

# Rail Mounting Hardware

## Rail brackets

Part Number	Description	Adjustable Range Distance from Wall
9743A-1	Small (1/4 in.) rail bracket assembly, with rail clips	2-1/4 to 3-1/4 in.
9743A-2	Small (1/4 in.) rail bracket assembly, with rail clips	3 to 4-3/4 in.
9750A-1	Small (1/4 in.) rail bracket assembly, without rail clips	2-1/4 to 3-1/4 in.
9750A-2	Small (1/4 in.) rail bracket assembly, without rail clips	3 to 4-3/4 in.
9745A-1	Large (5/16 in.) rail bracket assembly, with rail clips	4 to 6-3/4 in.
9745A-2	Large (5/16 in.) rail bracket assembly, with rail clips	5-3/4 to 8-1/8 in.
9745A-3	Large (5/16 in.) rail bracket assembly, with rail clips	7-1/2 to 10-1/4 in.
9749A-1	Large (5/16 in.) rail bracket assembly, without rail clips	4 to 6-3/4 in.
9749A-2	Large (5/16 in.) rail bracket assembly, without rail clips	5-3/4 to 8-1/8 in.
9749A-3	Large (5/16 in.) rail bracket assembly, without rail clips	7-1/2 to 10-1/4 in.



Rail brackets with rail clips also include locking plates for seismic areas.

Rail brackets without rail clips do not include rail clip fasteners.

Neither bracket includes wall fasteners.

12 and 15 lb. brackets use 5/8 in. fasteners.

Assemblies with rail clips for 8 lb. rail are a special order and include a correctly-sized locking plate and 1/2 in. fasteners.

## Rail clips

Part Number	Description
55-012	Forged rail clip, for 8 lb. rail
55-013	Forged rail clip, for 12 lb. rail
55-014	Forged rail clip, for 15 lb. rail



## Rail bracket shims

Part Number	Size	Thickness	Cutout(s)
55-020	8 x 2 in.	.030 in.	11/16 in.
55-021	8 x 2 in.	.060 in.	11/16 in.
55-022	8 x 2 in.	.105 in.	11/16 in.
55-023	9-3/8 x 2 in.	.030 in.	13/16 in.
55-024	9-3/8 x 2 in.	.060 in.	13/16 in.
55-025	9-3/8 x 2 in.	.105 in.	13/16 in.
55-026	3 x 2 in.	.015 in.	13/16 in.



Components and Systems

# Rail Mounting Hardware

CONCRETE/MASONRY INSERTS ARE DESIGNED TO ASTM A17.1

## Concrete / masonry Inserts

Part Number	Description	Seismic Zone	Allowable 2-bolt Connections	Allowable Point Loads	Allowable Shear and Slip Loads*
INSERT-12	Insert, 12 in. long	0 and 1	2,000 lbs (1) load pair max.	1,370 lbs (1) point load max.	1,040* lbs per bolt (1) connection max.
INSERT-18	Insert, 18 in. long	0 and 1	2,000 lbs (1) load pair max.	1,370 lbs (2) point load max.	1,040* lbs per bolt (2) connection max.
INSERT-24	Insert, 24 in. long	0 and 1	2,000 lbs (2) load pair max.	1,370 lbs (3) point load max.	1,040* lbs per bolt (2) connection max.
INSERT-30	Insert, 30 in. long	0 and 1	2,000 lbs (2) load pair max.	1,370 lbs (3) point load max.	1,040* lbs per bolt (3) connection max.
INSERT-36	Insert, 36 in. long	0 and 1	2,000 lbs (3) load pair max.	1,370 lbs (3) point load max.	1,040* lbs per bolt (3) connection max.
INSERT-48	Insert, 48 in. long	0 and 1	2,000 lbs (4) load pair max.	1,370 lbs (4) point load max.	1,040* lbs per bolt (4) connection max.

INSERT-30



Max. load pair for standard inserts is limited to 2,000 lb. regardless of the number of load pairs used per insert.

\*Shear and slip loads can be increased to 1,500 lbs/bolt if a 16 in. tall by (insert length + 10 in.) block opening is used,

## Heavy duty concrete / masonry Inserts

Part Number	Description	Seismic Zone	Allowable 2-bolt Connections	Allowable Point Loads	Allowable Shear and Slip Loads*
INSERT-HD-12	Insert, 12 in. long	2 to 4	2,760 lbs (1) load pair max.	1,900 lbs (1) point load max.	1,040* lbs per bolt (1) connection max.
INSERT-HD-18	Insert, 18 in. long	2 to 4	2,760 lbs (1) load pair max.	1,900 lbs (2) point load max.	1,040* lbs per bolt (2) connection max.
INSERT-HD-24	Insert, 24 in. long	2 to 4	2,760 lbs (2) load pair max.	1,900 lbs (3) point load max.	1,040* lbs per bolt (2) connection max.
INSERT-HD-30	Insert, 30 in. long	2 to 4	2,760 lbs (2) load pair max.	1,900 lbs (3) point load max.	1,040* lbs per bolt (3) connection max.
INSERT-HD-36	Insert, 36 in. long	2 to 4	2,760 lbs (3) load pair max.	1,900 lbs (3) point load max.	1,040* lbs per bolt (3) connection max.
INSERT-HD-48	Insert, 48 in. long	2 to 4	2,760 lbs (4) load pair max.	1,900 lbs (4) point load max.	1,040* lbs per bolt (4) connection max.

INSERT-HD-30



Max. load pair for HD inserts is limited to 2,760 lb. regardless of the number of load pairs used per insert.

\*Shear and slip loads can be increased to 1,500 lbs/bolt if a 16 in. tall by (insert length + 10 in.) block opening is used,

### Notes for INSERTs and INSERT-HDs:

Allowable loads at S.F. = 3.0

Minimum required grout strength = 3,000 psi with a min. air dry density = 110 pcf.

Min. required bolt spacing for load pairs = 6 in.

Min. spacing between multiple load pairs = 12 in. as used on 24 in. through 48 in. inserts.

Min. required spacing between point loads = 12 in.

All connections require use of 1/2 in. through 3/4 in. strut nuts placed a min. of 2 in. from the end of the insert.

Recommended bolt torques: 1/2 in. = 50 ft/lbs, 5/8 and 3/4 in. = 100 ft/lbs (3/8 in. thick anchor recommended).

Required min. end distance from end of insert to edge of grout = 3 in. (required block opening = insert length + 6 in.).

Required min. edge distance from centerline of insert to top and bottom edge of grout = 4 in.

(8 in. tall min. block opening required).

5 in. min. end distance, 8 in. min. edge distance.

## Insert spring nuts

Part Number	Description
INSERT-NUT-12	Spring nut, 1/2 in.
INSERT-NUT-58	Spring nut, 5/8 in.
INSERT-NUT-34	Spring nut, 3/4 in.



Components  
and Systems