

# Choosing the Right Hinge for the Job

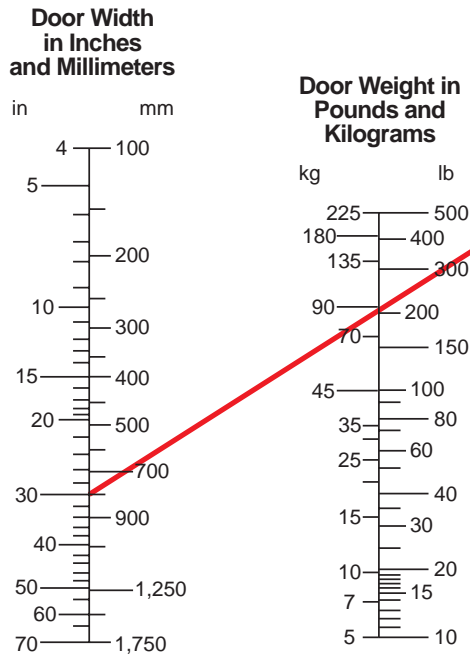
The nomograph below has been developed to assist you in determining the correct size and number of hinges for your installation.

If the information you need is off the chart, consult the factory.

The general rule used to determine the number of hinges is:

Every door should be provided with at least one hinge for every thirty inches in height or portion thereof; however, more hinges may be required per chart below.

For example, a 90" door needs three hinges and a 91" door needs four.



Note: For #418 and #420 hinge, use formula described on page 7.

## Example

A wood door 30" wide, 200 lbs., with a thickness of 1<sup>3</sup>/<sub>4</sub>" will require four #218 SOSS Invisible Hinges. The red line shows how the sizing and selection were determined from the nomograph.

The nomograph above has been developed to assist you in determining the correct size and number of hinges for your installation.

## Directions

After determining the weight and width of the door, draw a straight line through the door width and weight to line "A", as indicated in the example. Continue with a horizontal line sideways from the point of intersection with line "A" until the door

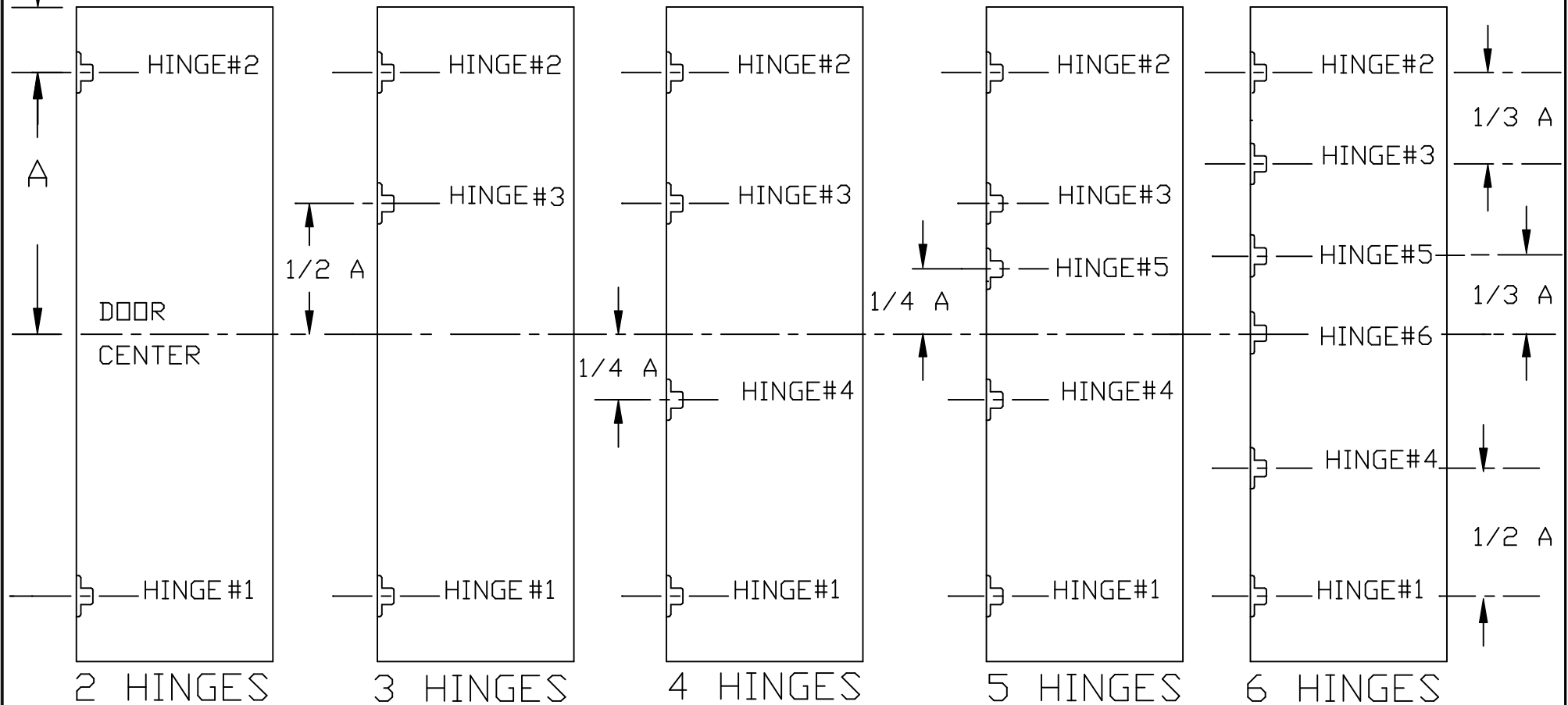
thickness is reached. Use the number of hinges and the model number indicated on this line.

To use this chart as a working guide, we suggest that you photocopy this page.

Hinge Number	Door Material		Minimum Door Thickness	Number of Hinges Required
	METAL	WOOD & METAL		
	9/16	5/8		
114				
314				
205				
106				
100				
101				
303				
103				
203				
204				
208				
212				
216				
218				
220				

SOSS OFFERS A ROUTER GUIDE SYSTEM WHERE ONE SETUP PROVIDES FAST ACCURATE MORTISING ON BOTH DOOR AND FRAME. SEE TITLE BLOCK FOR ROUTER GUIDE PART NUMBERS FOR EACH SIZE HINGE.

8 TO 10 INCHES FROM END (BOTH TOP AND BOTTOM HINGE)



SEE CATALOG NOMOGRAPH TO DETERMINE THE NUMBER OF HINGES REQUIRED FOR A DOOR OF KNOWN WEIGHT AND HEIGHT.

LOCATION IS NOT CRITICAL ON DOORS REQUIRING MORE THAN 7 HINGES. LOCATE MOST HINGES IN THE TOP HALF OF THE DOOR.

**UIP**

© Copyright 1998  
 Universal Industrial Products Co. Inc.  
 One Coreway Drive  
 Pioneer, Ohio 43554-0628

SOSS INVISIBLE HINGE

NAME  
 VERTICAL HINGE LOCATION ON DOOR

SCALE: NOT TO SCALE

DATE: 4/8/98

DRAWN BY: R. SEIGNEUR

CHECKED BY:

ROUTER GUIDE SYSTEMS

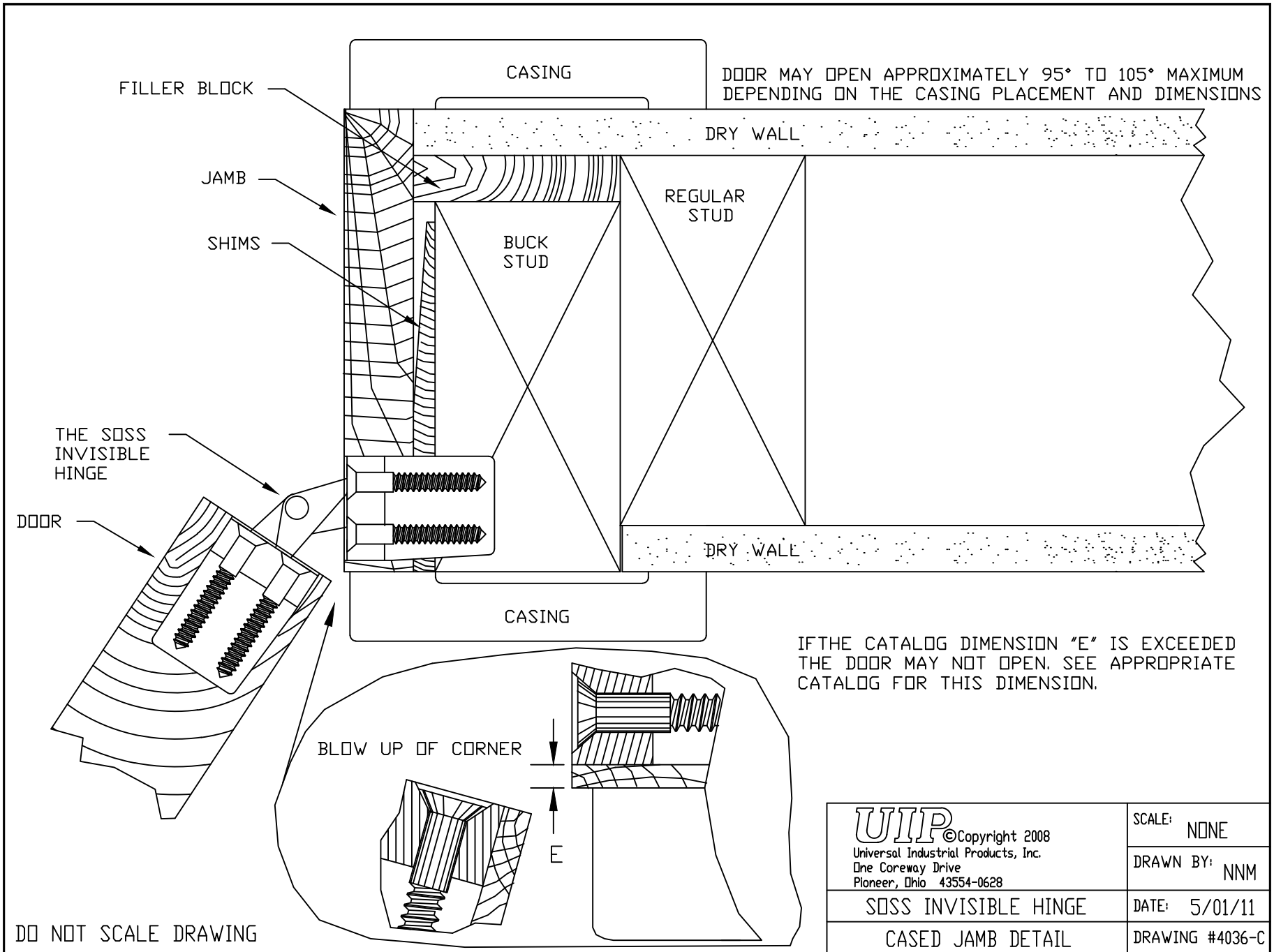
#216 - PART# 216RG4

#218 - PART# 218RG4

#220 - PART# 220RG4

#418 - PART# 418RG4

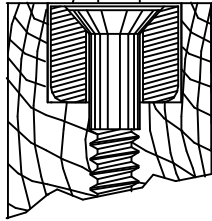
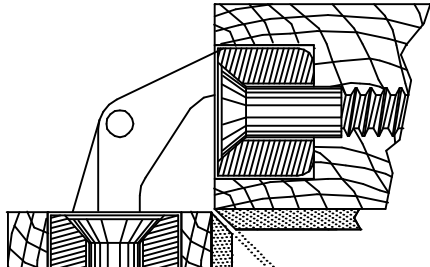
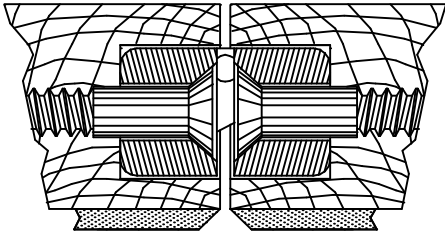
DRAWING # 4440-C



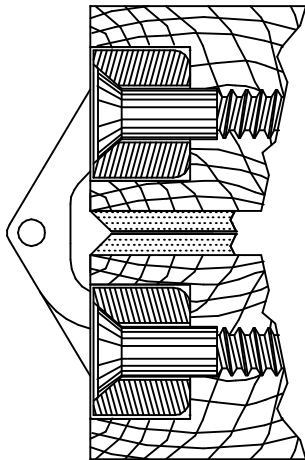
DO NOT SCALE DRAWING

<b>UIP</b> ©Copyright 2008 Universal Industrial Products, Inc. One Coreway Drive Pioneer, Ohio 43554-0628	SCALE: NONE
	DRAWN BY: NNM
SOSS INVISIBLE HINGE	DATE: 5/01/11
CASED JAMB DETAIL	DRAWING #4036-C

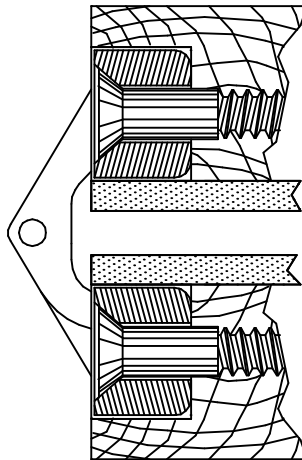
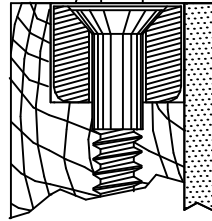
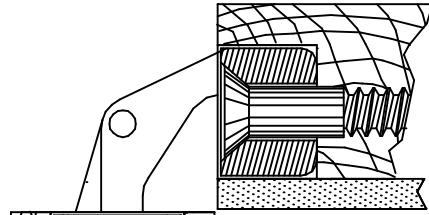
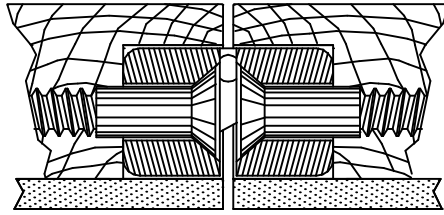
180 DEGREE OPENING - STANDARD BACKSET WITH MATERIAL APPLIED TO DOOR & FRAME



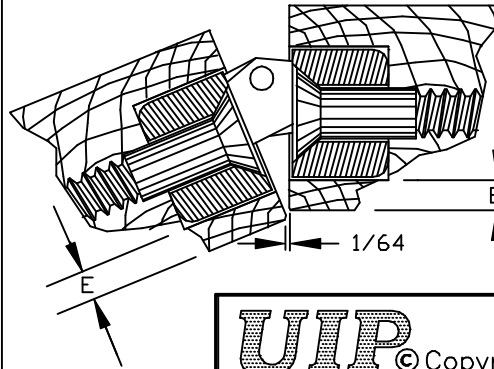
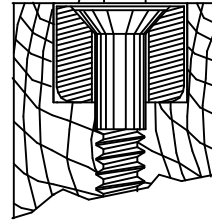
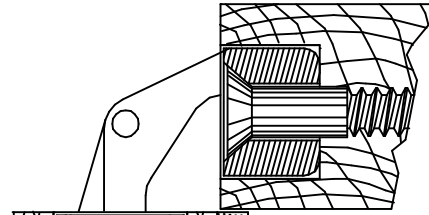
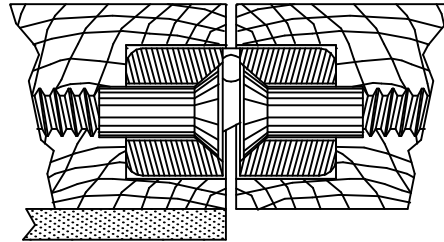
DOTS SHOW ANY THICKNESS CAN BE USED FOR 90° OPENING



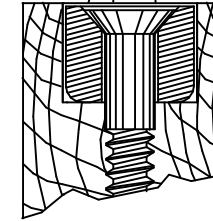
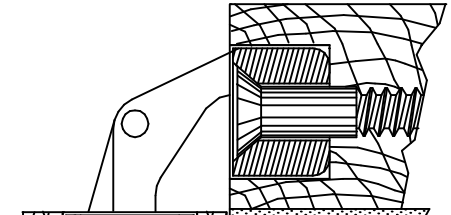
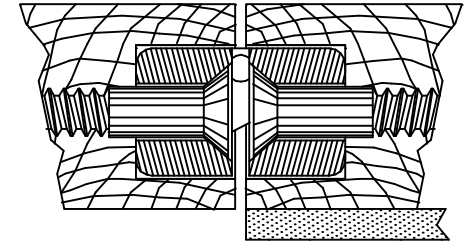
180 DEGREE OPENING WITH NO BACKSET AND MATERIAL APPLIED TO DOOR & FRAME



90 DEGREE OPENING - STANDARD BACKSET WITH MATERIAL APPLIED TO DOOR ONLY



90 DEGREE OPENING - STANDARD BACKSET WITH MATERIAL APPLIED TO FRAME ONLY



CLEARANCE REDUCES TO APPROXIMATELY 1/64 INCH AS DOOR APPROACHES THE FRAME UPON OPENING. BEYOND THAT POINT THE CLEARANCE INCREASES TO A THE MAXIMUM CLEARANCE WHEN THE DOOR REACHES IT'S FULLY OPEN POSITION AT 180 DEGREES. SEE THE HINGE TEMPLATE DRAWING FOR THAT DIMENSION. IF THE TEMPLATE "E" DIMENSION IS EXCEEDED THE DOOR WILL HIT THE JAMB AND BIND. SEE HINGE TEMPLATE FOR DIMENSION "E".

A 45° BEVEL ON APPLIED MATERIAL, WITH A THICKNESS LESS THAN HALF THE MAX. DOOR CLEARANCE, WILL PROVIDE 180° DOOR OPENING. SEE HINGE TEMPLATE DRAWING FOR DOOR CLEARANCE AT 180 DEGREE OPENING.

**UIP** © Copyright 1998  
 Universal Industrial Products Co. Inc.  
 One Coreway Drive  
 Pioneer, Ohio 43554-0628

SCALE: NONE  
 DATE: 4/8/98  
 DRAWN BY: RLS

MATERIAL APPLIED TO DOOR AND/OR FRAME AND EFFECT ON DEGREE OF DOOR OPENING

NAME: S055 INVISIBLE HINGE  
 OPEN CLEARANCE DETAIL

DRAWING # 4477-C