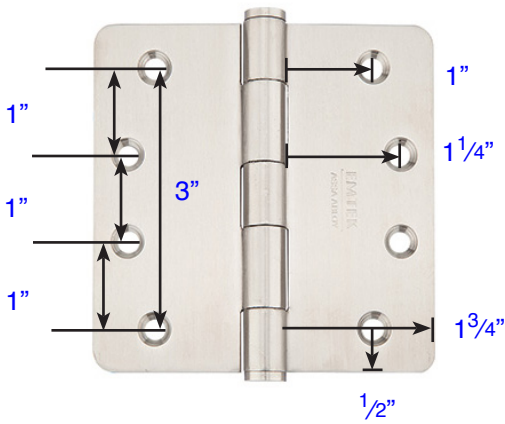


**3 1/2" x 3 1/2" Residential Duty  
Plain Bearing with  
5/8" Radius Corners**

### Residential Duty Hinges

*Plain Bearing, 304 Grade, 0.093" - 0.096" Thick*

Description	Product Code
3 1/2" x 3 1/2" with Square Corners	9811332D
3 1/2" x 3 1/2" with 1/4" Radius Corners	9812332D
3 1/2" x 3 1/2" with 5/8" Radius Corners	9813332D

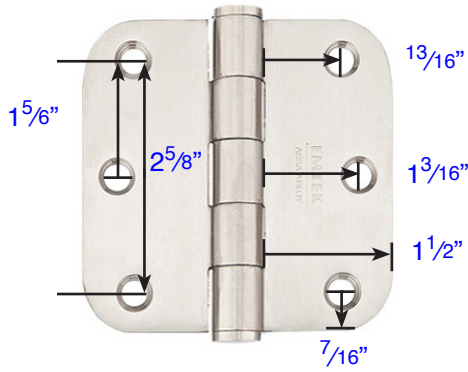


**4" x 4" Residential Duty  
Plain Bearing with  
1/4" Radius Corners**

### Residential Duty Hinges

*Plain Bearing, 304 Grade, 0.093" - 0.096" Thick*

Description	Product Code
4" x 4" with Square Corners	9811432D
4" x 4" with 1/4" Radius Corners	9812432D
4" x 4" with 5/8" Radius Corners	9813432D

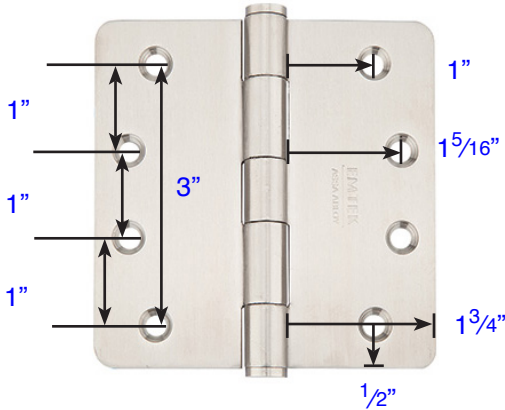


**3 1/2" x 3 1/2" Heavy Duty Plain Bearing with 5/8" Radius Corners**

### Heavy Duty Hinges

*Plain Bearing, 304 Grade, 0.113" - 0.135" Thick*

Description	Product Code
3 1/2" x 3 1/2" with Square Corners	9821332D
3 1/2" x 3 1/2" with 1/4" Radius Corners	9822332D
3 1/2" x 3 1/2" with 5/8" Radius Corners	9823332D

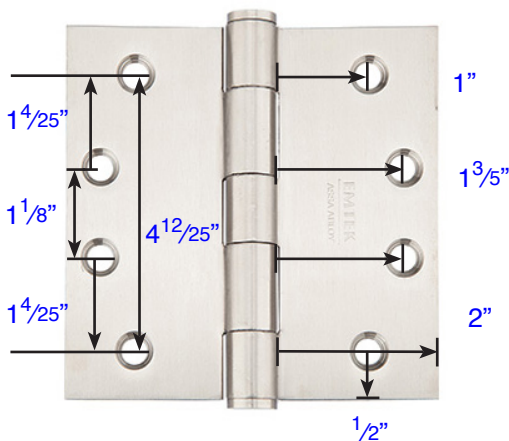


**4" x 4" Heavy Duty Plain Bearing with 1/4" Radius Corners**

### Heavy Duty Hinges

*Plain Bearing, 304 Grade, 0.113" - 0.135" Thick*

Description	Product Code
4" x 4" with Square Corners	9821432D
4" x 4" with 1/4" Radius Corners	9822432D
4" x 4" with 5/8" Radius Corners	9823432D

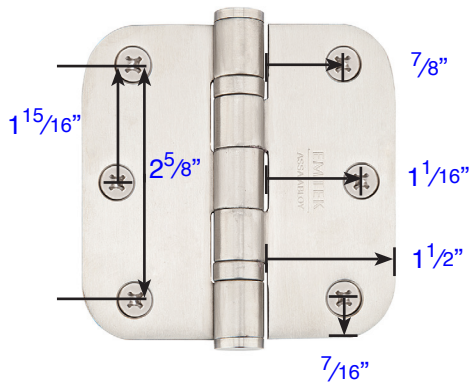


**4 1/2" x 4 1/2" Heavy Duty Plain Bearing with Square Corners**

### Heavy Duty Hinges

*Plain Bearing, 304 Grade, 0.113" - 0.135" Thick*

Description	Product Code
4 1/2" x 4 1/2" with Square Corners	9821532D

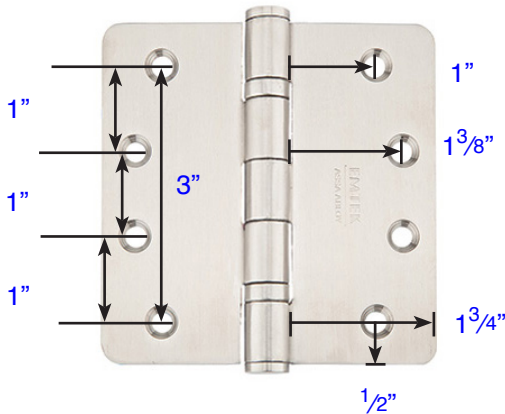


**3 1/2" x 3 1/2" Heavy Duty  
Ball Bearing with  
5/8" Radius Corners**

### Heavy Duty Hinges

*Ball Bearing, 304 Grade, 0.113" - 0.132" Thick*

Description	Product Code
3 1/2" x 3 1/2" with Square Corners	9841332D
3 1/2" x 3 1/2" with 1/4" Radius Corners	9842332D
3 1/2" x 3 1/2" with 5/8" Radius Corners	9843332D

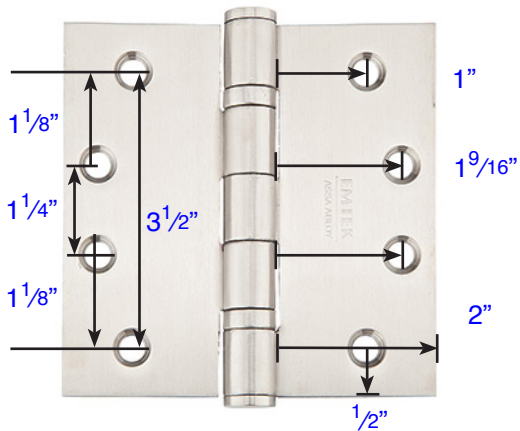


**4" x 4" Heavy Duty  
Ball Bearing with  
1/4" Radius Corners**

### Heavy Duty Hinges

*Ball Bearing, 304 Grade, 0.113" - 0.132" Thick*

Description	Product Code
4" x 4" with Square Corners	9841432D
4" x 4" with 1/4" Radius Corners	9842432D
4" x 4" with 5/8" Radius Corners	9843432D

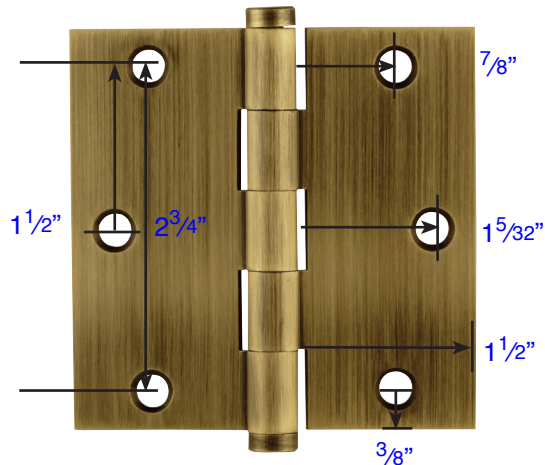


**4 1/2" x 4 1/2" Heavy Duty  
Ball Bearing with  
Square Corners**

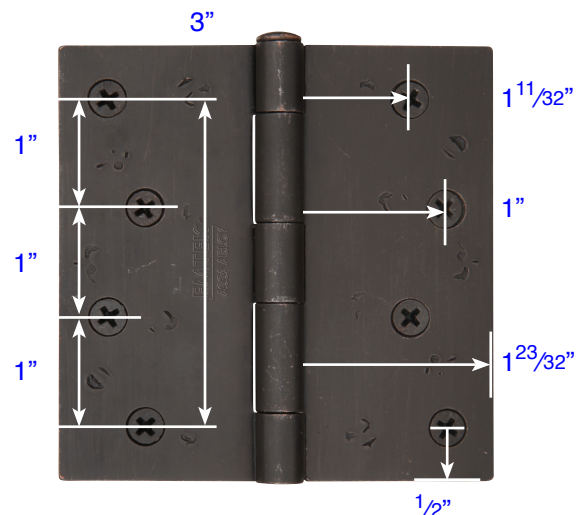
### Heavy Duty Hinges

*Ball Bearing, 304 Grade, 0.113" - 0.132" Thick*

Description	Product Code
4 1/2" x 4 1/2" with Square Corners	9841532D



3 1/2" x 3 1/2"



4" x 4"

Brass Residential Duty  
Square Corner: 96113  
1/4" Radius: 96123  
5/8" : 96133

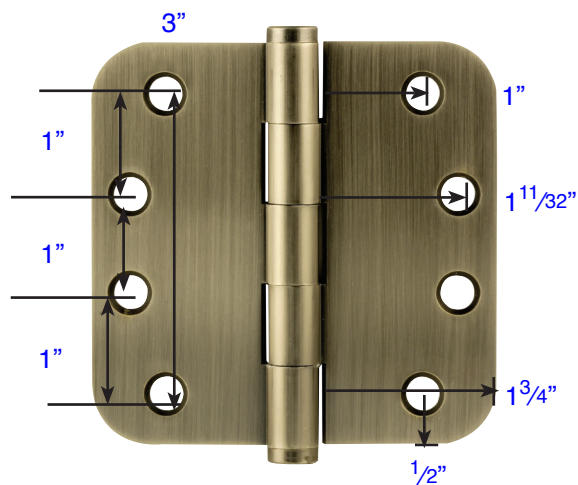
Brass Heavy Duty, Plain Bearing  
Square Corner: 96213  
1/4" Radius: 96223  
5/8" : 96233

Brass Heavy Duty, Ball Bearing  
Square Corner: 96413

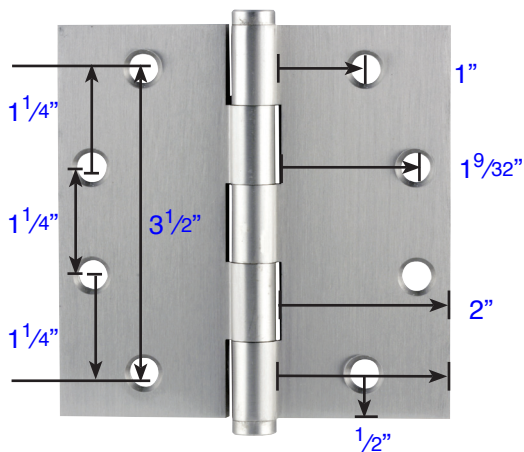
Steel Residential Duty  
Square Corner: 91013  
1/4" Radius: 91023  
5/8" : 91033

Steel Heavy Duty, Plain Bearing  
Square Corner: 92013  
1/4" Radius: 92023

Steel Residential Duty  
Square Corner: 91014  
1/4" Radius: 91024  
5/8" : 91034



4" x 4"



4 1/2" x 4 1/2"

Brass Residential Duty  
Square Corner: 96114  
1/4" Radius: 96124  
5/8" : 96134

Brass Heavy Duty, Plain Bearing  
Square Corner: 96214  
1/4" Radius: 96224  
5/8" : 96234

Brass Heavy Duty, Ball Bearing  
Square Corner: 96414

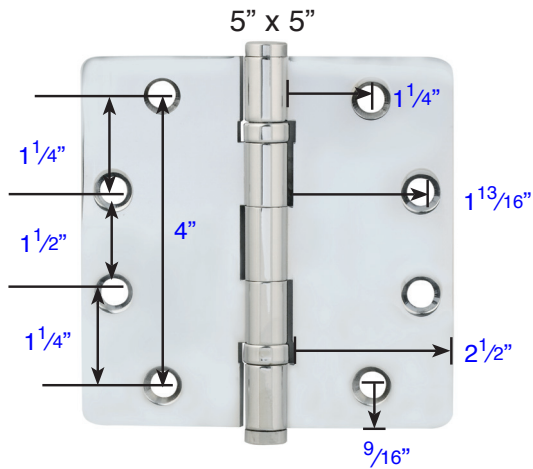
Steel Heavy Duty, Plain Bearing  
Square Corner: 92014  
1/4" Radius: 92024

Steel Heavy Duty, Ball Bearing  
Square Corner: 94014  
1/4" Radius: 94024

Brass Heavy Duty, Plain Bearing  
Square Corner: 96215  
1/4" Radius: 96225  
Brass Heavy Duty, Ball Bearing  
Square Corner: 96415  
1/4" Radius: 96425

Steel Heavy Duty, Plain Bearing  
Square Corner: 92015  
1/4" Radius: 92025

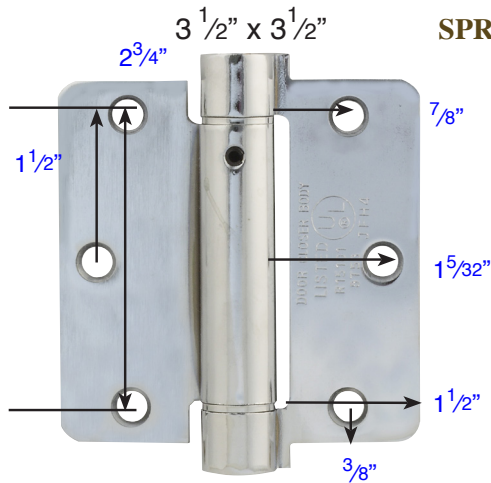
Steel Heavy Duty, Ball Bearing  
Square Corner: 94015  
1/4" Radius: 94025



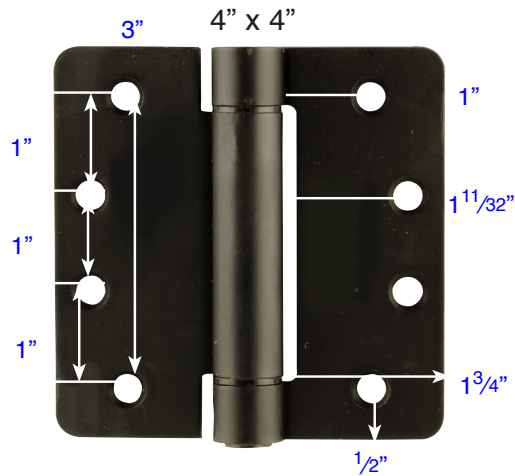
**BALL BEARING, EXTRUDED**

3 1/2" x 3 1/2", 4" x 4", 4 1/2" x 4 1/2", 5" x 5"

*Brass Heavy Duty, Ball Bearing  
Square Corner: 96416*



**SPRING HINGES**



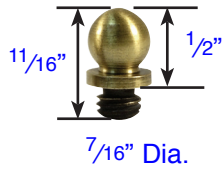
**Brass Hinges**

Hinges #	Description	Screw Dimensions
96113	3 1/2" x 3 1/2"	#9 x 3/4"
96123	Residential Duty	
96133	Plain Bearing	
96114	4" x 4"	#9 x 3/4"
96124	Residential Duty	
96134	Plain Bearing	
96213	3 1/2" x 3 1/2"	#10 x 1"
96223	Heavy Duty	
96233	Plain Bearing	
96214	4" x 4"	#12 x 1 1/4"
96224	Heavy Duty	
96234	Plain Bearing	
96215	4 1/2" x 4 1/2"	#12 x 1 1/4"
96225	Heavy Duty	
96235	Plain Bearing	
96413	3 1/2" x 3 1/2" Ball Bearing	#10 x 1"
96414	4" x 4" Ball Bearing	#12 x 1 1/4"
96415	4 1/2" x 4 1/2"	#12 x 1 1/4"
96425	Ball Duty	
96416	5" x 5" Ball Bearing	#12 x 1 1/4"

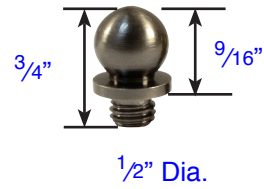
**Steel Plated Hinges**

Hinges #	Description	Screw Dimensions
91013	3 1/2" x 3 1/2"	#9 x 3/4"
91023	Residential Duty	
91033	Plain Bearing	
91014	4" x 4"	#9 x 3/4"
91024	Residential Duty	
91034	Plain Bearing	
92013	3 1/2" x 3 1/2"	#10 x 1"
92023	Heavy Duty	
92033	Plain Bearing	
92014	4" x 4"	#12 x 1 1/4"
92024	Heavy Duty	
92034	Plain Bearing	
92015	4 1/2" x 4 1/2"	#12 x 1 1/4"
92025	Heavy Duty	
92035	Plain Bearing	
94033	3 1/2" x 3 1/2" Ball Bearing	#10 x 1"
94014	4" x 4" Ball Bearing	#12 x 1 1/4"
94024	Plain Bearing	
94015	4 1/2" x 4 1/2"	#12 x 1 1/4"
94025	Ball Duty	

3 1/2" & 4" Residential Duty  
(97203 & 97204)



3 1/2" H.D & B.B  
(97303)

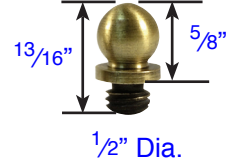


Threading is the same for all solid brass hinge tips

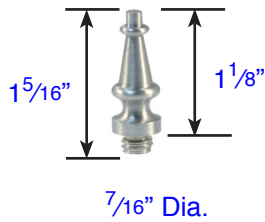
4" H.D & B.B  
(97304)



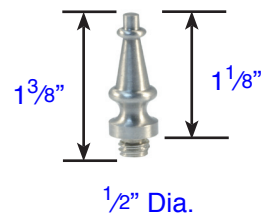
4 1/2" H.D & B.B  
(97305)



3 1/2" & 4" Residential Duty  
(97213 & 97214)

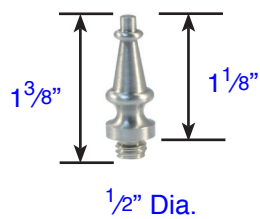


3 1/2" H.D & B.B  
(97313)

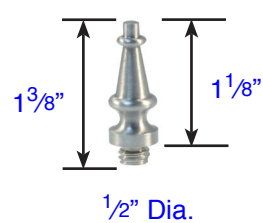


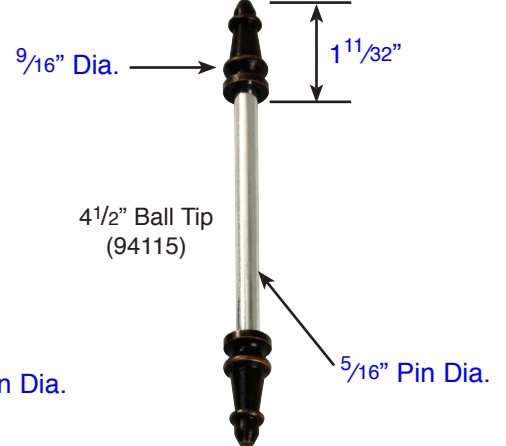
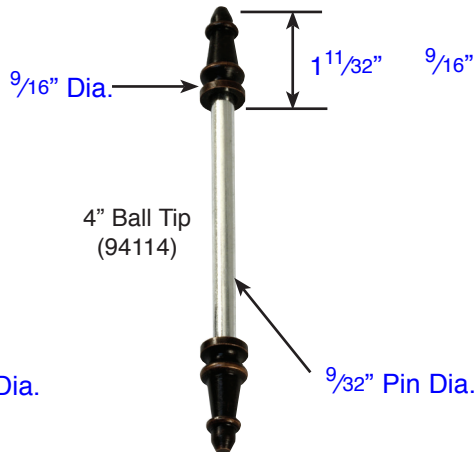
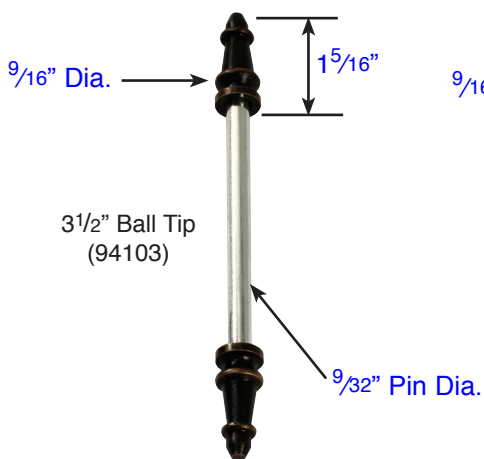
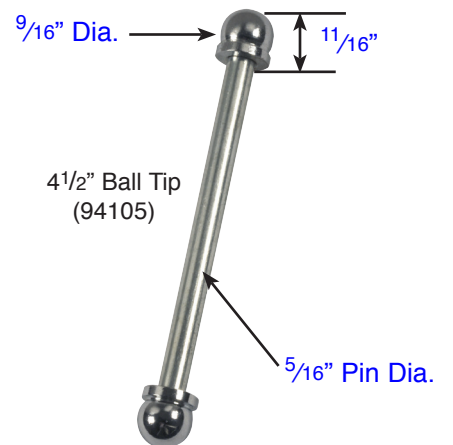
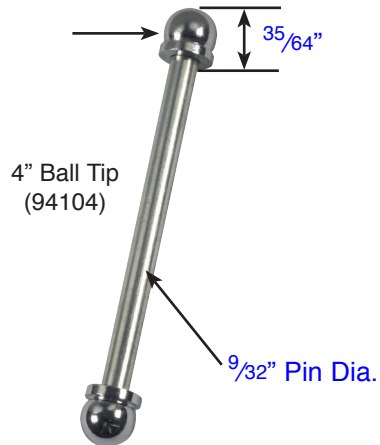
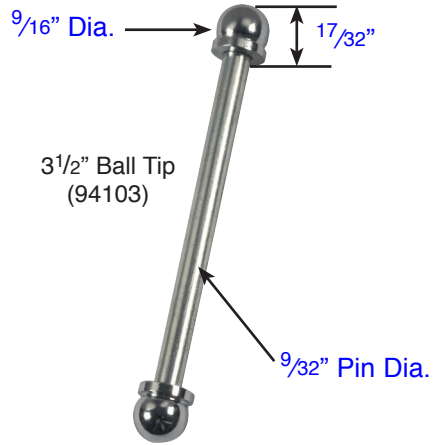
Threading is the same for all solid brass hinge tips

4" H.D & B.B  
(97314)

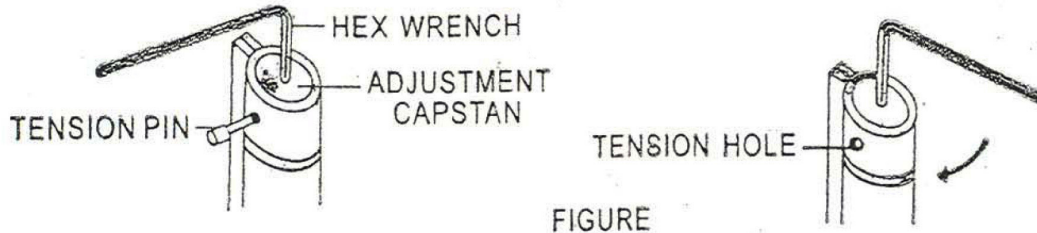


4 1/2" H.D & B.B  
(97315)





# SPRING HINGE



FIGURE

**CAUTION:**

- (A) DONOT EXCEED THREE(3)HOLES TENSION FOR 180° DOOR OPENING, OR FOUR(4)HOLES TENSION FOR 90° OPENING.
- (B) ALWAYS ROTATE THE HEX WRENCH TO THE CLOCKWISE REGARDLESS OF RIGHT ORLEFT HAND DOOR APPLICATION.
- 1. HINGE INSTALLATION: INSTALL HINGE IN NORMAL MANNER WITH THE ADJUSTMENT END OF HINGE UP, AS SHOWN ABOVE.
- 2. ADJUSTING SPRING TORQUE:
  - (A) ADJUST TORQUE ONLY AFTER TO HINGE IN INSTALLED AND WITH DOOR CLOSED.
  - (B) ROTATE ADJUSTMENT CAPSTAN TO THE CLOCKWISE BY HEX WRENCH TO ADJUST PROPER SPRING TENSION AND INSERT TENSION PIN INTO TENSION HOLE WITH TENSIONING HEX WRENCH AS SHOWN ON FIGURE.
  - (C) REMOVE HEX WRENCH, AND TRY DOOR FOR CLOSING. TO ACHIEVE PROPER CLOSING FORCE. CHANGE ADJUSTMENT FORM ONE HOLE TO THE NEXT IN EITHER DIRECTION BY HEX WRENCH AS TENSION PIN IS REMOVED AND RESET.

MAXIMUM DOOR SIZE RECOMMENDED 3' - 0" WIDE X 7' - 0" HIGH				
RECOMMENDED MAXIMUM DOOR WEIGHT(LBS.)			HINGE SELECTION	
3.5 x 3.5	4 x 4	4.5 x 4.5	SPRING HINGES	BUTT HINGES
50	60	70	1 EACH	2 EACH
70	85	115	2 EACH	1 EACH
90	110	150	3 EACH	NONE

**NOTES:**

- 1) Wind conditions, excessive air pressure on one side of an opening, weather stripping, or other adverse job conditions may require the use of all spring hinges.
- 2) For maximum versatility, use all spring hinges.