

Pivot Sets and
Components

DORMA LM

Whatever your pivot requirements, turn to DORMA and put the weight of your door on our pivots. DORMA's commitment to quality is your assurance of durability and long life.

DORMA pivots support door weight effectively in a variety of applications. Like all DORMA products, our pivots are available in an array of finishes to enhance and complement surrounding decor.

DORMA's LM Series of pivots using brass and steel are designed for long life and trouble-free operation. Each pivot and pivot set meets DORMA's exacting specifications for support of rated and non-rated high-traffic interior and exterior openings, extra-heavy doors, or lead-lined doors. Pivots for 20 minute and 3 hour fire-rated doors comply with applicable codes.

DORMA pivots span a wide variety of styles and applications that can interface with other DORMA products on wood, aluminum, or hollow metal doors and frames. They can also be used on doors of special design such as paneled doors, and doors of unusual weight, thickness, or material.

Pivots and pivot sets, durable and long lasting, accommodate doors weighing up to 1000 lb. Pivot sets are available for center hung, 3/4" offset, and 1-1/2" offset. Components are offered for center hung, 3/4" offset, 1-1/2" offset, and pocket pivot applications. Floor bearings with numerous spindle heights are available to accommodate an array of bottom door clearances.

Center Hung walking beam top pivots and bottom arms are mortised into the door. Floor bearings are surface applied or grouted into the floor, depending on which pivot set/floor bearing is used. Pivot sets are available for doors weighing from 200 lb to 660 lb. Heavy-duty versions are available for doors up to 1000 lb. Center hung pivots and pivot sets can be single-acting (must use an applied stop) or double-acting.

3/4" Offset pivots and pivot sets are available for non-rated and fire-rated applications. Pivot sets use full mortise pivots. Optional intermediate pivots are recommended for use with pivot sets. Side jamb bottom arm is available for conditions where floor preparation is not desired. Lead-lined door pivots and pivot sets are available for varying door thicknesses.

1-1/2" Offset pivots and pivot sets are available for non-rated and fire-rated applications. All pivots are full-mortise. Optional intermediate pivots are recommended for use with pivot sets.

Pocket Pivots are available for non-rated and fire-rated openings that require the door to open 90° into a pocket and flush with the frame rabbet and adjacent wall.



Technical Details:

- Center hung, 3/4" offset, 1-1/2" offset, and pocket door pivots available.
- Pivots standard design includes needle bearings with hardened pins for durability and long life.
- 3/4" and 1-1/2" offset versions available for flush and 1/8" inset door and frame conditions. Flush versions are standard.
- Pivot sets are available for non-rated, 20 minute rated, and up to 3 hour fire-rated applications.
- Intermediate pivots are recommended with offset pivot sets.
- Pivot sets available for lead-lined doors weighing up to 800 lb. Can also be used on non lead-lined doors.
- Lead-lined door pivots available for varying door thicknesses. The hole pattern in the pivots is staggered to straddle the lead in the center of the door.
- Pocket pivots available for 90° pocket door applications that require the door to be flush with an adjacent wall.
- Pivots and pivot sets furnished standard with all machine screws. Half or all wood screw options available.

Certification:

The DORMA LM Series is listed by U.L. and C.U.L. under their continuing reinspection programs. The LM Series is certified to the requirements of ANSI A156.4.



The quality management system at the Reamstown, PA facility is certified to ISO-9001.*



*DORMA Door Controls Inc., dba: DORMA Architectural Hardware



Specification:

DORMA's LM Pivot Series produced from brass or steel for interior and exterior non-rated and fire-rated doors. Top pivots and bottom arms will be center hung, 3/4" or 1-1/2" offset. Intermediate pivots will be 3/4" or 1-1/2" offset. Side jamb bottom pivot will be 3/4" offset. Top and intermediate pivots will be full mortise configurations. Bottom arms and side jamb pivot will be mortised. Pivots can be substituted within a pivot set, assuming the offset is the same. Offset 3/4" and 1-1/2" top pivots are available for doors that are inset 1/8" from the frame face while standard intermediate and bottom arms are templated accordingly. Center hung pivots will accommodate double-acting and single-acting doors. Center hung single-acting will use an applied stop. Pocket pivots will accommodate doors opening 90° that must be flush with an adjacent wall. All pivots and pivot sets will incorporate needle bearings and lubricated hardened steel pivot pins treated to prevent corrosion. All pivots and pivot sets will be available in a variety of finishes.

Finishes:

Plated Finishes:

Primed for Painting: 600.
 Brass: 605 (Bright) or 606 (Satin).
 Bronze: 611 (Bright), 612 (Satin), or 613 (Oxidized Satin Oil Rubbed).
 Nickel: 618 (Bright) or 619 (Satin).
 Chrome: 625 (Bright) or 626 (Satin).

Sprayed Finishes:

Aluminum: 689.
 Bronze: 691 (Dull), 690 (Statuary), or 695 (Dark Duranodic).
 Gold: 696.
 Black: 693.

Optional DORMA Custom Color or Designer Color Finishes:

Contact Customer Service.

Warranty: 5 years

Cross Reference Chart

DORMA	Rixson
OP440	117
OPF440	F117
OPJ350	195
OPH750	117-1/2
OPHF750	F117-1/2
OPL440	L147
OPL800	L117
OP15200	117 × 1-1/2"
OP15500	117-1/2 × 1-1/2"
OPF15200	F117 × 1-1/2"
OPF15500	F117-1/2 × 1-1/2"
CP440	370
CPA440	370
CP660	117-3/4
CP1000	H117-3/4

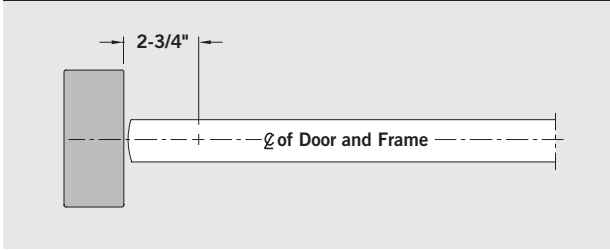
NOTE: Comparison is based upon application type and maximum door weight capacity, which may vary between manufacturers. Based on information obtained from trade sources, it is our judgement that these products are most similar. Exact equivalency is not guaranteed.

ANSI Conversion Chart

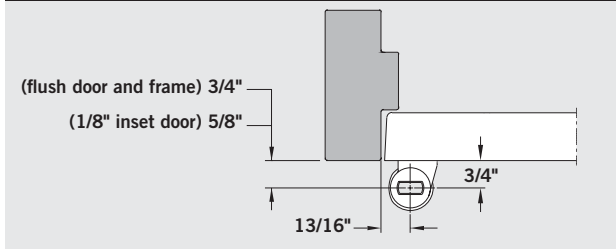
ANSI Number	ANSI Requirement/Function	DORMA Pivot Sets	DORMA Pivots	Required Components
CO7011	Center Pivoted, 1000 lb Door max.	CP1000		
CO7021	Center Pivoted, 250 lb Door max.	CP660		
CO7032	Center Pivoted, 150 lb Door max.	CP440, CPA440		
CO7121	Offset Pivoted, 250 lb Door max.	OPH750, OP1550		
CO7131	Offset Pivoted, Side Jamb Bottom Pivot, 250 lb Door max.	OPJ350		
CO7162	Offset Pivoted, 150 lb Door max.	OP440, OPL440, OP15200		
CO7172	Offset Pivoted, Side Jamb Bottom Pivot, 150 lb Door max.	OPJ350		
CO7202	Offset Pivoted, Labeled Fire Doors, 150 lb Door max.	OPF440, OPLF440, OPF15200		
CO7311	Offset Pivoted, Lead-Lined Intermediate Pivot		75240	
CO7321	Offset Pivoted, Intermediate Pivot		75220, 15220	
CO7371	Offset Pivoted, Intermediate Pivot, Labeled Fire Doors		75233, 15233	
CO7382	Offset Pivoted, Full Mortise Intermediate Pivot (light-duty)		75210	

Applications

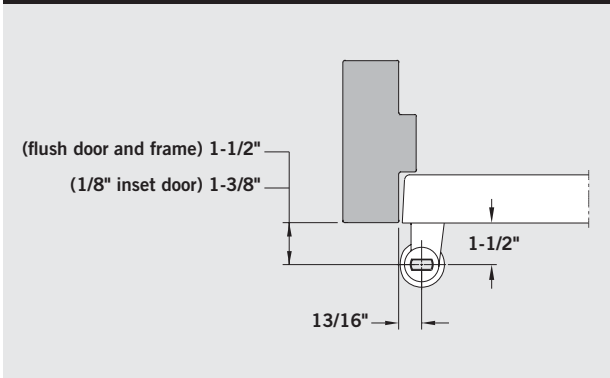
Center Hung - Single or Double Acting



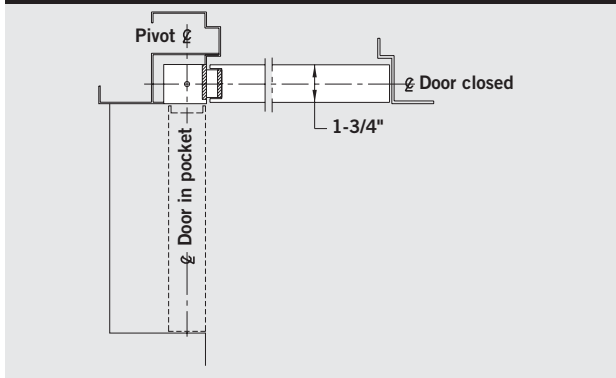
3/4" Offset Hung - Single Acting



1-1/2" Offset Hung - Single Acting



90° Pocket Pivot Hung



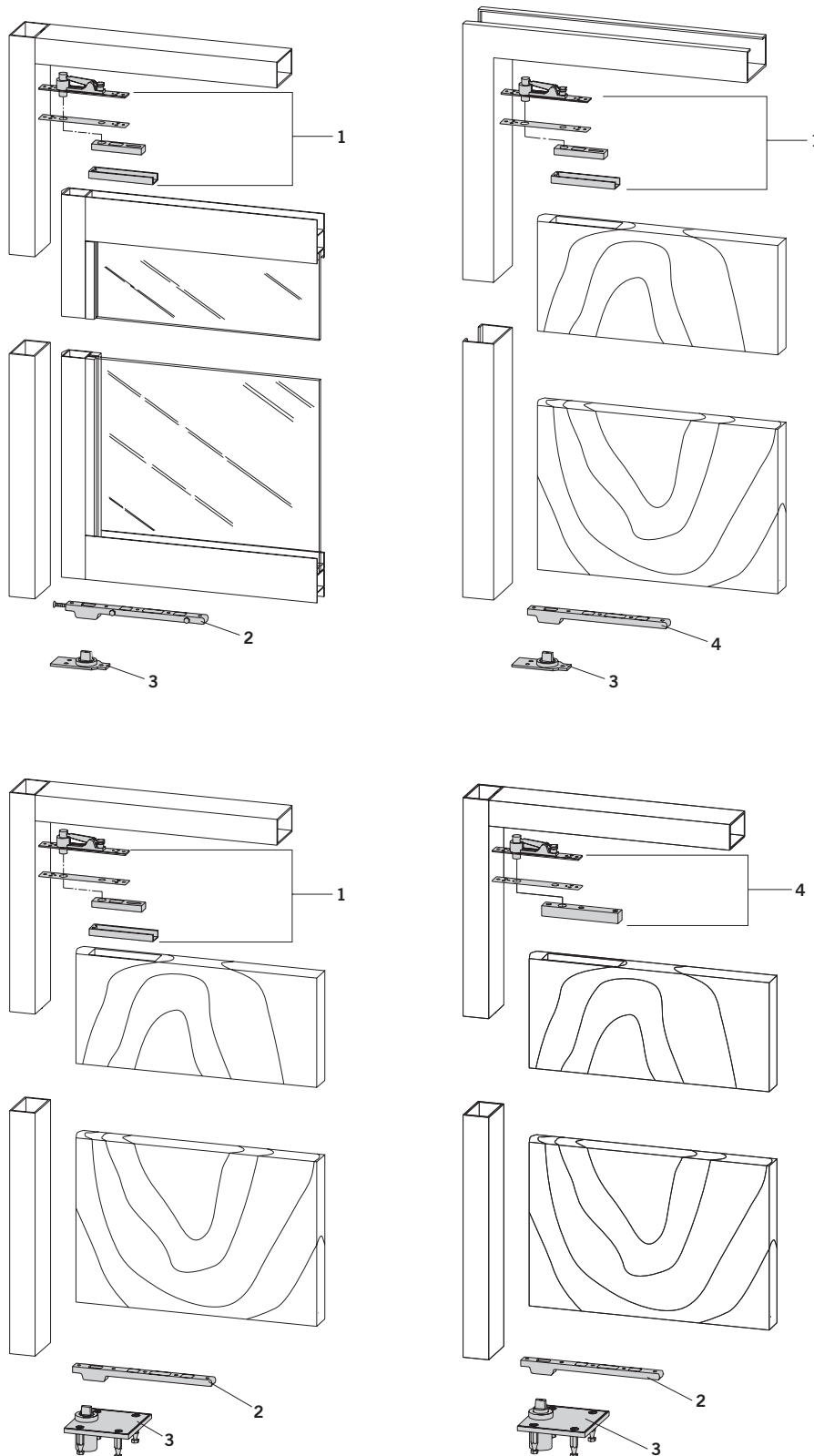
Pivot Set Selection Chart

Pivot Set	Application	Maximum Door Width	Maximum Door Weight	Fire Rated	Center Hung Double-Acting	Offset Hung Single-Acting
OP440	3/4" offset standard	4'-0"	440 lb			✓
OPF440	3/4" offset, up to 3 hour fire rated	4'-0"	440 lb	✓		✓
OPJ350	3/4" offset side jamb	4'-0"	350 lb			✓
OPH750	3/4" offset heavy-duty	4'-0"	750 lb			✓
OPHF750	3/4" offset heavy-duty, up to 3 hour fire rated	4'-0"	750 lb	✓		✓
OPL440	3/4" offset lead-lined	4'-0"	440 lb			✓
OPL800	3/4" offset lead-lined	4'-0"	800 lb			✓
OP15200	1-1/2" offset	3'-6"	200 lb			✓
OP15500	1-1/2" offset heavy-duty	4'-0"	500 lb			✓
OPF15200	1-1/2" offset, up to 3 hour fire rated	3'-6"	200 lb	✓		✓
OPF15500	1-1/2" offset heavy-duty, up to 3 hour fire rated	4'-0"	500 lb	✓		✓
CP440	Center hung, wood or steel door	4'-0"	440 lb		✓	
CPA440	Center hung, aluminum door	4'-0"	440 lb		✓	
CP660	Center hung medium-duty, wood or steel door	4'-0"	660 lb		✓	
CP1000	Center hung heavy-duty, wood or steel door	6'-0"	1000 lb		✓	

All bottom arms and floor bearings, excluding the 75320 side jamb pivot, can be used on fire doors. Top and intermediate pivots for 20 minute rated and up to 3 hour rated doors can be assembled with a bottom arm and floor bearing of common application to create specialty fire rated sets. See component drawings for specific details on the standard, fire rated, lead-lined, and electrified components and their compatibility in the various applications.

NFPA 80 requires that labeled fire doors up to 60" in height be provided with 2 pivots and an additional pivot for each 30" of door height or fraction thereof. The same recommendation applies for non-labeled doors. Distance between pivots may exceed 30".

Center Hung – Single or Double Acting



CPA440 Pivot Set

For aluminum doors up to 4'-0" wide and weighing up to 440 lb.

1. No. 8062 Top Pivot
2. No. 7422 Bottom Arm
3. No. 7471K Floor Bearing

CP440 Pivot Set

For wood or hollow metal doors up to 4'-0" wide and weighing up to 440 lb.

1. No. 8062 Top Pivot
4. No. 7421 Bottom Arm
3. No. 7471K Floor Bearing

CP660 Pivot Set

For wood or steel doors up to 4'-0" wide and weighing up to 660 lb.

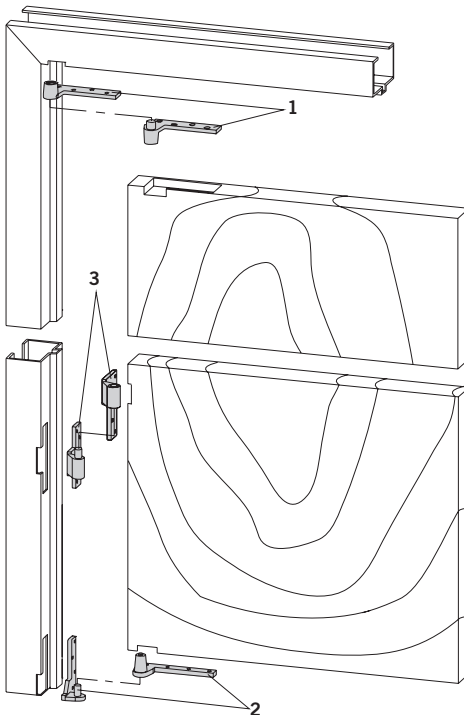
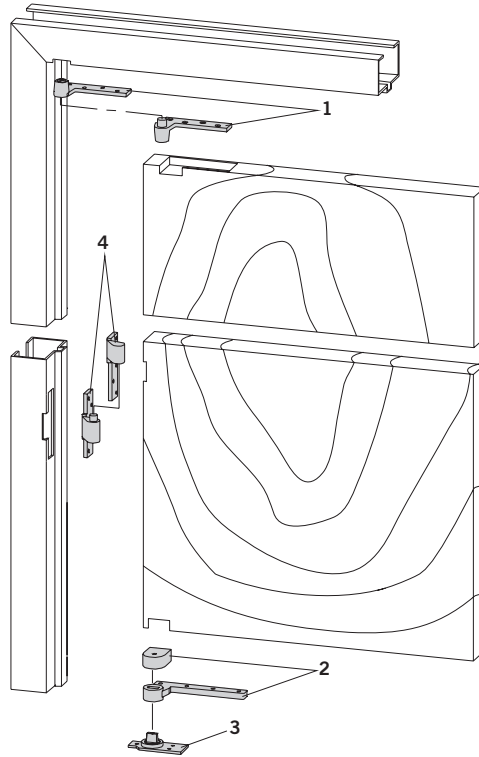
1. No. 8062 Top Pivot
2. No. 7421 Bottom Arm
3. No. 7471HD Floor Bearing

CP1000 Pivot Set

For wood or steel doors up to 6'-0" wide and weighing up to 1000 lb.

4. No. HD8062 Top Pivot
2. No. 7421 Bottom Arm
3. No. 7471HD Floor Bearing

3/4" Offset Hung – Single Acting



OP440 Pivot Set

For doors up to 4'-0" wide and weighing up to 440 lb.

1. No. 75120 Top Pivot
2. No. 75323 Bottom Arm
3. No. 7471K Floor Bearing
4. No. 75220 Intermediate Pivot (optional)

(Specify Hand)

OPF440 Pivot Set

For up to 3 hour rated fire doors, 4'-0" wide and weighing up to 440 lb.

1. No. 75133 Top Pivot
2. No. 75323 Bottom Arm
3. No. 7471K Floor Bearing
4. No. 75233 Intermediate Pivot (optional)

(Specify Hand)



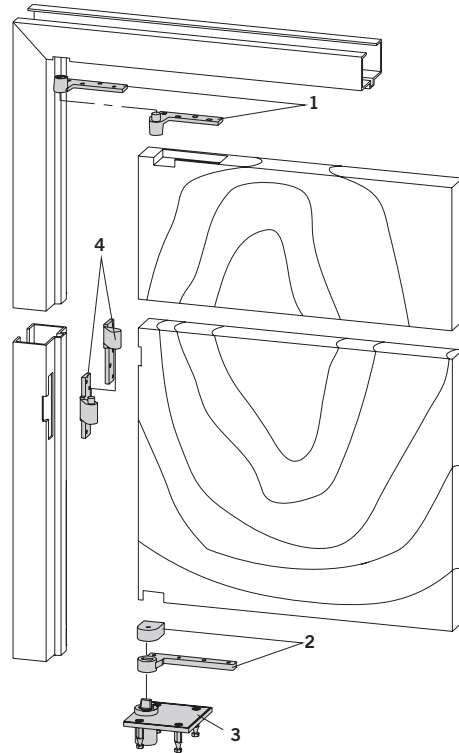
OPJ350 Pivot Set

For doors up to 4'-0" wide and weighing up to 350 lb.

1. No. 75120 Top Pivot
2. No. 75320 Bottom Arm
3. No. 75220 Intermediate Pivot (optional)

(Specify Hand)

3/4" Offset Hung – Single Acting (Heavy-Duty)



OPH750 Pivot Set

For doors up to 4'-0" wide and weighing up to 750 lb.

1. No. 75120 Top Pivot
2. No. 75323 Bottom Arm
3. No. 7471HD Floor Bearing
4. No. 75220 Intermediate Pivot (optional)

(Specify Hand)

OPHF750 Pivot Set

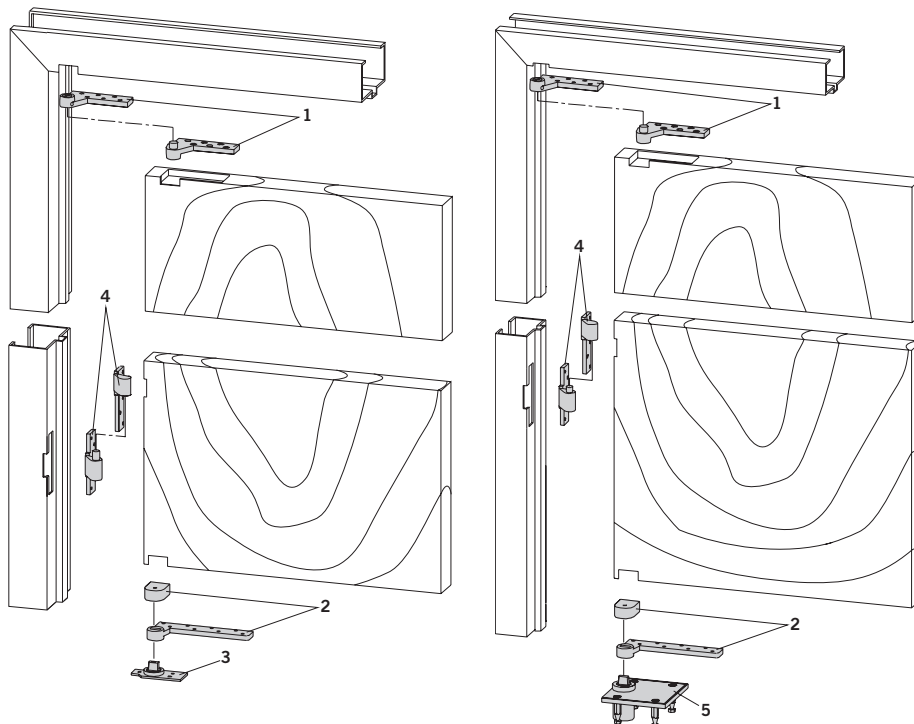
For up to 3 hour rated fire doors, 4'-0" wide and weighing up to 750 lb.

1. No. 75133 Top Pivot
2. No. 75323 Bottom Arm
3. No. 7471HD Floor Bearing
4. No. 75233 Intermediate Pivot (optional)

(Specify Hand)



3/4" Offset Hung – Single Acting (Lead-Lined)



OPL440 Pivot Set

For lead-lined doors up to 4'-0" wide and weighing up to 440 lb.

1. No. 75140 Top Pivot
2. No. 75343 Bottom Arm
3. No. 7471K Floor Bearing
4. No. 75240 Intermediate Pivot (optional)

(Specify Hand)

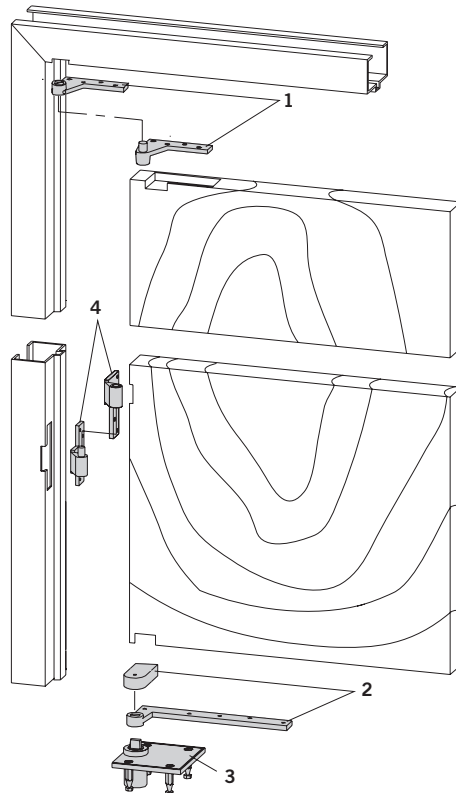
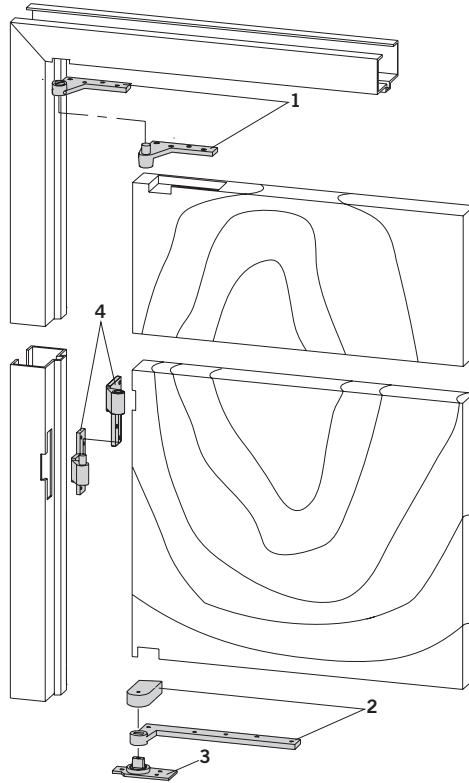
OPL800 Pivot Set

For lead-lined doors up to 4'-0" wide and weighing up to 800 lb.

1. No. 75140 Top Pivot
2. No. 75343 Bottom Arm
5. No. 7471HD Floor Bearing
4. No. 75240 Intermediate Pivot (optional)

(Specify Hand)

1-1/2" Offset Hung – Single Acting



OP15200 Pivot Set

For doors up to 3'-6" wide and weighing up to 200 lb.

1. No. 15120 Top Pivot
2. No. 15323 Bottom Arm
3. No. 7471K Floor Bearing
4. No. 15220 Intermediate Pivot (optional)

(Specify Hand)

OPF15200 Pivot Set

For up to 3 hour rated fire doors, 3'-6" wide and weighing up to 200 lb.

1. No. 15133 Top Pivot
2. No. 15323 Bottom Arm
3. No. 7471K Floor Bearing
4. No. 15233 Intermediate Pivot (optional)

(Specify Hand)



OP15500 Pivot Set

For doors up to 4'-0" wide and weighing up to 500 lb.

1. No. 15120 Top Pivot
2. No. 15323 Bottom Arm
3. No. 7471HD Floor Bearing
4. No. 15220 Intermediate Pivot (optional)

(Specify Hand)

OPF15500 Pivot Set

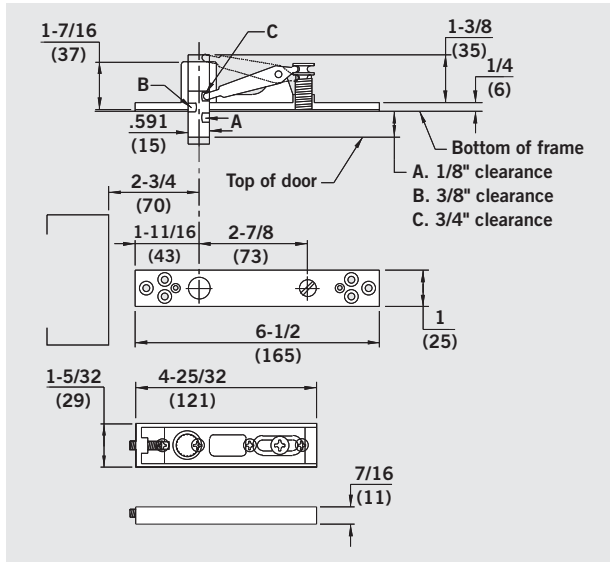
For up to 3 hour rated fire doors, 4'-0" wide and weighing up to 500 lb.

1. No. 15133 Top Pivot
2. No. 15323 Bottom Arm
3. No. 7471HD Floor Bearing
4. No. 15233 Intermediate Pivot (optional)

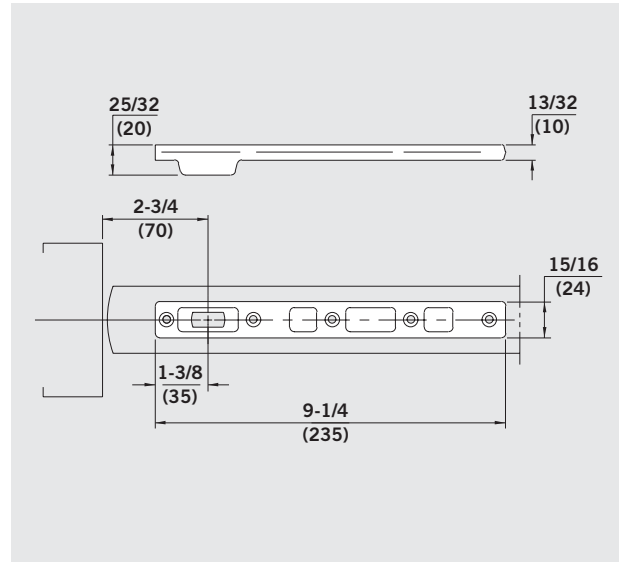
(Specify Hand)



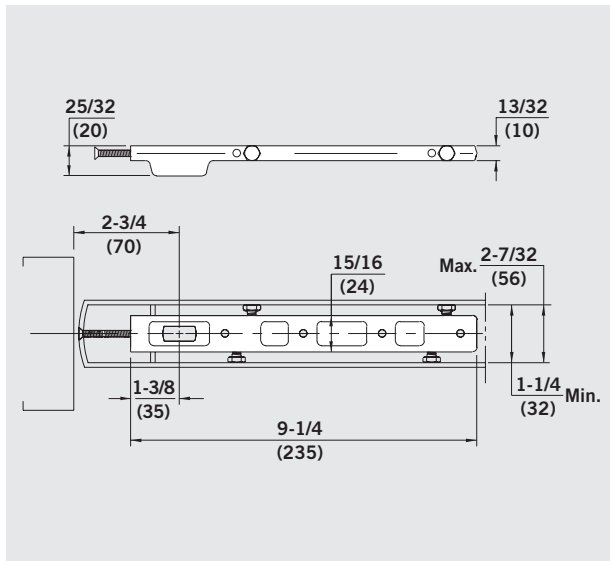
Center Hung



No. 8062 — Walking beam top pivot with cover plate. Lateral adjustment assures the door is plumb. Accommodates top door clearances of 1/8", 3/8", or 3/4". Optional extended pin available for clearances of 3/4", 1", or 1-5/16". Not recommended for use with overhead stops/holders. Use HD8062.

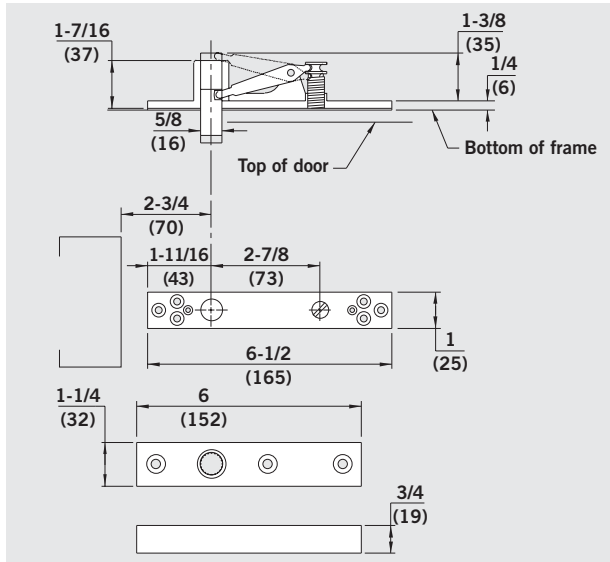


No. 7421 — Center hung bottom arm for steel or wood doors. For use with 7471K and 7471HD floor bearing.

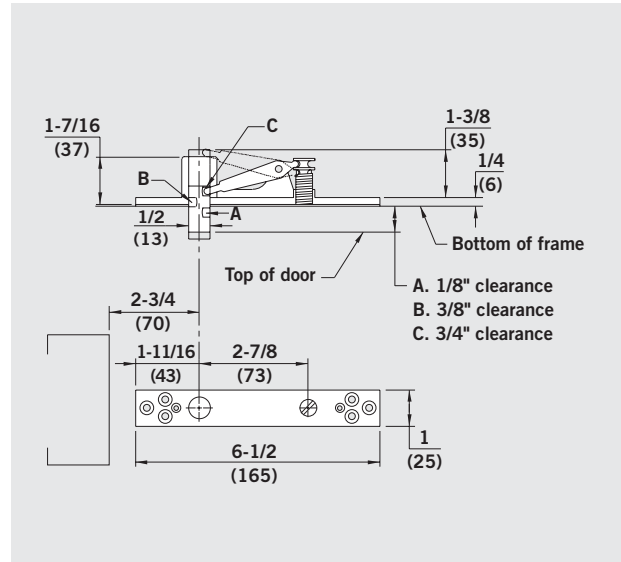


No. 7422 — Center hung bottom arm for aluminum doors. For use with 7471K and 7471HD floor bearing.

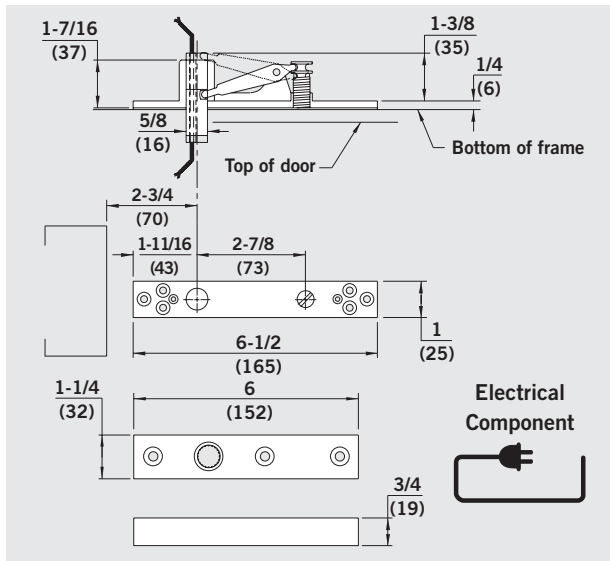
Center Hung



HD8062 — Heavy-duty walking beam top pivot with frame portion and cover plate. Door portion consists of a needle bearing pressed into a 3/4" thick aluminum block. Adjustable to obtain a 1/8"–3/8" clearance between the door and frame. Required when using overhead stops/holders.



8062.5 — Walking beam top pivot frame portion with cover plate. Pin has a 1/2" diameter.



E8062 — Electrified walking beam top pivot for power transfer. Available in a two wire and four wire design using #18 AWG. Both designs provide a maximum of 6 A at 24 V. Specify number of wires required.

Miscellaneous Center Hung Accessories:

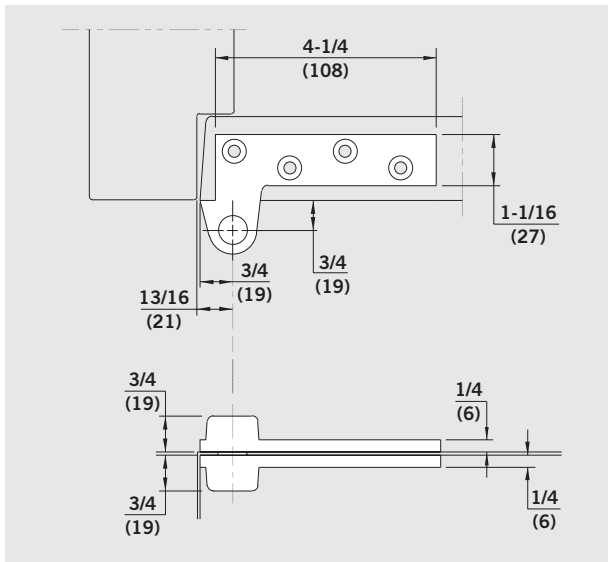
8062 EXT PIN — Pin only for standard 8062 pivot. Increases clearance to 3/4", 1", or 1-5/16".

8062.6 — Frame portion only for the standard 8062 pivot.

8062 LOWER — Door portion only for the standard 8062 pivot.

8062 COV — Cover only for frame portion of the standard 8062 pivot.

3/4" Offset Full Mortise

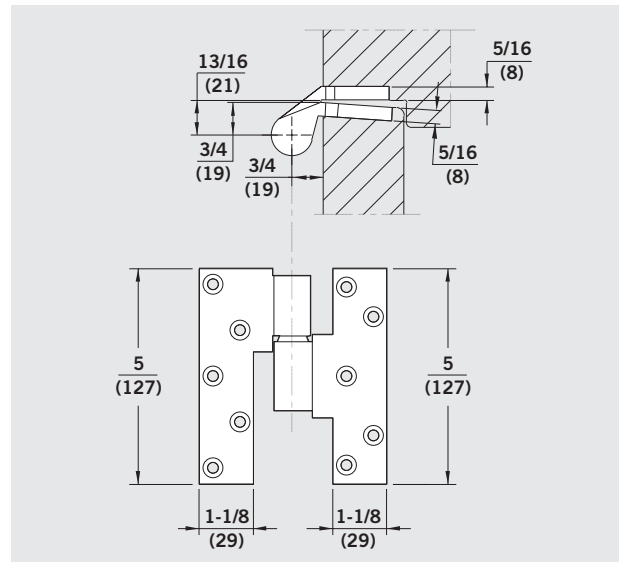


No. 75120 — 3/4" offset standard brass top pivot.

No. 75122 — 3/4" offset brass top pivot. U.L. listed for 20 minute rated fire doors.

No. 75133 — 3/4" offset steel top pivot. For use on fire doors rated up to three hours.

Note: Standard pivots are non-handed and designed for flush door and frame conditions. For 1/8" inset pivots, add 5/8 suffix and hand, i.e. 75120 5/8 RH.

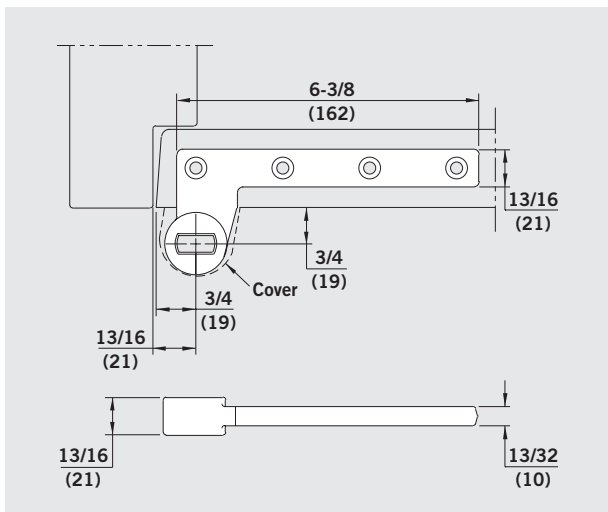


No. 75220 — 3/4" offset standard brass intermediate pivot.

No. 75222 — 3/4" offset brass intermediate pivot. U.L. listed for 20 minute rated fire doors.

No. 75233 — 3/4" offset steel intermediate pivot. For use on fire doors rated up to three hours.

(Specify Hand)



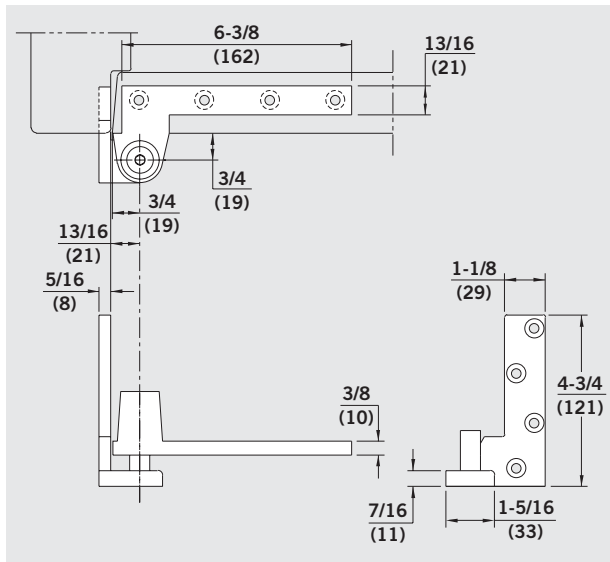
No. 75323 — 3/4" offset standard steel bottom arm.

Can also be used on fire doors rated up to three hours.

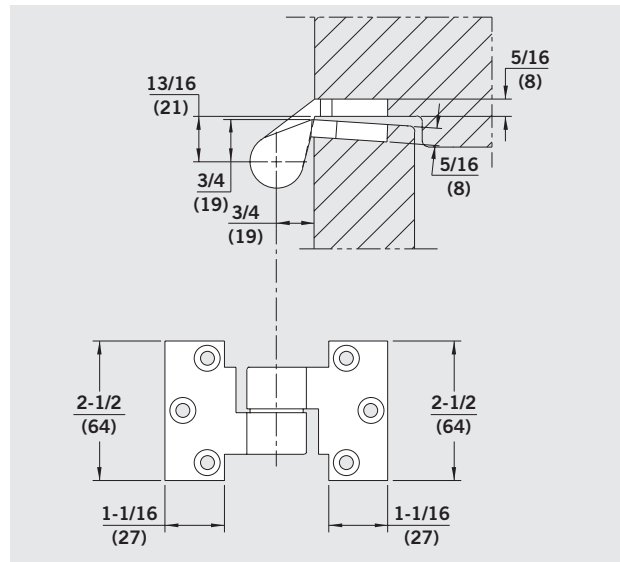
For use with 7471K and 7471HD floor bearing.

(Specify Hand)

3/4" Offset Full Mortise

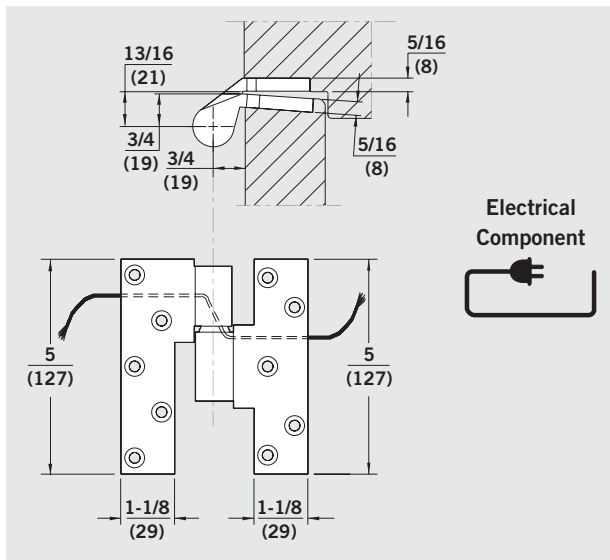


No. 75320 — 3/4" offset brass bottom side jamb pivot. For use with doors weighing up to 350 lb. Has a vertical height adjustment of 3/8".
(Specify Hand)

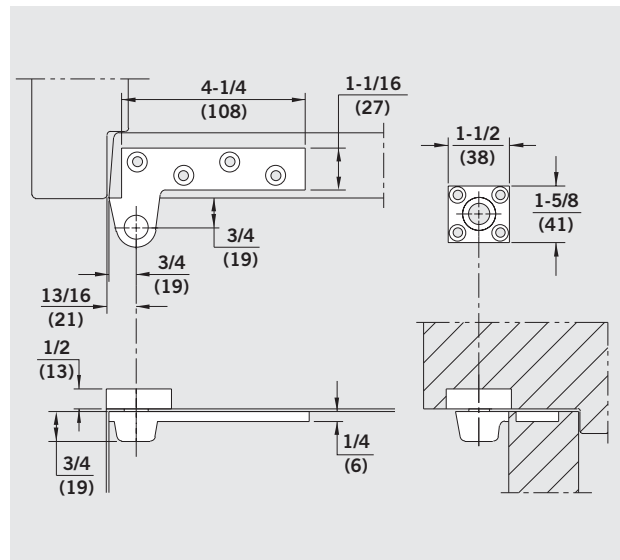


No. 75210 — 3/4" offset light-duty brass intermediate pivot. Non-load bearing, for door alignment only.
(Specify Hand)

3/4" Offset Full Mortise (Miscellaneous)



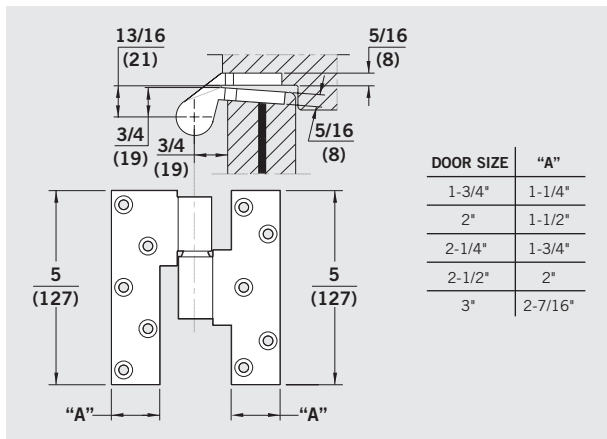
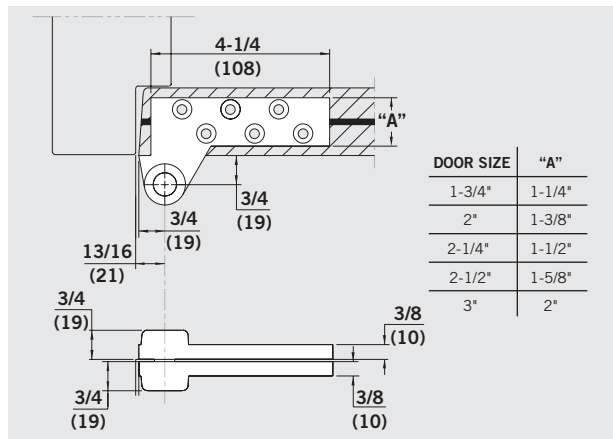
No. 75200 — Electrified intermediate pivot for power transfer. Available as an eight-wire design using #28 AWG, rated for 24 V maximum. Pairs of wires connected together provide 2 A maximum. Multiple pairs provide greater amperage ratings, i.e. two pairs in a circuit provide 4 A maximum and four pairs provide 8 A maximum. Pivot is non-load bearing and has non-separable pivot leaves.
(Specify Hand)



No. 75120/102 — Standard mortised door portion with a pivot block containing a needle bearing mortised into the overhead condition above. This pivot is ideal for conditions when the door is inset from the frame face, or the ceiling is directly above the door.
(Specify Hand)

3/4" Offset Full Mortise (Lead-Lined)

Heavy duty pivots designed for lead-lined doors or extra heavy or thick doors.



No. 75140 — 3/4" offset brass top pivot for lead-lined doors 1-3/4" thick.

No. 75142 — 3/4" offset brass top pivot for lead-lined doors 1-3/4" thick. U.L. listed for 20 minute rated fire doors.

No. 75143 — 3/4" offset steel top pivot for lead-lined doors 1-3/4" thick. For use on doors rated up to three hours.

NOTE: For doors 2" to 3" thick specify as follows:

No. 75140-2 — For use on doors 2" thick.

No. 75140-2 1/4 — For use on doors 2-1/4" thick.

No. 75140-2 1/2 — For use on doors 2-1/2" thick.

No. 75140-3 — For use on doors 3" thick.

NOTE: Standard pivots are non-handed and designed for flush door and frame conditions. For 1/8" inset pivots, add 5/8 suffix and hand, i.e. 75140-2 5/8 RH.

No. 75240 — 3/4" offset brass intermediate pivot for lead-lined doors 1-3/4" thick.

No. 75242 — 3/4" offset brass intermediate pivot for lead-lined doors 1-3/4" thick. U.L. listed for 20 minute rated fire doors.

No. 75243 — 3/4" offset steel top pivot for lead-lined doors 1-3/4" thick. For use on doors rated up to three hours.

NOTE: For doors 2" to 3" thick specify as follows:

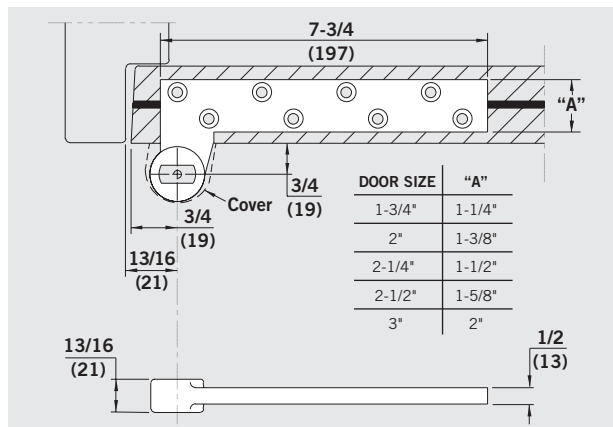
No. 75240-2 — For use on doors 2" thick.

No. 75240-2 1/4 — For use on doors 2-1/4" thick.

No. 75240-2 1/2 — For use on doors 2-1/2" thick.

No. 75240-3 — For use on doors 3" thick.

(Specify Hand)



No. 75343 — 3/4" offset standard steel bottom arm for lead-lined 1-3/4" doors. Can also be used on fire doors rated up to 3 hours. For use with 7471K and 7471HD floor bearing.

NOTE: For doors 2" to 3" thick specify as follows:

No. 75343-2 — For use on doors 2" thick.

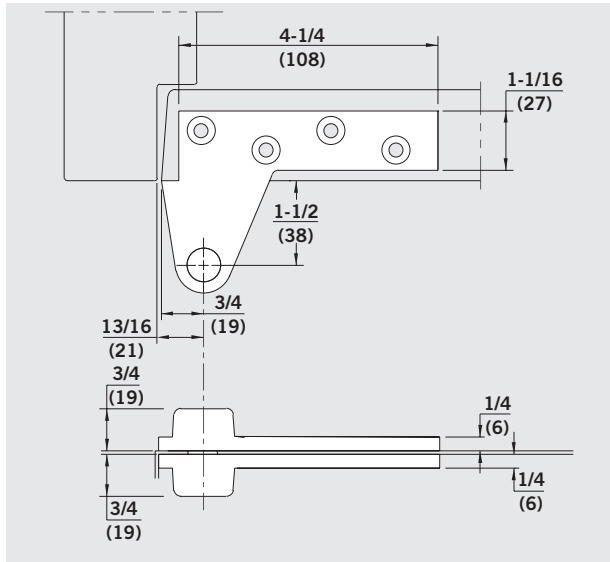
No. 75343-2 1/4 — For use on doors 2-1/4" thick.

No. 75343-2 1/2 — For use on doors 2-1/2" thick.

No. 75343-3 — For use on doors 3" thick.

(Specify Hand)

1-1/2" Offset Full Mortise

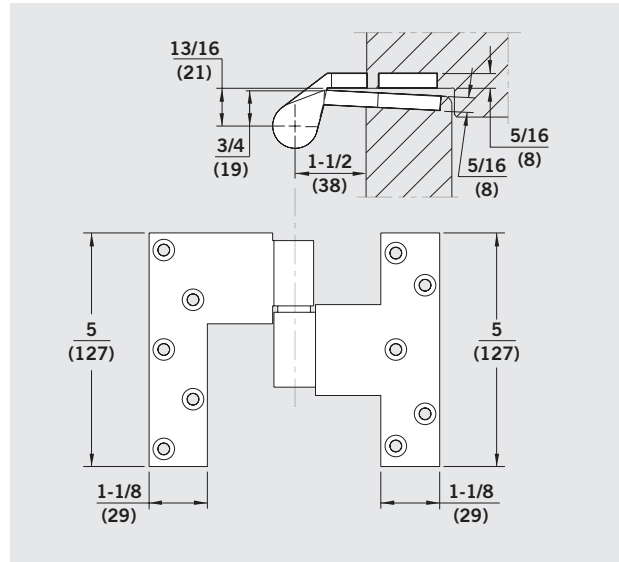


No. 15120 — 1-1/2" offset standard brass top pivot.

No. 15122 — 1-1/2" offset brass top pivot. U.L. listed for 20 minute rated fire doors.

No. 15133 — 1-1/2" offset steel top pivot. For use on fire doors rated up to three hours.

NOTE: For 1/8" inset pivots, add 5/8 suffix, i.e. 15122 5/8.

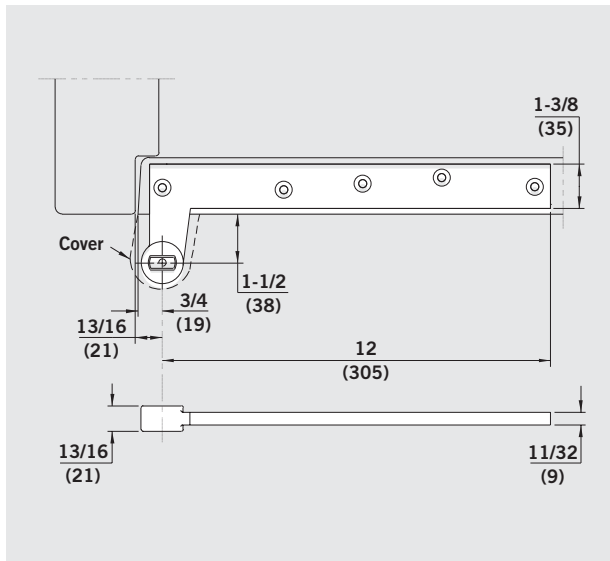


No. 15220 — 1-1/2" offset standard brass intermediate pivot.

No. 15222 — 1-1/2" offset brass intermediate pivot. U.L. listed for 20 minute rated fire doors.

No. 15233 — 1-1/2" offset steel intermediate pivot. For use on fire doors rated up to three hours.

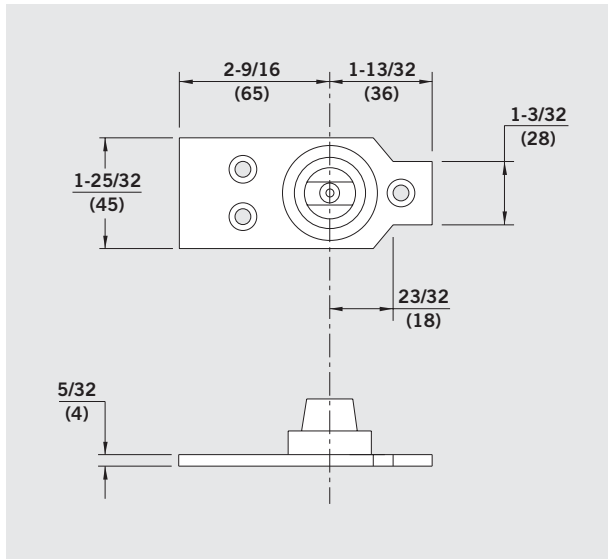
(Specify Hand)



No. 15323 — 1-1/2" offset standard steel bottom arm. Can also be used on fire doors rated up to 3 hours. For use with 7471K and 7471HD floor bearing.

(Specify Hand)

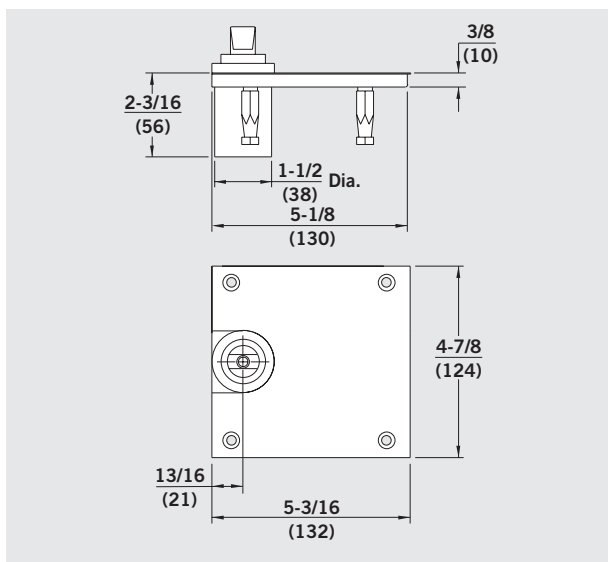
Floor Bearings



No. 7471K — Standard floor bearing with thrust roller bearing for doors weighing up to 440 lb. Can also be used on fire doors rated up to 3 hours. Includes cover cap. Mounts directly to floor. For use with No. 75323, 75343, 7421, 7422 and 15323 bottom arms. Available with integral spindle extensions as shown in the adjacent chart.

Floor Bearing Spindle Height	Clearance Provided Under Door
7471K	3/4" *
7471K × 5 mm	15/16"
7471K × 10 mm	1-1/8"
7471K × 15 mm	1-5/16"
7471K × 20 mm	1-1/2"
7471K × 25 mm	1-11/16"
7471K × 30 mm	1-15/16"
7471K × 35 mm	2-1/8"
7471K × 40 mm	2-5/16"
7471K × 45 mm	2-1/2"
7471K × 50 mm	2-11/16"

* Lesser clearances can be obtained by altering the mortise depth of the arm.

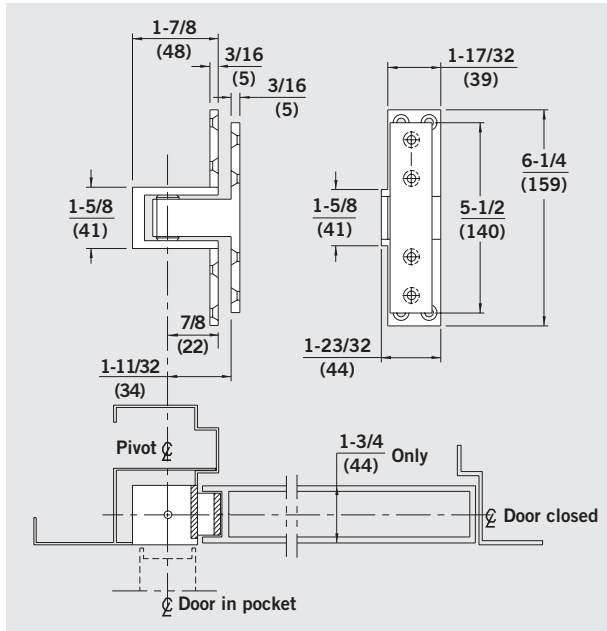


No. 7471HD — Heavy-duty floor bearing for center hung doors weighing up to 1000 lb and offset hung doors weighing up to 800 lb. Can also be used on fire doors rated up to 3 hours. For use with No. 7421, 75323, 75343 and 15323 bottom arms. Interchangeable spindles provide for bottom door clearances of 3/8" to 1-3/4". Includes cover plate. Bearing is mortised into floor. Interchangeable spindles and associated bottom door clearances shown in the adjacent chart.

Interchangeable Spindle Extension	Clearance Provided Under Door
74003	3/8" to 9/16" *
74005 (std.)	3/4"
74007	7/8"
74010	1"
74012	1-1/16"
74015	1-1/8"
74020	1-3/8"
74025	1-9/16"
74030	1-3/4"

*Clearance is determined by the mortise depth of the arm.

Pocket Pivots



For use on doors up to 4'-0" wide and weighing up to 300 lb when hung on three pocket pivots. Allows for maximum door swing of 90°.

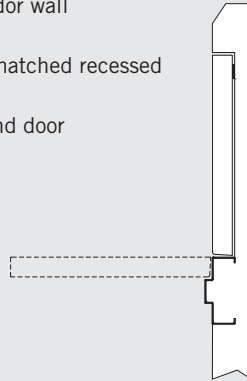
DORMA offers pocket door packages for surface door closers and floor concealed closers. See individual door closer brochures for surface closer details or BTS Series brochures for floor concealed closer details.

No. 75520 — Bronze pocket pivot. For 90° pocket doors.

No. 75523 — Steel pocket pivot for 90° pocket doors, U.L. listed for 20 minute wood doors and 3 hour rated steel fire doors.

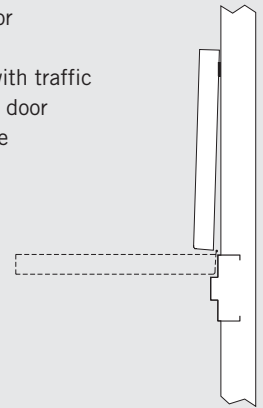
Pocket Pivot Hung Door

- Door surface is flush with corridor wall
- No protruding edges
- Open door fits completely into hatched recessed wall pocket
- No dirt or debris build-up behind door



Conventional Hinged Door

- Door edge protrudes into corridor
- Door face subject to damage
- Door edge and hinge interfere with traffic
- Dirt and debris build-up behind door
- Door hampers floor maintenance



DORMA Group North America

www.dorma-usa.com

DORMA Architectural Hardware

DORMA Drive, Drawer AC
 Reamstown, PA 17567-0411
 Telephone: (800) 523-8483
 Facsimile: (800) 274-9724
 E-mail: archdw@dorma-usa.com

DORMA Glas

1520 Jabez Run, Suite 303
 Millersville, MD 21108
 Telephone: (800) 451-0649
 Facsimile: (301) 390-0011
 E-mail: glas@dorma-usa.com

DORMA Canada

1680 Courtney Park Drive, Unit 13
 Mississauga, Ontario L5T 1R4
 Telephone: (800) 387-4938
 Facsimile: (905) 670-5850
 E-mail: sales@dormacanada.com

DORMA Mexico, S. de R.L. de C.V.

Astrónomos 28
 Col. Escandón
 11800, México, D.F.
 Mexico
 Telephone: (52+55) 5272-6937
 Facsimile: (52+55) 5272-6948
 E-mail: dormaoper@prodigy.net.mx