



WEAVER CONSTRUCTION MANAGEMENT, INC.
 3679 S. Huron St., Suite 404
 Englewood, CO 80110
 Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

March 30, 2012

WGC Submittal No: 08710-003
(Includes 08100)

PROJECT: **Harold Thompson Regional WRF**
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: **GMS, Inc.**
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
 Sewage Disposal District**
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: **Newco Door & Hardware, Inc.**
 6606 E. 47th Ave
 Denver, CO 80216
 303-579-0558 rickbradley@gmail.com

SUBJECT: Submittal for Hollow Metal Doors/Frames (08100) and for Finish Hardware (08710) at the Pump & Disinfection Building

SPEC SECTION: 08710 and 08100

PREVIOUS SUBMISSION DATES:

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

Contractor's Stamp:

Date: 3/30/12

Reviewed by: Leslie Brown
 (x) Reviewed Without Comments
 () Reviewed With Comments

Engineer's Stamp:

**ENGINEER'S
 COMMENTS:** _____

Newco Door & Hardware, LLC.
6606 East 47TH Avenue
Denver, Co. 80216

Email address: rickbradley@gmail.com
P: 303.576.0558 F: 303.576.0565
Cell Phone: 303.903.3947

Weaver Construction Management
3679 South Huron Street, Suite 404
Englewood, Colorado 80110-3498

Phone: 303.789.4111 Fax: 303.789.4310

Reference Job Name: Harold D. Thompson Water Reclamation Facility
Fountain, State: Colorado Zip: 80817

Attention: John Jacobs

<u>Quantity</u>	<u>Description</u>
1 st Attachment	Finish Hardware Catalog Cuts - Section 8710
2 nd Attachment	Finish Hardware Catalog Cuts - Section 8710
3 rd Attachment	Hollow Metal Door and Frame Elevations - Section 8100
4 th Attachment	Hollow Metal Doors - Section 8100 - Part 2.3, A
5 th Attachment	Hollow Metal frames - Section 8100 - Part 2.1, A-1
6 th Attachment	Hardware Schedule Section - 8700

Thank you

Newco Door & Hardware, LLC.,
6606 East 47th Avenue
Denver, Co. 80216

E-mail: rickbradley56@gmail.com
P: 303.576.0558 F: 303.576.0565
Cell Phone: 303.903.3947

Project:

Harold D. Thompson
Regional Water Reclamation Facility
Lower Fountain Metropolitan Sewage Disposal District
Equipment, Maintenance and Storage Building

Pump Building

Architect:

GMS, Inc.
Consulting Engineers
611 N. Weber, Suite 300
Colorado Springs, Colorado 80903

Phone: Fax:

Contractor:

Weaver Construction, Management, Inc.
3679 South Huron Street, Suite 404
Englewood, Colorado 80110

Phone: 303.789.4111 Fax: 303.789.4310

Prepared By: Rick L. Bradley

Date: March 28, 2012

Revision Date:

Job Number: NC1256Lptp

Manufacturers:

Cal Royal - Hinge Pin Stops, Latch guards
Hager - Hinges, Kick plates, Passage, Privacy
Ives - Stops
Pioneer - Hollow Meal Doors & Frames
Precision - Exit Devices
Reese - Sweeps, Thresholds, Weather stripping
Stanley - Closers

In order to better service our customers we require the following information be provided and returned with the approved submittals.

Project Manager: _____

Office / Cell Phone Number: _____ Fax: _____

Email Address: _____

Superintendent: _____

Office / Cell Phone Number: _____ Fax: _____

Email Address: _____

Dates Required:

1) Hollow Metal Door Frames: _____

2) Hollow Metal Borrowed Lite Frames: _____

3) Hollow Metal Doors: _____

4) Timely Steel Frames: _____

5) Aluminum Frames: _____

6) Wood Doors: _____

*Pre finished wood doors - Sample(s) to be provided by the General Contractor or his agent.

7) Finish Hardware: _____

8) Miscellaneous: _____

9) If we are to provide the keying for this project, please provide us with the following contact information

Name of the contact: _____ Phone #: _____

Fax #: _____ Email Address: _____

Please have this signed and returned with the submittals. We will not proceed with fabrication, or purchasing of this project until the above information has been provided.

Failure to provide this information could result in additional lead times and costs.

Signed by: _____ Date: _____

Job Note(s):

- 1) To comply with ADA requirements vision lites cannot exceed 42" above the finish floor to the bottom of the vision lite.
Please verify location of vision lites in all doors with lites.

Architect please advise.

- 2) Opening D-P03 is specified to receive a minimum of 1.0 square feet. Since we used 6" x 27" vision lite, (clear exposed glass will be 4" x 25"), on the base previous building, we suggest using the same size. Also, the elevation indicates the vision lite is to be 2'6" in from the latch side. A 36" door, less the 30", only leaves 6". We suggest a minimum of 10", this is 4" between the hinge side of the door and the lite cut out, 6" for the cut out.

Architect please advise.

Abbreviations

Abbreviation(s) For Hollow Metal Doors and Frames:

86 - Mortise Lock Prep
161 - Cylindrical Lock Prep
453 - 3 Each 4.5" X 4.5" Hinges
CYL - Cylindrical
CYLS - Cylinders
H453 - 3 Each Heavy Weight 4.5" X 4.5" Hinges
FBW - Fully Back Welded
FWC - Full Width Cloer Reinforcement
FWH - Full Width Hinge Reinforcement
LH - Left Hand
LHR - Left Hand Reverse
MRTS - Mortise
PA - Parallel Arm Closer Reinforcement
REG - Regular Arm Closer Reinforcement
RH - Right Hand
RHR - Right Hand Reverse
RESR - Rim Exit Strike Reinforcement
SNB - Sex Nuts and Bolts
SSR - Special Strike Reinforcement
TB - Thru Bolt(s)
UC - Uner Cut
WGS - Welded Ground Smooth

Abbreviation(s) For Wood Doors:

86 - Mortise Lock Prep
161 - Cylindrical Lock Prep
B1E - Bevel 1 Edge (Leading Edge)
B2E - Bevel Both Edges
CYL - Cylindrical
CYLS - Cylinders
H453 - 3 Each Heavy Weight 4.5" X 4.5" Hinges
HC - Hollow Core
LH - Left Hand
LHR - Left Hand Reverse
MPLE - Maple
MRTS - Mortise
MVE - Matching Vertical Edge
PSRO - Plain Slice Red Oak
RH - Right Hand
RHR - Right Hand Reverse
RCB - Rotary Cut Birch
SC - Solid Core
SNB - Sex Nuts and Bolts
SWE - Soft Wood Edges
TB - Thru Bolts
UC - Under Cut

Hw Set A

Opng/Tag	Location	Handing
D-P01	Exterior from Interior	Right Hand Reverse
D-P03	Exterior from Interior	Right Hand Reverse
D-P04	Exterior from Interior	Left Hand Reverse

Pioneer Hmf 3 - 3070 5 3/4" 4" hd. 14ga. gal. welded hollow metal frames - Type a prep for H453 hinges, asa strike, parallel arm closer reinforcement

Pioneer Hmd 3 - 3070 1 3/4" flush 16ga. gal. hollow metal doors - Type a prep H453 hinges, 161 cylindrical lockset, standard under cut, seamless edge

Mfr	Qty	Subtype	Item Description
Hager	9	Butts	BB1199 4.5 X 4.5 US32D nrp
Simplex	1	Mech. Combo Lock	LL1021S 2 3/4 x ASA x US26D LH
Simplex	2	Mech. Combo Lock	LR1021S 2 3/4 x ASA x US26D RH
Schlage	3	I/C Cores	23-030 626
Stanley	3	Closer	D4551 SRI Hold Open x snb 689
Ives	3	Floor Stop	FS448 626
Hager	3	Kick plate	.050 10" x 34" 630
Reese	3	Threshold	S426A 36"
Reese	3	Weather stripping	678A 1/36" x 2/84
Reese	3	Sweep	DB594AF 36"
Cal Royal	3	Latch guards	GJLPG2 US26D

Hw Set B

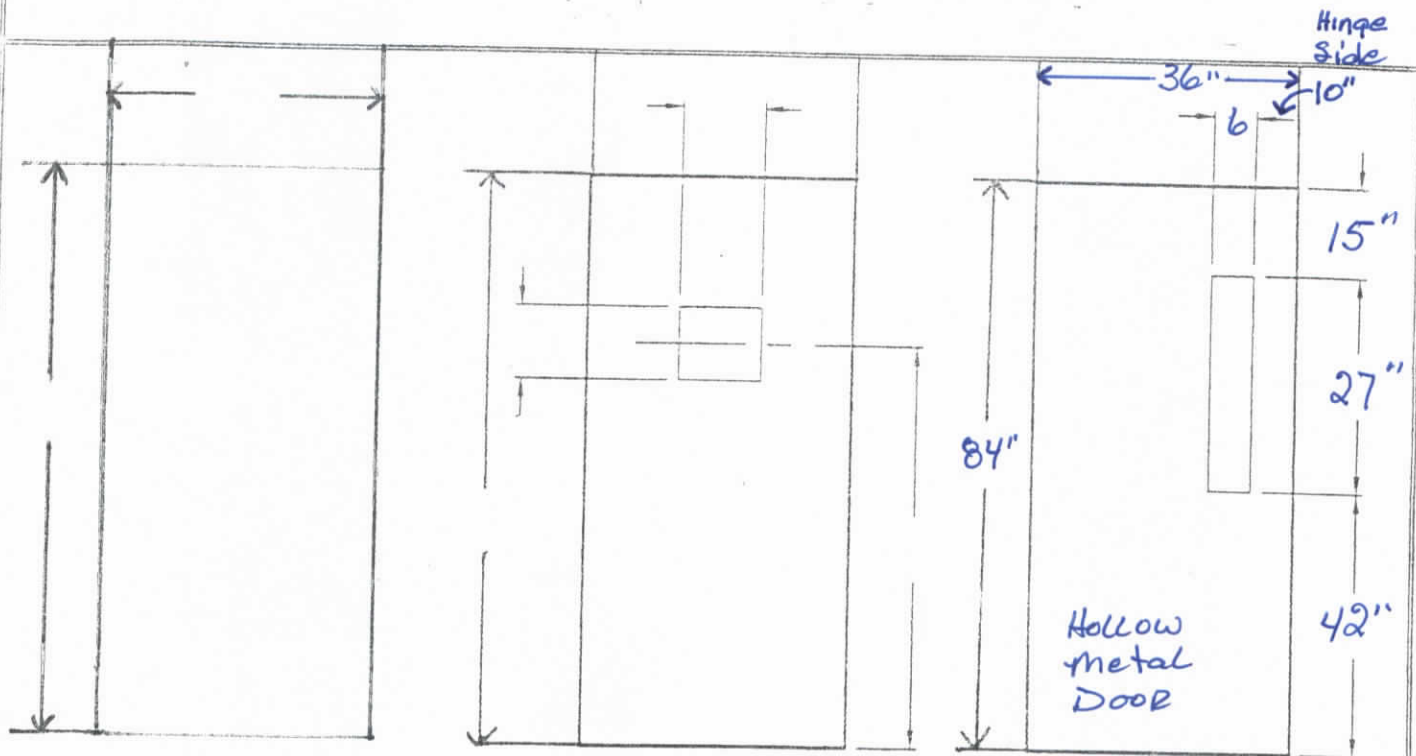
Opng/Tag	Location	Handing
D-P02	Exterior from Chemical Feed Room	Left Hand Reverse

Pioneer Hmf 1 - 3070 5 3/4" 4" hd. 14ga. gal. welded hollow metal frames - Type a prep for H453 hinges, rim exit strike reinforcement, parallel arm closer reinforcement

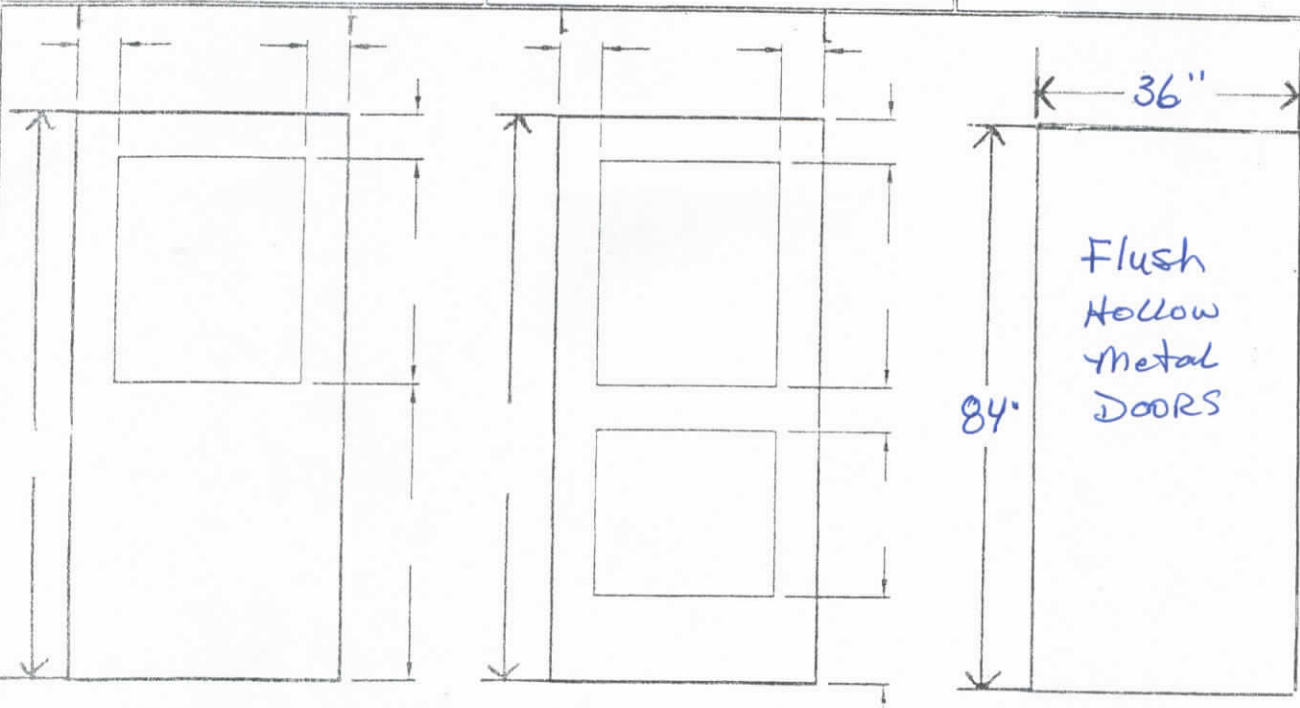
Pioneer Hmd 1 - 3070 1 3/4" flush 16ga. gal. hollow metal doors - Type a Prep H453 hinges, 161 cylindrical lockset, standard under cut, seamless edge vision lite cut out 6" x 27" located 15" down and 10" in **FROM HINGE SIDE**

Nation Guard VL Kits 1 - L-FRA 100 6" X 27" for use with 1/4" glass provide by others

Mfr	Qty	Subtype	Item Description
Hager	3	Butts	BB1199 4.5 X 4.5 US32D nrp
Stanley	1	Rim Exit	2103 x snb US32D LHR
Simplex	1	Mech. Combo Lock	LP1021S 2 3/4 x ASA x US26D LHR
Schlage	1	I/C Cores	23-030 626
Stanley	1	Closer	D4551 SRI Hold Open x snb 689
Ives	1	Floor Stop	FS448 626
Hager	1	Kick plate	.050 10" x 34" 630
Reese	1	Threshold	S426A 36"
Reese	1	Weather stripping	678A 1/36" x 2/84
Reese	1	Sweep	DB594AF 36"
Cal Royal	1	Latch guard	GJLPG2 US26D



DPO2-LHR



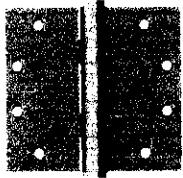
DPO1-RHR

DPO3-RHR

DPO4-LHR

ARCHITECTURAL HINGES

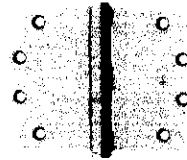
FIVE KNUCKLE HINGES (CONTINUED)



BB1168
Ball Bearing - Heavy Weight
 Steel with steel pin (ANSI A8111)

BB1199 ★
Ball Bearing - Standard Weight
 Brass with stainless steel pin
 (ANSI A2111) or stainless steel with
 stainless steel pin (ANSI A5111)

- Four ball bearings
- Non-rising removable pin with button tip and plug
- 5" x 5" (127 mm x 127 mm) and 4-1/2" x 4-1/2" (114 mm x 114 mm) BB1168 available with two different leaf sizes
- For use on heavy weight doors or doors requiring high frequency service



WTBB1168
Ball Bearing - Heavy Weight - Wide Throw
 Steel with steel pin (ANSI A8111)

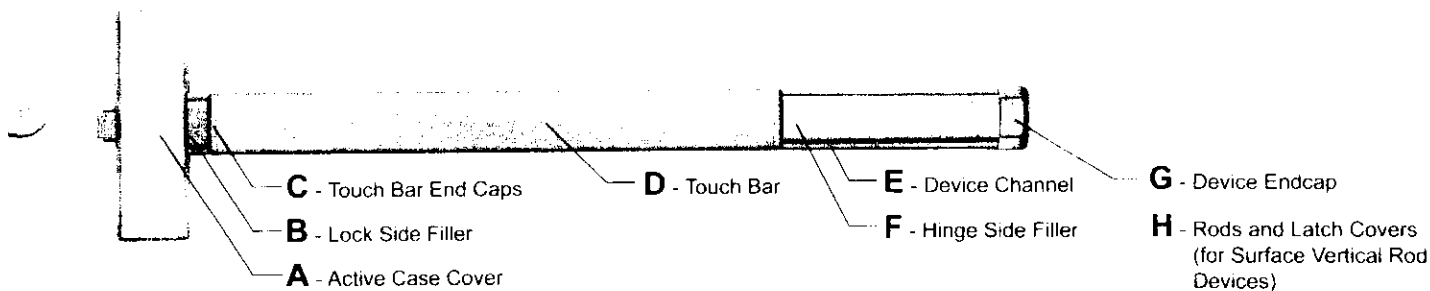
WTBB1199
Ball Bearing - Heavy Weight - Wide Throw
 Brass with stainless steel pin
 (ANSI A2111) or stainless steel with
 stainless steel pin (ANSI A5111)

- Wide throw
- Four ball bearings
- Non-rising removable pin with button tip and plug
- For use on heavy weight doors or doors requiring high frequency service

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
4-1/2 x 4	114 x 102	0.180	8	1/2 x 12-24	1-1/4 x 12
4-1/2 x 4-1/2	114 x 114	0.180	8	1/2 x 12-24	1-1/4 x 12
5 x 4	127 x 102	0.190	8	1/2 x 12-24	1-1/4 x 12
5 x 4-1/2	127 x 114	0.190	8	1/2 x 12-24	1-1/4 x 12
5 x 5	127 x 127	0.190	8	1/2 x 12-24	1-1/4 x 12
6 x 4-1/2	152 x 114	0.203	10	1/2 x 1/4-20	1-1/2 x 14
6 x 5	152 x 127	0.203	10	1/2 x 1/4-20	1-1/2 x 14
6 x 6	152 x 152	0.203	10	1/2 x 1/4-20	1-1/2 x 14
8 x 6	203 x 152	0.203	16	1/2 x 1/4-20	1-1/2 x 14
8 x 8	203 x 203	0.203	16	1/2 x 1/4-20	1-1/2 x 14

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
4-1/2 x 5	114 x 127	0.180	8	1/2 x 12-24	1-1/4 x 12
4-1/2 x 6	114 x 152	0.180	8	1/2 x 12-24	1-1/4 x 12
4-1/2 x 7	114 x 178	0.180	8	1/2 x 12-24	1-1/4 x 12
4-1/2 x 8	114 x 203	0.180	8	1/2 x 12-24	1-1/4 x 12
5 x 6	127 x 152	0.190	8	1/2 x 12-24	1-1/4 x 12
5 x 7	127 x 178	0.190	8	1/2 x 12-24	1-1/4 x 12
5 x 8	127 x 203	0.190	8	1/2 x 12-24	1-1/4 x 12





Base Materials

Finishes	ANSI/BHMA	US	Aluminum	Brass	Bronze	Stainless Steel
Polished Brass, Clear Coated	605	US3	---	A,B,C,D,E,F,G,H	---	---
Satin Brass, Clear Coated	606	US4	---	A,B,C,D,E,F,G,H	---	---
Satin Bronze, Clear Coated	612	US10	---	---	A,B,C,D,E,F,G,H	---
Dark Oxidized Satin Bronze	613	US10B	---	---	A,B,C,D,E,F,G,H	---
Polished Chromium Plated	625	US26	---	C	A,B,D,E,F,G	H
Satin Chromium Plated	626	US26D	---	C	A,B,D,E,F,G	H
Satin Aluminum, Clear Anodized	628	US28	A,E,F	---	---	B,C,D,G,H
Satin Stainless Steel	630	US32D	---	---	---	A,B,C,D,E,F,G,H

Finishes

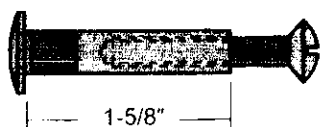
ANSI/BHMA	US	Description
600	USP	Primed for Paint
605	US3	Polished Brass, Clear Coated
606	US4	Satin Brass, Clear Coated
612	US10	Satin Bronze, Clear Coated
613	US10B	Dark Oxidized Satin Bronze
625	US26	Polished Chromium Plated
626	US26D	Satin Chromium Plated
628	US28	Satin Aluminum, Clear Anodized
630	US32D	Satin Stainless Steel
689		Aluminum Paint
695		Dark Bronze Paint

Fasteners

Furnished standard with machine screws and full thread wood/sheet metal screws. Specify Sex Nuts and Bolts (SNB) where recommended or required by the door manufacturer.

Sex Nuts & Bolts (not furnished std.)

Sex Nuts & Bolts are furnished with No. 10-24 x 1" OHMS (1-1/2" long screws required for guides).



Security Screws

All exposed screws will be a Torx pin in tamper resistant type, machine screws only. Specify (SEC) Security Screws. Cover Screws use a T20 driver, End Cap Screws use a T25 driver.



Door Sizes

Stock sizes for door widths and heights are listed below. If required, cut to size in the field.

Door Widths Stock Sizes

2'-1" to 2'-6"	2'-6" *
2'-7" to 3'-0"	3'-0"
3'-1" to 4'-0"	4'-0"

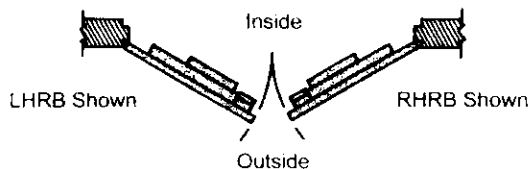
* Not available for Narrow Stile Devices.

Vertical Rod Devices

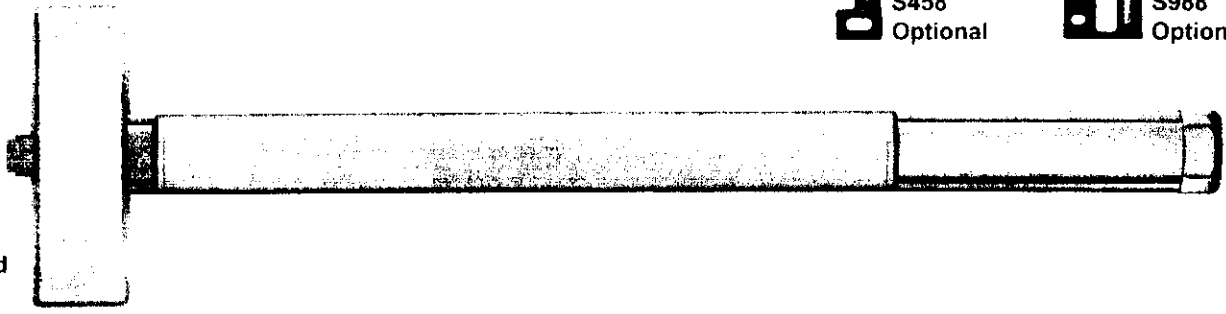
Device	Door Heights	Stock Sizes
Surface Vertical Rod Device*	up to 7'-0"	7'-0"
	7'-1" to 8'-0"	8'-0"
	8'-1" to 10'-0"	10'-0"
Concealed Vertical Rod Device	6'-8" to 8'-0"	8'-0"
	8'-1" to 10'-0"	10'-0"

* Surface Vertical Rods are furnished of the same material as the device. Stainless steel rods are furnished for 625, 626, 628 and 630 devices.

Hand of Doors



RIM EXIT DEVICES



Apex 2100 Series - Reversible Apex FL2100 Fire Exit Series - Reversible

DOORS - For all types of single and double doors with a mullion. For mullions, see page 18. Available for 1-3/4" to 2-1/4" thick, up to 4'-0" wide opening. For thicker doors, consult factory. Furnished standard for 1-3/4" thick, 3'-0" wide opening.

DEVICE - Covers ANSI A115.2 (Type 161), A115.18 cylinder lock and A115.1 (Type 86) Mortise Lock preparation.

FUNCTIONS - Functions are field selectable except for the Double Cylinder option. The device is furnished for a desired function if specified. If not specified the "03" function is furnished standard.

DOUBLE CYLINDER - Handed. "10" Function available. Requires two rim type cylinders, not furnished standard. See page 5 and 19.

BASE MATERIAL - The Cover, Touchbar, Device Channel, Lock/Hinge Side Filler and End Cap are furnished of heavy wrought Brass, Bronze or Stainless Steel. 628 Devices are furnished with Aluminum, Brass, Bronze and Stainless Steel components. See "Finish & Base Material" chart on page 3.

CHASSIS - Investment Cast Steel, Zinc Dichromated.

LATCHBOLT - Stainless Steel, Deadlocking, 3/4" throw.

STRIKES - No. S300, Investment Cast Stainless Steel, Black Powder Coated furnished standard. No. S988, optional strike for use on Aluminum Door applications, please specify when ordering. No. S458, optional strike for use on Mullion applications, please specify when ordering. For optional strike information see page 30.

DOGGING - 1/4 turn hex key dogging standard. NOT available on Fire Exit Hardware.

TOUCHBAR HEIGHT - 39-15/16" from floor standard. May be varied as situation dictates.

REVERSIBLE - Reversible for all functions and Trims. Standard packaging RHRB.

UL LISTED - Panic and Fire Exit Hardware. For FIRE EXIT HARDWARE Ratings see page 35. Conforms to UL10C and UBC 7-2.

ANSI/BHMA - Devices are BHMA certified for ANSI 156.3, Grade 1.

FINISHES - 605, 606, 612, 613, 625, 626, 628, 630. For Finish description see page 3.

CYLINDERS - Rim Type, not furnished standard. Specify when required. For cylinder details see page 19.

STILE WIDTH - See Stile Information on page 32.

RETROFIT APPLICATIONS - The 2100 and FL2100 Series Devices are designed to retrofit into other manufacturers' mounting hole locations. 1700 Series Pull Trim and 4900 Series Lever Trim may also be factory set for these applications by specifying prefix "R" (e.g. 2108 x R4908A).

Consult factory for details.

Apex 21 Series - Nonhanded

The 21 Series Device is designed to be compatible with many manufacturers' Access Control exterior trim. The device incorporates a center driven cam to receive the tailpiece of the access control product. The tailpiece rotation required to retract the latch is a minimum of 50 degrees.

Consult factory for details.

DEVICE OPTIONS

Prefix	Description	Page
DE	Delayed Egress	24
E	Electric Device	28
ELR	Electric Latch Retraction	21
FL	Fire Exit Hardware	4
HC	Windstorm and Hurricane Code Device	20
LDS	Latchbolt Monitoring Double Switch	29
LS	Latchbolt Monitoring Switch	29
TDS	Touchbar Monitoring Double Switch	29
TS	Touchbar Monitoring Switch	29
WTDS	Weatherized Touchbar Mon. Dbl. Switch	29
WTS	Weatherized Touchbar Monitoring Switch	29

To specify add Prefix to Device No. (e.g. TS2103)

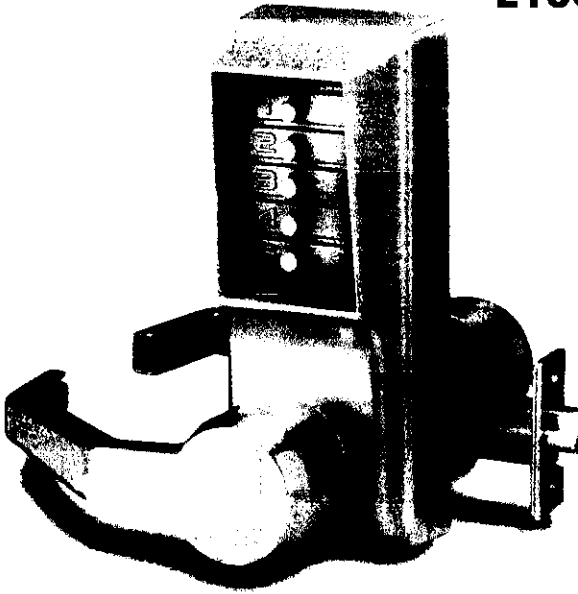
Suffix	Description	Page
ALK	Exit Alarm: battery operated	27
ALW	Exit Alarm: remote power	27
BRL	Braille Touchbar	31
CD	Cylinder Dogging	19
DS	Door Position Monitoring Switch	29
SEC	Security Screws	3
SNB	Sex Nut and Bolt	3
WALW	Weatherized Exit Alarm: remote power	27

To specify add Suffix to Device No. (e.g. 2103CD)

STANLEY



L1000 Series



Specifications

Construction: Heavy-duty cylindrical lock housing conforms to ANSI 156.2 Grade 1. ADA & D.O.D.5220.22M. Cast front housing; fixed lever. Brass unified trim plate; cast or wrought brass levers.

Door thickness: 1 3/8" to 2 1/4" (35 to 57 mm)

Strike: Includes "TS" strike plate 201288-* -01, "ASA" strike plate 201413-* -41 and "DB" strike box 55068-000-01.

Latch: 5/8" (16 mm) throw latch carries a 3-hour UL/ULC fire rating for "A" labeled doors. 2 3/4" (70 mm) backset. Floating front.

Installation: Cross bore for housing: 2 1/8" (54 mm) dia. Edge bore for latch: 1" (25 mm) dia. Installation wrench 201278-018-01 included. Minimum stile required: 5" (127 mm)

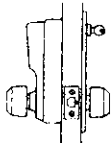
Control: Includes two DF59 keys for combination change; two DF5 keys for models 1051, 1061.

Door handing: Factory handed; cannot be changed in the field.

Weight: 8 1/4 lbs. (3.7 kg)

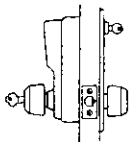
Substitute the - in the product number with one of the finish codes below*

1011



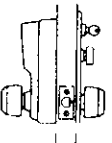
Exterior access by combination.
Egress by interior lever.

1021



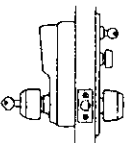
Exterior access by combination
or key override.
Egress by interior lever.

1031



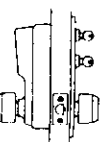
Exterior access by combination
or passage feature (thumbturn activated).
Egress by interior lever.

1041



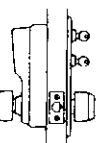
Exterior access by combination,
key override,
or passage feature (thumbturn activated).
Egress by interior lever.

1051



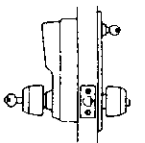
Exterior access by combination
or passage feature (key activated).
Egress by interior lever.

1061

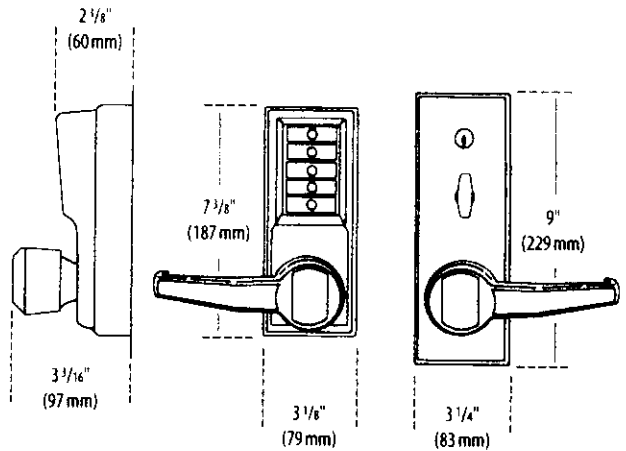


Exterior access by combination,
key override,
or passage feature (key activated).
Egress by interior lever.

1075



Exterior access by combination
or key override.
Button on inside lever activates privacy function.
Egress by interior lever.



(LH lock shown)

How to order

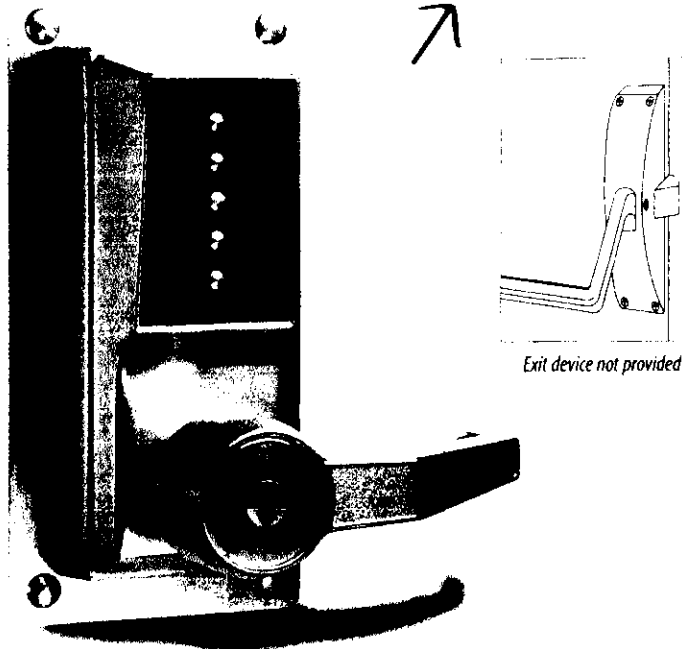
HAND	MODEL	FINISH	PACKAGE
L	1041A	26D	41
LEVER		KEY OVERRIDE	

(Models 1021, 1041 and 1061 core not supplied - see page 2 for key override options)

MODEL	Choose from the seven models pictured at left: 1011, 1021, 1031, 1041, 1051, 1061, 1071		
FINISH	03	-	"Chiara" Bright Brass
	05	-	Antique Brass
	26D	-	Satin Chrome
PACKAGE	41	-	1 lock per box
HAND	L	-	Left hand
	R	-	Right Hand

Exit Device Controls LP1000 Series

ILCO UNICAN



Exit device not provided

Specifications

Construction: Cast front housing with fixed lever (factory handed) and brass mounting plate. Cast lever meets all ADA (Americans with Disabilities Act) standards.

Door thickness: Up to 2 1/4" (57 mm)

Strike/Latch: Not included

Installation: Minimum stile required: 5" (127 mm). See exit device compatibility. (Installation may require recessing LP1000 thru-bolts on inside of door.)

Control: Includes tool #55179 for combination change.

Door handing: Factory handed; cannot be changed in the field.

Weight: 8 lbs. (3.6 kg)

The Lever Panic lock replaces the key cylinder on new or existing surface-mounted exit devices. The UNICAN® LP1000 can be used with a variety of manufacturer's rim-mounted exit devices.

- Complies with ADA (Americans with Disabilities Act) standards.
- Weather-resistant; all-metal construction, ideal for use outdoors.
- Designed for high-frequency use.
- Lock comes with a 2 1/4" (70 mm) long tailpiece to operate exit device from the outside
- Exit device can have up to 60° rotation (either direction).
- LP1000 may not be used with mortise design, or with most vertical rod devices.
- Exit device may be "dogged" without affecting the LP1000.

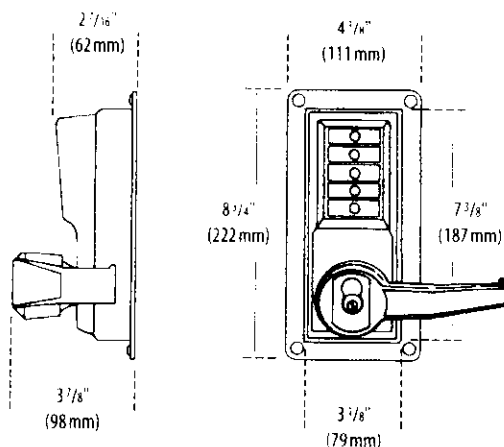
LP1000 locks can be used with many leading brands of surface-mounted exit devices including but not limited to the following:

Von Duprin — All models are Exit Only (EO) or Exit Only Fire (EOF): 22, 88 (EO only), 98, 99, 900, 2227, 9827, 9847, 9847 WDC, 9848, 9857, 9947 WDC, 9927, 9947, 90027, 90047 WDC, 90057

American Device — 6324, F6324, 6424, F6424

Monarch — XX-R*, FXX-R, 18-R*, F-18-R*, 17-R, F-17-R*, XX-V*, F-XX-V*, 18-V*, F-18-V*, F-XX-V*, 11-R*, 11-V*.

*Requires a special K-hub adapter (to be supplied by Monarch).



How to order

HAND	MODEL	FINISH	PACKAGE	
LRP1020A	-	26D	-	41
LEVER	KEY OVERRIDE			

(Core not supplied - see page 2 for key override options)

MODEL 1020 Exterior access by combination or key override. Interior egress by exit device (not supplied).

FINISH 26D - Satin Chrome

PACKAGE 41 - 1 lock per box

HAND LP - Left hand panic RP - Right hand panic

TABLE OF CONTENTS

D-4550 / D-4551 Series

General Information	2, 3	Heavy Duty Arm Application	7
Standard Application	4	Track Rail Arm Application	8
Parallel Arm Application	5	Accessories	9, 10, 11
Top Jamb Application	6		

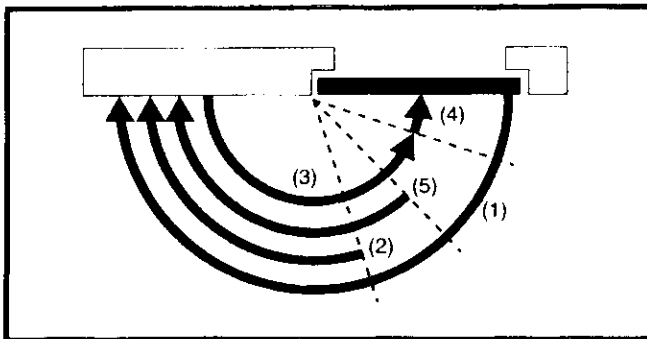
Introduction

The model D4550 Series is Stanley's best performing Heavy Duty Closer. The cylinder body is manufactured using R-14 Silicon Aluminum Alloy providing superior strength and durability on institutional applications. Available in a variety of standard and heavy-duty arm configurations accommodating a broader range of today's growing architectural application requirements.

Features

Fully Hydraulic Checking

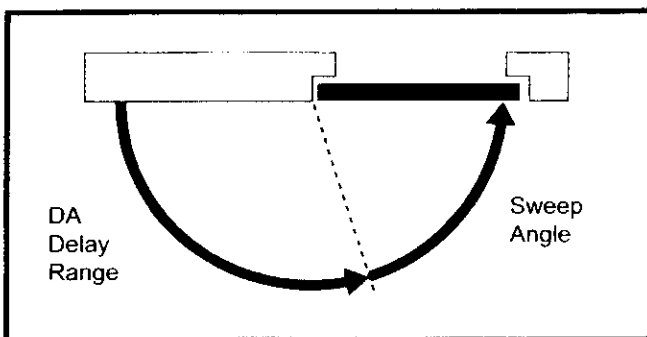
Controls the door through the entire opening and closing cycles by providing adjustable backcheck upon opening and adjusting general and latch speeds through the closing cycle.



- (1) opening swing, no checking
- (2) backcheck
- (3) general speed
- (4) latch speed
- (5) advanced backcheck

Delayed Action - Optional

The D-4550DA / D-4551DA Series Door Closers are equipped with a separate hydraulic valve adjustment to delay the closing speed from 180 to 70 degrees of door opening range.



Non-Handed

Can be used on both RH and LH doors for both push side and pull side mounting.

Advanced Variable Backcheck (AVB) optional

Cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder. When combined with Delayed Action consult factory for special template. (Heavy Duty Arm applications).

Adjustable Spring Power

The D-4550/D-4551 Series Door Closers are designed to have the widest range of spring power adjustment available to meet the broadest range of application requirements.

Non-Critical Regulation

The separate adjustments for backcheck, general and latch speeds are equipped with non-critical "V-Slot" regulating valves which allow for fine tuning the closing and latching speeds as well as the backcheck intensity.

All Season Fluid

All season fluid eliminates the need for seasonal adjustment.

Special High Silicon Aluminum Alloy Housing

All D-4550 / D-4551 Series Door Closers are constructed of RYOBI'S R14 HIGH SILICON ALUMINUM ALLOY to exceed the ANSI/BHMA A156.4 Grade 1 requirements.

Forged Arms

Heavy duty forged arms are interchangeable between the D-4550 and D-3550 Series Door Closers.

High Impact Cover

All D-4550 / D-4551 Series Door Closers are shipped with a high impact self-extinguishing decorative cover.

Metal Cover - Optional

An optional stainless steel, brushed finish metal cover is available.

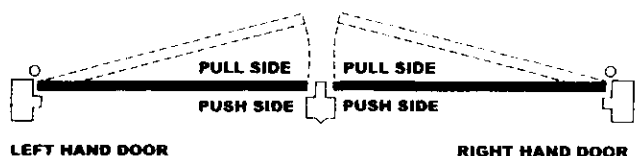
Special Rust Inhibitor (SRI) - Optional

For installations where a higher level of corrosive resistance is required.

Maintenance Free

Door Closers mounted in accordance with the provided installation instructions are maintenance free from periodic inspection and adjustment.

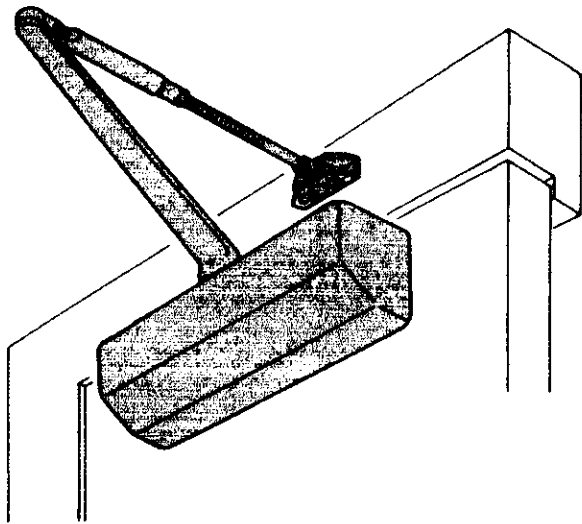
Handing



STANLEY

D-4550 SERIES

STANDARD APPLICATION ←



D-4550 / D-4551 Series Door Closer

Specifications

- Closer mounted on Pull side of door
- Can be templated for either 120° or 180° (when butt, frame and wall conditions permit.)
- Custom installation template may be available for unusual installation conditions. Contact Stanley for assistance.

Maximum Door Opening

120° Opening

A = 11-1/4" (286 mm)

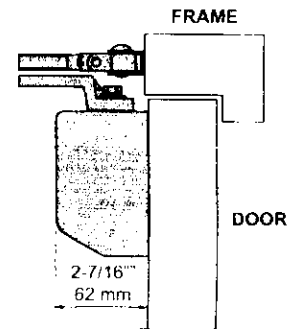
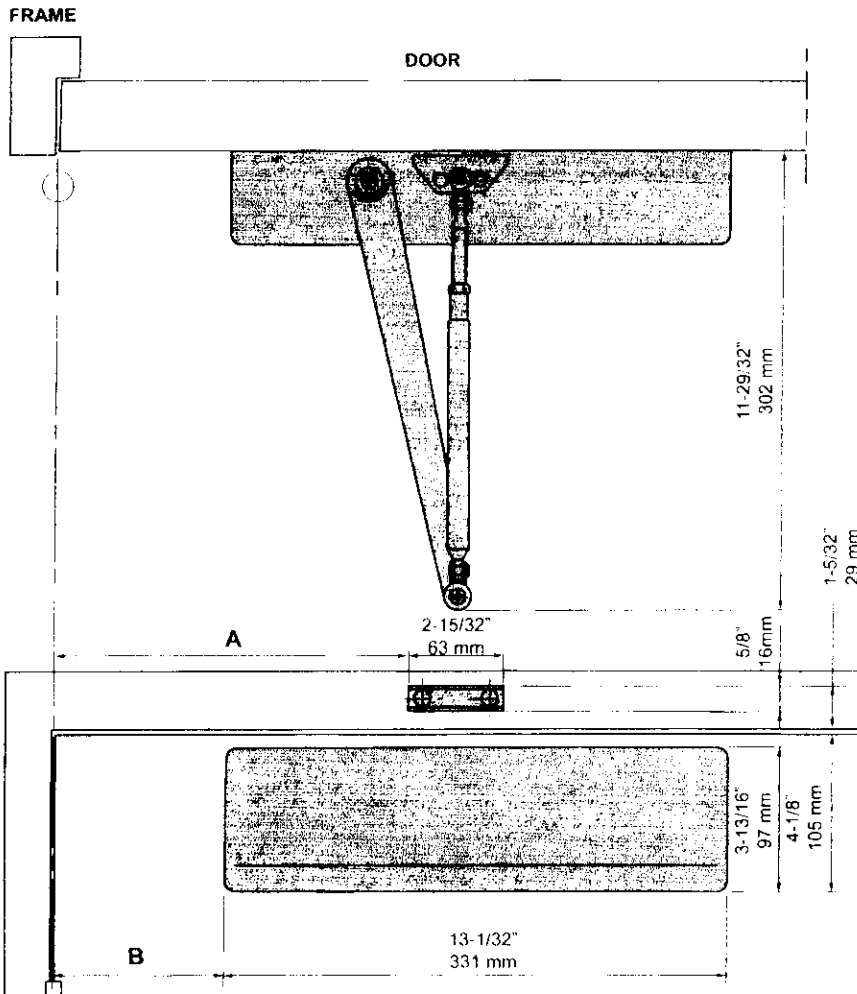
B = 6-1/2" (165 mm)

180° Opening

A = 9-1/4" (235 mm)

B = 4-1/2" (114 mm)

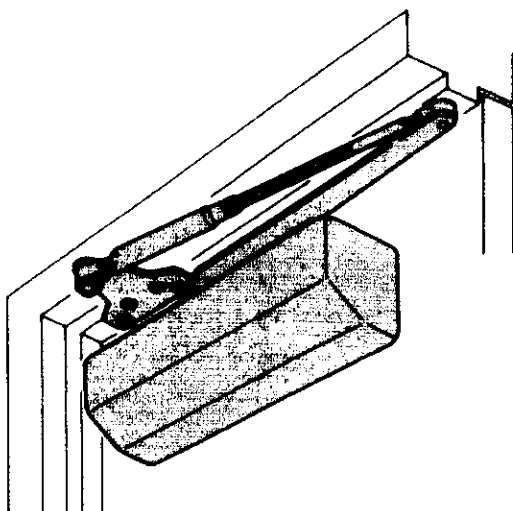
Hold-open points up to maximum door opening with hold open arm.



D-4550 / D-4551 Series Door Closer

Specifications

- Closer mounted on **PUSH** side of door
- Can be templated for either 120° or 180° (when butt, frame and wall conditions permit.)
- Custom installation template may be available for unusual installation conditions. Contact Stanley for assistance.



Maximum Door Opening

120° Opening

A = 8-23/32" (222 mm)

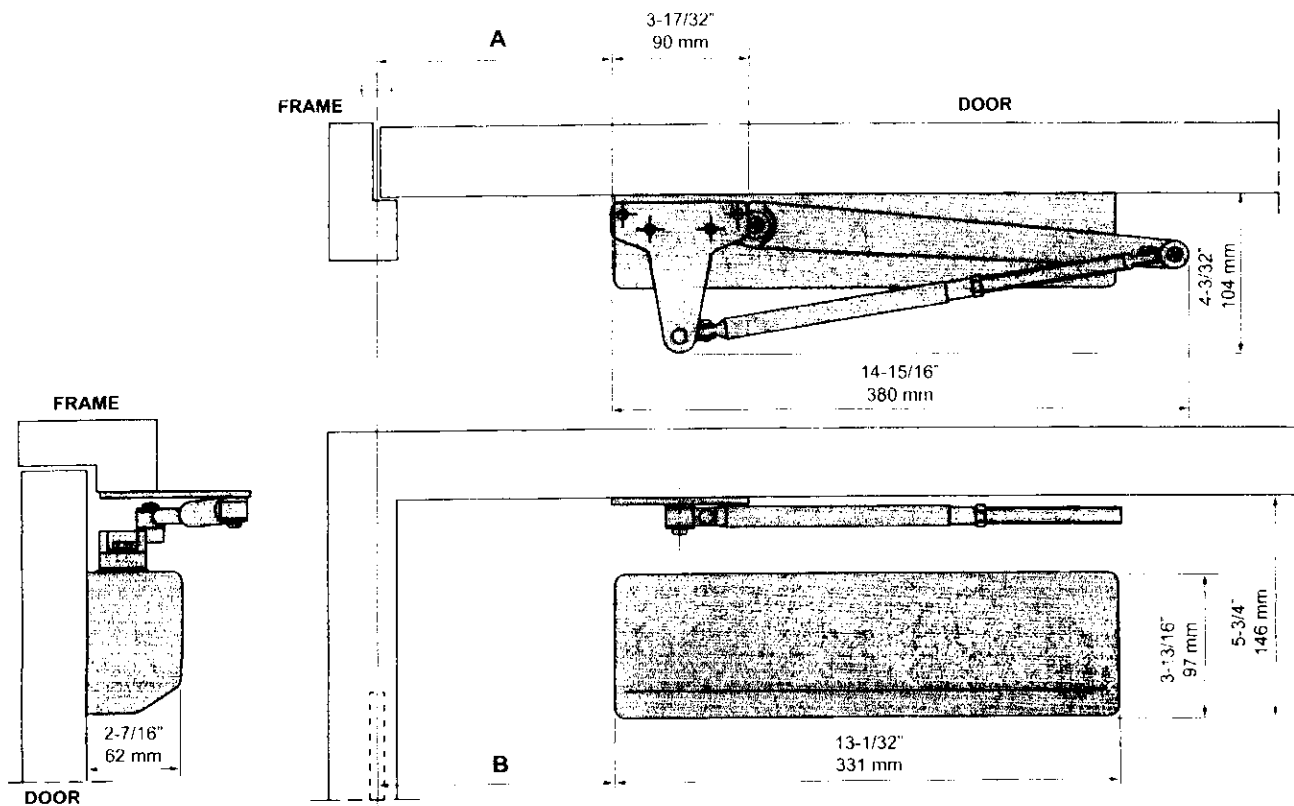
B = 8-27/32" (224 mm)

180° Opening

A = 6-3/32" (155 mm)

B = 6-7/32" (158 mm)

Hold-open points up to maximum door opening with hold open arm.



Standard Arm Set
A45-501

10-7/8"

1-3/4"

Standard Hold-Open Arm Set
A45-501H

10-1/32"

1-3/4"

Standard Arm with Long Rod and Shoe Set
A45-501L

- For reveals from 6-1/2" to 8"

10-7/8"

1-3/4"

Standard Hold-Open Arm with Long Rod and Shoe Set
A45-501HL

- For reveals from 3-3/16" to 4-13/16"

A45-501HXL

- For reveals from 4-7/8" to 8"

10-1/32"

1-3/4"

Full Cover
C-455 Plastic
MC-455 Metal

3-13/16"

2-7/16"

13-1/32"

Parallel Hold-Open Arm Set
A45-503H

3-15/32"

13/32"

9/32"

3"

1-9/16"

10-7/8"

Track Rail Arm Set
A45-507T

11-13/16"

20-1/4"

Track Rail Hold-Open Arm Set
A45-507HT

11-13/16"

20-1/4"

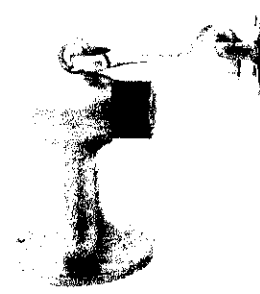
Floor Door Stop & Manual Holder

FS446

Features:

- Manual type floor holder ideal for interior or exterior use.
- Cast brass or aluminum construction.
- Accommodates door undercut up to 2-1/2".
- Non-marring rubber tip.
- Unit functions as a stop but serves as a Hold-Open device when hook is manually engaged in strike. Unit requires manual disengagement to release Hold-Open.
- Packed with expansion shield and lead shield.
- Meets ANSI/BHMA 156.16, L11371 for brass and L31371 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Height from Floor to Stop Center Line	Stop Diameter	Base Diameter
FS446	3-3/4"	2-5/8"	1-1/16"	2-1/2"

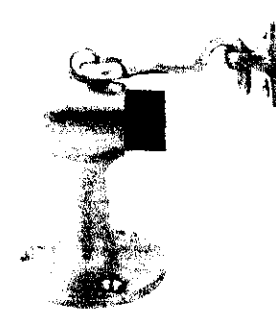


FS450

Features:

- Manual type floor holder ideal for interior or exterior use.
- Cast brass or aluminum construction.
- Accommodates door undercut up to 2-1/2".
- Non-marring rubber tip.
- Unit functions as a stop but serves as a Hold-Open device when hook is manually engaged in strike. Unit requires manual disengagement to release Hold-Open.
- Packed with wood screws.
- Meets ANSI/BHMA 156.16, L11361 for brass and L31361 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Height from Floor to Stop Center Line	Stop Diameter	Base Diameter
FS450	3-3/4"	2-5/8"	1-1/16"	2-1/2"



FS451

Features:

- Manual type door holder ideal for interior or exterior use.
- Cast brass construction.
- Strike features hinged hook which engages the holder.
- Accommodates door undercut up to 2-1/2".
- Resilient rubber tip.
- FS451-WS packed with wood screws.
- FS451 packed with expansion shield and tamper. Strike packed with sheet metal screws.
- FS451-WS meets ANSI/BHMA 156.16, L11361 for brass and L31361 for aluminum. FS451-WS meets ANSI/BHMA 156.16, L11371 for brass and L31371 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Base Depth	Base Width
FS451-WS	3-3/16"	2-1/2"	1-5/8"
FS451	3-3/16"	2-1/2"	1-5/8"





TRIM & AUXILIARY

Door Protection Plates

The metal door protection plates below meet ANSI A156.6 for J101 Metal Armor Plate, J102 Metal Kickplate, and J103 Metal Mop Plate. The plastic door protection plates below meet ANSI A156.6 for J105 Plastic Armor Plate, J106 Plastic Kickplate, and J107 Plastic Mop Plate. Options for all plates include countersunk holes, UL armor plate stamped, self-adhesive tape, spanner head screws, torx head screws, round corners, wrap around side and bottom return, and 0.125" (3.2 mm) material. All plates below are supplied standard with #6 x 5/8" truss head screws (unless specified otherwise). They are available in mop plate, kick plate, stretcher plate, and armor plate sizes.

- Mop Plate:** Protects the bottom of the pull side of doors subject to cleaning and mopping procedures.
- Kick Plate:** Protects the bottom of the push side of doors subject to scuffing from foot traffic.
- Stretcher Plate:** Protects doors in specific areas where constant contact is made by stretchers, service carts, or other equipment.
- Armor Plate:** Protects lower half of doors from abuse by carts, trucks, and rough usage.

190S

Gauge: 0.050" (1.3 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: None
 Options: UL Listed for US32 and US32D*

193S

Gauge: 0.050" (1.3 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: 3 edges
 Options: UL Listed for US32 and US32D*

194S

Gauge: 0.050" (1.3 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: 4 edges
 Options: UL Listed for US32 and US32D*

198S

Gauge: 0.038" (0.8 mm)
 Materials: Stainless steel
 Finishes: US32D
 Options: UL Listed*

199B

Gauge: 0.038" (0.8 mm)
 Materials: Aluminum
 Finishes: Bright gold anodized
 Fasteners: #6 x 5/8" TPH Tapping Screws

220S

Gauge: 0.062" (1.6 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: None

223S

Gauge: 0.062" (1.6 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: 3 edges

224S

Gauge: 0.062" (1.6 mm)
 Materials: Aluminum, brass, bronze, stainless steel
 Finishes: US3, US4, US10, US10B, US28, US32, US32D
 Bevel: 4 edges

204S

Gauge: 0.125" (3.2 mm)
 Materials: Clear plastic
 Bevel: 4 edges

214S

Gauge: 0.125" (3.2 mm)
 Materials: Plastic laminate
 Bevel: 4 edges
 Colors: Black, Brown, Grey
 Notes: Other colors are available and will be subject to minimum order quantities; priced on application

225S

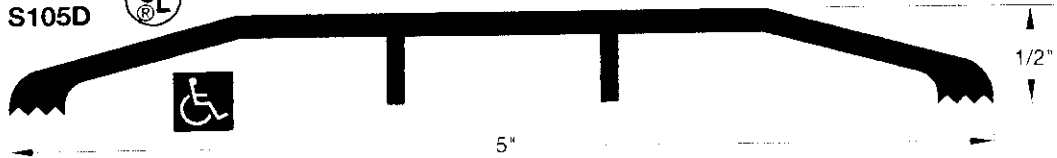
Gauge: 0.060" (1.9 mm)
 Materials: Kydex®
 Colors: CBO - Calcutta Black, KGO - Beige, KHO - Chocolate
 Notes: Other colors are available and will be subject to minimum order quantities; priced on application
 Options: UL Listed*



*Must specify UL stamp.



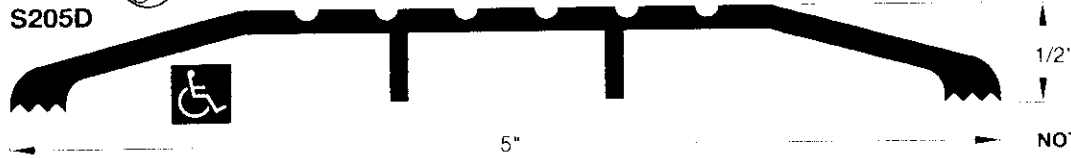
S105A
S105D



Finish Designations:

- A Aluminum mill finish
- B Architectural brass
- D Dark bronze anodized aluminum

S205A
S205B
S205D

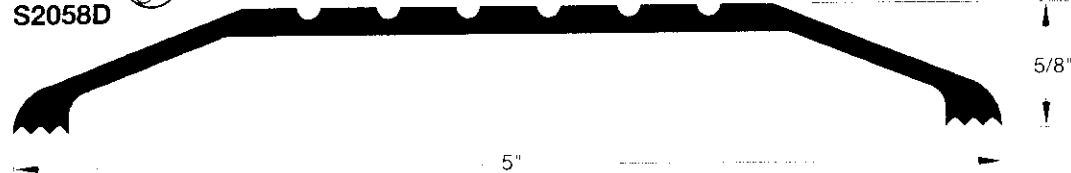


NOTE: S205B does not have center legs.

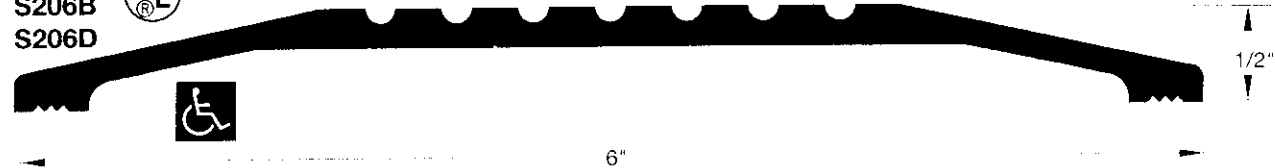
S425A
S425D



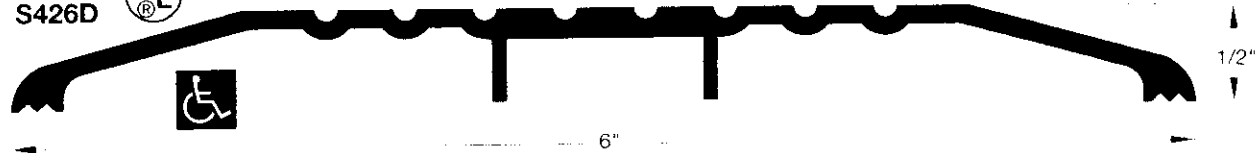
S2058A
S2058D



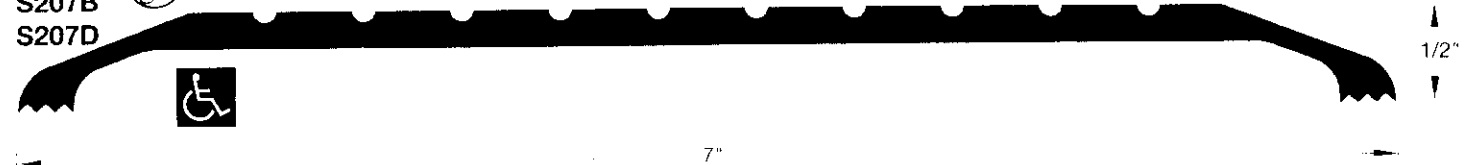
S206A
S206B
S206D



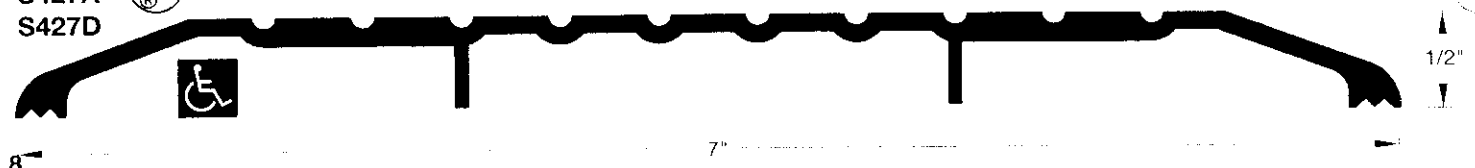
S426A
S426D



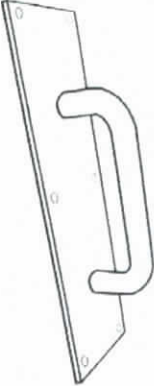

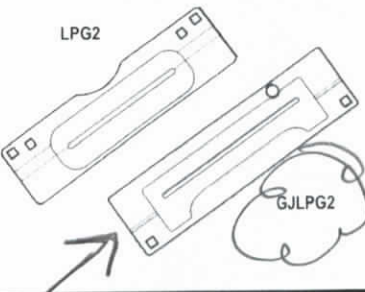
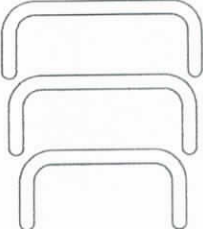
S207A
S207B
S207D



S427A
S427D



MISCELLANEOUS DOOR AND WINDOW HARDWARE

ILLUSTRATION	ITEM	SIZE	ITEM #	FINISH	
	<p style="text-align: center;">Pull Plate Solid Bar Round 1000 Series</p> <ul style="list-style-type: none"> ➤ Meets ANSI 156.6 for J401 Pulls ➤ 18 Gauge (0.050") Plate 	3/4" dia. 6"CTC	3.5" x 15"	1000	US32D, 10B, 3
			4" x 16"	1001	
					1001 ADA
		3/4" dia. 8"CTC	3.5" x 15"	1002	US32D, 10B, 3
			4" x 16"	1003	
					1003 ADA
		1" dia. 8"CTC	3.5" x 15"	1004	US32D, 10B, 3
			4" x 16"	1005	
					1005 ADA
		1" dia. 10"CTC	3.5" x 15"	1006	US32D, 10B, 3
			4" x 16"	1007	
					1007 ADA
	<p style="text-align: center;">Push Plate</p> <ul style="list-style-type: none"> ➤ Individually packed with protective film and screws ➤ Easy installation ➤ Conforms to ANSI/BHMA A156.6 ➤ Architectural finishes available 	0.050" x 3 1/2" x 15"	PSPL3515	US32D, 10B, 10, 6, 5, 4, 3, 26	
		0.050" x 4" x 16"	PSPL4016		
	<p style="text-align: center;">Latch Guard Protector</p> <ul style="list-style-type: none"> ➤ Universal latch guard for out-opening doors ➤ Fits most single, double and mortise locks ➤ Conforms with ANSI/BHMA 156.2 Series 4000 	2 7/8" x 11"	LPG2	USP,ALUM DURO, GOLD	
		3" x 11"	GJLPG2	US32D	
	<p style="text-align: center;">Solid Brass Drawer Pull</p> <ul style="list-style-type: none"> ➤ Includes Screws for 3/4" - 1 3/8" thick drawers or doors ➤ Conforms to ANSI/BHMA A156.9 B22011 ➤ Architectural finishes available 	Dia. of Rod : 3", 5/16"	WP300	US3, 26, 26D, US10B	
		Dia. of Rod 3 1/2", 5/16"	WP350		
		Dia. of Rod 4", 5/16"	WP400		

Specification Sheets available for submittal purposes at www.cal-royal.com. Click on "Specification Sheets Image"

Cal-Royal Products, Inc.

6605 Flotilla St., City of Commerce, CA 90040 U.S.A.

Phone: (323) 888-6601 • (800) 876-9258 • Fax: (323) 888-6699 • (800) 222-3316

Email: sales@cal-royal.com • Website: www.cal-royal.com

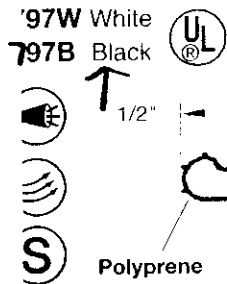
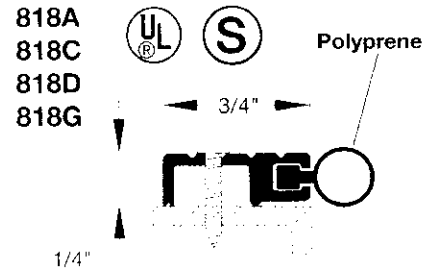
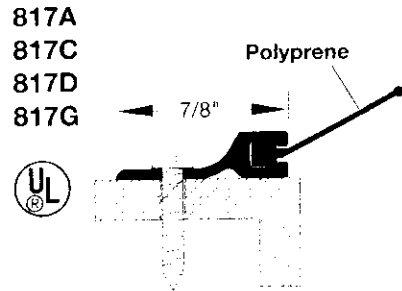
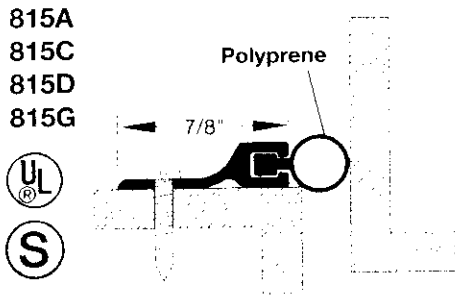
The illustration and technical description in this Specification Sheet is current as of the date in the version box above.
Cal-Royal Product reserves the right to and may frequently make changes and/or improvements in designs and dimensions.



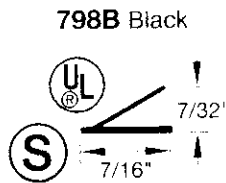
Ver. 1, Rev. 5/11
©2011 CRP, Inc.

Polyprene

Polyprene®, a thermoplastic compound rubber, is a series of high-performance elastomers which combine the desirable characteristics of vulcanized rubber, such as flexibility and low compression set with the processing ease of thermoplastics.



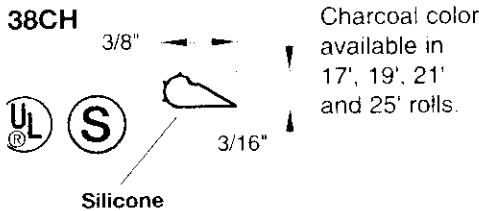
Note: 797 and 798 available in 17', 19', 21', 25' and 500' rolls.



- Withstands a wide variety of temperature extremes: remains stable and keeps its shape from -76°F to 250°F.
- Has soft, good low temperature flexibility.
- More wear resistant than silicone rubber.
- Low compression set – outstanding memory for consistent long-term sealing pressure.
- Unaffected by sunlight, ozone and ultraviolet rays.
- Fatigue resistance – unsurpassed flex fatigue resistance.

Silicone

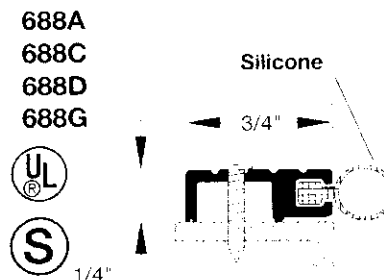
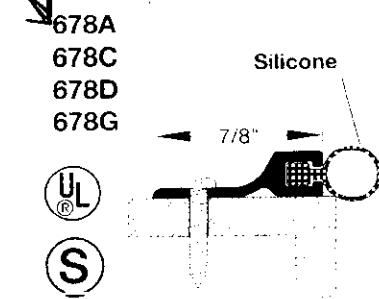
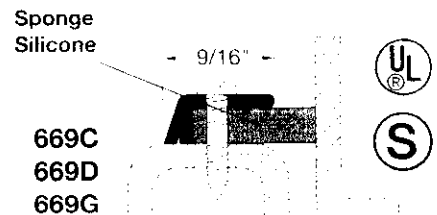
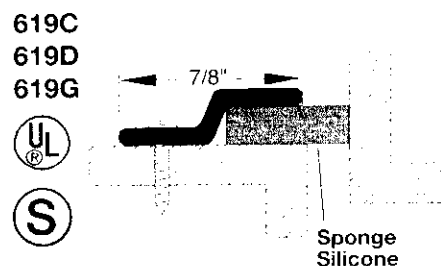
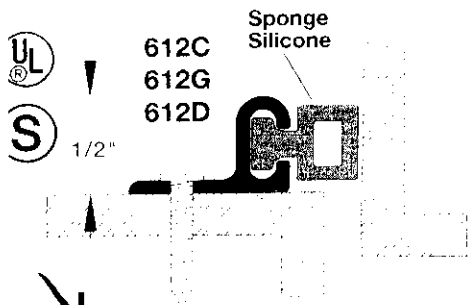
Silicone rubbers are synthetic polymers with unusual molecular structures; giant backbones of alternating silicon and oxygen atoms. This linkage is similar to that found in quartz, thus silicones have superior heat resistance compared to other elastomers.



Charcoal color available in 17', 19', 21' and 25' rolls.

Note: All self-adhesive weatherstrips must be applied on clean, dry frames between +50°F and +100°F. Smoke seals have a pre-installation shelf life of 6 to 9 months.

- Withstands a wide variety of temperature extremes and remains flexible from -75°F to 400°F.
- Retains softness indefinitely – will not deteriorate under normal exposure.
- Resists compression set – lower than thermal plastic elastomers.
- Resists fungus, mildew, moisture and steam.
- Unaffected by sunlight, ozone and ultraviolet rays.
- Nontoxic.

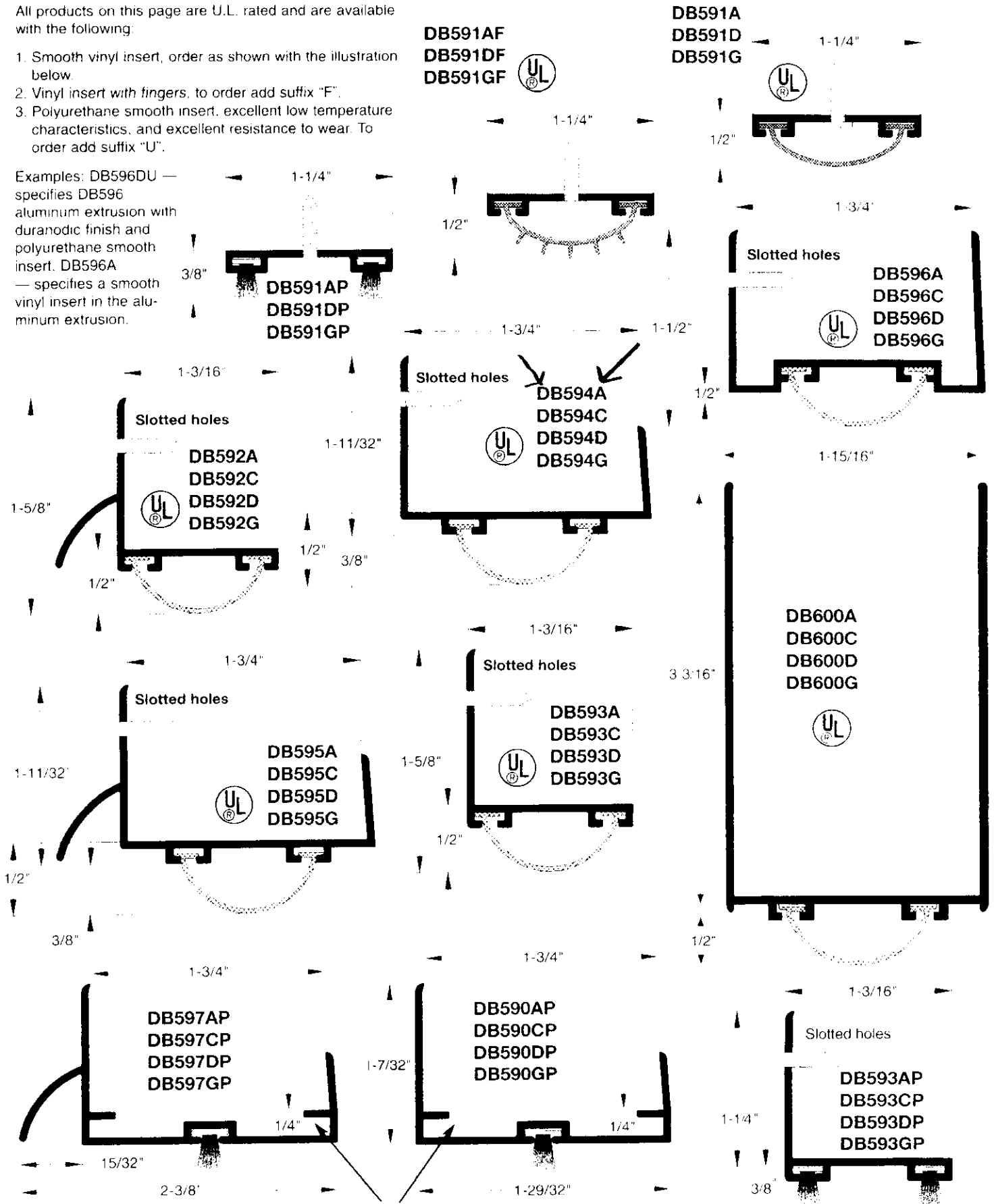


Polyurethane, Vinyl and Pile Seals

All products on this page are U.L. rated and are available with the following:

1. Smooth vinyl insert, order as shown with the illustration below.
2. Vinyl insert with *fingers*, to order add suffix "F".
3. Polyurethane smooth insert, excellent low temperature characteristics, and excellent resistance to wear. To order add suffix "U".

Examples: DB596DU — specifies DB596 aluminum extrusion with duranodic finish and polyurethane smooth insert. DB596A — specifies a smooth vinyl insert in the aluminum extrusion.



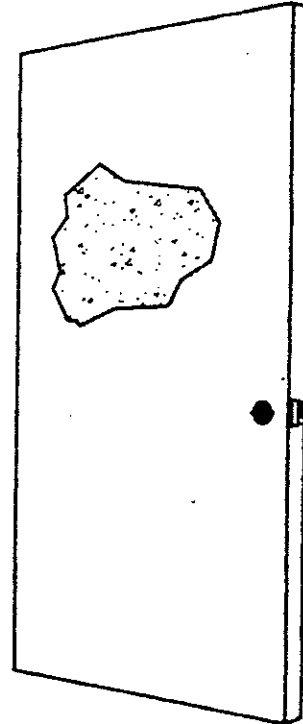
Door Extenders

ENGINEERING DETAILS for STANDARD

SERIES CHP Seamless 1 3/4" Doors

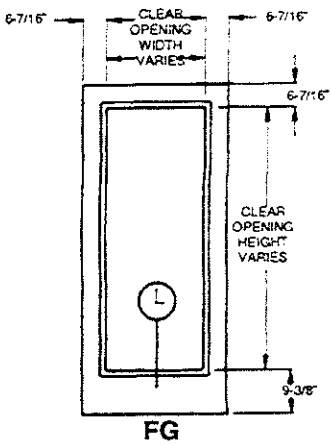
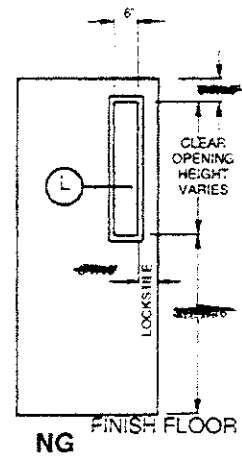
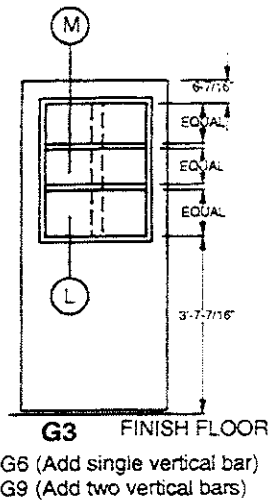
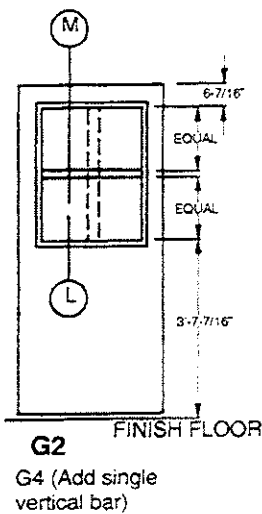
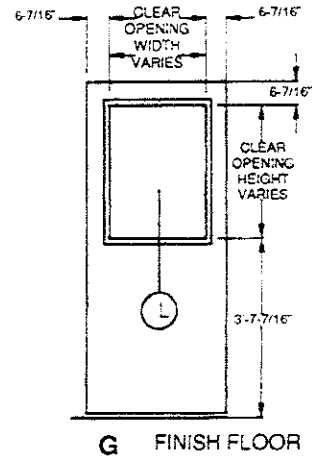
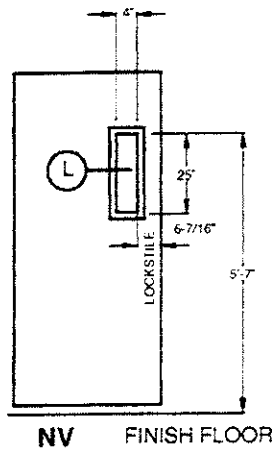
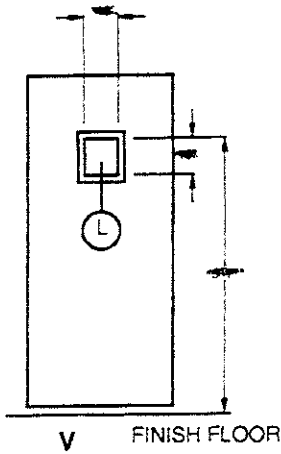
Specifications

1. HP doors shall be formed from two 16 or 18 gage A60 Galvanized Steel per ASTM A924 and A653 and shall be 1-3/4" thick.
2. CHP doors shall be formed from two 14, 16 or 18 gage A 60 Galvanized steel per ASTM A924 and A653 and shall be 1-3/4" thick.
3. Doors shall have a core of rigid Polystyrene. The core shall have a nominal density of 1.0 #/ft³, with an "R" factor of 7.12. The door panel shall develop a "U" factor of 0.014.
4. HP doors shall have vertical mechanical interlocking seams on hinge and lock edges. There shall be no seam on the faces of door.
5. CHP doors shall have no seams on the faces or edges of doors. Vertical edges of doors shall be continuously seam-welded full height of the door.
6. Exterior doors shall be capped to retard moisture penetrating the door.
7. All hinge reinforcements shall be 3/16" thick.
8. All doors shall be internally reinforced with a 12 gage plate both sides of the door for application of surface applied door closures and holders.
9. Glass light moulding shall be Pioneer standard steel moulding, with no exposed screws on the secure side of door.
10. Louvers shall be Pioneer standard design for application required.
11. All doors shall be cleaned and given one coat of baked -on rust- inhibitive metal primer in compliance with ANSI A250.10-2004
12. All fire rated doors, where indicated, shall be manufactured in accordance with UL or WHI procedures and bear the appropriate classification mark (label).
13. Door construction complies with ANSI A250.8-2003 (SDI 100)
14. Doors shall be packaged to minimize damage in transit and handling.
15. Hardware reinforcements are in accordance with ANSI A 250.6-2003. Locations are in accordance with ANSI/BHMA A156.115

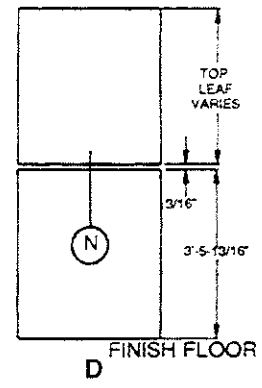
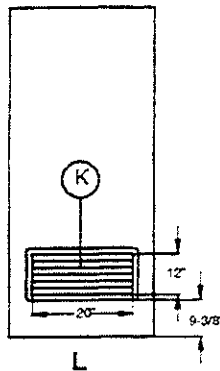


Insulation Values

Factor	Definition																				
K	The rate at which heat flows thru a material. Values for insulation are normally based on one inch thickness of a single homogeneous material and are expressed in BTU/ft ² /°F/hr/inch.																				
C	The rate at which heat flows thru a material of any given thickness. The "C" factor at one inch = "K" factor. The "C" factor of the same material at three inches is 1/3 of the "K" factor; at two inches the "C" factor is 1/2 the "K" factor.																				
U	The overall coefficient of heat transfer (conductivity) for all elements of construction (as well as environmental factors). A "U" factor is determined by adding the "C" factors of the various individual materials making up the composite structure. Units are expressed as BTU/ft ² /°F/hr.																				
R	A measure of the resistance to heat flow. As the thickness of the insulation material increases, the resistance to the heat flow increases. See the following common insulation materials for typical "R" factors.																				
	<table border="1"> <thead> <tr> <th>Material</th> <th>1" thick</th> <th>2" thick</th> <th>3" thick</th> </tr> </thead> <tbody> <tr> <td>Urethane</td> <td>7.0</td> <td>13.0</td> <td>20.0</td> </tr> <tr> <td>Polystyrene</td> <td>4.1</td> <td>8.0</td> <td>12.0</td> </tr> <tr> <td>Fiberglass (1# or less)</td> <td>4.0</td> <td>8.0</td> <td>12.0</td> </tr> <tr> <td>Vermiculite</td> <td>2.0</td> <td>3.6</td> <td>5.5</td> </tr> </tbody> </table>	Material	1" thick	2" thick	3" thick	Urethane	7.0	13.0	20.0	Polystyrene	4.1	8.0	12.0	Fiberglass (1# or less)	4.0	8.0	12.0	Vermiculite	2.0	3.6	5.5
Material	1" thick	2" thick	3" thick																		
Urethane	7.0	13.0	20.0																		
Polystyrene	4.1	8.0	12.0																		
Fiberglass (1# or less)	4.0	8.0	12.0																		
Vermiculite	2.0	3.6	5.5																		

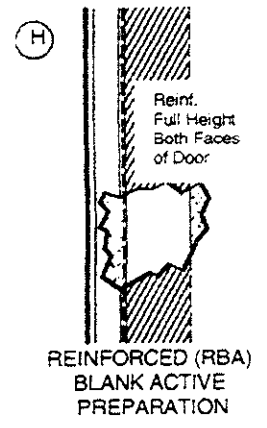
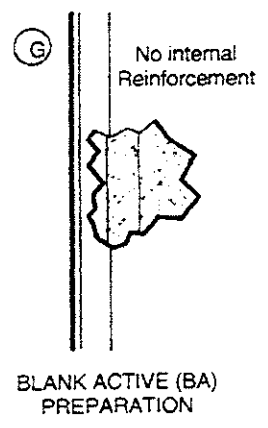
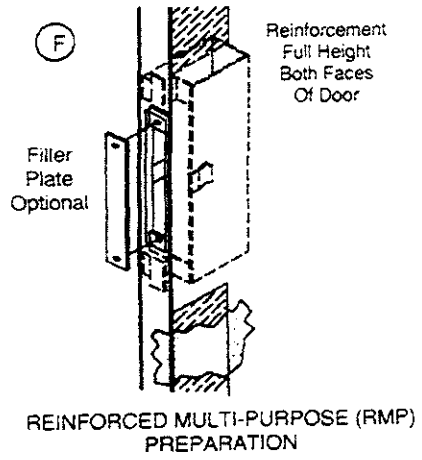
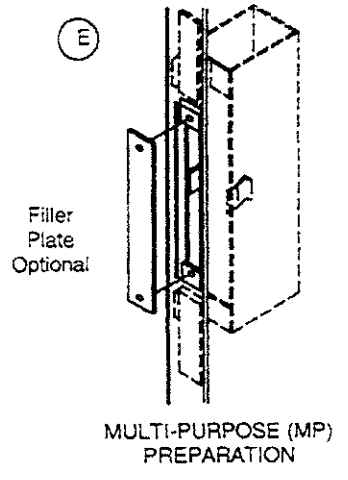
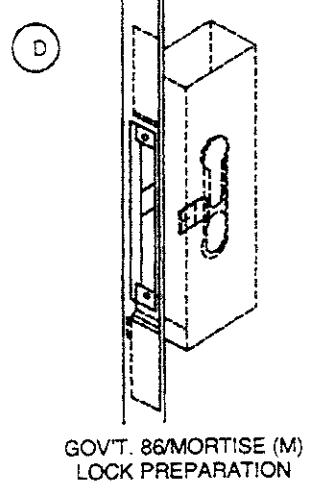
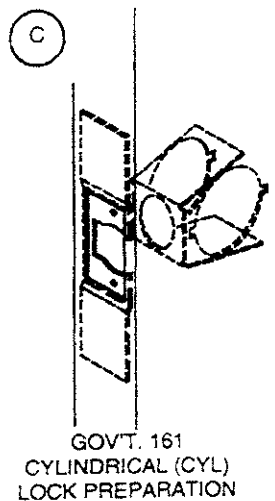
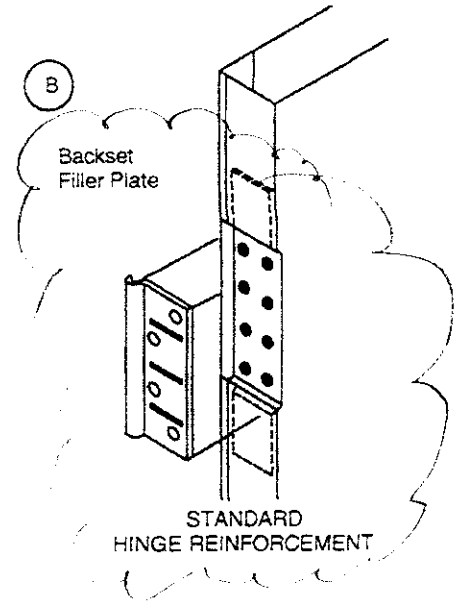
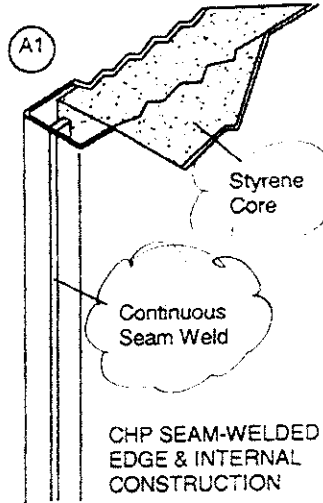
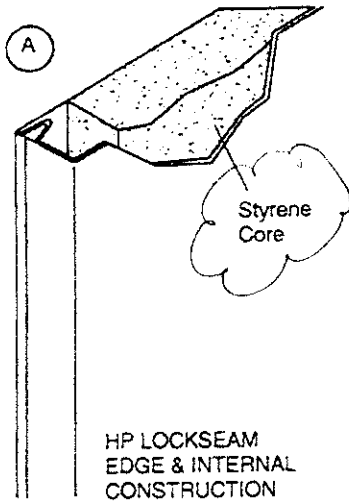


NOTE: 12" x 12" Louver standard for 2'-0" & 2'-4" door – all others 20" x 12", 20" x 24" Louver available

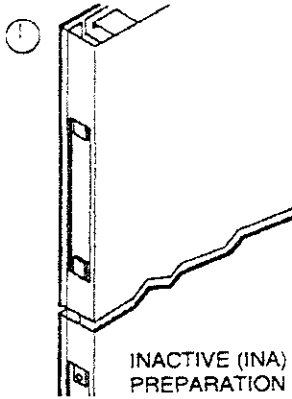


171 S. Newman St., Hackensack, NJ 07601 • Tel (201) 933-1900 • Fax (201) 933-9580

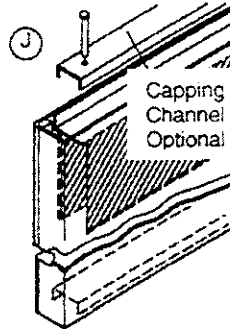
MANUFACTURING DETAILS: FULL FLUSH & SEAMLESS DOORS



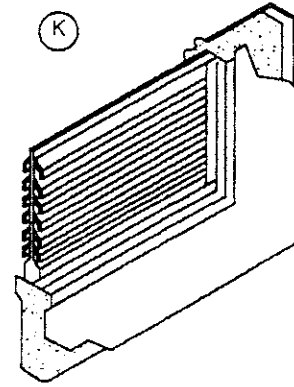
171 S. Newman St., Hackensack, NJ 07601 • Tel (201) 933-1900 • Fax (201) 933-9580



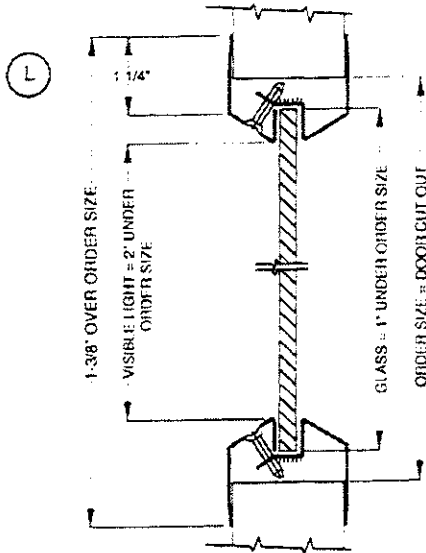
INACTIVE (INA)
PREPARATION



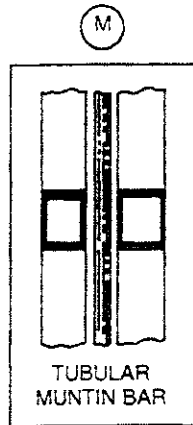
CLOSER REINFORCEMENT
TOP & BOTTOM CHANNELS



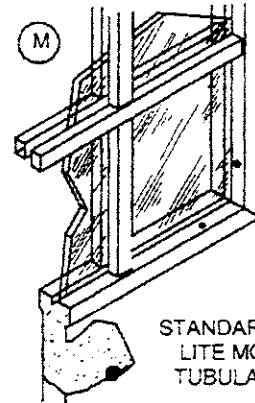
STANDARD
LOUVER



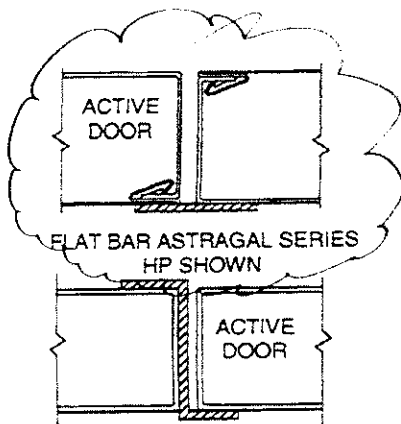
1/4"
1-3/8" OVER ORDER SIZE
VISIBLE LIGHT = 2" UNDER
ORDER SIZE
GLASS = 1" UNDER ORDER SIZE
ORDER SIZE = DOOR CUT OUT



TUBULAR
MUNTIN BAR

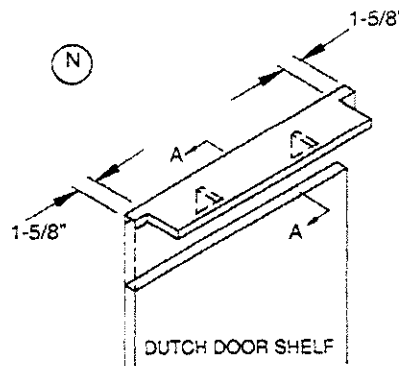


STANDARD STEEL GLASS
LITE MOULDING WITH
TUBULAR MUNTIN BAR

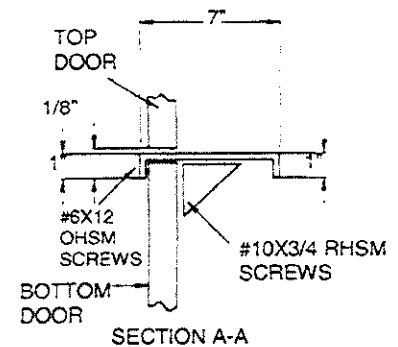


FLAT BAR ASTRAGAL SERIES
HP SHOWN

Z ASTRAGAL SERIES CHP
SHOWN



DUTCH DOOR SHELF



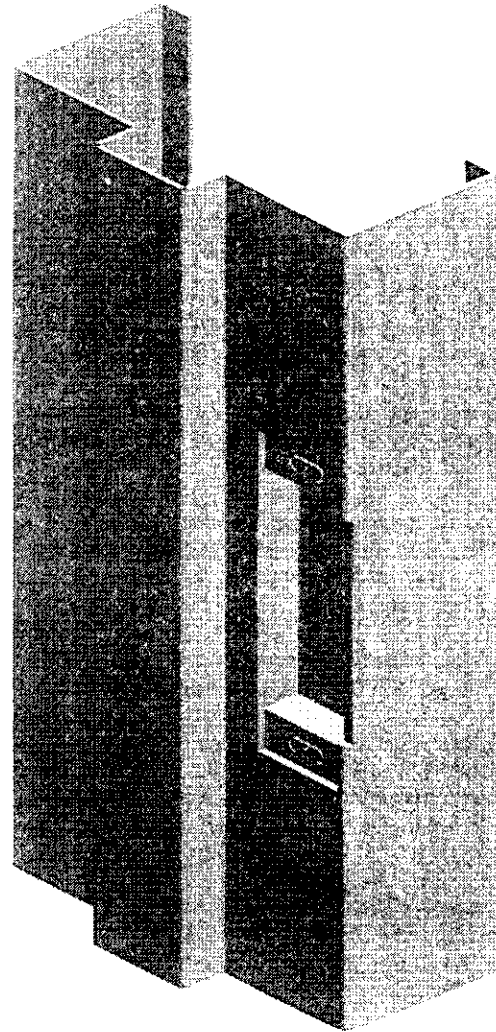
SECTION A-A

171 S. Newman St., Hackensack, NJ 07601 • Tel (201) 933-1900 • Fax (201) 933-9580

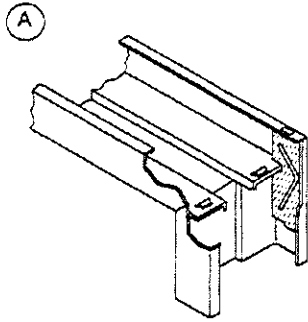
**ENGINEERING DETAILS for STANDARD
SERIES F-14 and F-16 FRAMES
For 1- 3/4" Doors**

Specifications

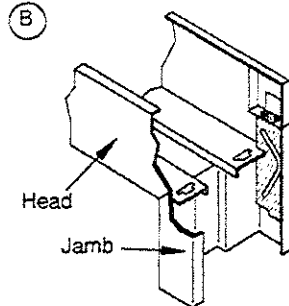
1. Frames shall be manufactured of 14 or 16 gage Steel per ASTM A 1008, 568 & 569. OR A60 Galv. Per ASTM A924 & A653
2. Frames shall be knocked down for field assembly. Milters shall have a precision hairline joint when assemble.
OPTION: Corners shall be arc-welded and ground smooth, and frames shall be provided with steel bottom spreader.
3. Heads shall be reinforced for surface applied closers, holders, or brackets when required.
4. Dual purpose hinge reinforcements shall be 3/16" thick. It comes equipped with galvanneal back-up filler plate for standard weight hinges. Conversion from standard weight to heavy weight hinges is done by removing the filler plate. All reinforcements for hinges and strikes shall have steel-plaster guards.
5. All frames shall be prepared to receive G.J.64 type door silencers; three for single frame and two for pair frame. (Silencers by others)
6. Frames are available with appropriate anchors as required to suit wall conditions. Frames shall have floor clips at bottom of all jambs for attachment to finished floor.
7. Heads of pair frames over 4'-0" wide and up to 16 gage shall be prepared with a universal "knock-out" or Mortised Flush Bolt prep. as required.
8. Frames shall be prime painted by Pioneer's exclusive "DURA-BOND" process, consisting of a wash, phosphate treatment, "flo-coat" painting and oven baking in compliance with ANSI A250.10-2004
9. Frames shall be furnished with WHI or UL Positive and Negative Pressure rated listing mark (label) as required. Frames must be installed in compliance with NFPA 80 and per Pioneer's Installation Instructions.
10. Frame construction complies with ANSI A 250.8-2003 (SDI -100)
11. Hardware preparations and reinforcements comply with ANSI A250.6-2003. Locations are in accordance with ANSI/BHMA A156.115-2006



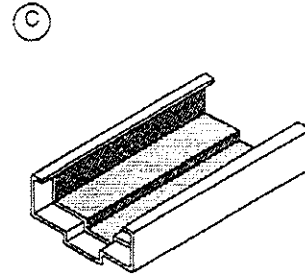
MANUFACTURING DETAILS



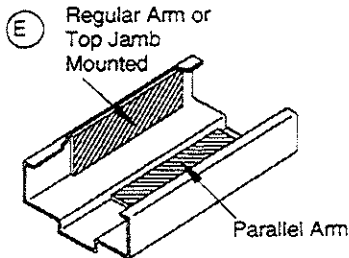
CORNER SECTION



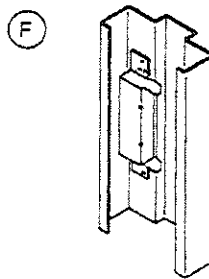
CORNER SECTION
4" HEAD



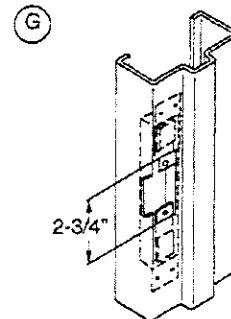
CLOSER REINF.
SLEEVE



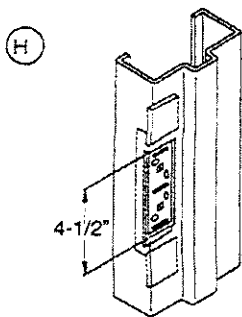
CLOSER REINF (WELD-IN)
(Available for various trim
and stop applied devices)



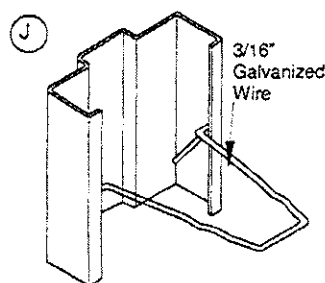
ANSI /BHMA A156. 115
STD. 1-PIECE 4-7/8" ASA
STRIKE REINF. WITH
PLASTER GUARD



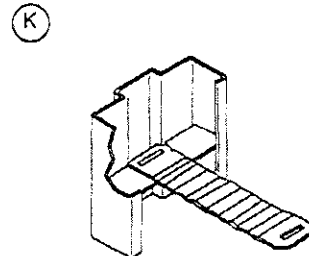
STRIKE PREPARATION
ANSI/BHMA A156. 115
(Optional)



DUAL PURPOSE MORTISE
HINGE PREPARATION WITH
BACK-UP FILLER PLATE

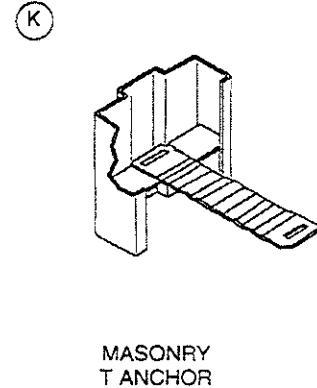
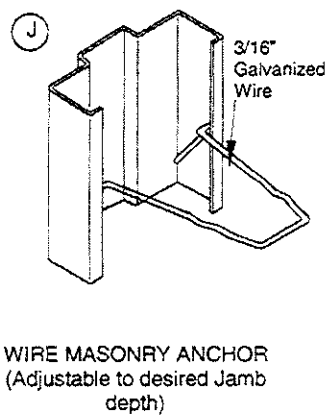
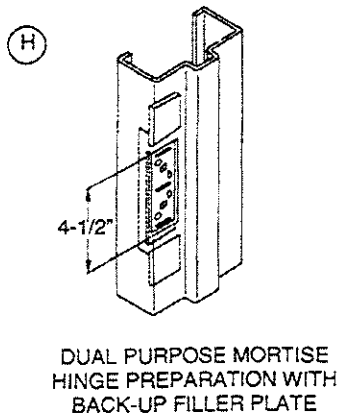
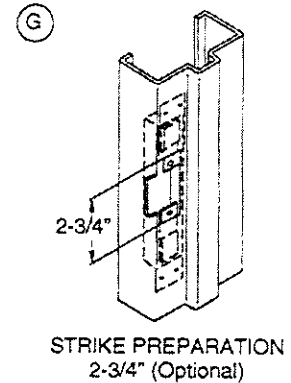
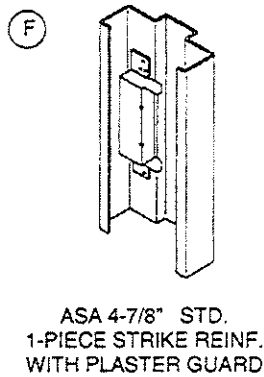
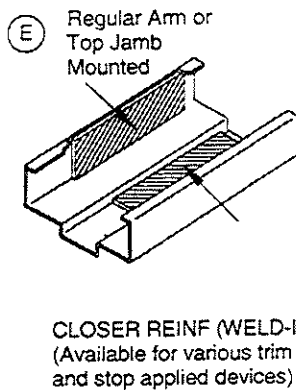
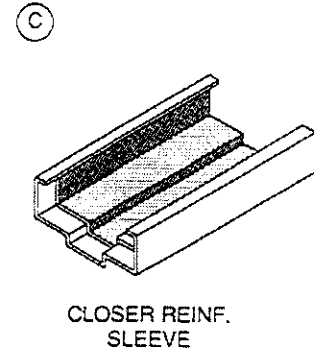
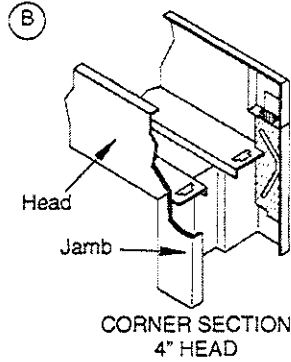
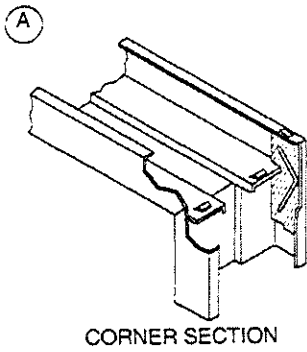


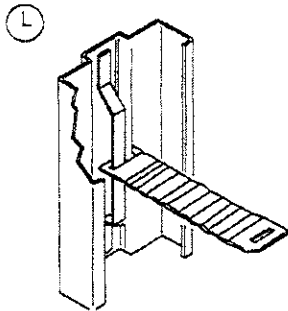
WIRE MASONRY ANCHOR
(Adjustable to desired Jamb
depth)



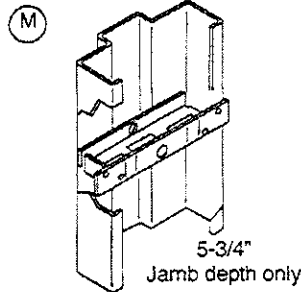
MASONRY
T ANCHOR

171 S. Newman St., Hackensack, NJ 07601 • Tel (201) 933-1900 • Fax (201) 933-9580

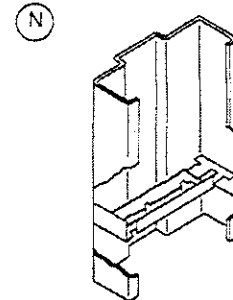




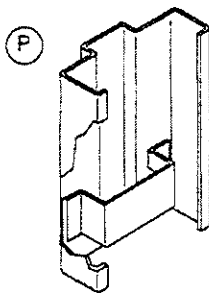
**YOKE & STRAP
MASONRY ANCHOR**



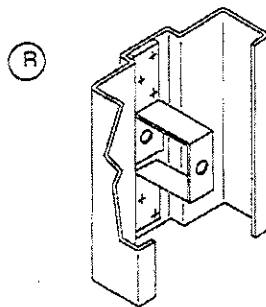
COMBINATION ANCHOR
for Steel Stud, Wood Stud
and Existing Masonry



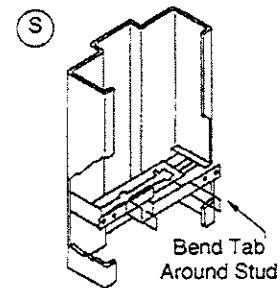
STEEL STUD ANCHOR
(Adjustable to desired Jamb
depth)



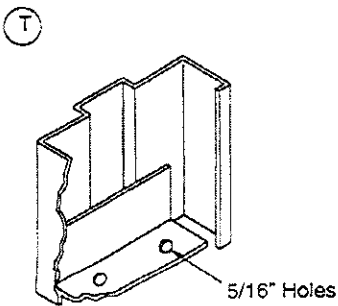
**CLOSED CHANNEL
STEEL STUD ANCHOR**
(Specify stud width)



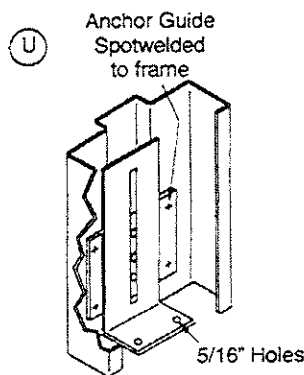
EXISTING MASONRY ANCHOR
3/8" Bolt and Shield furnished
when UL listed



WOOD STUD ANCHOR
(Adjustable to desired Jamb
depth)



BASE ANCHOR



ADJUSTABLE FLOOR KNEE

NOTE: In order to provide our Customers with the finest Products, manufactured in the Most up to date manner, Pioneer Industries reserves the right to make design or specific construction changes without notice.

Pioneer Industries will not be Responsible for errors incurred By other parties through the use Of this data sheet without written confirmation from Pioneer. Other trades should contact Pioneer for exact hardware locations.