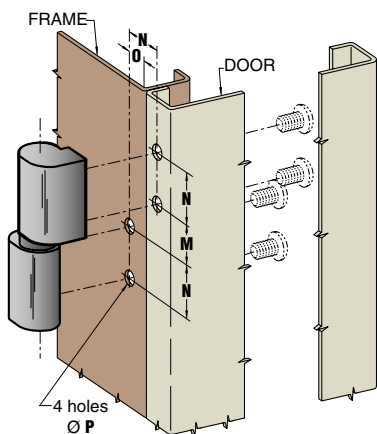
NOTE: For door to open a full 180°, one of the two dimensions, **R** or **S**, must be less than 25.4 (1.00).

### Offset Knuckle Style...Type "A"

For 300 series:

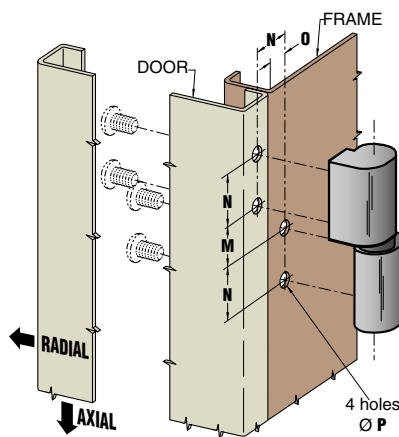
For 400 series:

Screw length = panel thickness + 6.5 (.250) to 9.5 (.375). *Screws not supplied.*



### Offset Knuckle Style...Type "B"

Screw length = panel thickness + 9.5 (.375) to 12.7 (.500). *Screws not supplied.*



## Material and Finish

KNUCKLES: Glass-reinforced nylon, black.  
PIN: Nylon, black.

### Note:

Maximum recommended tightening torque for mounting screws:

300 series = 2.8 N•m (25 in. lbs.)

400 series

(in-line) = 2.5 N•m (22 in. lbs.)

(offset) = 2.8 N•m (25 in. lbs.)

## Product Strength Guidelines

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

### 300 series

#### RADIAL

Maximum static load - 670 N (150 lbs.)

Average ultimate load - 1300 N (290 lbs.)

#### AXIAL

Maximum static load - 1100 N (250 lbs.)

Average ultimate load - 2500 N (550 lbs.)

### 400 series

#### RADIAL

Maximum static load - 1300 N (300 lbs.)

Average ultimate load - 2600 N (600 lbs.)

#### AXIAL

Maximum static load - 2200 N (500 lbs.)

Average ultimate load - 5000 N (1100 lbs.)

millimeter (inch)  
millimeter  
(inch)

Dimensions without tolerances are for reference only.