

## What is PemkoHinge™?

PemkoHinge™ consists of two full-height, paired and geared leaves. Each geared leaf rotates evenly from top to bottom riding on proprietary polymer blended bearings. The geared leaves and bearings are held together by a full-length channel cap. This assembly retains the smooth, clean lines of the door and frame, while easily supporting heavy vertical loads.

## PemkoHinge™

### SECURITY, SAFETY, PRIVACY, LOW WEAR AND TEAR

#### PemkoHinge™ Attributes:

- With a continuous hinge, typical alignment problems (such as door sag and binding) are eliminated
- The continuous hinge distributes load stress uniformly along the full length of the door and frame
- The gear design of the continuous hinge ensures symmetrical operation of each leaf
- ½ lb. or less operating force required to operate most doors, regardless of size
- Low operating force feature makes continuous hinges ideal for doors used by the physically challenged
- The continuous hinge, when installed on standard steel doors and frames, requires no additional reinforcement. However, hinge preps must have fillers installed for proper operation
- A high degree of security can be achieved for exterior openings or restricted spaces by using a continuous hinge. With the geared construction and the full-length channel cap, the common gap between the door and frame is sealed, which provides security against prying
- In addition, the continuous full-height hinge cap protects against pinching fingers in doors in public areas, particularly those where children are present
- Sight proof design of the continuous hinge provides privacy for lavatories, executive offices, or file rooms

#### PemkoHinge™ Superior Design:

- PemkoHinge™ has increased critical stress points of the hinge leaf extrusions providing additional strengths and rigidity to the completed product
- PemkoHinge™ bearing design eliminates premature wear, guarantees proper alignment, and requires fewer bearings to carry more weight. The bearing is produced for PEMKO using a chemical composition and injection process that provides a stronger, more accurately formed bearing
- PemkoHinge™ is designed with inter-meshing gear segments in the hinge which provide 50% more bearing surface resulting in less wear
- PemkoHinge™ goes through the anodizing process after completing all machining. This means the machined aluminum surfaces that are in direct contact with the bearing have a smoother, harder surface, thereby reducing wear
- PemkoHinge™ maintains uniform bearing spacing for the full length of the hinge even when lengths exceed 10'
- PemkoHinge™ uses #12-24 size fasteners instead of #10. (#12 Tek fasteners available upon request)
- PemkoHinge™ commercial models are ideal for use on lead lined doors (i.e. hospital X-ray rooms), without requiring special screw locations

### How To Order (Hinge Part Designations)

Example: **D | SPFM | 85 | SLI | HD1**

Finishes	Hinge Types	Lengths	Hinge Options	Capacity
<b>BL</b> Black Anodized	<b>AL_FM</b> Aluminum Full-Mortise	<b>79</b>	<b>"blank"</b> Standard	<b>"blank"</b> Standard Duty
<b>C</b> Clear Anodized	<b>AL_HS</b> Aluminum Half-Surface	<b>83</b>	<b>CP</b> Center Pivot	<b>HD1</b> Heavy Duty, Grade 1
<b>D</b> Dark Bronze Anodized	<b>FM</b> Full-Mortise	<b>85</b>	<b>RG</b> Raised Gear	<b>HD3</b> Heavy Duty, Grade 3
<b>G</b> Gold Anodized	<b>FS</b> Full-Surface	<b>95</b>	<b>SF</b> Safety	
<b>PW</b> Painted White	<b>HS</b> Half-Surface	<b>120</b>	<b>SL</b> Short Leaf (residential only)	
<b>SN</b> Satin Nickel Anodized	<b>RS138</b> Full-Mortise Residential: 1-3/8"		<b>SLF</b> Short Leaf Flush	
	<b>RS175</b> Full-Mortise Residential: 1-3/4"		<b>SLI</b> Short Leaf Inset	
	<b>SPFM</b> Special Full-Mortise			
	<b>WT_FM</b> Wide Throw Full-Mortise			
	<b>WT_HS</b> Half-Surface			

## BHMA Certification Program

This program was developed to establish product classifications through performance testing. Three grades (1, 2 and 3) of product classifications were established for continuous hinges, with three weight groups (150, 300 and 600) for each grade: Grade 3 being the lowest and Grade 1 being the highest classification. Each classification and weight group has a set of established cycle requirements and wear characteristics, with a minimum for vertical and lateral wear to establish a listing under a weight and grade classification, after the set number of cycles is completed.

Maximum Vertical Wear Allowable:

- Grade 3 = 0.105"
- Grade 2 = 0.030"
- Grade 1 = 0.020"



Maximum Lateral Wear Allowable:

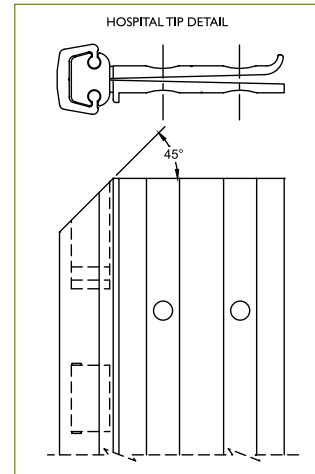
- All Grades = 0.062"

Cycle requirements range from Grade 3-600 requiring 100,000 cycles through Grade 1-150 requiring 2.5 million cycles.

For more information on certification testing or other product certification programs, please contact PEMKO Customer Service.

## Hospital Tip

A special modification is available for certain hinges which provides an extra bearing at the top of the gear cap, leaving no opening. A 45° angled cut on the gear cap and leaf covers provides a safe environment for hospitals and correctional facilities.



## Cycle Requirements - Per BHMA Standard ANSI/BHMA A156.26-2006

- Standard Duty Hinges (excluding \_RS175 & \_RS138) conform to Grade 3-150 and Grade 3-300
- HD3 Hinges conform to Grade 3-150, Grade 3-300, and Grade 3-600
- HD1 Hinges conform to Grade 2-150, Grade 1-300, and Grade 1-600
- 1100 Series and X-Series Hinges conform to Grade 1-150

## Weight Bearing - Per BHMA Standard ANSI/BHMA A156.26-2006

- This information pertains to all commercial models
- Heavier weight can be carried; please contact Customer Service for applications other than those listed in the chart
- Special hinge reinforcements are not required as hollow metal door and frame manufacturers' standard are acceptable. Removal of hinge reinforcements in the door and frame is not advised. Hinge preps must have fillers installed

	Hinge Size	Number of Bearings	Door Weight
<b>Residential Hinges</b>	79" and 83"	7	90 lbs.
<b>Standard Duty Hinges</b>	83" and 85"	14	280 lbs.
	95"	16	320 lbs.
	120"	20	400 lbs.
<b>Heavy Duty (HD1 &amp; HD3) Hinges</b>	83" and 85"	27	540 lbs.
	95"	31	620 lbs.
	120"	39	780 lbs.

## UL Fire Labeled 3-Hour



LISTED  
Door Hinges  
76Y2

- All models designated with these symbols are tested and certified by Underwriters Laboratories Inc.® (U.S.A. and Canada) to standards UL10B, UL10C and UBC7.2 (positive pressure) for up to and including a 3-Hour Fire Listing for all 4'0" x 10'0" and 8'0" x 10'0" door and frame assemblies. Fire listing certifications apply to all approved hollow metal and wood door assemblies in drywall or masonry wall construction
- Special FirePins™ are only required on 3-Hour assemblies. Please refer to page PH-15 for illustrations and information regarding the application of PEMKO FirePins™

- All hinges are supplied with standard fastener kits. Replacement kits/individual fasteners may be purchased separately
- TEK/TORX fasteners may be purchased separately. Full-mortise hinges require 40 each; half-surface hinges require 20 each; full-surface hinges require 12 each
- All half-surface and full-surface hinges are supplied with a snap cover for the door leaf. Replacement snap covers may be purchased separately
- Rain caps may be purchased separately

## Full-Mortise Hinges

- Full-Mortise units are designed mainly for new door applications and are applied to the frame rabbet and door face to conceal both leaves

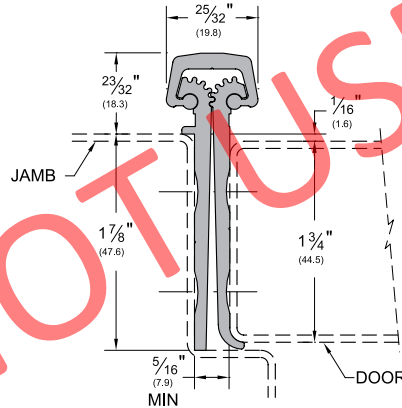
### Full Mortise

**\_FM**

AVAILABLE FINISHES: BL, C, D, G, PW, SN



LISTED  
Door Hinges  
76Y2



### Full Mortise Short Leaf Inset

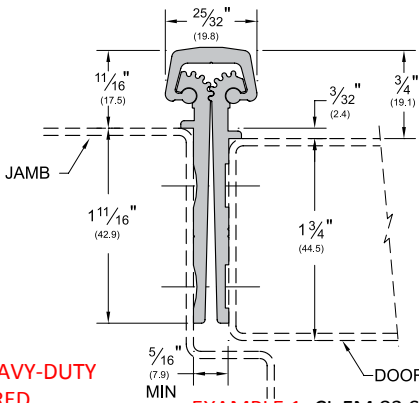
- Designed for use with doors which range between 1 3/4" to 2 1/4"
- Designed for use with hollow metal frames where the inset conforms to S.D.I. specifications for aligning doors and frames

**FM\_SLI**

AVAILABLE FINISHES: BL, C, D, G, PW, SN



LISTED  
Door Hinges  
76Y2



### STILE AND RAIL DOORS

200 Standard  
351 Standard  
452 Standard  
200 ThermalClad  
351 ThermalClad  
452 ThermalClad  
400HD (HD HINGE)  
500HD (HD HINGE)

EXAMPLE 1: CL FM 83 SLI = A CLEAR, STANDARD DUTY HINGE AT 83"  
EXAMPLE 2: CL FM 83 SLI HD = A CLEAR, HEAVY DUTY HINGE AT 83"

### Full Mortise Short Leaf Flush

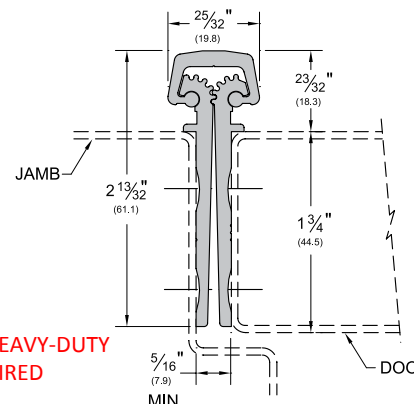
- Designed for use with doors which range between 1 3/4" to 2 1/4"
- Also used for bifold applications to keep the faces of the doors flush (not illustrated)

**FM\_SLF**

AVAILABLE FINISHES: BL, C, D, G, PW, SN



LISTED  
Door Hinges  
76Y2



4000 PLANK  
8000 FRP  
9000 FLUSH

EXAMPLE 1: CL FM 83 SLF = A CLEAR, STANDARD DUTY HINGE AT 83"  
EXAMPLE 2: CL FM 83 SLF HD = A CLEAR, HEAVY DUTY HINGE AT 83"

AVAILABLE FINISHES FOR PRODUCTS SHOWN ON THIS PAGE (see General Information section for finish chart)  
C (Clear Anodized) D (Dark Bronze Anodized) SN (Satin Nickel Anodized)  
BL (Black Anodized) and PW (Painted White) are special finishes available upon request.