

Notes:

| Opening | Dim. " $A$ " |
| :--- | :---: |
| To $100^{\circ}$ | $7-5 / 8(194)$ |
| 100 to $120^{\circ}$ | $6-5 / 8(168)$ |
| 120 to $150^{\circ}$ | $4-5 / 8(117)$ |
| 150 to $180^{\circ}$ | $4-1 / 8(105)$ |

1. Do not scale drawing.
2. Right hand door shoown.
3. Dimensions are in inches ( mm ).
4. Hollow metal doors require channel or box type reinforcement when thru bolt mount is specified.
5. Sex bolts may be required for wood or plastic faced fire door mounting.
6. Minimum thickness recommended for reinforcements in hollow metal doors are frames: 1046 " ( 2.66 mm ) unless other wise noted.


| Bracket | Dim. "B" |  | Dim. "C" |
| :---: | ---: | ---: | :---: |
|  | Maximum | Minimum | Maximum |
| 291 | $2(51)$ | $1-1 / 2(38)$ | $2-1 / 4(57)$ |
| 291 A | $2-3 / 4(70)$ |  | $3(76)$ |

Preparation for Fasteners

| Preparation for Fasteners |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Fasteners | Door or Frame | Drill Sizes |
|  | \#14 type "A" | Wood | 7/32" ${ }^{\prime \prime} 5.5 \mathrm{~mm}$ ) |
|  | Arm: 1-1/4" (32mm) <br> Closer: 2-3/4" $(70 \mathrm{~mm})$ | Aluminum |  |
|  | 1/4-20 machine screw | Metal | $\begin{aligned} & \text { drill: \#7 (.201") } \\ & \text { tap: } 1 / 4-20 \end{aligned}$ |
|  | Sex nuts and bolts | Hollow Metal | 9/32" ( 7.00 mm ) thru; $3 / 8^{\prime \prime}(9.50 \mathrm{~mm})$ on door or transom face opposite to closer |
|  |  | Aluminum or Wood | $3 / 8$ " (9.50mm.) thru |
|  | Thru bolts and grommet nuts | All | 9/32" ( 7.00 mm ) thru; 3/8" $(9.50 \mathrm{~mm})$ dia. $x$ <br> $3 / 8$ " ( 10 mm ) deep on door or transom face opposite to closer |

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## 400 Series Door Closers-Sized 2 thru 6

 4400 Series Door Closers-Multi-Size 1 to 6With 291 or 291A Mortised Bracket and With or Without 486 Backplate Regular Non-Hold Open Arm Application

Template Number: 7344-0103
Sheet: 1 of 1
Date: 12/23

