



K51M Series

Grade 1 Heavy Duty Closer Hinge



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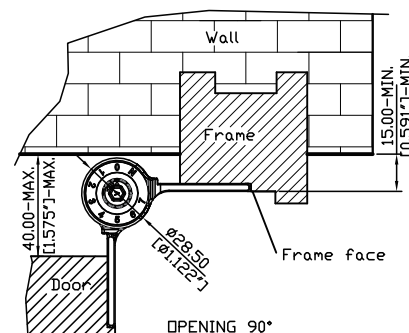
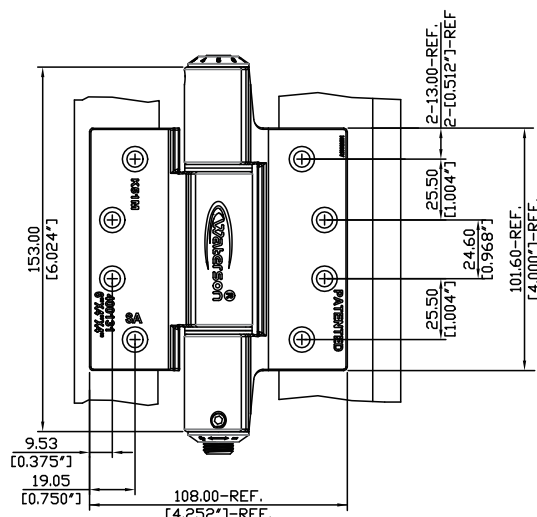


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MECHANICAL SELF-CLOSING DOOR HINGES

K51M-400 Series · K51M-400-A2 · K51M-400-A3 · K51M-400-A4



SPECIFICATIONS

- Full mortise closer hinge meets UL and ADA requirements
- Square corner templates, 4.0" x 4.0" leaf size and Ø1.12" barrel
- 304 stainless steel leaf and body
- Speed control up to 120° door swing
- Pure mechanical design
- Adjustable closing force, swing & latch speed control
- Non-handed
- Interior and exterior use
- Screw packages
 - Machine screws- Phillips Flat-head - #12 x 24 x 1/2"
 - Wood screws- Phillips Flat-head - #12 x 1-1/4"
- Hinge set selection table according to door size (see below table)

Hinge Model	Applicable Door Size (Maximums)			Hinge Numbers	Configuration
	Thickness	Weight	Size WxH		
K51M-400-A2	1-3/8"	150 lbs	4 x 6 ft	2	SA.SA1
K51M-400-A3		260 lbs	4 x 7 ft	3	SA.SA.SA1
K51M-400-A4		330 lbs	4 x 8 ft	4	DS.SA.SA.SA1

Contact factory for other dimensions availability.

FINISHES

- In Stock:
 - Satin stainless steel: BHMA 630 (US32D)
 - Flat black: BHMA 631 (US19)
- Special Order:
 - Dark bronze: BHMA 695 (US10B)
 - Satin brass: BHMA 731 (US4)
 - Stain bronze: BHMA 612(US10)
 - Contact factory for other custom finishes.

OPTIONS

- SST 316
- 90° door stop, 120° door stop
- Corners: square, R 1/4" or R 5/8"
- Zig zag template

CODE COMPLIANCE



- ANSI/BHMA A156.7 Full mortise template
- ANSI/BHMA A156.17 Grade 1 single acting hinge
- ANSI/ICC A117.1 ADA accessibility
- UL Listed for ANSI/UL10C Fire Rated up to 3 hours
- NFPA 80 National Fire Protection - Fire Door Assembly

FEATURES

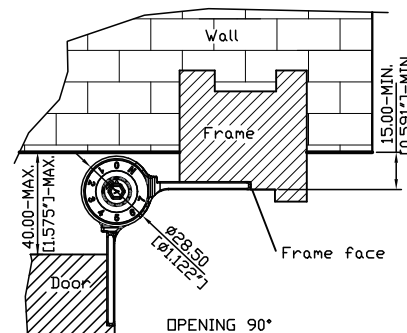
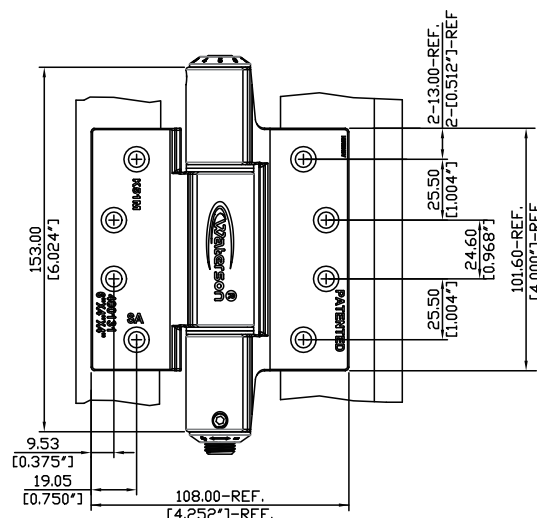
- **Stainless Steel Body**
Closer hinge body and leaf crafted from stainless steel by one mold investment cast process.
- **Mechanical Operation**
Provides a smooth and constant swing speed control from 120° - 0°.
- **Non-Handed**
K51M series is non-handed and can be installed on either right or left hand swing doors.
- **Swing Speed Control**
Allows adjustment of door speed from the doors 90° open position down to approximately 20° from the closed position.
- **Latch Speed Control**
Allows adjustment of door latch speed from approximately 20° to 0° down to the door's fully closed position.
- **Variety of Sizes & Weights**
Suitable for doors weighing between 100-440 lbs with width under 4ft.
- **ADA Compliant**
5 lbs opening force, 5 secs closing speed and ADA clearance.
- **Easily Maintained**
Easily adjusted and maintained with only a hex wrench. Individual hinges in a set can be easily replaced without changing entire set.

WARRANTY

10 years interior and exterior use

HYDRAULIC HYBRID CLOSER HINGES

K51M-400 Series · K51M-400-B2 · K51M-400-B3 · K51M-400-B4



SPECIFICATIONS

- Full mortise closer hinge meets UL and ADA requirements
- Square corner templates, 4.0" x 4.0" leaf size and Ø1.12" barrel
- 304 stainless steel leaf and body
- Speed control up to 120° door swing
- Hybrid - Hydraulic & mechanical
- Adjustable closing force, swing & latch speed control
- Non-handed
- Interior use
- Screw packages
 - Machine screws - Phillips Flat-head - #12 x 24 x 1/2"
 - Wood screws - Phillips Flat-head - #12 x 1-1/4"
- Hinge set selection table according to door size (see below table)

Hinge Model	Applicable Door Size (Maximums)			Hinge Numbers	Configuration
	Thickness	Weight	Size WxH		
K51M-400-B2	1-3/8"	150 lbs	4 x 6 ft	2	DS.HA
K51M-400-B3		260 lbs	4 x 7 ft	3	DS.HA.SA1
K51M-400-B4		330 lbs	4 x 8 ft	4	DS.SA.HA.SA1

Contact factory for other dimensions availability.

FINISHES

- In Stock:
 - Satin stainless steel: BHMA 630 (US32D)
 - Flat black: BHMA 631 (US19)
- Special Order:
 - Dark bronze: BHMA 695 (US10B)
 - Satin brass: BHMA 731 (US4)
 - Satin bronze: BHMA 612 (US10)
 - Contact factory for other custom finishes.

OPTIONS

- SST 316
- 90° door stop, 120° door stop
- Corners: R 1/4" or R 5/8"
- Zig zag template

CODE COMPLIANCE



- ANSI/BHMA A156.7 Full mortise template
- ANSI/BHMA A156.17 Grade 1 single acting hinge
- ANSI/ICC A117.1 ADA accessibility
- UL Listed for ANSI/UL10C Fire Rated up to 3 hours
- NFPA 80 National Fire Protection - Fire Door Assembly

FEATURES

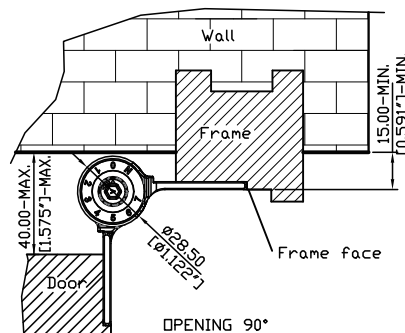
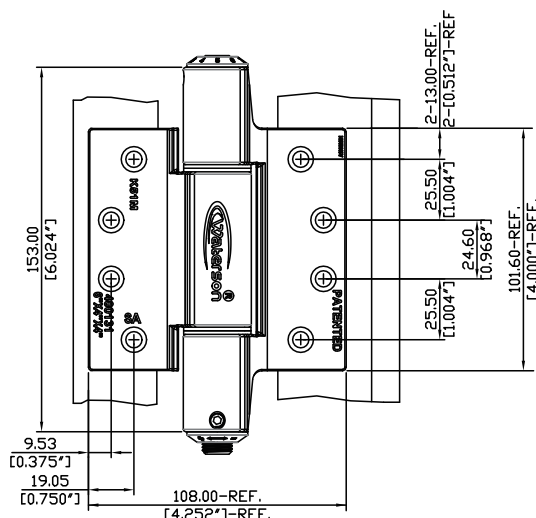
- **Stainless Steel Body**
Closer hinge body and leaf crafted from stainless steel by one mold investment cast process.
- **Hybrid**
Hydraulic Hybrid hinges contain a small reservoir of hydraulic fluid that provides dynamic braking for quieter, softer closing.
- **Non-Handed**
K51M series is non-handed and can be installed on either right or left hand swing doors.
- **Swing Speed Control**
Allows adjustment of door speed from the doors 90° open position down to approximately 20° from the closed position.
- **Latch Speed Control**
Allows adjustment of door latch speed from approximately 20° to 0° down to the door's fully closed position.
- **Variety of Sizes & Weights**
Suitable for doors weighing between 100-440 lbs with width under 4ft.
- **ADA Compliant**
Meets 5 lbs opening force, 5 secs closing speed and ADA clearance requirements.
- **Easily Maintained**
Easily adjusted and maintained with only a hex wrench. Individual hinges in a set can be easily replaced without changing entire set.

WARRANTY

5 years interior use and 3 years exterior use

MECHANICAL HOLD-OPEN SELF-CLOSING HINGES

K51M-400 Series · K51M-400-C2 · K51M-400-C3 · K51M-400-C4



SPECIFICATIONS

- Full mortise closer hinge meets UL and ADA requirements
- Square corner templates, 4.0" x 4.0" leaf size and Ø1.12" barrel
- 304 stainless steel leaf and body
- 90° Hold-open
- Mechanical design
- Adjustable closing force, swing & latch speed control
- Speed control up to 120° door swing
- Non-handed
- Interior and exterior use
- Screw packages
 - Machine screws- Phillips Flat-head - #12 x 24 x 1/2"
 - Wood screws- Phillips Flat-head - #12 x 1-1/4"
- Hinge set selection table according to door size (see below table)

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	Thickness	Weight	Size WxH		
K51M-400-C2	1-3/8"	150 lbs	4 x 6 ft	2	SB.SA
K51M-400-C3		260 lbs	4 x 7 ft	3	SB.SA.SA1
K51M-400-C4		330 lbs	4 x 8 ft	4	SA.SB.SA.SA1

Contact factory for other dimensions availability.

FINISHES

- In Stock:
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- Special Order:
 - Dark bronze: BHMA 695 (US10B)
 - Satin brass: BHMA 731 (US4)
 - Satin bronze: BHMA 612 (US10)
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OPTIONS

- SST 316
- 90° door stop, 120° door stop
- Corners: R 1/4" or R 3/8"
- Zig zag template

CODE COMPLIANCE



- ANSI/BHMA A156.7 Full mortise template
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FEATURES

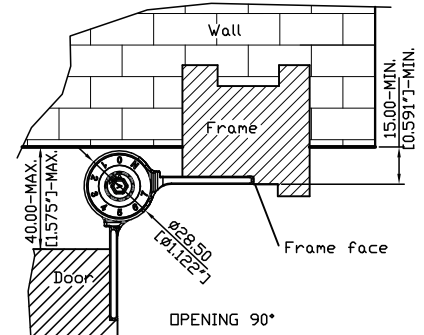
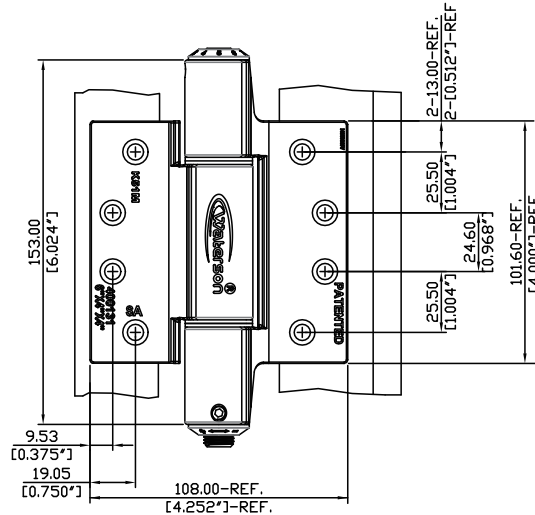
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HYDRAULIC HYBRID WITH HOLD-OPEN SELF-CLOSING HINGE

K51M-400 Series · K51M-400-D2 · K51M-400-D3 · K51M-400-D4



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K51M-400-D3		260 lbs	4 x 7 ft	3	DS.HA.SB
K51M-400-D4		330 lbs	4 x 8 ft	4	DS.SB.HA.SA1

Contact factory for other dimensions availability.

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OPTIONS

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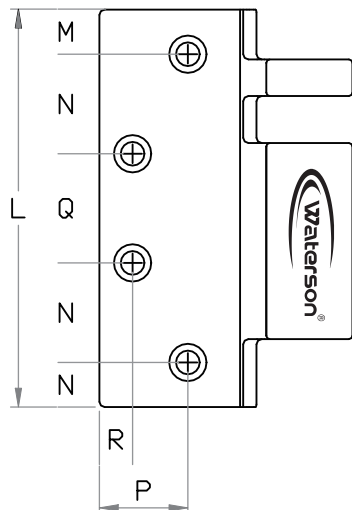
- ANSI/BHMA A156.7 Full mortise template
- ANSI/BHMA A156.17 Grade 1 single acting hinge
- ANSI/ICC A117.1 ADA accessibility

FEATURES

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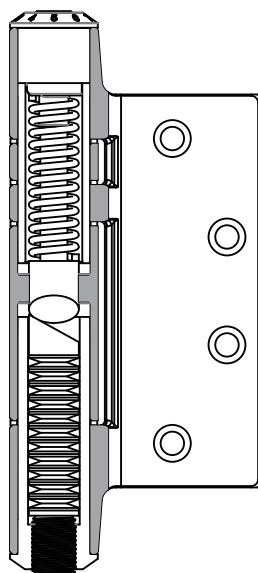


Dimensions	K51M-400	K15M-450	K51M-450D	K51M-500	K51M-500D	K5M-600	K51M-600D
BHMA CODE	A40M	A45M	B45M	A50M	B50M	A60M	B60M
L	4.000	4.500	4.500	5.000	5.000	6.000	6.000
	(101.60)	(114.30)	(114.30)	(127.00)	(127.00)	(152.40)	(152.40)
M	0.512	0.508	0.508	0.508	0.508	0.500	0.500
	(13.00)	(12.90)	(12.90)	(12.90)	(12.90)	(12.70)	(12.70)
N	1.004	1.125	1.125	1.250	1.250	1.281	1.281
	(25.50)	(28.58)	(28.58)	(31.75)	(31.75)	(32.54)	(32.54)
P	0.750	1.000	1.000	1.000	1.000	0.937	0.937
	(19.05)	(25.40)	(25.40)	(25.40)	(25.40)	(23.80)	(23.80)
Q	0.968	1.234	1.234	1.484	1.484	1.219	1.219
	(24.60)	(31.34)	(31.34)	(37.70)	(37.70)	(30.96)	(30.96)
R	0.375	0.375	0.375	0.375	0.375	0.375	0.375
	(9.53)	(9.53)	(9.53)	(9.53)	(9.53)	(9.53)	(9.53)
Thickness	0.130	0.134	0.180	0.146	0.190	0.160	0.203
	(3.30)	(3.40)	(4.57)	(3.71)	(4.83)	(4.06)	(5.16)

Closer Hinge Cutaway View

Mechanical Operation

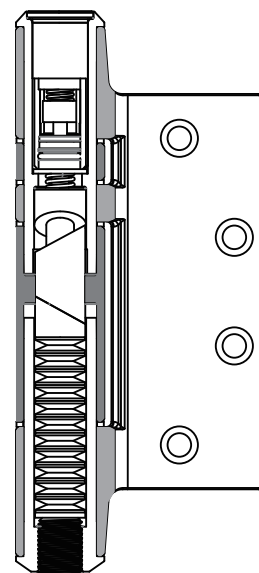
- Tension Control
- Torsion Spring
- Low-friction Washers
- Interactive Braking Mechanisms
- Disc Springs
- Speed Control



UL listed for 3-hour fire rating and one million cycles.

Hybrid Hydraulic

- Hydraulic Reservoir
- Low-friction Washers
- Interactive Braking Mechanisms
- Disc Springs
- Speed Control



Enhanced control for softer closing and locations with high winds.

HINGE FUNCTIONS



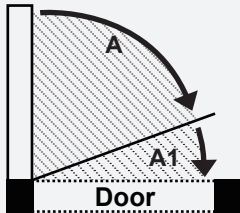
Spring Power (S)

The numerical panel controls spring power (S), which provides closing force from 90° to 0° on the SA, SA1, SB, DS, and HS types.

Swing (A) & Latch (A1) Speeds

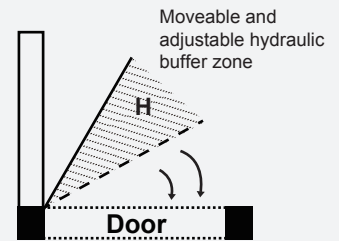
The 5mm hex socket located opposite the numerical panel on the SA, SA1, HA and HA1 types controls both the swing and latch speed braking mechanisms.

Swing Speed (A) operates from 90° to 20° and latch speed (A1) operates from 20° to 0°.



Hydraulic Buffer (H)

The hydraulic component (H) on the HA and HS types provides a hydraulic buffer to create a quiet and smooth closing door.



Hold Open (B)

The hex socket located opposite the numerical panel on the SB type controls a hold-open (B) feature that fixes the door open at 85°.

HINGE TYPE TABLE

Type	Functions		Location	Description
DS	S	Spring Power	Top	Double spring model - both ends (S) provide closing force.
	S	Spring Power	Bottom	
SA	S	Spring Power	Top	(S) Provides closing force, and (A) controls speed from 90° to 20°.
	A	Swing Speed	Bottom	
SA1	S	Spring Power	Top	(S) Provides closing force, and (A1) controls speed from 20° to 0°.
	A1	Latching Speed	Bottom	
SB	S	Spring Power	Top	(S) Provides closing force, and (B) holds door open at 85° +/- 5°.
	B	Hold-Open	Bottom	
HA	H	Hydraulic Buffer	Top	(H) Control either swing or latch speed or in-between, and (A) controls the speed from 90° to 20°.
	A	Swing Speed	Bottom	
HS	H	Hydraulic Buffer	Top	(H) Controls moveable and adjustable hydraulic buffer zone, and (S) provides closing force.
	S	Spring Power	Bottom	

Note: Closer hinges are usually installed with the functions in top / bottom orientation. Inverting closer hinges will NOT affect performance.

HOW TO ORDER

Product Identification



K51 M -450 -A3 -630 -316DWR14

Materials

K51: Stainless Steel
(Type 304 is standard)

Closer Hinge Style

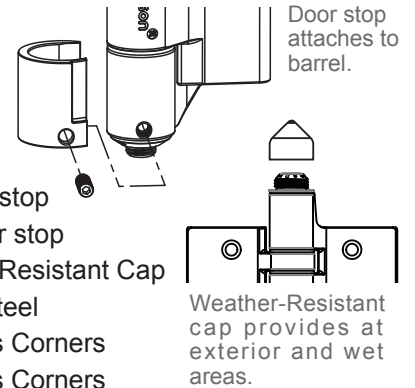
M: Full Mortise (non-handed)
L- SWRH: Swing Clear (reversible)

Hinge Sizes

4" x 4"	5" x 5"
4.5" x 4.5"	6" x 6"
4.5" x 5"	Custom

Options

WP01: 90° door stop
WP02: 120° door stop
WP03: Weather Resistant Cap
316: Stainless Steel
R14: 1/4" Radius Corners
R58: 5/8" Radius Corners



Finishes On Stainless Steel

630 (US32D) - Satin Stainless Steel
631 (US19) - Flat Black – Powder coating
695 (US10B) - Dark Satin Bronze – Powder coating
731 (US4) - Satin Brass – Physical vapor deposition
612 (US10) - Satin Bronze – Physical vapor deposition
Contact us for custom finishes.

Three Hinges per Set

Purely Mechanical: A3 (SA.SA.SA1)
Hydraulic Hybrid: B3 (DS.HA.SA1)
Mechanical + Hold Open: C3 (SB.SA.SA1)
Hydraulic + Hold Open: D3 (DS.HA.SB)

Four Hinges per Set

Purely Mechanical: A4 (DS.SA.SA.SA1)
Hydraulic Hybrid: B4 (DS.SA.HA.SA1)
Mechanical + Hold Open: C4 (SA.SB.SA.SA1)
Hydraulic + Hold Open: D3 (DS.SB.HA.SA1)

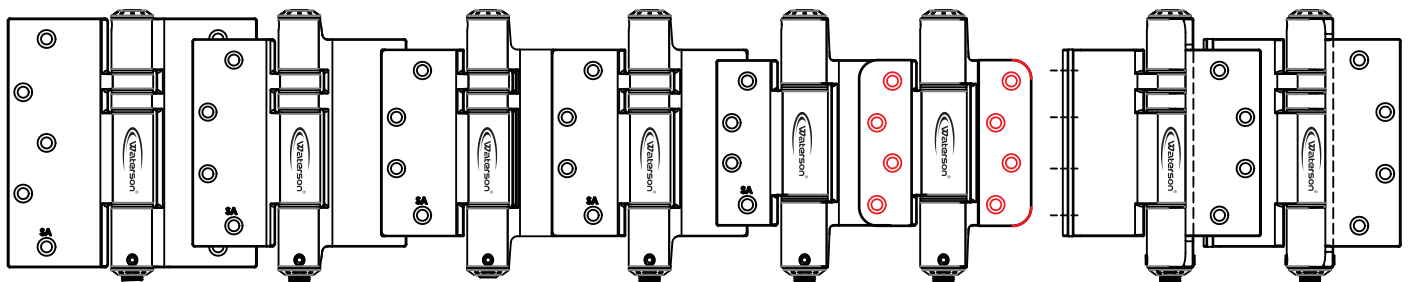
Sets are combinations of closer hinges with these functions.

DS | Double closing force
SA | Closing force + Swing speed adjustment
SA1 | Closing force + Latch speed adjustment
SB | Closing force adjustment + Hold open

HA | Hydraulic damping + Swing speed adjustment
HS | Hydraulic damping + Closing force adjustment
NM | No closing function (regular hinge)

K51M - Full Mortise Sizes

K51L - Swing Clear Sizes



Identification	K51M-600	K51M-500	K51M-500D	K51M-455	K51M-450	K51M-400	K51M-400-R	K51L-SWRH-450	K51L-SWRH-545
Hinge Size	6" x 6"	5" x 5"	5" x 5"	4.5" x 5"	4.5" x 4.5"	4" x 4"	4" x 4"	4.5" x 4.5"	5" x 4.5"
Hinge Gauge	0.160"	0.146"	0.190"	0.134"	0.134"	0.130"	0.130"	0.134"	0.190"
Door Thickness	2-1/4" and up	1-3/4" to 2-1/4"	1-3/4" to 2-1/4"	1-3/4" to 2-1/4"	1-3/4"	1-3/8"	1-3/8"	1-3/4"	1-3/4" to 2-1/4"

PRODUCT SELECTION TABLE

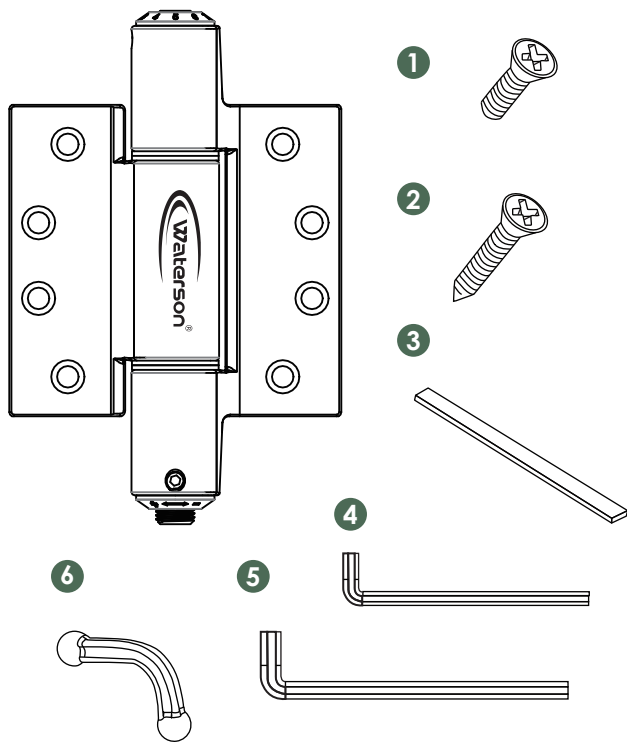


Full Mortise - K51M		Door Size (Maximums)			Operation		Closer Hinges		Others
Identification <i>Useable with fire-rated doors</i>	BHMA Template Size(in)	Thickness (in)	W x H (ft)	Weight (lbs)	Fire Door Hold Open	Mechanical: All Locations Hybrid: Softer Closer Interior Only	Per Door	Configuration Set	Finishes
<i>K51M-400-A3</i>	4 x 4 x 0.130 (A40M)	1-3/8	4 x 7	260		Mechanical	3	A3: SA.SA.SA1	Stainless Steel US32D 630 Flat Black US19 631 Dark Bronze US10B 695 Satin Brass US4 731 Satin Bronze US10 612 Custom
<i>K51M-400-B3</i>						Hybrid	3	B3: DS.HA.SA1	
K51M-400-C3						Mechanical	3	C3: SB.SA.SA1	
K51M-400-D3						Hybrid	3	D3: DS.HA.SB	
K51M-400-C4			4 x 8	260		Mechanical	4	C4: SA.SB.SA.SA1	
K51M-400-D4						Hybrid	4	D4: DS.SB.HA.SA1	
<i>K51M-400-A4</i>				330		Mechanical	4	A4: DS.SA.SA.SA1	
<i>K51M-400-B4</i>						Hybrid	4	B4: DS.SA.HA.SA1	
<i>K51M-450-A3</i>	4.5 x 4.5 x 0.134 (A45M5)	1-3/4	4 x 7	260		Mechanical	3	A3: SA.SA.SA1	Dark Bronze US10B 695 Satin Brass US4 731 Satin Bronze US10 612 Custom
<i>K51M-450-B3</i>						Hybrid	3	B3: DS.HA.SA1	
K51M-450-C3						Mechanical	3	C3: SB.SA.SA1	
K51M-450-D3						Hybrid	3	D3: DS.HA.SB	
K51M-450-C4			4 x 8	260		Mechanical	4	C4: SA.SB.SA.SA1	
K51M-450-D4						Hybrid	4	D4: DS.SB.HA.SA1	
<i>K51M-450-A4</i>				330		Mechanical	4	A4: DS.SA.SA.SA1	
<i>K51M-450-B4</i>						Hybrid	4	B4: DS.SA.HA.SA1	
<i>K51M-500D-A3</i>	5 x 5 x 0.146 (A50M)	1-3/4 to 2-1/4	4 x 7	260		Mechanical	3	A3: SA.SA.SA1	Custom Options D: Doorstop 316: Stainless steel R14: 1/4" Radius Corners R58: 5/8" Radius Corners
<i>K51M-500D-B3</i>						Hybrid	3	B3: DS.HA.SA1	
K51M-500D-C3						Mechanical	3	C3: SB.SA.SA1	
K51M-500D-D3						Hybrid	3	D3: DS.HA.SB	
K51M-500D-C4			4 x 8	260		Mechanical	4	C4: SA.SB.SA.SA1	
K51M-500D-D4						Hybrid	4	D4: DS.SB.HA.SA1	
<i>K51M-500D-A4</i>				330		Mechanical	4	A4: DS.SA.SA.SA1	
<i>K51M-500D-B4</i>						Hybrid	4	B4: DS.SA.HA.SA1	
<i>K51M-600-A3</i>	6 x 6x 0.160 (A60M)	2-1/4 up	4 x 7	260		Mechanical	3	A3: SA.SA.SA1	R14: 1/4" Radius Corners R58: 5/8" Radius Corners
<i>K51M-600-B3</i>						Hybrid	3	B3: DS.HA.SA1	
<i>K51M-600-A4</i>			4 x 8	330		Mechanical	4	A4: DS.SA.SA.SA1	
<i>K51M-600-B4</i>						Hybrid	4	B4: DS.SA.HA.SA1	

► Non-Handed ► Conforms to ANSI/BHMA A156.7 ► Refer to NFPA-80 for number of hinges required on a fire-rated door.

A Waterson Hinge Set contains 3 - 4 hinges. Each hinge provides a specific and distinct function that contributes to the set's optimal performance.

COMPONENT PARTS



No.	Part No.	Description
1	WS01	Cross head machine screws (#12-24 UNC - 1/2" L)
2	WS02	Cross head self tapping screws (#12 x 1-1/4" L)
3	WT01	Fire rated stainless steel shim
4	WT02	Standard 3mm hex wrench
5	WT03	Standard 5mm hex wrench
6	WT04	Spreader Bar - use it to help install the hinge
7	WP01	90° door stop
8	WP02	120° door stop
9	WP03	Weather-Resistant Cap
10	WP04	Decorative Round Cap
11	WP05	Decorative Queen Cap
12	WP06	Decorative Bullet Cap
13	WP07	Decorative Tall Cap

OPTIONAL DISCREET DOOR STOP

Optional 90° (WP01) and 120° (WP02) discreet door stops are available for all Waterson K51M Series closer hinges. Most doors require stops installed on the top and bottom closer hinges. Stops can be installed at factory or job sites. If ordered separately, specify which closer hinge models the stops will be used with.



OPTIONAL HINGE CAPS

