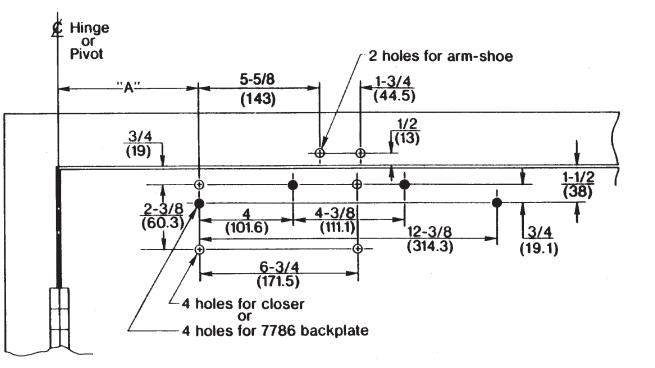
Opening	Dimension ''A''	
	inches	mm.
To 100°	7-5/8	194
100° to 120°	6-5/8	168
120° to 150°	4-5/8	117
150° to 180°	4-1/8	105

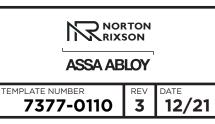
- Caution: Door swing may be limited by door, frame, wall or hardware conditions (including closer projection).
- Do not scale drawing.
- Right hand door shown.
- Dimensions are given in inches (mm).
- Minimum ceiling clearance for closer arm : 1" (25mm).
- Hollow-metal doors require channel or box-type reinforcement when thru-bolt mount is specified.
- Through bolts required for wood or plastic faced fire-door mounting.
- Minimum thickness recommended for reinforcements in hollow-metal doors and frames: .1046" (2.66mm) unless otherwise noted.



- Sex nut head [9/16"(15.00mm.) diameter x 1/8"(3mm.) high] has to be mortised in door or stop for top two closer or backplate fasteners.
- ****** Grommet nut head (5/8"(16.00mm.) diameter x 1/8"(3mm.) high) has to be mortised in door or stop for top two closer or holder backplate fasteners.

PREPARATION FOR FASTENERS				
Fasteners		Door or Frame	Drill Sizes	
ANDARD	#14 type "A" S.M. Screw Arm: 1-1/4" (32mm.) Closer: 2-3/4" (70mm.)	Wood	3/16" (4.30mm.)	
STA	1/4-20 Machine Screw	Metal	#7 [.201" (5.10mm.) dia.] drill 1/4-20 UNC tap	
OPTIONAL	Sex-nuts and bolts (See mortising note*)	Holiow- metal	9/32" (7.00mm.) through; 3/8" (9.50mm.) face opposite to closer.	
		Aluminum or Wood	3/8" (9.50mm.) through.	
	Through-bolts and grommet-nuts (See mortising note**)	All	9/32" (7.00mm.) through; 3/8" (9.50mm.) dia. X 3/8" (10mm.) deep on face opposite to closer.	





Approved 2022-02-25