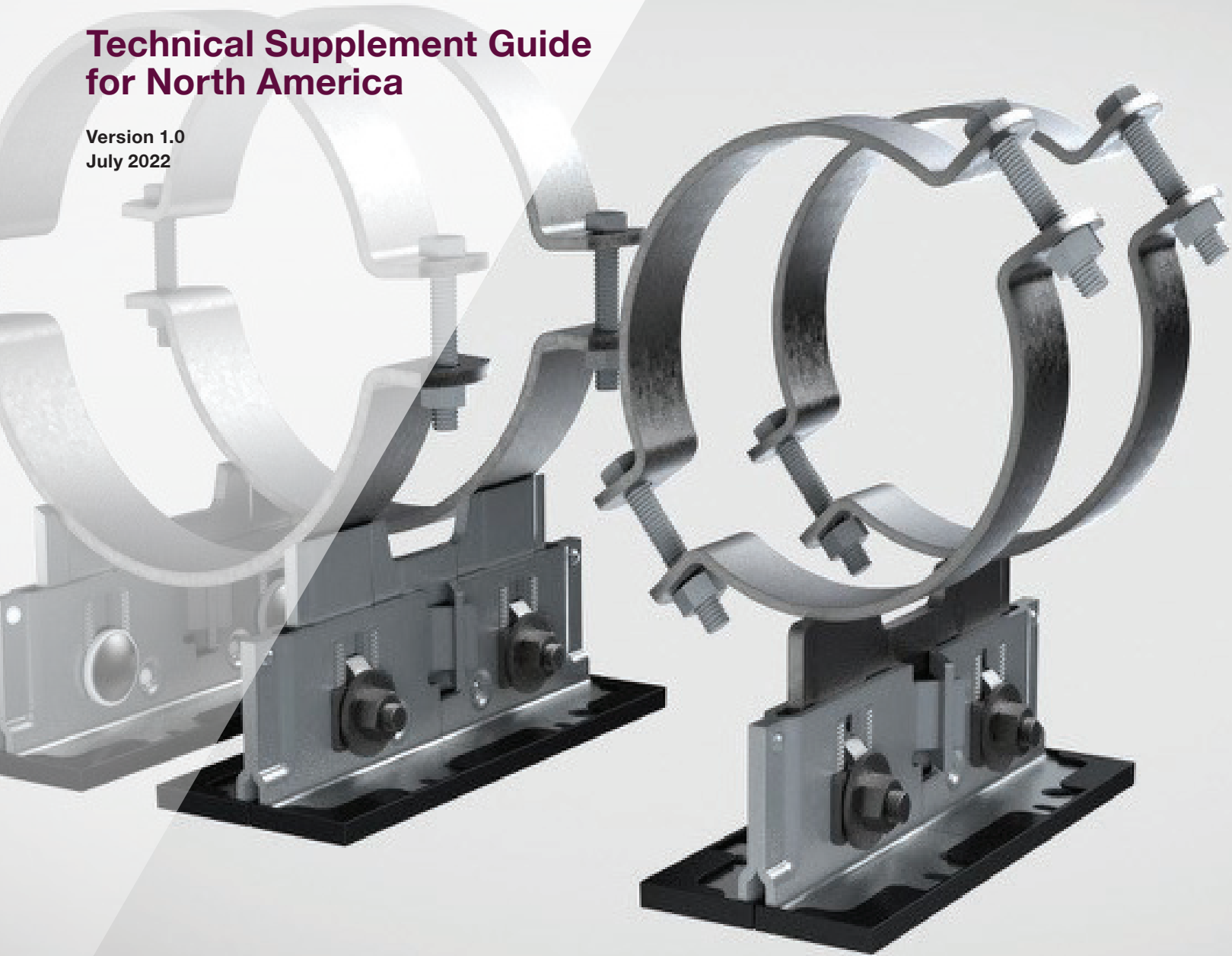




MP-PS PIPE SHOES

**Technical Supplement Guide
for North America**

Version 1.0
July 2022



PUBLISHED LOAD VALUES GENERAL INFORMATION

The MP-PS Pipe Shoe Product Technical Guide is intended to supplement Hilti Online with technical information for the designer or specifier. Technical data presented herein is current as of the date of publication.

The tables and diagrams in this guide are intended purely as an aid to the user and no guarantee can be given regarding their correctness or accuracy when used for design calculations for a specific application. Should you, despite the care we have taken, discover an error in the information given in here, please notify us accordingly. In any event, the static system or, respectively, the specific application must always be checked for plausibility by the user.

For information regarding updates and changes, please contact Hilti, Inc. (US) Technical Support at 1-877-749-6337 or Hilti (Canada) Corporation at 1-800-363-4458.

UNITS

Technical data is provided in Imperial units and Metric units. Metric values, when provided, use the International System of units (SI) in observance with the Metric Conversion Act of 1975 as amended by the Omnibus Trade and Competitiveness Act of 1988. MP-PS pipe shoe and connector dimensions are converted from SI units, shown in parentheses, to Imperial units.

QUALITY

Hilti is one of a select group of North American companies to receive the ISO 9001:2015 and ISO 14001:2015 Certifications. This recognition of our commitment to quality assures our customers that Hilti has the systems and procedures in place to maintain our position as the world market leader and to continually evaluate and improve our performance.

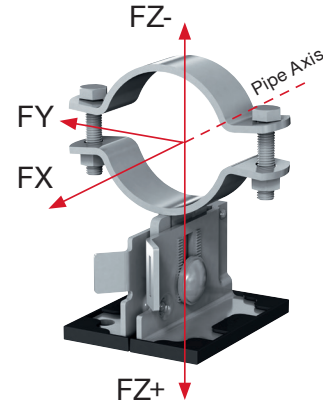


GENERAL INFORMATION FOR LOAD TABLES

A probabilistic approach is followed when testing is used to derive Allowable Loading (ASD), Design Strength (LRFD), and Limit State (LSD) values utilizing safety factors and resistance values as applicable. Published technical data loading tables are based on static loading conditions only. All non-static forces must be considered separately. Service loads were not considered.

The tabulated values for the pipe shoes and connectors as listed in this product technical guide are a combination of physical tests and analytical calculations. They do not include local effects, bending, web crippling, shear or buckling of a supporting member. These limit states must be checked independently. See table below for applicable failure modes (limit states) that govern per loading direction for each item.

The point of load application for determination of applicable values is at the centerline of the pipe axis (X-Axis) as can be seen in the following diagram:



Item	+/- FX	+/- FY	+ FZ	- FZ
MP-PS 1-1	Deformation of pipe ring	Deformation of baseplate	Ultimate strength of baseplate	Ultimate strength of baseplate OR Ultimate strength of MT-TFB
MP-PS 2-2 MP-PS 4-2	Deformation of baseplate	Deformation of baseplate OR Ultimate strength of MT-TFB		
MT-FPS-FF	Deformation of bracket	Deformation of baseplate	-	Deformation of baseplate
MT-FPS-FZL	Deformation of bracket	Deformation of baseplate	-	Deformation of bracket
MT-IFG/ISG	Slip of jaws	Slip of jaws	-	Deformation of baseplate
MT-FPS-SF	-	Deformation of bracket	-	Deformation of bracket
MT-FPS-GF	-	Deformation of bracket	-	-
MT-FPS-SZX	-	Deformation of bracket	-	Deformation of bracket
MT-FPS-GLX	-	Deformation of bracket	-	-

1 Special care must be used when installing the pipe shoes with Hilti pipe shoe connectors (MT-FPS-xx) as shown on the Installation for Use (IFU) of these items. This includes no overlapping of connectors unless noted otherwise.

MATERIAL PROPERTIES^{1,2}

Component	Material (Reference)	F _y Yield strength ksi(N/mm ²)	F _u Tensile strength, ksi (N/mm ²)	E Modulus of elasticity ksi (N/mm ²)	G Shear modulus ksi (N/mm ²)
Pipe ring Midplate IMT-FPS-FZL	S235JR (DIN EN 10025-2)	34.1 (235)	52.2 (360)	30457.9 (210000)	11715.5 (80769)
Baseplate Baseplate (MP-PS lxG) Serrated washer MT-FPS-FF MT-FPS-SF MT-FPS-GF MT-FPS-SZX MT-FPS-GLX	S280GD (EN 10346)	40.6 (280)	52.2 (360)		
Bolts Nuts	F Class 8.8 (ISO 898-1) Grade 8 (ISO 898-2)	92.8 (640)	116. (800)		
Beam Clamp (MP-PS lxG)	Cast Iron (DIN EN 1562)	34.1 (235)	52.2 (360)		
Rectangular washer (MP-PSlxG)	S235JR	40.61 (280)	52.21 (360)		
Cylindrical washers (MP-PSIFG) Stainless Steel X5CrNi8-10 (EN 10088-3)		27.56 (190)	72.52 (500)		
Retaining washers (MP-PS xG) C60E (EN10132-3)		65.27 (450)	108.88 (750)		
Sliding plates PA66-GF30	Static friction coefficient values per STM D1894-14: Hot Dip Galvanized mating surface: 0.13 Zinc-Magnesium mating surface: 0.15 Zinc Plated mating surface: 0.18				

1 Capacities provided throughout this product technical guide are based on each product at an assumed room temperature of 68 °F (20 °C)

2 Unless otherwise noted in the Information for Use (IFU) do NOT weld the products listed within this product technical guide

ABBREVIATIONS

The following abbreviations are used throughout this product technical guide:

- NPS = Nominal Pipe Size
- D = Outer Pipe Diameter
- ASD = Allowable Strength Design
- LRFD = Load Resistance Factored Design
- LSD = Limit State Design
- H_{Base} = Distance from bottom of support to bottom of pipe clamp
- H_{Center} = Distance from bottom of support to centerline of pipe axis
- H_{Max} = Distance from bottom of support to top of upper pipe clamp

REFERENCES

MSS SP-58-2018 Pipe Hangers and Supports Material, Design, Manufacture, Selection, Application, and Installation Standard Practice

PIPE SHOE MP-PS L1-1 / MP-PS M1-1 / MP-PS H1-1

Adjustable single pipe shoes with outdoor coating for fastening 1/2" to 6" (21-173 mm) diameter pipes to various base materials in moderately corrosive environments.



APPLICATIONS

- Fastening pipes to steel beams, concrete or Hilti modular support girders
- Pipe installations in onshore industrial, power generation, pharmaceutical, electronics or automotive manufacturing facilities
- Suitable for application temperatures of up to 572 °F (300 °C) and an insulation thickness of up to 8.66 in (220 mm)
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- One-for-all versatility — use the same pipe shoe system for fix-, slide-, guided- or freestanding supports to Hilti modular girders, steel beams and concrete
- Extensive software support — simplify calculation by using PROFIS, Hilti FixPoint Calculator, BIM/CAD libraries and various plug-ins
- Load data available for pipe shoe components (see applicable pages in this document).
- Quicker installation on-site — easily adjust the height and slope after fastening the pipe shoe in place
- Wider clamping range — suitable for various different pipes with or without additional inlays

Product Information

Material thickness	Base-plate: 0.157 in (4 mm) Middle-plate: 0.276 in (7 mm) Sliding-plate: 0.118 in (3 mm) Serrated washer: 0.157 in (4 mm)
Surface finish	<ul style="list-style-type: none"> • Lower bow, Middle-plate: Hot dip galvanized 70µm - DIN EN ISO 1461, • Upper bow: Hot dip galvanized 55µm - DIN EN ISO 1461, • Base-plate: ZM300
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)
Base material type	Concrete, Steel, Modular Support
Wrench size	19 mm
Temperature resistance (based on EN13480-3)	-4 °F to 572 °F (-20 °C to 300 °C)
Fire resistance (Yes/No)	No

PROFIS software

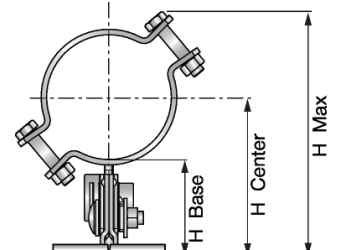
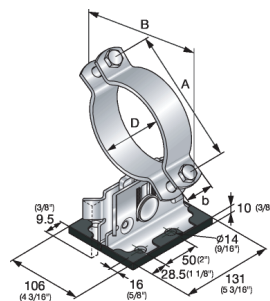
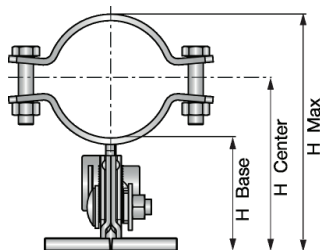
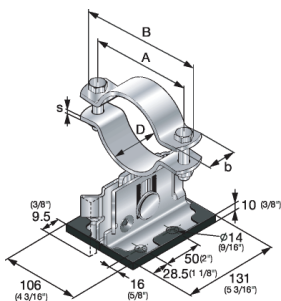
Hilti FixPoint Calculator

BIM/CAD-libraries

Smart 3D
Modular Supports Plug-In for Smart 3D

AVEVA
Modular Supports Plug-In for PDMS & E3D

PWIS / LABS Conform
VDMA 24364



PIPE SHOE MP-PS L1-1 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales Qty	Item number
MP-PS L1-1 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	4.00 - 5.08 in (101.5 - 129 mm)	4.76 - 5.85 in (121 - 148.5 mm)	1/2 in (15 mm)	3.31 lb (1.5 kg)	1 pcs	2330922
MP-PS L1-1 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	4.09 - 5.18 in (104 - 131.5 mm)	4.96 - 6.04 in (126 - 153.5 mm)	3/4 in (20 mm)	3.35 lb (1.52 kg)	1 pcs	2330923
MP-PS L1-1 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	4.21 - 5.30 in (107 - 134.5 mm)	5.20 - 6.28 in (132 - 159.5 mm)	1 in (25 mm)	3.40 lb (1.54 kg)	1 pcs	2330924
MP-PS L1-1 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	4.35 - 5.43 in (110.5 - 138 mm)	5.47 - 6.56 in (139 - 166.5 mm)	1-1/4 in (32 mm)	3.44 lb (1.56 kg)	1 pcs	2330925
MP-PS L1-1 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	4.49 - 5.57 in (114 - 141.5 mm)	5.75 - 6.83 in (146 - 173.5 mm)	1-1/2 in (40 mm)	3.51 lb (1.59 kg)	1 pcs	2330926
MP-PS L1-1 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	4.63 - 5.71 in (117.5 - 145 mm)	6.02 - 7.11 in (153 - 180.5 mm)	-	3.92 lb (1.78 kg)	1 pcs	2330927
MP-PS L1-1 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	4.76 - 5.85 in (121 - 148.5 mm)	6.30 - 7.38 in (160 - 187.5 mm)	2 in (50 mm)	3.99 lb (1.81 kg)	1 pcs	2330928
MP-PS L1-1 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	4.94 - 6.02 in (125.5 - 153 mm)	6.65 - 7.74 in (169 - 196.5 mm)	-	4.10 lb (1.86 kg)	1 pcs	2330929
MP-PS L1-1 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	5.08 - 6.16 in (129 - 156.5 mm)	6.93 - 8.01 in (176 - 203.5 mm)	2-1/2 in (65 mm)	4.17 lb (1.89 kg)	1 pcs	2330930
MP-PS L1-1 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	5.33 - 6.38 in (135.5 - 163 mm)	7.44 - 8.52 in (189 - 216.5 mm)	3 in (80 mm)	4.30 lb (1.95 kg)	1 pcs	2330931
MP-PS L1-1 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	5.61 - 6.69 in (142.5 - 170 mm)	8.70 - 9.79 in (221.1 - 248.6 mm)	3-1/2 in (-)	4.43 lb (2.01 kg)	1 pcs	2330932
MP-PS L1-1 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	5.81 - 6.89 in (147.5 - 175 mm)	9.04 - 10.13 in (229.7 - 257.2 mm)	4 in (100 mm)	4.50 lb (2.04 kg)	1 pcs	2330933
MP-PS L1-1 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	6.10 - 7.19 in (155 - 182.5 mm)	9.54 - 10.62 in (242.2 - 269.7 mm)	-	4.70 lb (2.13 kg)	1 pcs	2330934
MP-PS L1-1 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	6.32 - 7.40 in (160.5 - 188 mm)	9.90 - 10.98 in (251.5 - 279 mm)	5 in (125 mm)	4.81 lb (2.18 kg)	1 pcs	2330935
MP-PS L1-1 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	6.67 - 7.76 in (169.5 - 197 mm)	10.56 - 11.64 in (268.2 - 295.7 mm)	-	5.00 lb (2.27 kg)	1 pcs	2330936
MP-PS L1-1 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	6.89 - 7.97 in (175 - 202.5 mm)	10.93 - 12.01 in (277.5 - 305 mm)	6 in (150 mm)	5.14 lb (2.33 kg)	1 pcs	2330937

Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)

H Base	Max. Height adjustability	Max. Inclination
3.48 - 4.57 in (88.5 - 116 mm)	1.08 in (27.5 mm)	12°

PIPE SHOE MP-PS M1-1 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty	Item number
MP-PS M1-1 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	5.08 - 7.24 in (129 - 184 mm)	7.13 - 9.29 in (181 - 236 mm)	1/2 in (15 mm)	3.92 lb (1.78 kg)	1 pcs	2330938
MP-PS M1-1 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	5.18 - 7.34 in (131.5 - 186.5 mm)	7.32 - 9.49 in (186 - 241 mm)	3/4 in (20 mm)	3.97 lb (1.80 kg)	1 pcs	2330939
MP-PS M1-1 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	5.30 - 7.46 in (134.5 - 189.5 mm)	7.56 - 9.72 in (192 - 247 mm)	1 in (25 mm)	4.01 lb (1.82 kg)	1 pcs	2330940
MP-PS M1-1 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	5.43 - 7.60 in (138 - 193 mm)	7.83 - 10.00 in (199 - 254 mm)	1-1/4 in (32 mm)	4.06 lb (1.84 kg)	1 pcs	2330941
MP-PS M1-1 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	5.57 - 7.74 in (141.5 - 196.5 mm)	8.11 - 10.28 in (206 - 261 mm)	1-1/2 in (40 mm)	4.12 lb (1.87 kg)	1 pcs	2330942
MP-PS M1-1 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	5.71 - 7.87 in (145 - 200 mm)	8.39 - 10.55 in (213 - 268 mm)	-	4.54 lb (2.06 kg)	1 pcs	2330943
MP-PS M1-1 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	5.85 - 8.01 in (148.5 - 203.5 mm)	8.66 - 10.83 in (220 - 275 mm)	2 in (50 mm)	4.61 lb (2.09 kg)	1 pcs	2330944
MP-PS M1-1 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	6.02 - 8.19 in (153 - 208 mm)	9.02 - 11.18 in (229 - 284 mm)	-	4.72 lb (2.14 kg)	1 pcs	2330945
MP-PS M1-1 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	6.16 - 8.33 in (156.5 - 211.5 mm)	9.29 - 11.46 in (236 - 291 mm)	2-1/2 in (65 mm)	4.78 lb (2.17 kg)	1 pcs	2330946
MP-PS M1-1 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	3.42 - 8.58 in (163 - 218 mm)	11.42 - 11.97 in (249 - 304 mm)	3 in (80 mm)	4.92 lb (2.23 kg)	1 pcs	2330947
MP-PS M1-1 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	6.69 - 8.86 in (170 - 225 mm)	11.06 - 13.23 in (281 - 336 mm)	3-1/2 in (-)	5.05 lb (2.29 kg)	1 pcs	2330948
MP-PS M1-1 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	6.89 - 9.06 in (175 - 230 mm)	9.25 - 13.58 in (235 - 345 mm)	4 in (100 mm)	5.11 lb (2.32 kg)	1 pcs	2330949
MP-PS M1-1 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	7.19 - 9.35 in (182.5 - 237.5 mm)	11.89 - 14.06 in (302 - 357 mm)	-	5.31 lb (2.41 kg)	1 pcs	2330950
MP-PS M1-1 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	7.40 - 9.57 in (188 - 243 mm)	12.28 - 14.43 in (312 - 366.5 mm)	5 in (125 mm)	5.42 lb (2.46 kg)	1 pcs	2330951
MP-PS M1-1 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	7.76 - 9.92 in (197 - 252 mm)	12.91 - 15.08 in (328 - 383 mm)	-	5.62 lb (2.55 kg)	1 pcs	2330952
MP-PS M1-1 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	7.97 - 10.14 in (202.5 - 257.5 mm)	13.27 - 15.45 in (337 - 392.5 mm)	6 in (150 mm)	5.75 lb (2.61 kg)	1 pcs	2330953

Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)

H Base	Max. Height adjustability	Max. Inclination
4.57 - 6.73 in (116 - 171 mm)	2.17 in (55 mm)	12°

PIPE SHOE MP-PS H1-1 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty	Item number
MP-PS H1-1 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	7.24 - 9.31 in (184 - 236.5 mm)	9.09 - 11.16 in (231 - 283.5 mm)	1/2 in (15 mm)	4.83 lb (2.19 kg)	1 pcs	2330954
MP-PS H1-1 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	7.34 - 9.41 in (186.5 - 239 mm)	9.29 - 11.36 in (236 - 288.5 mm)	3/4 in (20 mm)	4.85 lb (2.20 kg)	1 pcs	2330955
MP-PS H1-1 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	7.46 - 9.53 in (189.5 - 242 mm)	9.53 - 11.59 in (242 - 294.5 mm)	1 in (25 mm)	4.92 lb (2.23 kg)	1 pcs	2330956
MP-PS H1-1 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	7.60 - 9.67 in (193 - 245.5 mm)	9.80 - 11.87 in (249 - 301.5 mm)	1-1/4 in (32 mm)	4.96 lb (2.25 kg)	1 pcs	2330957
MP-PS H1-1 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	7.74 - 9.80 in (196.5 - 249 mm)	10.08 - 12.15 in (256 - 308.5 mm)	1-1/2 in (40 mm)	5.00 lb (2.27 kg)	1 pcs	2330958
MP-PS H1-1 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	7.87 - 9.94 in (200 - 252.5 mm)	10.35 - 12.42 in (263 - 315.5 mm)	-	5.42 lb (2.46 kg)	1 pcs	2330959
MP-PS H1-1 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	8.01 - 10.08 in (203.5 - 256 mm)	10.63 - 12.70 in (270 - 322.5 mm)	2 in (50 mm)	5.51 lb (2.50 kg)	1 pcs	2330960
MP-PS H1-1 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	8.19 - 10.26 in (208 - 260.5 mm)	10.98 - 13.05 in (279 - 331.5 mm)	-	5.60 lb (2.54 kg)	1 pcs	2330961
MP-PS H1-1 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	8.33 - 10.39 in (211.5 - 264 mm)	11.26 - 13.33 in (286 - 338.5 mm)	2-1/2 in (65 mm)	5.69 lb (2.58 kg)	1 pcs	2330962
MP-PS H1-1 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	8.58 - 10.65 in (218 - 270.5 mm)	11.77 - 13.84 in (299 - 351.5 mm)	3 in (80 mm)	5.82 lb (2.64 kg)	1 pcs	2330963
MP-PS H1-1 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	8.86 - 10.93 in (225 - 277.5 mm)	13.03 - 15.10 in (331 - 383.5 mm)	3-1/2 in (-)	5.93 lb (2.69 kg)	1 pcs	2330964
MP-PS H1-1 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	9.06 - 11.12 in (230 - 282.5 mm)	13.39 - 15.43 in (340 - 392 mm)	4 in (100 mm)	6.02 lb (2.73 kg)	1 pcs	2330965
MP-PS H1-1 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	9.35 - 11.42 in (237.5 - 290 mm)	13.86 - 15.94 in (352 - 405 mm)	-	6.19 lb (2.81 kg)	1 pcs	2330966
MP-PS H1-1 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	9.57 - 11.63 in (243 - 295.5 mm)	14.25 - 16.30 in (362 - 414 mm)	5 in (125 mm)	6.33 lb (2.87 kg)	1 pcs	2330967
MP-PS H1-1 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	9.92 - 11.99 in (252 - 304.5 mm)	14.88 - 16.97 in (378 - 431 mm)	-	6.53 lb (2.96 kg)	1 pcs	2330968
MP-PS H1-1 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	10.14 - 12.20 in (257.5 - 310 mm)	15.24 - 17.32 in (387 - 440 mm)	6 in (150 mm)	6.64 lb (3.01 kg)	1 pcs	2330969

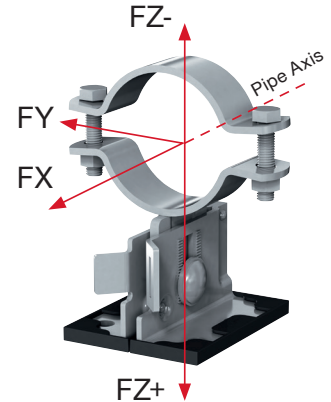
Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)

H Base	Max. Height adjustability	Max. Inclination
6.73 - 8.80 in (171 - 223.5 mm)	2.07 in (52.5 mm)	12°

PIPE SHOE MP-PS L1-1 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS L1-1 21-26 1/2" OC	170	600	1540	1190	2330922
MP-PS L1-1 26-31 3/4" OC	180	590	1540	1190	2330923
MP-PS L1-1 32-37 1" OC	200	570	1540	1190	2330924
MP-PS L1-1 38-44 1-1/4" OC	210	550	1540	1190	2330925
MP-PS L1-1 45-51 1-1/2" OC	230	530	1540	1190	2330926
MP-PS L1-1 52-58 OC	240	520	1540	1190	2330927
MP-PS L1-1 59-65 2" OC	250	510	1540	1190	2330928
MP-PS L1-1 68-74 OC	270	490	1540	1190	2330929
MP-PS L1-1 75-81 2-1/2" OC	290	470	1540	1190	2330930
MP-PS L1-1 88-94 3" OC	310	450	1540	1190	2330931
MP-PS L1-1 100-108 3-1/2" OC	340	430	1540	1190	2330932
MP-PS L1-1 110-118 4" OC	370	410	1540	1190	2330933
MP-PS L1-1 125-133 OC	390	400	1540	1190	2330934
MP-PS L1-1 136-144 5" OC	420	380	1540	1190	2330935
MP-PS L1-1 152-162 OC	460	360	1540	1190	2330936
MP-PS L1-1 163-173 6" OC	480	350	1540	1190	2330937



- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

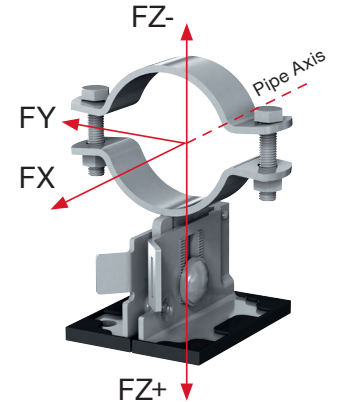
Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS L1-1 21-26 1/2" OC	220	600	2380	1870	2330922
MP-PS L1-1 26-31 3/4" OC	240	590	2380	1870	2330923
MP-PS L1-1 32-37 1" OC	250	570	2380	1870	2330924
MP-PS L1-1 38-44 1-1/4" OC	280	550	2380	1870	2330925
MP-PS L1-1 45-51 1-1/2" OC	290	530	2380	1870	2330926
MP-PS L1-1 52-58 OC	310	520	2380	1870	2330927
MP-PS L1-1 59-65 2" OC	320	510	2380	1870	2330928
MP-PS L1-1 68-74 OC	350	490	2380	1870	2330929
MP-PS L1-1 75-81 2-1/2" OC	360	470	2380	1870	2330930
MP-PS L1-1 88-94 3" OC	390	450	2380	1870	2330931
MP-PS L1-1 100-108 3-1/2" OC	430	430	2380	1870	2330932
MP-PS L1-1 110-118 4" OC	460	410	2380	1870	2330933
MP-PS L1-1 125-133 OC	490	400	2380	1870	2330934
MP-PS L1-1 136-144 5" OC	520	380	2380	1870	2330935
MP-PS L1-1 152-162 OC	570	360	2380	1870	2330936
MP-PS L1-1 163-173 6" OC	600	350	2380	1870	2330937

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

PIPE SHOE MP-PS L1-1 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-F _x [lb]	+/-F _y [lb]	+ F _z ² [lb]	-F _z ² [lb]	Item number
MP-PS L1-1 21-26 1/2" OC	280	910	2930	2280	2330922
MP-PS L1-1 26-31 3/4" OC	290	880	2930	2280	2330923
MP-PS L1-1 32-37 1" OC	310	850	2930	2280	2330924
MP-PS L1-1 38-44 1-1/4" OC	340	820	2930	2280	2330925
MP-PS L1-1 45-51 1-1/2" OC	360	800	2930	2280	2330926
MP-PS L1-1 52-58 OC	370	780	2930	2280	2330927
MP-PS L1-1 59-65 2" OC	390	760	2930	2280	2330928
MP-PS L1-1 68-74 OC	420	730	2930	2280	2330929
MP-PS L1-1 75-81 2-1/2" OC	440	710	2930	2280	2330930
MP-PS L1-1 88-94 3" OC	480	680	2930	2280	2330931
MP-PS L1-1 100-108 3-1/2" OC	510	650	2930	2280	2330932
MP-PS L1-1 110-118 4" OC	550	620	2930	2280	2330933
MP-PS L1-1 125-133 OC	580	600	2930	2280	2330934
MP-PS L1-1 136-144 5" OC	630	570	2930	2280	2330935
MP-PS L1-1 152-162 OC	680	540	2930	2280	2330936
MP-PS L1-1 163-173 6" OC	710	520	2930	2280	2330937



1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used

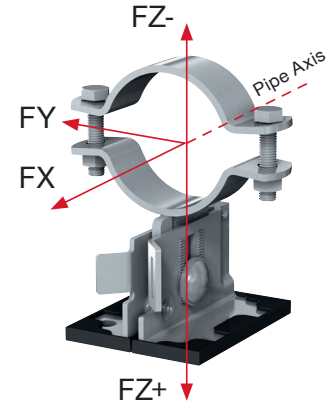
2 An additional safety of 1.35 was applied to the +/-F_z values due to unknown installation environments

3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS M1-1 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS M1-1 21-26 1/2" OC	190	380	1540	1190	2330938
MP-PS M1-1 26-31 3/4" OC	200	370	1540	1190	2330939
MP-PS M1-1 32-37 OC	220	360	1540	1190	2330940
MP-PS M1-1 38-44 1-1/4" OC	240	350	1540	1190	2330941
MP-PS M1-1 45-51 1-1/2" OC	250	350	1540	1190	2330942
MP-PS M1-1 52-58 OC	260	340	1540		2330943
MP-PS M1-1 59-65 2" OC	270	340	1540	1190	2330944
MP-PS M1-1 68-74 OC	290	330	1540	1190	2330945
MP-PS M1-1 75-81 2-1/2" OC	310	320	1540	1190	2330946
MP-PS M1-1 88-94 3" OC	330	310	1540	1190	2330947
MP-PS M1-1 100-108 3-1/2" OC	360	300	1540	1190	2330948
MP-PS M1-1 110-118 4" OC	390	290	1540	1190	2330949
MP-PS M1-1 125-133 OC	410	290	1540	1190	2330950
MP-PS M1-1 136-144 5" OC	440	280	1540	1190	2330951
MP-PS M1-1 152-162 OC	480	260	1540	1190	2330952
MP-PS M1-1 163-173 6" OC	500	260	1540	1190	2330953



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- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

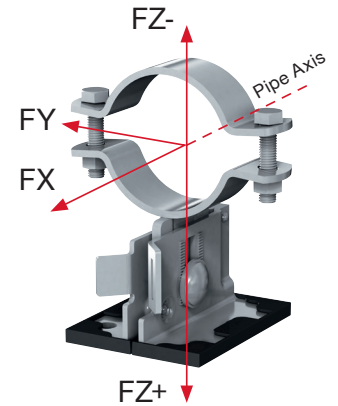
Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS M1-1 21-26 1/2" OC	250	380	2380	1870	2330938
MP-PS M1-1 26-31 3/4" OC	260	370	2380	1870	2330939
MP-PS M1-1 32-37 1" OC	280	360	2380	1870	2330940
MP-PS M1-1 38-44 1-1/4" OC	300	350	2380	1870	2330941
MP-PS M1-1 45-51 1-1/2" OC	320	350	2380	1870	2330942
MP-PS M1-1 52-58 OC	330	340	2380	1870	2330943
MP-PS M1-1 59-65 2" OC	350	340	2380	1870	2330944
MP-PS M1-1 68-74 OC	370	330	2380	1870	2330945
MP-PS M1-1 75-81 2-1/2" OC	390	320	2380	1870	2330946
MP-PS M1-1 88-94 3" OC	420	310	2380	1870	2330947
MP-PS M1-1 100-108 3-1/2" OC	450	300	2380	1870	2330948
MP-PS M1-1 110-118 4" OC	490	290	2380	1870	2330949
MP-PS M1-1 125-133 OC	510	290	2380	1870	2330950
MP-PS M1-1 136-144 5" OC	550	280	2380	1870	2330951
MP-PS M1-1 152-162 OC	600	260	2380	1870	2330952
MP-PS M1-1 163-173 6" OC	620	260	2380	1870	2330953

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

PIPE SHOE MP-PS M1-1 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-F _x [lb]	+/-F _y [lb]	+ F _z ² [lb]	-F _z ² [lb]	Item number
MP-PS M1-1 21-26 1/2" OC	300	570	2930	2280	2330938
MP-PS M1-1 26-31 3/4" OC	320	560	2930	2280	2330939
MP-PS M1-1 32-37 1" OC	340	550	2930	2280	2330940
MP-PS M1-1 38-44 1-1/4" OC	370	530	2930	2280	2330941
MP-PS M1-1 45-51 1-1/2" OC	380	520	2930	2280	2330942
MP-PS M1-1 52-58 OC	400	520	2930	2280	2330943
MP-PS M1-1 59-65 2" OC	420	510	2930	2280	2330944
MP-PS M1-1 68-74 OC	450	490	2930	2280	2330945
MP-PS M1-1 75-81 2-1/2" OC	470	480	2930	2280	2330946
MP-PS M1-1 88-94 3" OC	500	470	2930	2280	2330947
MP-PS M1-1 100-108 3-1/2" OC	540	450	2930	2280	2330948
MP-PS M1-1 110-118 4" OC	580	440	2930	2280	2330949
MP-PS M1-1 125-133 OC	610	430	2930	2280	2330950
MP-PS M1-1 136-144 5" OC	660	410	2930	2280	2330951
MP-PS M1-1 152-162 OC	710	400	2930	2280	2330952
MP-PS M1-1 163-173 6" OC	740	390	2930	2280	2330953



1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used

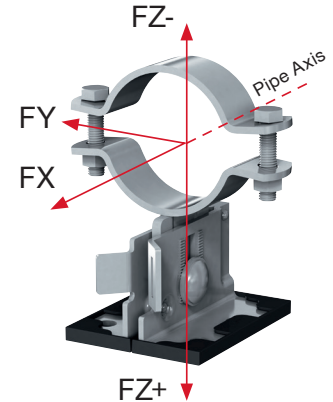
2 An additional safety of 1.35 was applied to the +/-F_z values due to unknown installation environments

3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS H1-1 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS H1-1 21-26 1/2" OC	180	290	1540	1190	2330954
MP-PS H1-1 26-31 3/4" OC	190	280	1540	1190	2330955
MP-PS H1-1 32-37 OC	210	280	1540	1190	2330956
MP-PS H1-1 38-44 1-1/4" OC	220	270	1540	1190	2330957
MP-PS H1-1 45-51 1-1/2" OC	240	270	1540	1190	2330958
MP-PS H1-1 52-58 OC	250	270	1540	1190	2330959
MP-PS H1-1 59-65 2" OC	260	260	1540	1190	2330960
MP-PS H1-1 68-74 OC	280	260	1540	1190	2330961
MP-PS H1-1 75-81 2-1/2" OC	300	260	1540	1540	2330962
MP-PS H1-1 88-94 3" OC	320	250	1540	1540	2330963
MP-PS H1-1 100-108 3-1/2" OC	350	240	1540	1540	2330964
MP-PS H1-1 110-118 4" OC	380	240	1540	1540	2330965
MP-PS H1-1 125-133 OC	400	230	1540	1540	2330966
MP-PS H1-1 136-144 5" OC	430	220	1540	1540	2330967
MP-PS H1-1 152-162 OC	470	220	1540	1540	2330968
MP-PS H1-1 163-173 6" OC	490	210	1540	1540	2330969



- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
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Allowable Loading (ASD) ^{1,3,4}

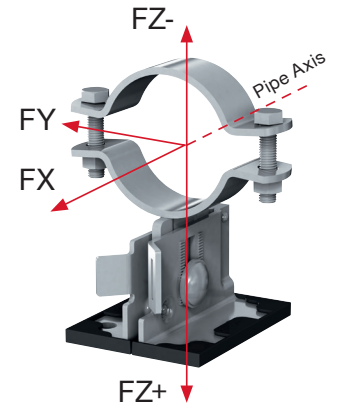
Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS H1-1 21-26 1/2" OC	230	290	2380	1870	2330954
MP-PS H1-1 26-31 3/4" OC	250	280	2380	1870	2330955
MP-PS H1-1 32-37 1" OC	270	280	2380	1870	2330956
MP-PS H1-1 38-44 1-1/4" OC	290	270	2380	1870	2330957
MP-PS H1-1 45-51 1-1/2" OC	300	270	2380	1870	2330958
MP-PS H1-1 52-58 OC	320	270	2380	1870	2330959
MP-PS H1-1 59-65 2" OC	330	260	2380	1870	2330960
MP-PS H1-1 68-74 OC	360	260	2380	1870	2330961
MP-PS H1-1 75-81 2-1/2" OC	370	260	2380	1870	2330962
MP-PS H1-1 88-94 3" OC	410	250	2380	1870	2330963
MP-PS H1-1 100-108 3-1/2" OC	440	240	2380	1870	2330964
MP-PS H1-1 110-118 4" OC	470	240	2380	1870	2330965
MP-PS H1-1 125-133 OC	500	230	2380	1870	2330966
MP-PS H1-1 136-144 5" OC	540	220	2380	1870	2330967
MP-PS H1-1 152-162 OC	590	220	2380	1870	2330968
MP-PS H1-1 163-173 6" OC	610	210	2380	1870	2330969

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

PIPE SHOE MP-PS H1-1 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-F _x [lb]	+/-F _y [lb]	+ F _z ² [lb]	-F _z ² [lb]	Item number
MP-PS H1-1 21-26 1/2" OC	290	430	2930	2280	2330954
MP-PS H1-1 26-31 3/4" OC	310	430	2930	2280	2330955
MP-PS H1-1 32-37 1" OC	330	420	2930	2280	2330956
MP-PS H1-1 38-44 1-1/4" OC	350	410	2930	2280	2330957
MP-PS H1-1 45-51 1-1/2" OC	370	410	2930	2280	2330958
MP-PS H1-1 52-58 OC	390	400	2930	2280	2330959
MP-PS H1-1 59-65 2" OC	410	400	2930	2280	2330960
MP-PS H1-1 68-74 OC	430	390	2930	2280	2330961
MP-PS H1-1 75-81 2-1/2" OC	450	380	2930	2280	2330962
MP-PS H1-1 88-94 3" OC	490	370	2930	2280	2330963
MP-PS H1-1 100-108 3-1/2" OC	530	360	2930	2280	2330964
MP-PS H1-1 110-118 4" OC	570	350	2930	2280	2330965
MP-PS H1-1 125-133 OC	600	350	2930	2280	2330966
MP-PS H1-1 136-144 5" OC	640	340	2930	2280	2330967
MP-PS H1-1 152-162 OC	700	330	2930	2280	2330968
MP-PS H1-1 163-173 6" OC	730	320	2930	2280	2330969



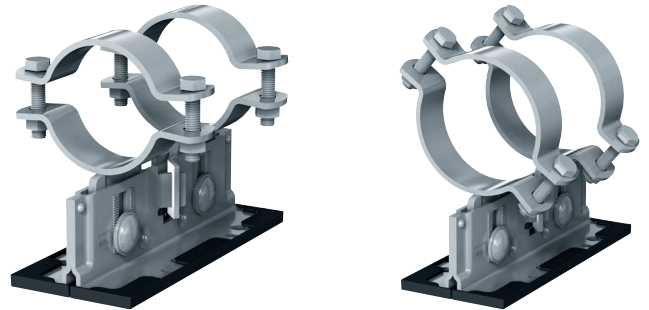
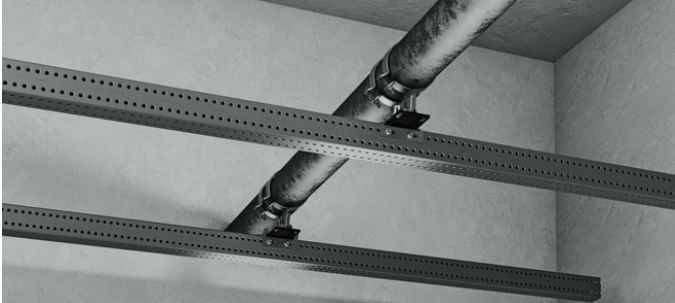
1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used

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3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS L2-2 / MP-PS M2-2 / MP-PS H2-2

Adjustable double pipe shoes with outdoor coating for fastening 1/2" to 12" (21-328 mm) diameter pipes to various base materials in moderately corrosive environments.



APPLICATIONS

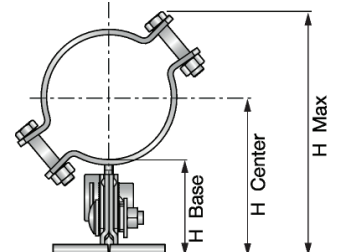
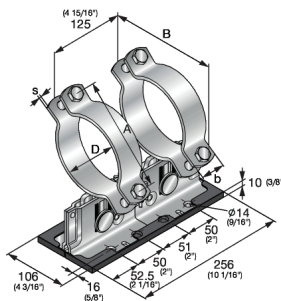
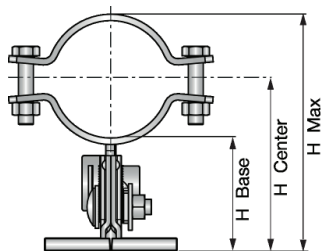
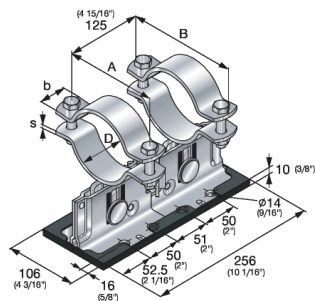
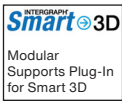
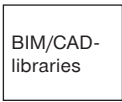
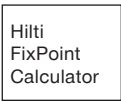
- Fastening pipes to steel beams, concrete or Hilti modular support girders
- Pipe installations in onshore industrial, power generation, pharmaceutical, electronics or automotive manufacturing facilities
- Suitable for application temperatures of up to 572 °F (300 °C) and an insulation thickness of up to 8.66 in (220 mm)
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- One-for-all versatility — use the same pipe shoe system for fix-, slide-, guided- or freestanding supports to Hilti modular girders, steel beams and concrete
- Extensive software support — simplify calculation by using PROFIS, Hilti FixPoint Calculator, BIM/CAD libraries and various plug-ins
- Load data available for pipe shoe components (see applicable pages in this document).
- Quicker installation on-site — easily adjust the height and slope after fastening the pipe shoe in place
- Wider clamping range — suitable for various different pipes with or without additional inlays

Product Information

Material thickness	Base-plate: 0.157 in (4 mm) Middle-plate: 0.276 in (7 mm) Sliding-plate: 0.118 in (3 mm) Serrated washer: 0.157 in (4 mm)
Surface finish	<ul style="list-style-type: none"> • Lower bow, Middle-plate: Hot dip galvanized 70µm - DIN EN ISO 1461, • Upper bow: Hot dip galvanized 55µm - DIN EN ISO 1461, • Base-plate: ZM300
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)
Base material type	Concrete, Steel, Modular Support
Wrench size	19 mm
Temperature resistance (based on EN13480-3)	-4 °F to 572 °F (-20 °C to 300 °C)
Fire resistance (Yes/No)	No



PIPE SHOE MP-PS L2-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty	Item number
MP-PS L2-2 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	4.00 - 5.08 in (101.5 - 129 mm)	4.76 - 5.85 in (121 - 148.5 mm)	1/2 in (15 mm)	6.88 lb (3.12 kg)	1 pcs	2330973
MP-PS L2-2 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	4.09 - 5.18 in (104 - 131.5 mm)	4.96 - 6.04 in (126 - 153.5 mm)	3/4 in (20 mm)	6.94 lb (3.15 kg)	1 pcs	2330974
MP-PS L2-2 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	4.21 - 5.30 in (107 - 134.5 mm)	5.20 - 6.28 in (132 - 159.5 mm)	1 in (25 mm)	7.05 lb (3.2 kg)	1 pcs	2330975
MP-PS L2-2 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	4.35 - 5.43 in (110.5 - 138 mm)	5.47 - 6.56 in (139 - 166.5 mm)	1-1/4 in (32 mm)	7.14 lb (3.24 kg)	1 pcs	2330976
MP-PS L2-2 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	4.49 - 5.57 in (114 - 141.5 mm)	5.75 - 6.83 in (146 - 173.5 mm)	1-1/2 in (40 mm)	7.25 lb (3.29 kg)	1 pcs	2330977
MP-PS L2-2 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	4.63 - 5.71 in (117.5 - 145 mm)	6.02 - 7.11 in (153 - 180.5 mm)	-	8.09 lb (3.67 kg)	1 pcs	2330978
MP-PS L2-2 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	4.76 - 5.85 in (121 - 148.5 mm)	6.30 - 7.38 in (160 - 187.5 mm)	2 in (50 mm)	8.25 lb (3.74 kg)	1 pcs	2330979
MP-PS L2-2 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	4.94 - 6.02 in (125.5 - 153 mm)	6.65 - 7.74 in (169 - 196.5 mm)	-	8.44 lb (3.83 kg)	1 pcs	2330980
MP-PS L2-2 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	5.08 - 6.16 in (129 - 156.5 mm)	6.93 - 8.01 in (176 - 203.5 mm)	2-1/2 in (65 mm)	8.60 lb (3.9 kg)	1 pcs	2330981
MP-PS L2-2 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	5.33 - 6.38 in (135.5 - 163 mm)	7.44 - 8.52 in (189 - 216.5 mm)	3 in (80 mm)	8.86 lb (4.02 kg)	1 pcs	2330982
MP-PS L2-2 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	5.61 - 6.69 in (142.5 - 170 mm)	8.70 - 9.79 in (221.1 - 248.6 mm)	3-1/2 in (-)	9.11 lb (4.13 kg)	1 pcs	2330983
MP-PS L2-2 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	5.81 - 6.89 in (147.5 - 175 mm)	9.04 - 10.13 in (229.7 - 257.2 mm)	4 in (100 mm)	9.30 lb (4.22 kg)	1 pcs	2330984
MP-PS L2-2 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	6.10 - 7.19 in (155 - 182.5 mm)	9.54 - 10.62 in (242.2 - 269.7 mm)	-	9.63 lb (4.37 kg)	1 pcs	2330985
MP-PS L2-2 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	6.32 - 7.40 in (160.5 - 188 mm)	9.90 - 10.98 in (251.5 - 279 mm)	5 in (125 mm)	9.88 lb (4.48 kg)	1 pcs	2330986
MP-PS L2-2 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	6.67 - 7.76 in (169.5 - 197 mm)	10.56 - 11.64 in (268.2 - 295.7 mm)	-	10.27 lb (4.66 kg)	1 pcs	2330987
MP-PS L2-2 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	6.89 - 7.97 in (175 - 202.5 mm)	10.93 - 12.01 in (277.5 - 305 mm)	6 in (150 mm)	10.52 lb (4.77 kg)	1 pcs	2330988
MP-PS L2-2 192-202 7" OC	7.56 - 7.95 in (192 - 202 mm)	10.12 in (257 mm)	M12x70	7.46 - 8.54 in (189.5 - 217 mm)	11.87 - 12.96 in (301.6 - 329.1 mm)	7 in (-)	13.47 lb (6.11 kg)	1 pcs	2330989
MP-PS L2-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	10.91 in (277 mm)	M12x70	7.95 - 9.04 in (202 - 229.5 mm)	12.69 - 13.78 in (322.4 - 349.9 mm)	8 in (200 mm)	14.29 lb (6.48 kg)	1 pcs	2330990
MP-PS L2-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	12.44 in (316 mm)	M16x80	8.48 - 9.57 in (215.5 - 243 mm)	13.89 - 14.97 in (352.8 - 380.3 mm)	-	16.20 lb (7.35 kg)	1 pcs	2330991
MP-PS L2-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	13.19 in (335 mm)	M16x80	8.94 - 10.02 in (227 - 254.5 mm)	14.69 - 15.77 in (373 - 400.5 mm)	10 in (250 mm)	16.93 lb (7.68 kg)	1 pcs	2330992
MP-PS L2-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	14.76 in (375 mm)	M16x80	9.94 - 11.02 in (252.5 - 280 mm)	16.69 - 17.78 in (424 - 451.5 mm)	12 in (300 mm)	18.58 lb (8.43 kg)	1 pcs	2330993

Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)
7.56 - 8.94 in (192 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
9.61 - 12.91 in (244 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)

H Base	Max. Height adjustability	Max. Inclination
3.48 - 4.57 in (88.5 - 116 mm)	1.08 in (27.5 mm)	12°

PIPE SHOE MP-PS M2-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty	Item number
MP-PS M2-2 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	5.08 - 7.24 in (129 - 184 mm)	7.13 - 9.29 in (181 - 236 mm)	1/2 in (15 mm)	8.29 lb (3.76 kg)	1 pcs	2330994
MP-PS M2-2 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	5.18 - 7.34 in (131.5 - 186.5 mm)	7.32 - 9.49 in (186 - 241 mm)	3/4 in (20 mm)	8.38 lb (3.80 kg)	1 pcs	2330995
MP-PS M2-2 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	5.30 - 7.46 in (134.5 - 189.5 mm)	7.56 - 9.72 in (192 - 247 mm)	1 in (25 mm)	8.49 lb (3.85 kg)	1 pcs	2330996
MP-PS M2-2 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	5.43 - 7.60 in (138 - 193 mm)	7.83 - 10.00 in (199 - 254 mm)	1-1/4 in (32 mm)	8.55 lb (3.88 kg)	1 pcs	2330997
MP-PS M2-2 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	5.57 - 7.74 in (141.5 - 196.5 mm)	8.11 - 10.28 in (206 - 261 mm)	1-1/2 in (40 mm)	8.69 lb (3.94 kg)	1 pcs	2330998
MP-PS M2-2 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	5.71 - 7.87 in (145 - 200 mm)	8.39 - 10.55 in (213 - 268 mm)	-	9.50 lb (4.31 kg)	1 pcs	2330970
MP-PS M2-2 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	5.85 - 8.01 in (148.5 - 203.5 mm)	8.66 - 10.83 in (220 - 275 mm)	2 in (50 mm)	9.68 lb (4.39 kg)	1 pcs	2330971
MP-PS M2-2 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	6.02 - 8.19 in (153 - 208 mm)	9.02 - 11.18 in (229 - 284 mm)	-	9.88 lb (4.48 kg)	1 pcs	2330972
MP-PS M2-2 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	6.16 - 8.33 in (156.5 - 211.5 mm)	9.29 - 11.46 in (236 - 291 mm)	2-1/2 in (65 mm)	10.03 lb (4.55 kg)	1 pcs	2330999
MP-PS M2-2 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	6.42 - 8.58 in (163 - 218 mm)	9.80 - 11.97 in (249 - 304 mm)	3 in (80 mm)	10.27 lb (4.66 kg)	1 pcs	2331000
MP-PS M2-2 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	6.69 - 8.86 in (170 - 225 mm)	11.06 - 13.23 in (281 - 336 mm)	3-1/2 in (-)	10.52 lb (4.77 kg)	1 pcs	2331001
MP-PS M2-2 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	6.89 - 9.06 in (175 - 230 mm)	11.42 - 13.58 in (290 - 345 mm)	4 in (100 mm)	10.71 lb (4.86 kg)	1 pcs	2331002
MP-PS M2-2 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	7.19 - 9.35 in (182.5 - 237.5 mm)	11.89 - 14.06 in (302 - 357 mm)	-	11.05 lb (5.01 kg)	1 pcs	2331003
MP-PS M2-2 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	7.40 - 9.57 in (188 - 243 mm)	12.28 - 14.43 in (312 - 367 mm)	5 in (125 mm)	11.31 lb (5.13 kg)	1 pcs	2331004
MP-PS M2-2 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	7.76 - 9.92 in (197 - 252 mm)	12.91 - 15.08 in (328 - 383 mm)	-	11.68 lb (5.30 kg)	1 pcs	2331005
MP-PS M2-2 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	7.97 - 10.14 in (202.5 - 257.5 mm)	13.27 - 15.45 in (337 - 392 mm)	6 in (150 mm)	11.95 lb (5.42 kg)	1 pcs	2331006
MP-PS M2-2 192-202 7" OC	7.56 - 7.95 in (192 - 202 mm)	10.12 in (257 mm)	M12x70	8.54 - 10.71 in (217 - 272 mm)	14.25 - 16.42 in (362 - 417 mm)	7 in (-)	14.88 lb (6.75 kg)	1 pcs	2331007
MP-PS M2-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	10.91 in (277 mm)	M12x70	9.04 - 11.20 in (229.5 - 284.5 mm)	15.04 - 17.20 in (382 - 437 mm)	8 in (200 mm)	15.72 lb (7.13 kg)	1 pcs	2331008
MP-PS M2-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	12.44 in (316 mm)	M16x80	9.57 - 11.73 in (243 - 298 mm)	16.26 - 18.43 in (413 - 468 mm)	-	17.59 lb (7.98 kg)	1 pcs	2331009
MP-PS M2-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	13.19 in (335 mm)	M16x80	10.02 - 12.19 in (254.5 - 309.5 mm)	17.05 - 19.21 in (433 - 488 mm)	10 in (250 mm)	18.36 lb (8.33 kg)	1 pcs	2331010
MP-PS M2-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	14.76 in (375 mm)	M16x80	11.02 - 13.19 in (280 - 335 mm)	19.06 - 21.22 in (484 - 539 mm)	12 in (300 mm)	20.00 lb (9.07 kg)	1 pcs	2331011

Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)
7.56 - 8.94 in (192 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
9.61 - 12.91 in (244 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)

H Base	Max. Height adjustability	Max. Inclination
4.57 - 6.73 in (116 - 171 mm)	2.17 in (55 mm)	12°

PIPE SHOE MP-PS H2-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty	Item number
MP-PS H2-2 21-26 1/2" OC	0.83 - 1.02 in (21 - 26 mm)	3.19 in (81 mm)	M10x50	7.24 - 9.31 in (184 - 236.5 mm)	9.09 - 11.16 in (231 - 283.5 mm)	1/2 in (15 mm)	10.08 lb (4.57 kg)	1 pcs	2331012
MP-PS H2-2 26-31 3/4" OC	1.02 - 1.22 in (26 - 31 mm)	3.43 in (87 mm)	M10x50	7.34 - 9.41 in (186.5 - 239 mm)	9.29 - 11.36 in (236 - 288.5 mm)	3/4 in (20 mm)	10.16 lb (4.61 kg)	1 pcs	2331013
MP-PS H2-2 32-37 1" OC	1.26 - 1.46 in (32 - 37 mm)	3.74 in (95 mm)	M10x50	7.46 - 9.53 in (189.5 - 242 mm)	9.53 - 11.59 in (242 - 294.5 mm)	1 in (25 mm)	10.27 lb (4.66 kg)	1 pcs	2331014
MP-PS H2-2 38-44 1-1/4" OC	1.50 - 1.73 in (38 - 44 mm)	3.98 in (101 mm)	M10x50	7.60 - 9.67 in (193 - 245.5 mm)	9.80 - 11.87 in (249 - 301.5 mm)	1-1/4 in (32 mm)	10.34 lb (4.69 kg)	1 pcs	2331015
MP-PS H2-2 45-51 1-1/2" OC	1.77 - 2.01 in (45 - 51 mm)	4.29 in (109 mm)	M10x50	7.74 - 9.80 in (196.5 - 249 mm)	10.08 - 12.15 in (256 - 308.5 mm)	1-1/2 in (40 mm)	10.47 lb (4.75 kg)	1 pcs	2331016
MP-PS H2-2 52-58 OC	2.05 - 2.28 in (52 - 58 mm)	4.92 in (125 mm)	M12x55	7.87 - 9.94 in (200 - 252.5 mm)	10.35 - 12.42 in (263 - 315.5 mm)	-	11.29 lb (5.12 kg)	1 pcs	2331017
MP-PS H2-2 59-65 2" OC	2.32 - 2.56 in (59 - 65 mm)	5.28 in (134 mm)	M12x55	8.01 - 10.08 in (203.5 - 256 mm)	10.63 - 12.70 in (270 - 322.5 mm)	2 in (50 mm)	11.46 lb (5.20 kg)	1 pcs	2331018
MP-PS H2-2 68-74 OC	2.68 - 2.91 in (68 - 74 mm)	5.67 in (144 mm)	M12x55	8.19 - 10.26 in (208 - 260.5 mm)	10.98 - 13.05 in (279 - 331.5 mm)	-	11.66 lb (5.29 kg)	1 pcs	2331019
MP-PS H2-2 75-81 2-1/2" OC	2.95 - 3.19 in (75 - 81 mm)	5.98 in (152 mm)	M12x55	8.33 - 10.39 in (211.5 - 264 mm)	11.26 - 13.33 in (286 - 338.5 mm)	2-1/2 in (65 mm)	11.82 lb (5.36 kg)	1 pcs	2331020
MP-PS H2-2 88-94 3" OC	3.46 - 3.70 in (88 - 94 mm)	6.46 in (164 mm)	M12x55	8.58 - 10.65 in (218 - 270.5 mm)	11.77 - 13.84 in (299 - 351.5 mm)	3 in (80 mm)	12.06 lb (5.47 kg)	1 pcs	2331021
MP-PS H2-2 100-108 3-1/2" OC	3.94 - 4.25 in (100 - 108 mm)	6.93 in (176 mm)	M12x60	8.86 - 10.93 in (225 - 277.5 mm)	13.03 - 15.10 in (331 - 383.5 mm)	3-1/2 in (-)	12.30 lb (5.58 kg)	1 pcs	2331022
MP-PS H2-2 110-118 4" OC	4.33 - 4.65 in (110 - 118 mm)	7.20 in (183 mm)	M12x60	9.06 - 11.12 in (230 - 282.5 mm)	13.39 - 15.43 in (340 - 392 mm)	4 in (100 mm)	12.50 lb (5.67 kg)	1 pcs	2331023
MP-PS H2-2 125-133 OC	4.92 - 5.24 in (125 - 133 mm)	7.68 in (195 mm)	M12x60	9.35 - 11.42 in (237.5 - 290 mm)	13.86 - 15.94 in (352 - 405 mm)	-	12.83 lb (5.82 kg)	1 pcs	2331024
MP-PS H2-2 136-144 5" OC	5.35 - 5.67 in (136 - 144 mm)	8.07 in (205 mm)	M12x60	9.57 - 11.63 in (252 - 304.5 mm)	14.25 - 16.30 in (378 - 431 mm)	5 in (125 mm)	13.10 lb (5.94 kg)	1 pcs	2331025
MP-PS H2-2 152-162 OC	5.98 - 6.38 in (152 - 162 mm)	8.90 in (226 mm)	M12x70	9.92 - 11.99 in (252 - 304.5 mm)	14.88 - 16.97 in (378 - 431 mm)	-	13.49 lb (6.12 kg)	1 pcs	2331026
MP-PS H2-2 163-173 6" OC	6.42 - 6.81 in (163 - 173 mm)	9.25 in (235 mm)	M12x70	10.14 - 12.20 in (257.5 - 310 mm)	15.24 - 17.32 in (387 - 440 mm)	6 in (150 mm)	13.73 lb (6.23 kg)	1 pcs	2331027
MP-PS H2-2 192-202 7" OC	7.56 - 7.95 in (192 - 202 mm)	10.12 in (257 mm)	M12x70	10.71 - 12.78 in (272 - 324.5 mm)	16.22 - 18.27 in (412 - 464 mm)	7 in (-)	16.67 lb (7.56 kg)	1 pcs	2331028
MP-PS H2-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	10.91 in (277 mm)	M12x70	11.20 - 13.27 in (284.5 - 337 mm)	17.05 - 19.09 in (433 - 485 mm)	8 in (200 mm)	17.50 lb (7.94 kg)	1 pcs	2331029
MP-PS H2-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	12.44 in (316 mm)	M16x80	11.73 - 13.80 in (298 - 350.5 mm)	18.23 - 20.28 in (463 - 515 mm)	-	19.40 lb (8.80 kg)	1 pcs	2331030
MP-PS H2-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	13.19 in (335 mm)	M16x80	12.19 - 14.25 in (309.5 - 362 mm)	19.02 - 21.08 in (483 - 535.5 mm)	10 in (250 mm)	20.15 lb (9.14 kg)	1 pcs	2331031
MP-PS H2-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	14.76 in (375 mm)	M16x80	13.19 - 15.26 in (335 - 387.5 mm)	21.02 - 23.05 in (534 - 586.5 mm)	12 in (300 mm)	21.78 lb (9.88 kg)	1 pcs	2331032

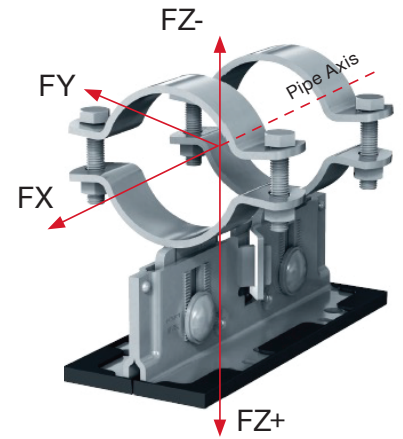
Clamping range - D	Width - b	Pipe clamp thickness - s
0.83 - 2.01 in (21 - 51 mm)	1.18 in (30 mm)	0.20 in (5 mm)
2.05 - 6.81 in (52 - 173 mm)	1.57 in (40 mm)	0.20 in (5 mm)
7.56 - 8.94 in (192 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
9.61 - 12.91 in (244 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)

H Base	Max. Height adjustability	Max. Inclination
6.73 - 8.80 in (171 - 223.5 mm)	2.07 in (52.5 mm)	12°

PIPE SHOE MP-PS L2-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS L2-2 21-26 1/2" OC	1180	930	2750	2100	2330973
MP-PS L2-2 26-31 3/4" OC	1190	900	2750	2100	2330974
MP-PS L2-2 32-37 OC	1210	870	2750	2100	2330975
MP-PS L2-2 38-44 1-1/4" OC	1230	840	2750	2100	2330976
MP-PS L2-2 45-51 1-1/2" OC	1250	820	2750	2100	2330977
MP-PS L2-2 52-58 OC	1260	800	2750	2100	2330978
MP-PS L2-2 59-65 2" OC	1280	780	2750	2100	2330979
MP-PS L2-2 68-74 OC	1300	750	2750	2100	2330980
MP-PS L2-2 75-81 2-1/2" OC	1320	730	2750	2100	2330981
MP-PS L2-2 88-94 3" OC	1350	700	2750	2100	2330982
MP-PS L2-2 100-108 3-1/2" OC	1380	660	2750	2100	2330983
MP-PS L2-2 110-118 4" OC	1410	640	2750	2100	2330984
MP-PS L2-2 125-133 OC	1440	610	2750	2100	2330985
MP-PS L2-2 136-144 5" OC	1480	580	2750	2100	2330986
MP-PS L2-2 152-162 OC	1530	550	2750	2100	2330987
MP-PS L2-2 163-173 6" OC	1550	540	2750	2100	2330988
MP-PS L2-2 192-202 7" OC	1610	500	2750	2100	2330989
MP-PS L2-2 217-227 8" OC	1680	470	2750	2100	2330990
MP-PS L2-2 244-254 OC	1760	430	2750	2100	2330991
MP-PS L2-2 267-277 10" OC	1810	410	2750	2100	2330992
MP-PS L2-2 318-328 12" OC	1940	370	2750	2100	2330993

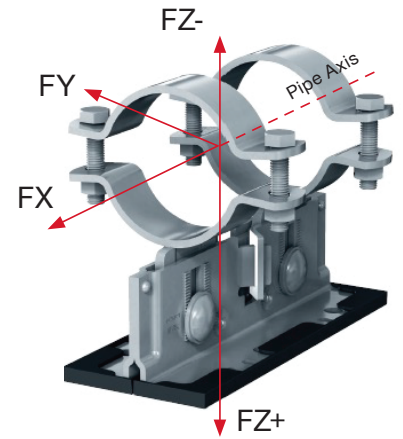


1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS L2-2 TECHNICAL DATA

Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS L2-2 21-26 1/2" OC	2600	930	5110	3990	2330973
MP-PS L2-2 26-31 3/4" OC	2630	900	5110	3990	2330974
MPPS L2-2 32-37 OC	2670	870	5110	3990	2330975
MP-PS L2-2 38-44 1-1/4" OC	2720	840	5110	3990	2330976
MP-PS L2-2 45-51 1-1/2" OC	2750	820	5110	3990	2330977
MP-PS L2-2 52-58 OC	2780	800	5110	3990	2330978
MP-PS L2-2 59-65 2' OC	2820	780	5110	3990	2330979
MP-PS L2-2 68-74 OC	2870	750	5110	3990	2330980
MP-PS L2-2 75-81 2-1/2" OC	2900	730	5110	3990	2330981
MP-PS L2-2 88-94 3" OC	2980	700	5110	3990	2330982
MP-PS L2-2 100-108 3-1/2" OC	3050	660	5110	3990	2330983
MP-PS L2-2 110-118 4" OC	3120	640	5110	3990	2330984
MP-PS L2-2 125-133 OC	3180	610	5110	3990	2330985
MP-PS L2-2 136-144 5" OC	3260	580	5110	3990	2330986
MP-PS L2-2 152-162 OC	3370	550	5110	3990	2330987
MP-PS L2-2 163-173 6" OC	3420	540	5110	3990	2330988
MP-PS L2-2 192-202 OC	3560	500	5110	3990	2330989
MP-PS L2-2 217-227 8' OC	3700	470	5110	3990	2330990
MP-PS L2-2 244-254 OC	3880	430	5110	3990	2330991
MP-PS L2-2 267-277 10" OC	4000	410	5110	3990	2330992
MP-PS L2-2 318-328 12" OC	4280	370	5110	3990	2330993

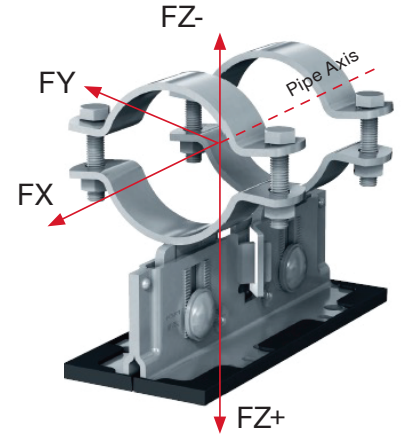


- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

PIPE SHOE MP-PS L2-2 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS L2-2 21-26 1/2" OC	3200	1390	6280	4900	2330973
MP-PS L2-2 26-31 3/4" OC	3240	1360	6280	4900	2330974
MP-PS L2-2 32-37 OC	3290	1310	6280	4900	2330975
MP-PS L2-2 38-44 1-1/4" OC	3340	1260	6280	4900	2330976
MP-PS L2-2 45-51 1-1/2" OC	3390	1230	6280	4900	2330977
MP-PS L2-2 52-58 OC	3420	1200	6280	4900	2330978
MP-PS L2-2 59-65 2" OC	3470	1170	6280	4900	2330979
MP-PS L2-2 68-74 OC	3530	1120	6280	4900	2330980
MP-PS L2-2 75-81 2-1/2" OC	3580	1090	6280	4900	2330981
MP-PS L2-2 88-94 3" OC	3660	1040	6280	4900	2330982
MP-PS L2-2 100-108 3-1/2' OC	3750	1000	6280	4900	2330983
MP-PS L2-2 110-118 4" OC	3840	950	6280	4900	2330984
MP-PS L2-2 125-133 OC	3910	920	6280	4900	2330985
MP-PS L2-2 136-144 5" OC	4010	880	6280	4900	2330986
MP-PS L2-2 152-162 OC	4150	830	6280	4900	2330987
MP-PS L2-2 163-173 6" OC	4210	810	6280	4900	2330988
MP-PS L2-2 192-202 7" OC	4390	750	6280	4900	2330989
MP-PS L2-2 217-227 8" OC	4560	700	6280	4900	2330990
MP-PS L2-2 244-254 OC	4770	650	6280	4900	2330991
MP-PS L2-2 267-277 10" OC	4930	620	6280	4900	2330992
MP-PS L2-2 318-328 12" OC	5270	560	6280	4900	2330993



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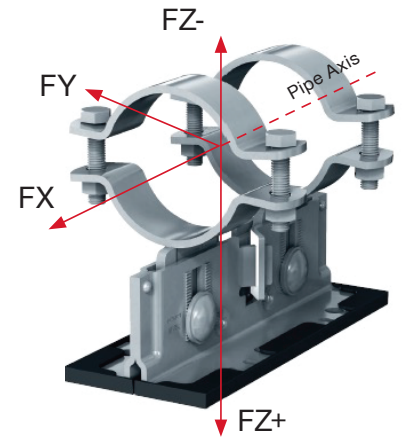
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PIPE SHOE MP-PS M2-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS M2-2 21-26 1/2" OC	1480	580	2750	2100	2330994
MP-PS M2-2 26-31 3/4" OC	1500	570	2750	2100	2330995
MP-PS M2-2 32-37 1" OC	1510	560	2750	2100	2330996
MP-PS M2-2 38-44 1-1/4" OC	1530	550	2750	2100	2330997
MP-PS M2-2 45-51 1-1/2" OC	1550	540	2750	2100	2330998
MPPS M2-2 52-58 OC	1560	530	2750	2100	2330970
MP-PS M2-2 59-65 2" OC	1580	520	2750	2100	2330971
MPPS M2-2 68-74 OC	1600	510	2750	2100	2330972
MP-PS M2-2 75-81 2-1/2" OC	1620	500	2750	2100	2330999
MP-PS M2-2 88-94 3" OC	1650	480	2750	2100	2331000
MIP-PS M2-2 100-108 3-1/2" OC	1680	470	2750	2100	2331001
MP-PS M2-2 110-118 4" OC	1720	450	2750	2100	2331002
MP-PS M2-2 125-133 OC	1740	440	2750	2100	2331003
MP-PS M2-2 136-144 5" OC	1780	430	2750	2100	2331004
MP-PS M2-2 152-162 OC	1830	410	2750	2100	2331005
MP-PS M2-2 163-173 6" OC	1850	400	2750	2100	2331006
MP-PS M2-2 192-202 7" OC	1920	380	2750	2100	2331007
MP-PS M2-2 217-227 8" OC	1940	360	2750	2100	2331008
MP-PS M2-2 244-254 OC	1940	340	2750	2100	2331009
MP-PS M2-2 267-277 10" OC	1940	330	2750	2100	2331010
MP-PS M2-2 318-328 12" OC	1940	300	2750	2100	2331011



¹ Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used

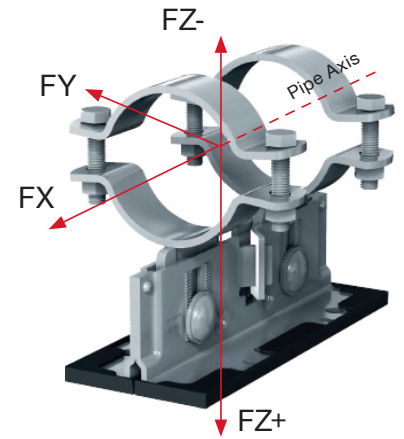
² MSS SP-58 values are based off the safety factors provided in the MSS SP-58

³ Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS M2-2 TECHNICAL DATA

Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS M2-2 21-26 1/2" OC	3270	580	5110	3990	2330994
MP-PS M2-2 26-31 3/4" OC	3300	570	5110	3990	2330995
MP-PS M2-2 32-37 1" OC	3340	560	5110	3990	2330996
MP-PS M2-2 38-44 1-1/4" OC	3390	550	5110	3990	2330997
MP-PS M2-2 45-51 1-1/2" OC	3420	540	5110	3990	2330998
MP-PS M2-2 52-58 OC	3450	530	5110	3990	2330970
MP-PS M2-2 59-65 2" OC	3490	520	5110	3990	2330971
MP-PS M2-2 68-74 OC	3540	510	5110	3990	2330972
MP-PS M2-2 75-81 2-1/2" OC	3570	500	5110	3990	2330999
MP-PS M2-2 88-94 3" OC	3650	480	5110	3990	2331000
MP-PS M2-2 100-108 3-1/2" OC	3720	470	5110	3990	2331001
MP-PS M2-2 110-118 4" OC	3790	450	5110	3990	2331002
MP-PS M2-2 125-133 OC	3850	440	5110	3990	2331003
MP-PS M2-2 136-144 5"	3930	430	5110	3990	2331004
MP-PS M2-2 152-162 OC	4040	410	5110	3990	2331005
MP-PS M2-2 163-173 6" OC	4090	400	5110	3990	2331006
MP-PS M2-2 192-202 7" OC	4230	380	5110	3990	2331007
MP-PS M2-2 217-227 8" OC	4280	360	5110	3990	2331008
MP-PS M2-2 244-254 OC	4280	340	5110	3990	2331009
MP-PS M2-2 267-277 10" OC	4280	330	5110	3990	2331010
MP-PS M2-2 318-328 12" OC	4280	300	5110	3990	2331011

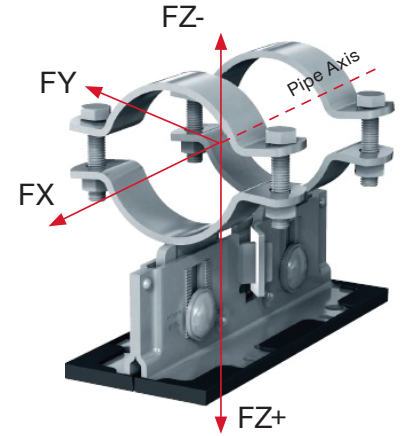


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- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

PIPE SHOE MP-PS M2-2 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS M2-2 21-26 1/2" OC	4030	870	6280	4900	2330994
MP-PS M2-2 26-31 3/4" OC	4060	860	6280	4900	2330995
MP-PS M2-2 32-37 1" OC	4110	840	6280	4900	2330996
MP-PS M2-2 38-44 1-1/4" OC	4170	820	6280	4900	2330997
MP-PS M2-2 45-51 1-1/2" OC	4210	810	6280	4900	2330998
MP-PS M2-2 52-58 OC	4250	790	6280	4900	2330970
MP-PS M2-2 59-65 2" OC	4290	780	6280	4900	2330971
MP-PS M2-2 68-74 OC	4360	760	6280	4900	2330972
MP-PS M2-2 75-81 2-1/2" OC	4400	750	6280	4900	2330999
MP-PS M2-2 88-94 3" OC	4490	720	6280	4900	2331000
MP-PS M2-2 100-108 3-1/2" OC	4580	700	6280	4900	2331001
MP-PS M2-2 110-118 4" OC	4670	680	6280	4900	2331002
MP-PS M2-2 125-133 OC	4740	660	6280	4900	2331003
MP-PS M2-2 136-144 5" OC	4840	640	6280	4900	2331004
MP-PS M2-2 152-162 OC	4970	610	6280	4900	2331005
MP-PS M2-2 163-173 6' OC	5040	600	62801	4900	2331006
MP-PS M2-2 192-202 7" OC	5210	570	6280	4900	2331007
MP-PS M2-2 217-227 8" OC	5260	540	6280	4900	2331008
MP-PS M2-2 244-254 OC	5260	510	6280	4900	2331009
MP-PS M2-2 267-277 10" OC	5260	490	6280	4900	2331010
MP-PS M2-2 318-328 12" OC	5260	450	6280	4900	2331011



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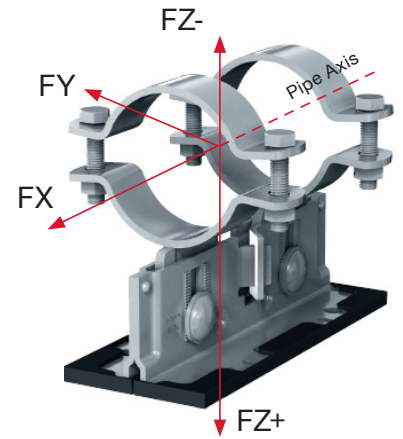
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PIPE SHOE MP-PS H2-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS H2-2 21-26 1/2" OC	1730	440	2750	2100	2331012
MP-PS H2-2 26-31 3/4" OC	1750	440	2750	2100	2331013
MP-PS H2-2 32-37 1" OC	1770	430	2750	2100	2331014
MP-PS H2-2 38-44 1-1/4" OC	1790	420	2750	2100	2331015
MP-PS H2-2 45-51 1-1/2" OC	1800	420	2750	2100	2331016
MP-PS H2-2 52-58 OC	1820	410	2750	2100	2331017
MP-PS H2-2 59-65 2" OC	1830	410	2750	2100	2331018
MP-PS H2-2 68-74 OC	1860	400	2750	2100	2331019
MP-PS H2-2 75-81 2-1/2" OC	1870	390	2750	2100	2331020
MP-PS H2-2 88-94 3" OC	1910	380	2750	2100	2331021
MPPS H2-2 100-108 3-1/2" OC	1940	370	2750	2100	2331022
MP-PS H2-2 110-118 4" OC	1940	360	2750	2100	2331023
MP-PS H2-2 125-133 OC	1940	360	2750	2100	2331024
MP-PS H2-2 136-144 5" OC	1940	350	2750	2100	2331025
MP-PS H2-2 152-162 OC	1940	330	2750	2100	2331026
MP-PS H2-2 163-173 6" OC	1940	330	2750	2100	2331027
MP-PS H2-2 192-202 7" OC	1940	310	2750	2100	2331028
MP-PS H2-2 217-227 8" OC	1940	300	2750	2100	2331029
MP-PS H2-2 244-254 OC	1940	290	2750	2100	2331030
MP-PS H2-2 267-277 10" OC	1940	280	2750	2100	2331031
MP-PS H2-2 318-328 12" OC	1940	260	2750	2100	2331032

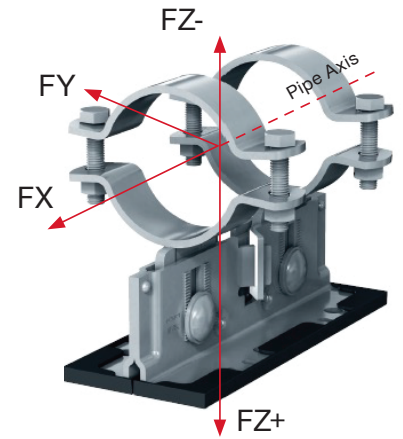


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PIPE SHOE MP-PS H2-2 TECHNICAL DATA

Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS H2-2 21-26 1/2" OC	3830	440	5110	3990	2331012
MP-PS H2-2 26-31 3/4" OC	3860	440	5110	3990	2331013
MP-PS H2-2 32-37 1" OC	3900	430	5110	3990	2331014
MP-PS H2-2 38-44 1-1/4" OC	3950	420	5110	3990	2331015
MP-PS H2-2 45-51 1-1/2" OC	3980	420	5110	3990	2331016
MP-PS H2-2 52-58 OC	4010	410	5110	3990	2331017
MP-PS H2-2 59-65 2" OC	4050	410	5110	3990	2331018
MP-PS H2-2 68-74 OC	4100	400	5110	3990	2331019
MP-PS H2-2 75-81 2-1/2" OC	4130	390	5110	3990	2331020
MP-PS H2-2 88-94 3" OC	4210	380	5110	3990	2331021
MP-PSH2-2 100-108 3-1/2" OC	4280	370	5110	3990	2331022
MP-PS H2-2 110-118 4" OC	4280	360	5110	3990	2331023
MP-PS H2-2 125-133 OC	4280	360	5110	3990	2331024
MP-PS H2-2 136-144 5" OC	4280	350	5110	3990	2331025
MP-PS H2-2 152-162 OC	4280	330	5110	3990	2331026
MP-PS H2-2 163-173 6" OC	4280	330	5110	3990	2331027
MP-PS H2-2 192-202 7" OC	4280	310	5110	3990	2331028
MP-PS H2-2 217-227 8" OC	4280	300	5110	3990	2331029
MP-PS H2-2 244-254 OC	4280	290	5110	3990	2331030
MP-PS H2-2 267-277 10" OC	4280	280	5110	3990	2331031
MP-PS H2-2 318-328 12" OC	4280	260	5110	3990	2331032



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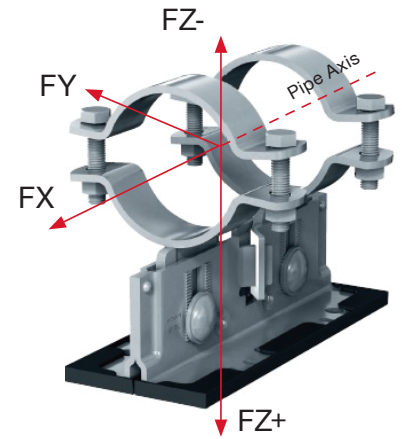
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4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

PIPE SHOE MP-PS H2-2 TECHNICAL DATA

Limit State Design (LSD) ^{1,3}

Order Designation	+/-F _x [lb]	+/-F _y [lb]	+ F _z ² [lb]	-F _z ² [lb]	Item number
MP-PS H2-2 21-26 1/2" OC	4710	670	6280	4900	2331012
MP-PS H2-2 26-31 3/4" OC	4750	660	6280	4900	2331013
MP-PS H2-2 32-37 1" OC	4800	650	6280	4900	2331014
MP-PS H2-2 38-44 1-1/4" OC	4860	630	6280	4900	2331015
MP-PS H2-2 45-51 1-1/2" OC	4900	630	6280	4900	2331016
MP-PS H2-2 52-58 OC	4940	620	6280	4900	2331017
MP-PS H2-2 59-65 2' OC	4980	610	6280	4900	2331018
MP-PS H2-2 68-74 OC	5050	600	6280	4900	2331019
MP-PS H2-2 75-81 2-1/2" OC	5090	590	6280	4900	2331020
MP-PS H2-2 88-94 3" OC	5180	570	6280	4900	2331021
MP-PS H2-2 100-108 3-1/2" OC	5260	560	6280	4900	2331022
MP-PS H2-2 110-118 4" OC	5260	550	6280	4900	2331023
MP-PS H2-2 125-133 OC	5260	530	6280	4900	2331024
MP-PS H2-2 136-144 5" OC	5260	520	6280	4900	2331025
MP-PS H2-2 152-162 OC	5260	500	6280	4900	2331026
MP-PS H2-2 163-173 6" OC	5260	490	6280	4900	2331027
MP-PS H2-2 192-202 7" OC	5260	470	6280	4900	2331028
MP-PS H2-2 217-227 8" OC	5260	450	6280	4900	2331029
MP-PS H2-2 244-254 OC	5260	430	6280	4900	2331030
MP-PS H2-2 267-277 10" OC	5260	420	6280	4900	2331031
MP-PS H2-2 318-328 12 OC	5260	390	6280	4900	2331032



1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used

2 An additional safety of 1.35 O was applied to the +/-F_z values due to unknown installation environments

3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS L4-2 / MP-PS M4-2 / MP-PS H4-2

Adjustable quadruple pipe shoes with outdoor coating for fastening 8" to 24" (217-610 mm) diameter pipes to various base materials in moderately corrosive environments.



APPLICATIONS

- Fastening pipes to steel beams, concrete or Hilti modular support girders
- Pipe installations in onshore industrial, power generation, pharmaceutical, electronics or automotive manufacturing facilities
- Suitable for application temperatures of up to 572 °F (300 °C) and an insulation thickness of up to 8.66 in (220 mm)
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- One-for-all versatility — use the same pipe shoe system for fix-, slide-, guided- or freestanding supports to Hilti modular girders, steel beams and concrete
- Extensive software support — simplify calculation by using PROFIS, Hilti FixPoint Calculator, BIM/CAD libraries and various plug-ins
- Load data available for pipe shoe components (see applicable pages in this document).
- Quicker installation on-site — easily adjust the height and slope after fastening the pipe shoe in place
- Wider clamping range — suitable for various different pipes with or without additional inlays

Product Information

Material thickness	Base-plate: 0.157 in (4 mm) Middle-plate: 0.276 in (7 mm) Sliding-plate: 0.118 in (3 mm) Serrated washer: 0.157 in (4 mm)
Surface finish	<ul style="list-style-type: none"> • Lower bow, Middle-plate: Hot dip galvanized 70µm - DIN EN ISO 1461, • Upper bow: Hot dip galvanized 55µm - DIN EN ISO 1461, • Base-plate: ZM300
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)
Base material type	Concrete, Steel, Modular Support
Wrench size	19 mm
Temperature resistance (based on EN13480-3)	-4 °F to 572 °F (-20 °C to 300 °C)
Fire resistance (Yes/No)	No

PROFIS software

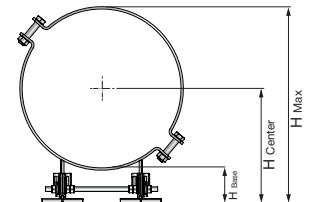
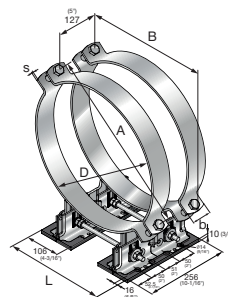
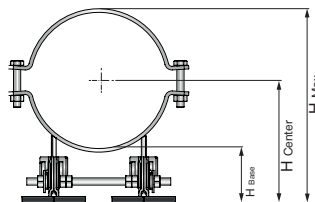
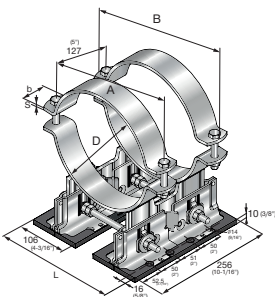
Hilti FixPoint Calculator

BIM/CAD-libraries

Smart 3D
Modular Supports Plug-In for Smart 3D

AVEVA
Modular Supports Plug-In for PDMS & E3D

PWIS / LABS Conform
VDMA 24364



PIPE SHOE MP-PS L4-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty*	Item number
MP-PS L4-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	11.81 in (300 mm)	M12x70	7.95 - 9.04 in (202 - 229.5 mm)	12.69 - 13.78 in (323 - 350.5 mm)	8 in (200 mm)	21.78 lb (9.88 kg)	1 pcs	2331033
MP-PS L4-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	13.54 in (344 mm)	M16x80	8.48 - 9.57 in (215.5 - 243 mm)	13.89 - 14.97 in (350 - 377.5 mm)	-	24.52 lb (11.12 kg)	1 pcs	2331034
MP-PS L4-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	14.49 in (368 mm)	M16x80	8.94 - 10.02 in (227 - 254.5 mm)	14.69 - 15.77 in (373 - 400.5 mm)	10 in (250 mm)	25.26 lb (11.46 kg)	1 pcs	2331035
MP-PS L4-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	16.57 in (421 mm)	M16x80	9.94 - 11.02 in (252.5 - 280 mm)	16.69 - 17.78 in (424 - 451.5 mm)	12 in (300 mm)	26.90 lb (12.20 kg)	1 pcs	2331036
MP-PS L4-2 350-360 14" OC	13.78 - 14.17 in (350 - 360 mm)	17.83 in (453 mm)	M16x80	10.57 - 11.65 in (268.5 - 296 mm)	17.95 - 19.04 in (456 - 483.5 mm)	14 in (350 mm)	30.45 lb (13.81 kg)	1 pcs	2331037
MP-PS L4-2 401-411 16" OC	15.79 - 16.18 in (401 - 411 mm)	17.09 in (434 mm)	M16x80	11.57 - 12.66 in (294 - 321.5 mm)	19.96 - 21.04 in (507 - 534.5 mm)	16 in (400 mm)	32.36 lb (14.68 kg)	1 pcs	2331038
MP-PS L4-2 452-462 18" OC	17.80 - 18.19 in (452 - 462 mm)	18.62 in (473 mm)	M16x80	12.58 - 13.66 in (319.5 - 347 mm)	21.97 - 23.05 in (558 - 585.5 mm)	18 in (450 mm)	34.30 lb (15.56 kg)	1 pcs	2331039
MP-PS L4-2 503-513 20" OC	19.80 - 20.20 in (503 - 513 mm)	20.16 in (512 mm)	M16x80	13.58 - 14.67 in (345 - 372.5 mm)	23.98 - 25.06 in (609 - 636.5 mm)	20 in (500 mm)	36.31 lb (16.47 kg)	1 pcs	2331040
MP-PS L4-2 605-615 24" OC	23.82 - 24.21 in (605 - 615 mm)	23.23 in (590 mm)	M16x80	15.59 - 16.67 in (396 - 423.5 mm)	27.99 - 29.07 in (711 - 738.5 mm)	24 in (600 mm)	40.26 lb (18.26 kg)	1 pcs	2331041

* These items are currently purchase-to-order only. Please plan accordingly to manage lead times accordingly.

Clamping range - D	Width - b	Pipe clamp thickness - s
8.54 - 8.94 in (217 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
8.98 - 12.91 in (228 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)
12.95 - 24.21 in (329 - 615 mm)	2.36 in (60 mm)	0.24 in (6 mm)

H Base	Max. Height adjustability	Max. Inclination
3.48 - 4.57 in (88.5 - 116 mm)	1.08 in (27.5 mm)	12°

PIPE SHOE MP-PS M4-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty*	Item number
MP-PS M4-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	11.81 in (300 mm)	M12x70	9.04 - 11.20 in (229.5 - 284.5 mm)	15.04 - 17.20 in (383 - 438 mm)	8 in (200 mm)	24.60 lb (11.16 kg)	1 pcs	2331042
MP-PS M4-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	13.54 in (344 mm)	M16x80	9.57 - 11.73 in (243 - 298 mm)	16.26 - 18.43 in (410 - 465 mm)	-	27.34 lb (12.40 kg)	1 pcs	2331043
MP-PS M4-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	14.49 in (368 mm)	M16x80	10.02 - 12.19 in (254.5 - 309.5 mm)	17.05 - 19.21 in (433 - 488 mm)	10 in (250 mm)	28.09 lb (12.74 kg)	1 pcs	2331044
MP-PS M4-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	16.57 in (421 mm)	M16x80	11.02 - 13.19 in (280 - 335 mm)	19.06 - 21.22 in (484 - 539 mm)	12 in (300 mm)	29.72 lb (13.48 kg)	1 pcs	2331045
MP-PS M4-2 350-360 14" OC	13.78 - 14.17 in (350 - 360 mm)	17.83 in (453 mm)	M16x80	11.65 - 13.82 in (296 - 351 mm)	20.32 - 22.48 in (516 - 571 mm)	14 in (350 mm)	33.27 lb (15.09 kg)	1 pcs	2331046
MP-PS M4-2 401-411 16" OC	15.79 - 16.18 in (401 - 411 mm)	17.09 in (434 mm)	M16x80	12.66 - 14.82 in (321.5 - 376.5 mm)	22.32 - 24.49 in (567 - 622 mm)	16 in (400 mm)	35.16 lb (15.95 kg)	1 pcs	2331047
MP-PS M4-2 452-462 18" OC	17.80 - 18.19 in (452 - 462 mm)	18.62 in (473 mm)	M16x80	13.66 - 15.83 in (347 - 402 mm)	24.33 - 26.69 in (618 - 673 mm)	18 in (450 mm)	37.13 lb (16.84 kg)	1 pcs	2331048
MP-PS M4-2 503-513 20" OC	19.80 - 20.20 in (503 - 513 mm)	20.16 in (512 mm)	M16x80	14.67 - 16.83 in (372.5 - 427.5 mm)	26.34 - 28.50 in (669 - 724 mm)	20 in (500 mm)	39.13 lb (17.75 kg)	1 pcs	2331049
MP-PS M4-2 605-615 24" OC	23.82 - 24.21 in (605 - 615 mm)	23.23 in (590 mm)	M16x80	16.67 - 18.84 in (423.5 - 478.5 mm)	30.35 - 32.52 in (771 - 826 mm)	24 in (600 mm)	43.08 lb (19.54 kg)	1 pcs	2331050

* These items are currently purchase-to-order only. Please plan accordingly to manage lead times accordingly.

Clamping range - D	Width - b	Pipe clamp thickness - s
8.54 - 8.94 in (217 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
8.98 - 12.91 in (228 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)
12.95 - 24.21 in (329 - 615 mm)	2.36 in (60 mm)	0.24 in (6 mm)

H Base	Max. Height adjustability	Max. Inclination
4.57 - 6.73 in (116 - 171 mm)	2.17 in (55 mm)	12°

PIPE SHOE MP-PS H4-2 ORDERING INFORMATION

Order Designation	D	B	Clamp screw	H Center	H Max	Nominal pipe size	Weight	Sales qty*	Item number
MP-PS H4-2 217-227 8" OC	8.54 - 8.94 in (217 - 227 mm)	11.81 in (300 mm)	M12x70	11.20 - 13.27 in (284.5 - 337 mm)	17.05 - 19.09 in (433 - 485.5 mm)	8 in (200 mm)	28.18 lb (12.78 kg)	1 pcs	2331051
MP-PS H4-2 244-254 OC	9.61 - 10.00 in (244 - 254 mm)	13.54 in (344 mm)	M16x80	11.73 - 13.80 in (298 - 350.5 mm)	18.23 - 20.28 in (460 - 512.5 mm)	-	30.91 lb (14.02 kg)	1 pcs	2331052
MP-PS H4-2 267-277 10" OC	10.51 - 10.91 in (267 - 277 mm)	14.49 in (368 mm)	M16x80	12.19 - 14.25 in (309.5 - 362 mm)	19.02 - 21.08 in (483 - 535.5 mm)	10 in (250 mm)	31.66 lb (14.36 kg)	1 pcs	2331053
MP-PS H4-2 318-328 12" OC	12.52 - 12.91 in (318 - 328 mm)	16.57 in (421 mm)	M16x80	13.19 - 15.26 in (335 - 387.5 mm)	21.02 - 23.05 in (534 - 586.5 mm)	12 in (300 mm)	33.29 lb (15.10 kg)	1 pcs	2331054
MP-PS H4-2 350-360 14" OC	13.78 - 14.17 in (350 - 360 mm)	17.83 in (453 mm)	M16x80	13.82 - 15.89 in (351 - 403.5 mm)	22.28 - 24.35 in (566 - 618.5 mm)	14 in (350 mm)	36.84 lb (16.71 kg)	1 pcs	2331055
MP-PS H4-2 401-411 16" OC	15.79 - 16.18 in (401 - 411 mm)	17.09 in (434 mm)	M16x80	14.82 - 16.89 in (376.5 - 429 mm)	24.29 - 26.36 in (617 - 669.5 mm)	16 in (400 mm)	38.74 lb (17.57 kg)	1 pcs	2331056
MP-PS H4-2 452-462 18" OC	17.80 - 18.19 in (452 - 462 mm)	18.62 in (473 mm)	M16x80	15.83 - 17.89 in (402 - 454.5 mm)	26.30 - 28.37 in (668 - 720.5 mm)	18 in (450 mm)	40.70 lb (18.46 kg)	1 pcs	2331057
MP-PS H4-2 503-513 20" OC	19.80 - 20.20 in (503 - 513 mm)	20.16 in (512 mm)	M16x80	16.83 - 18.90 in (427.5 - 480 mm)	28.31 - 30.37 in (719 - 771.5 mm)	20 in (500 mm)	42.70 lb (19.37 kg)	1 pcs	2331058
MP-PS H4-2 605-615 24" OC	23.82 - 24.21 in (605 - 615 mm)	23.23 in (590 mm)	M16x80	18.84 - 20.91 in (478.5 - 531 mm)	32.32 - 34.39 in (821 - 873.5 mm)	24 in (600 mm)	46.65 lb (21.16 kg)	1 pcs	2331059

* These items are currently purchase-to-order only. Please plan accordingly to manage lead times accordingly.

Clamping range - D	Width - b	Pipe clamp thickness - s
8.54 - 8.94 in (217 - 227 mm)	1.97 in (50 mm)	0.24 in (6 mm)
8.98 - 12.91 in (228 - 328 mm)	1.97 in (50 mm)	0.24 in (6 mm)
12.95 - 24.21 in (329 - 615 mm)	2.36 in (60 mm)	0.24 in (6 mm)

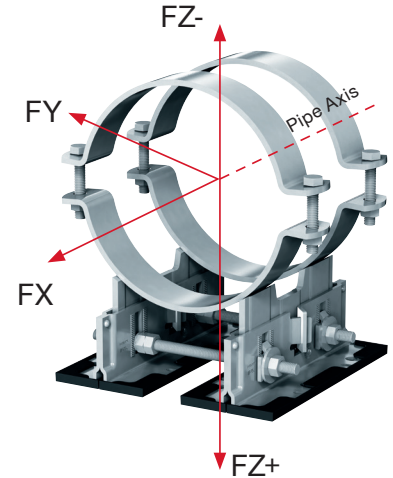
H Base	Max. Height adjustability	Max. Inclination
6.73- 8.80 in (171 - 223.5 mm)	2.07 in (52.5 mm)	12°

PIPE SHOE MP-PS L4-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS L4-2 217-227 8" OC	2710	2230	4520	2710	2331033
MP-PS L4-2 244-254 OC	2710	2070	4520	2710	2331034
MP-PS L4-2 267-277 10" OC	2710	1970	4520	2710	2331035
MP-PS L4-2 318-328 12" OC	2710	1770	4520	2710	2331036
MP-PS L4-2 350-360 14" OC	2710	1670	4520	2710	2331037
MP-PS L4-2 401-411 16" OC	2710	1520	4520	2710	2331038
MP-PS L4-2 452-462 18" OC	2710	1400	4520	2710	2331039
MP-PS L4-2 503-513 20" OC	2710	1300	4520	2710	2331040
MP-PS L4-2 605-615 24" OC	2710	1130	4520	2710	2331041

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values



Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS L4-2 217-227 8" OC	5970	5510	8470	4410	2331033
MP-PS L4-2 244-254 OC	5970	5120	8470	4410	2331034
MP-PS L4-2 267-277 10" OC	5970	4860	8470	4410	2331035
MP-PS L4-2 318-328 12" OC	5970	4370	8470	4410	2331036
MP-PS L4-2 350-360 14" OC	5970	4110	8470	4410	2331037
MP-PS L4-2 401-411 16" OC	5970	3750	8470	4410	2331038
MP-PS L4-2 452-462 18" OC	5970	3450	8470	4410	2331039
MP-PS L4-2 503-513 20" OC	5970	3200	8470	4410	2331040
MP-PS L4-2 605-615 24" OC	5970	2780	8470	1410	2331041

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS L4-2 217-227 8" OC	7350	6760	10370	5450	2331033
MP-PS L4-2 244-254 OC	7350	6270	10370	5450	2331034
MP-PS L4-2 267-277 10" OC	7350	5950	10370	5450	2331035
MP-PS L4-2 318-328 12" OC	7350	5350	10370	5450	2331036
MP-PS L4-2 350-360 14" OC	7350	5040	10370	5450	2331037
MP-PS L4-2 401-411 16" OC	7350	4600	10370	5450	2331038
MP-PS L4-2 452-462 18" OC	7350	4230	10370	5450	2331039
MP-PS L4-2 503-513 20" OC	7350	3920	10370	5450	2331040
MP-PS L4-2 605-615 24" OC	7350	3410	10370	5450	2331041

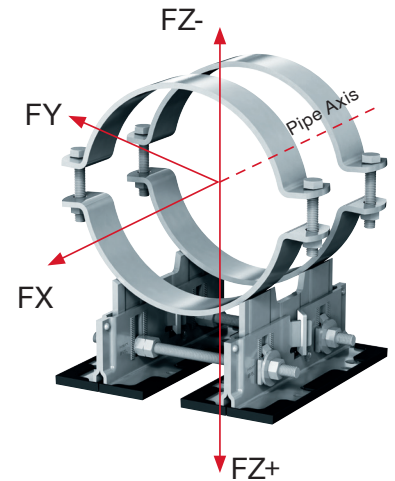
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS M4-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS M4-2 217-227 8" OC	2160	1720	4520	2710	2331042
MP-PS M4-2 244-254 OC	2160	1620	4520	2710	2331043
MP-PS M4-2 267-277 10" OC	2160	1560	4520	2710	2331044
MP-PS M4-2 318-328 12" OC	2160	1430	4520	2710	2331045
MP-PS M4-2 350-360 14" OC	2160	1360	4520	2710	2331046
MP-PS M4-2 401-411 16" OC	2160	1260	4520	2710	2331047
MP-PS M4-2 452-462 18" OC	2160	1180	4520	2710	2331048
MP-PS M4-2 503-513 20" OC	2160	1100	4520	2710	2331049
MP-PS M4-2 605-615 24" OC	2160	980	4520	2710	2331050

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values



Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS M4-2 217-227 8" OC	4780	4240	8470	4410	2331042
MP-PS M4-2 244-254 OC	4780	4000	8470	4410	2331043
MP-PS M4-2 267-277 10" OC	4780	3840	8470	4410	2331044
MP-PS M4-2 318-328 12" OC	4780	3530	8470	4410	2331045
MP-PS M4-2 350-360 14" OC	4780	3360	8470	4410	2331046
MP-PS M4-2 401-411 16" OC	4780	3120	8470	4410	2331047
MP-PS M4-2 452-462 18" OC	4780	2910	8470	4410	2331048
MP-PS M4-2 503-513 20" OC	4780	2720	8470	4410	2331049
MP-PS M4-2 605-615 24" OC	4780	2420	8470	4410	2331050

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS M4-2 217-227 8" OC	5880	5200	10370	5450	2331042
MPPS M4-2 244-254 OC	5880	4900	10370	5450	2331043
MP-PS M4-2 267-277 10" OC	5880	4710	10370	5450	2331044
MP-PS M4-2 318-328 12" OC	5880	4320	10370	5450	2331045
MP-PS M4-2 350-360 14" OC	5880	4120	10370	5450	2331046
MP-PS M4-2 401-411 16" OC	5880	3820	10370	5450	2331047
MP-PS M4-2 452-462 18" OC	5880	3560	10370	5450	2331048
MP-PS M4-2 503-513 20" OC	5880	3340	10370	5450	2331049
MP-PS M4-2 605-615 24" OC	5880	2960	10370	5450	2331050

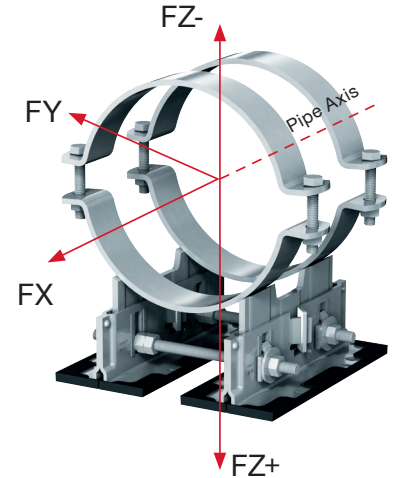
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE MP-PS H4-2 TECHNICAL DATA

Allowable Loading (ASD) per MSS SP-58 ^{1,2,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz [lb]	-Fz [lb]	Item number
MP-PS H4-2 217-227 8" OC	2160	1440	4520	2710	2331051
MP-PS H4-2 244-254 OC	2160	1370	4520	2710	2331052
MP-PS H4-2 267-277 10" OC	2160	1320	4520	2710	2331053
MP-PS H4-2 318-328 12" OC	2160	1230	4520	2710	2331054
MP-PS H4-2 350-360 14" OC	2160	1180	4520	2710	2331055
MP-PS H4-2 401-411 16" OC	2160	1110	4520	2710	2331056
MP-PS H4-2 452-462 18" OC	2160	1040	4520	2710	2331057
MP-PS H4-2 503-513 20" OC	2160	980	4520	2710	2331058
MP-PS H4-2 605-615 24" OC	2160	880	4520	2710	2331059

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values



Allowable Loading (ASD) ^{1,3,4}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS H4-2 217-227 8" OC	4780	3550	8470	4410	2331051
MP-PS H4-2 244-254 OC	4780	3380	8470	4410	2331052
MP-PS H4-2 267-277 10" OC	4780	3270	8470	4410	2331053
MP-PS H4-2 318-328 12" OC	4780	3040	8470	4410	2331054
MP-PS H4-2 350-360 14" OC	4780	2910	8470	4410	2331055
MP-PS H4-2 401-411 16" OC	4780	2730	8470	4410	2331056
MP-PS H4-2 452-462 18" OC	4780	2570	8470	4410	2331057
MP-PS H4-2 503-513 20" OC	4780	2420	8470	4410	2331058
MP-PS H4-2 605-615 24" OC	4780	2180	8470	4410	2331059

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

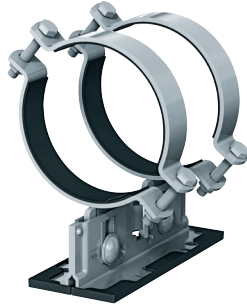
Limit State Design (LSD) ^{1,3}

Order Designation	+/-Fx [lb]	+/-Fy [lb]	+ Fz ² [lb]	-Fz ² [lb]	Item number
MP-PS H4-2 217-227 8" OC	5880	4360	10370	5450	2331051
MP-PS H4-2 244-254 OC	5880	4150	10370	5450	2331052
MP-PS H4-2 267-277 10" OC	5880	4010	10370	5450	2331053
MP-PS H4-2 318-328 12" OC	5880	3730	10370	5450	2331054
MP-PS H4-2 350-360 14" OC	5880	3570	10370	5450	2331055
MP-PS H4-2 401-411 16" OC	5880	3350	10370	5450	2331056
MP-PS H4-2 452-462 18" OC	5880	3150	10370	5450	2331057
MP-PS H4-2 503-513 20" OC	5880	2970	10370	5450	2331058
MP-PS H4-2 605-615 24" OC	5880	2670	10370	5450	2331059

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the +/-Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

EPDM-INSULATING BAND MP-A I-R

For adding galvanic separation and mild acoustic isolation to MP-PS pipe shoes.



APPLICATIONS

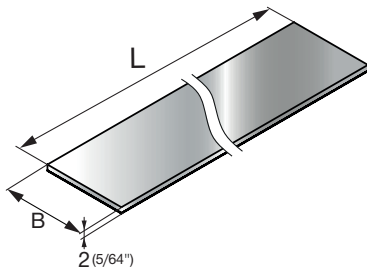
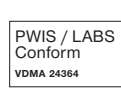
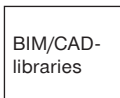
- Creating temperature separation between pipes and pipe clamps to reduce temperature transfer to sub-structure
- Creating surface separation between pipes and pipe clamps to prevent direct contact between different materials

ADVANTAGES

- Galvanic separation — helps prevent direct contact between pipe clamp and pipe (helping to avoid acoustic bridging)
- Adaptable — suitable for all MP-PS pipe shoes due to the clamping range of the pipe clamps (no specific clamp diameter required)

Product Information

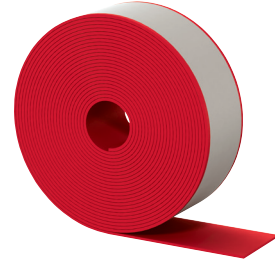
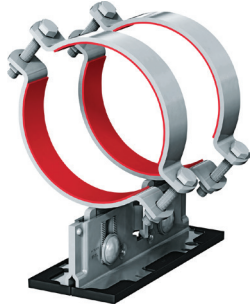
Material composition	EPDM + self-adhesive layer + release liner
Material composition details	<ul style="list-style-type: none"> • EPDM (ASTM D2240) • Shore A 66° ± 75° • Tensile strength min. 0.73 ksi (5 MPa)
Friction coefficient (steel pipe vs. inlay)	<ul style="list-style-type: none"> • Static: min. 0.3 • Kinetic: min. 0.3
Environmental conditions	Outdoor, low to moderate pollution (C3)
Temperature resistance (based on EN13480-3)	-4 °F to 212 °F (-20 °C to 100 °C)
Fire resistance (Yes/No)	No



Order Designation	Cross Section Width	Thickness	Length	Fits to MP-PS pipe shoes (nominal sizes)	Using one size wider inlay fits to MP-PS pipe shoes	Sales qty	Item number
MP-A I-R 30/2/5	1.18 in (30 mm)	0.08 in (2 mm)	16.40 ft (5 m)	1/2" - 1-1/2"	-	1 pcs	2331060
MP-A I-R 40/2/10	1.57 in (40 mm)	0.08 in (2 mm)	32.80 ft (10 m)	2" - 6"	1/2" - 1-1/2"	1 pcs	2331061
MP-A I-R 50/2/26	1.97 in (50 mm)	0.08 in (2 mm)	85.30 ft (26 m)	7" - 12"	2" - 6"	1 pcs	2331062
MP-A I-R 60/2/26	2.36 in (60 mm)	0.08 in (2 mm)	85.30 ft (26 m)	14" - 24"	7" - 12"	1 pcs	2331063

SILIKON-INSULATING BAND MP-A I-S

For adding galvanic separation and mild acoustic isolation to MP-PS pipe shoes.

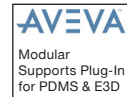
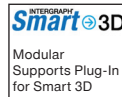
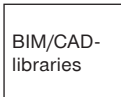


APPLICATIONS

- Creating temperature separation between pipes and pipe clamps to reduce temperature transfer to sub-structure
- Creating surface separation between pipes and pipe clamps to prevent direct contact between different materials

ADVANTAGES

- Galvanic separation — helps prevent direct contact between pipe clamp and pipe (helping to avoid acoustic bridging)
- Adaptable — suitable for all MP-PS pipe shoes due to the clamping range of the pipe clamps (no specific clamp diameter required)



Product Information

Material composition

Silikon
+ self-adhesive layer
+ release liner

Material composition details

- Silikon — elastosil R 401/60 S
- Shore A 60 \pm 5°
- Density 71.79 lb/ft³ (1150 kg/m³)
- Tensile strength 1.60 ksi (11 MPa)

Friction coefficient (steel pipe vs. inlay)

- Static: min. 0.3
- Kinetic: min. 0.3

Environmental conditions

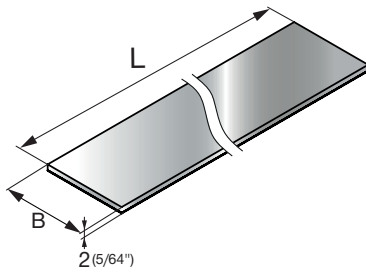
Outdoor, low to moderate pollution (C3)

Temperature resistance (based on EN13480-3)

4 °F to 410 °F (-20 °C to 210 °C)

Fire resistance (Yes/No)

No



Order Designation	Cross Section Width	Thickness	Length	Fits to MP-PS pipe shoes (nominal sizes)	Using one size wider inlay fits to MP-PS pipe shoes	Sales qty	Item number
MP-A I-S 30/2/5	1.18 in (30 mm)	0.08 in (2 mm)	16.40 ft (5 m)	1/2" - 1 1/2"	-	1 pcs	2331064
MP-A I-S 40/2/10	1.57 in (40 mm)	0.08 in (2 mm)	32.80 ft (10 m)	2" - 6"	1/2" - 1 1/2"	1 pcs	2331065
MP-A I-S 50/2/26	1.97 in (50 mm)	0.08 in (2 mm)	85.30 ft (26 m)	7" - 12"	2" - 6"	1 pcs	2331066
MP-A I-S 60/2/26	2.36 in (60 mm)	0.08 in (2 mm)	85.30 ft (26 m)	14" - 24"	7" - 12"	1 pcs	2331067

GLASS FIBER-INSULATING BAND MP-A I-GF

For adding galvanic separation to MP-PS pipe shoes.



APPLICATIONS

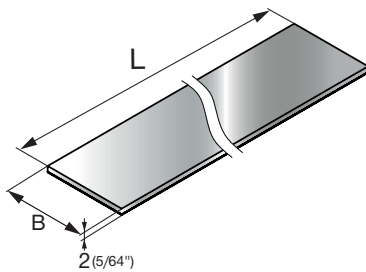
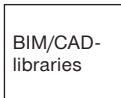
- Creating temperature separation between pipes and pipe clamps to reduce temperature transfer to sub-structure
- Creating surface separation between pipes and pipe clamps to prevent direct contact between different materials

ADVANTAGES

- Galvanic separation — helps prevent direct contact between pipe clamp and pipe (helping to avoid acoustic bridging)
- Adaptable — suitable for all MP-PS pipe shoes due to the clamping range of the pipe clamps (no specific clamp diameter required)

Product Information

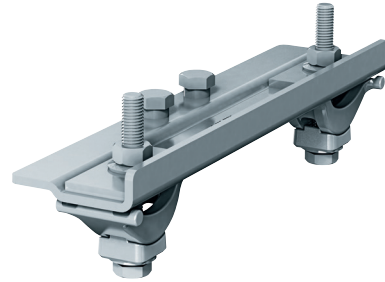
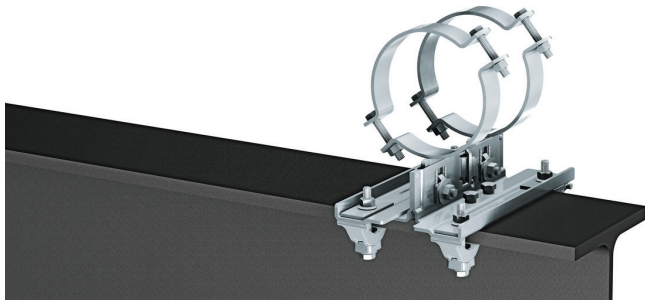
Material composition	Texturized E-Glass fiber + self-adhesive layer + release liner
Material composition details	<ul style="list-style-type: none"> • Glass used E type • Fiber diameter 9 µm
Friction coefficient (steel pipe vs. inlay)	-
Environmental conditions	Outdoor, low to moderate pollution (C3)
Temperature resistance (based on EN13480-3)	-4 °F to 932 °F (-20 °C to 500 °C)
Fire resistance (Yes/No)	No



Order Designation	Cross Section Width	Thickness	Length	Fits to MP-PS pipe shoes (nominal sizes)	Using one size wider inlay fits to MP-PS pipe shoes	Sales qty	Item number
MP-A I-GF 30/2/5	1.18 in (30 mm)	0.08 in (2 mm)	16.40 ft (5 m)	1/2" - 1-1/2"	-	1 pcs	2331068
MP-A I-GF 40/2/5	1.57 in (40 mm)	0.08 in (2 mm)	16.40 ft (5 m)	2" - 6"	1/2" - 1-1/2"	1 pcs	2331069
MP-A I-GF 50/2/25	1.97 in (50 mm)	0.08 in (2 mm)	82 ft (25 m)	7" - 12"	2" - 6"	1 pcs	2331070
MP-A I-GF 60/2/25	2.36 in (60 mm)	0.08 in (2 mm)	82 ft (25 m)	14" - 24"	7" - 12"	1 pcs	2331071

BEAM FIXPOINT CONNECTOR MP-PS IFG

Beam connectors for attaching MP-PS pipe shoes to steel beams



APPLICATIONS

- Fastening MP-PS pipe shoes used as fixpoint to steel beams
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- Simpler installation — easier-to-adjust and retrofit method for mounting pipe shoes to steel beams
- Safer jobsites — clamping function to avoid welding and drilling
- Part of the MP pipe shoe system — an adjustable solution for virtually any relevant steel beam width
- Load data available for pipe shoe components (see applicable pages in this document).



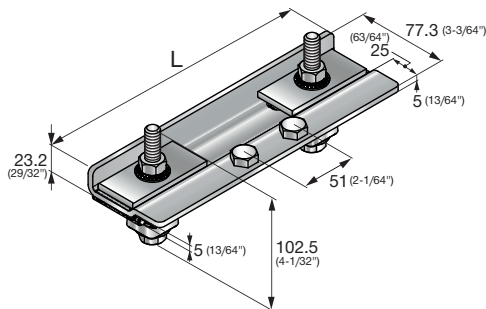
Hilti
FixPoint
Calculator

BIM/CAD-
libraries



AVEVA
Modular
Supports Plug-In
for PDMS & E3D

PWIS / LABS
Conform
VDMA 24364



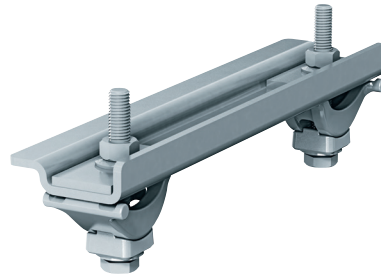
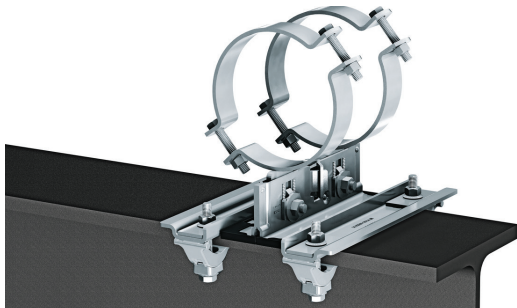
Product Information

Surface finish	<ul style="list-style-type: none"> • Beam clamps and rectangular washer: DIN EN ISO 1461, • Baseplate: ZM300, • Bolts/Nuts: ISO 10684, • Retaining washers: ISO 10683 • Cylindrical washer: Stainless steel
Material thickness	All sheet metal parts: 0.20 in (5 mm)
Hot-dip galvanized	Yes
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)
Base material type	Steel
Steel beam thickness	0.125 to 1.42 in (3 to 36 mm)
Steel beam thickness min. mm/inch	0.125 in (3 mm)
Steel beam thickness max. mm/inch	1.42 in (36 mm)
Wrench size	19 mm
Temperature resistance (based on EN13480-3)	-4 °F to 572 °F (-20 °C to 300 °C)
Fire resistance (Yes/No)	No

Order Designation	L	Min I-Beam Width	Max I-Beam Width	Weight	Clamping Screw	Sales qty	Item number
MP-PS IFG 80/160 OC	10.24 in (260 mm)	3.15 in (80 mm)	6.30 in (160 mm)	4.23 lb (1.92 kg)	M12x95	4 pcs	2331072
MP-PS IFG 160/230 OC	12.99 in (330 mm)	6.30 in (160 mm)	9.06 in (230 mm)	4.92 lb (2.23 kg)	M12x95	4 pcs	2331073
MP-PS IFG 230/300 OC	15.75 in (400 mm)	9.06 in (230 mm)	11.81 in (300 mm)	5.49 lb (2.49 kg)	M12x95	4 pcs	2331074

BEAM SLIDING CONNECTOR GAUGE MP-PS ISG

Beam connectors for attaching MP-PS pipe shoes to steel beams

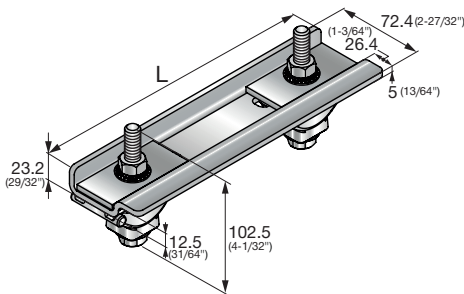


APPLICATIONS

- Fastening MP-PS pipe shoes used as slide or guide to steel beams
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

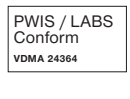
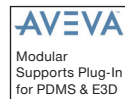
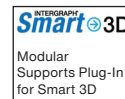
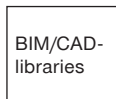
ADVANTAGES

- Simpler installation — easier-to-adjust and retrofit method for mounting pipe shoes to steel beams
- Safer jobsites — clamping function to avoid welding and drilling
- Part of the MP pipe shoe system — an adjustable solution for virtually any relevant steel beam width
- Slim design — allows better access whenever insulation for hot piping needs to be wrapped around pipe shoe
- Suitable for stand-up, suspended and horizontal or vertical mounting against I-beam columns
- Load data available for pipe shoe components (see applicable pages in this document).



Product Information

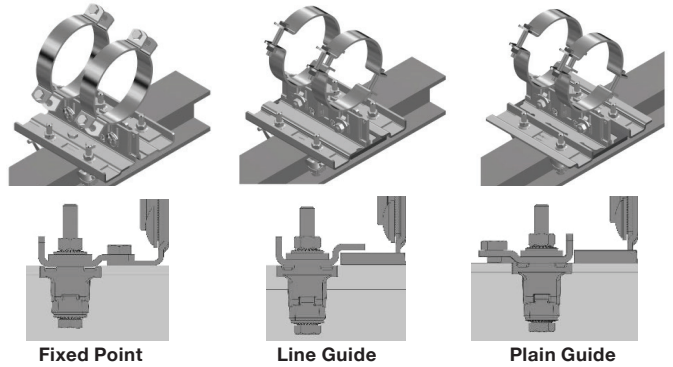
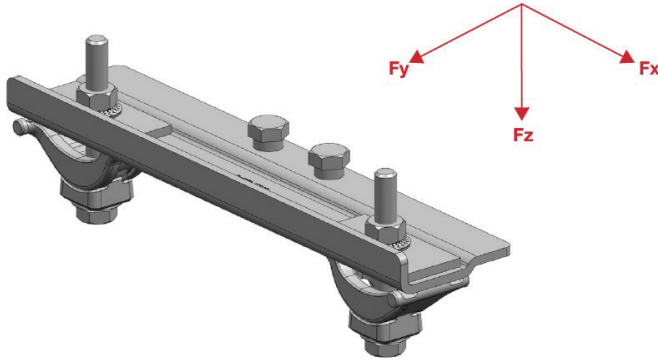
Surface finish	<ul style="list-style-type: none"> • Beam clamps and rectangular washer: DIN EN ISO 1461, • Baseplate: ZM300, • Bolts/Nuts: ISO 10684, • Retaining washers: ISO 10683
Material thickness	All sheet metal parts: 0.20 in (5 mm)
Hot-dip galvanized	Yes
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)
Base material type	Steel
Steel beam thickness	0.125 - 1.42 in (3 - 36 mm)
Steel beam thickness min. mm/inch	0.125 in (3 mm)
Steel beam thickness max. mm/inch	1.42 in (36 mm)
Wrench size	19 mm
Temperature resistance (based on EN13480-3)	-4 °F to 572 °F (-20 °C to 300 °C)
Fire resistance (Yes/No)	No



Order Designation	L	Min I-Beam Width	Max I-Beam Width	Weight	Clamping Screw	Sales qty	Item number
MP-PS ISG 80/160 OC	10.24 in (260 mm)	3.15 in (80 mm)	6.30 in (160 mm)	4.23 lb (1.92 kg)	M12x95	4 pcs	2343972
MP-PS ISG 160/230 OC	12.99 in (330 mm)	6.30 in (160 mm)	9.06 in (230 mm)	4.81 lb (2.18 kg)	M12x95	4 pcs	2343973
MP-PS ISG 230/300 OC	15.75 in (400 mm)	9.06 in (230 mm)	11.81 in (300 mm)	5.38 lb (2.44 kg)	M12x95	4 pcs	2343974

MP-PS IFG OC / MP-PS ISG OC TECHNICAL DATA

Design loading capacity – 3D



Allowable Loading (ASD) per MSS-SP58 1,2,3

Connected Pipe Shoe	Configuration	+/- Fx [lb]	+/- Fy [lb]	+/- Fy [lb]	-Fz [lb]
		IFG Fix Point	IFG / ISG Plain Guide	IFG Fix Point / ISG Line Guide	IFG Fix Point / ISG Line Guide
MP-PS 1-1 (L/M/H) MP-PS 2-2 (L/M/H)	2 Brackets	1020	450	2770 / H _{Center}	1420
MP-PS 4-2 (L/M/H)	2 Brackets	1020	450	7080 / H _{Center}	1420
	4 Brackets	2040	-	10600 / H _{Center}	2840

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) 1,3,4

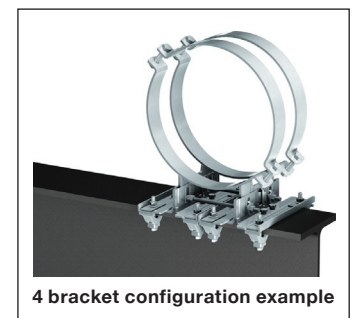
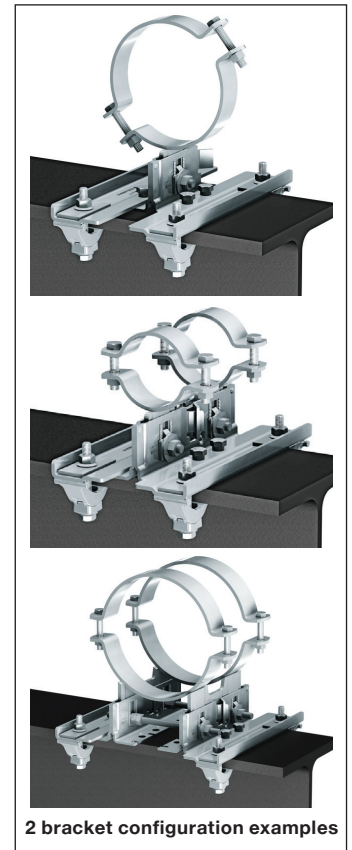
Connected Pipe Shoe	Configuration	+/- Fx [lb]	+/- Fy [lb]	+/- Fy [lb]	-Fz ² [lb]
		IFG Fix Point	IFG / ISG Plain Guide	IFG Fix Point / ISG Line Guide	IFG Fix Point / ISG Line Guide
MP-PS 1-1 (L/M/H) MP-PS 2-2 (L/M/H)	2 Brackets	2390	940	5910 / H _{Center}	2390
MP-PS 4-2 (L/M/H)	2 Brackets	2390	940	15100 / H _{Center}	2390
	4 Brackets	4780	-	22620 / H _{Center}	4780

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

Limit State Design (LSD) 1,3

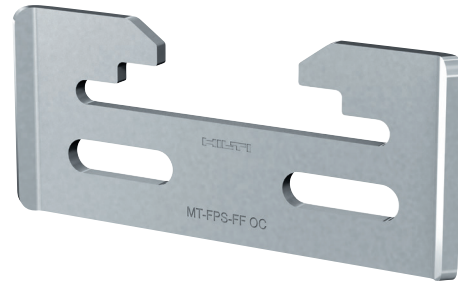
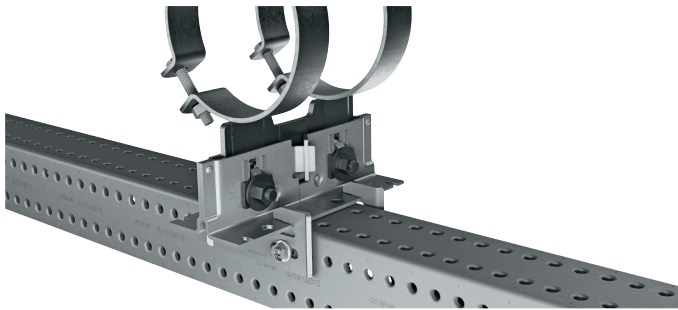
Connected Pipe Shoe	Configuration	+/- Fx [lb]	+/- Fy [lb]	+/- Fy [lb]	-Fz ² [lb]
		IFG Fix Point	IFG / ISG Plain Guide	IFG Fix Point / ISG Line Guide	IFG Fix Point / ISG Line Guide
MP-PS 1-1 (L/M/H) MP-PS 2-2 (L/M/H)	2 Brackets	2920	1150	7310 H _{Center}	2940
MP-PS 4-2 (L/M/H)	2 Brackets	2920	1150	18680 / H _{Center}	2940
	4 Brackets	5840	-	27980 / H _{Center}	5880

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values



FIXPOINT CONNECTOR MT-FPS-FF

Outdoor coated (OC) bracket for fastening MP-PS pipe shoes to Hilti MT modular girders as fixpoint in mildly corrosive environments.



APPLICATIONS

- Installing fixed points with MP-PS pipe shoes on Hilti MT modular girders
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- One-step installation — quicker and easier fastening using Hilti MT thread-forming bolts
- Simpler method — suitable for all double pipe clamp pipe shoes in combination with all available MT modular girders
- Safer jobsites — avoid welding and drilling
- Easier to install — slotted anchor holes to simplify pipe shoe positioning and fastening
- Load data available for pipe shoe components (see applicable pages in this document).

Product Information

Surface finish	Zinc-Magnesium coating
Material thickness	0.20 in (5 mm)
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)

PROFIS
software

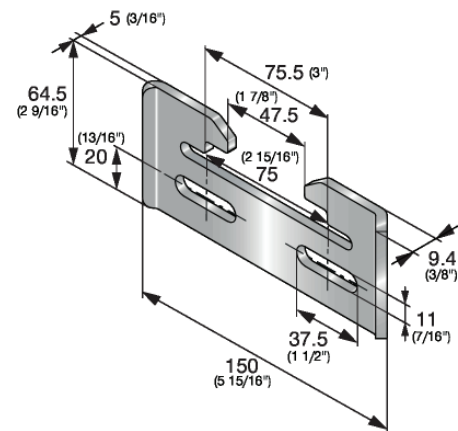
Hilti
FixPoint
Calculator

BIM/CAD-
libraries

EXTENSIFY
Smart 3D
Modular
Supports Plug-In
for Smart 3D

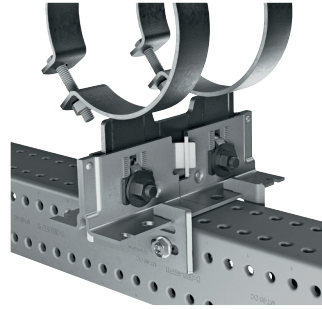
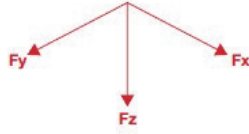
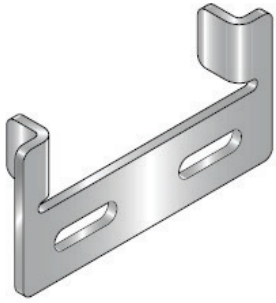
AVEVA
Modular
Supports Plug-In
for PDMS & E3D

PWIS / LABS
Conform
VDMA 24364



Order Designation	Height	Length	Material thickness	Modular girders type	Weight	Sales qty	Item number
MT-FPS-FF OC	2.54 in (64.5 mm)	5.91 in (150 mm)	0.20 in (5 mm)	MT 70/80/90/100	0.60 lb (0.27 kg)	8 pcs	2331076

MT-FPS-FF OC TECHNICAL DATA



- **2 brackets** = FF connector each side of supporting MT member for 1-1 and 2-2 configurations as shown
- **4 brackets** = FF connector each side of supporting MT member for each base element of 4-2 configuration (not shown)

Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz [lb]
2 Brackets	1420	1400 / H _{Center}	1130
4 Brackets	2840	5360 / H _{Center}	2260

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MiSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz ² [lb]
2 Brackets	3220	3150 / H _{Center}	1870
4 Brackets	6440	12060 / H _{Center}	3740

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

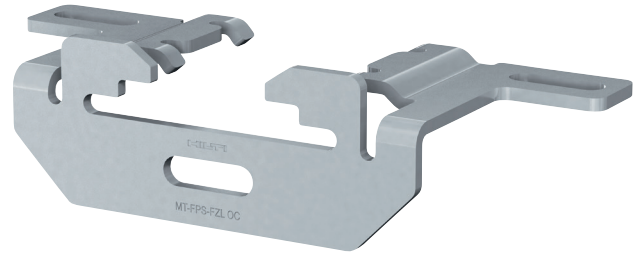
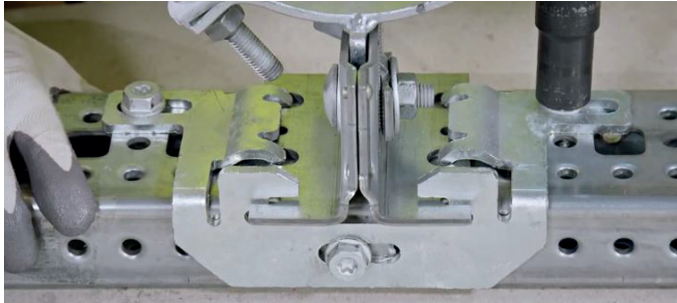
Limit State Design (LSD) ^{1,3}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz ² [lb]
2 Brackets	3970	3880 / H _{Center}	2310
4 Brackets	7940	14850 / H _{Center}	4320

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

FIXPOINT CONNECTOR MT-FPS-FZL

Outdoor coated (OC) bracket for fastening MP-PS pipe shoes to Hilti MT modular girders as fixpoint in mildly corrosive environments.



APPLICATIONS

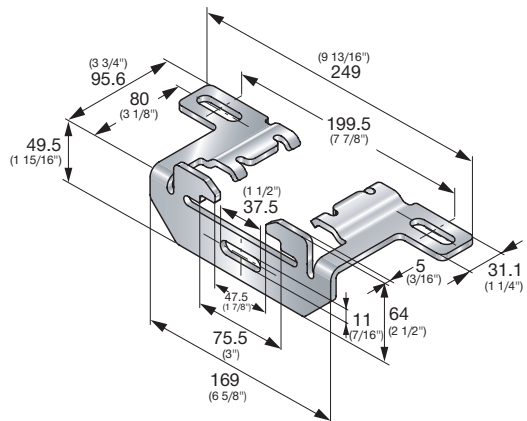
- Installing fixed points with MP-PS pipe shoes on Hilti MT modular girders
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- One-step installation — easier and quick fastening using Hilti MT thread-forming bolts
- Simpler method — suitable for single pipe clamp pipe shoes in combination with 100 or 150mm wide MT modular girders
- Safer jobsites — avoid welding and drilling
- Easier to install — slotted anchor holes to simplify pipe shoe positioning and fastening
- Load data available for pipe shoe components (see applicable pages in this document).

Product Information

Surface finish	Hot-dip galvanized, 55 µm - DIN EN ISO 1461
Material thickness	0.20 in (5 mm)
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)



PROFIS
software

Hilti
FixPoint
Calculator

BIM/CAD-
libraries

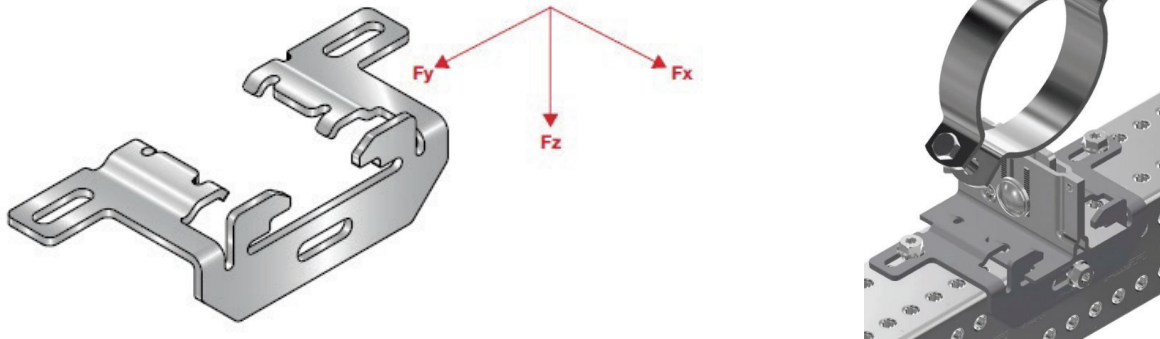
INTERGRAPH
Smart 3D
Modular
Supports Plug-In
for Smart 3D

AVEVA
Modular
Supports Plug-In
for PDMS & E3D

PWIS / LABS
Conform
VDMA 24364

Order Designation	Height	Length	Material thickness	Modular girders type	Weight	Sales qty	Item number
MT-FPS-FZL OC	2.52 in (64 mm)	9.80 in (249 mm)	0.20 in (5 mm)	MT 80/90/100	1.32 lb (0.6 kg)	2 pcs	2331077

MT-FPS-FF OC TECHNICAL DATA



Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz [lb]
1 Bracket	1430	2310 / H _{Center}	700

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz ² [lb]
1 Bracket	3360	2310 / H _{Center}	1140

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,3}

Configuration	+/-Fx [lb]	+/-Fy [lb]	-Fz ² [lb]
1 Bracket	4150	3470 / H _{Center}	1400

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE GUIDE MT-FPS-S

Adjustable sliding bracket for fastening MP-PS pipe shoes to Hilti MT modular girders.



APPLICATIONS

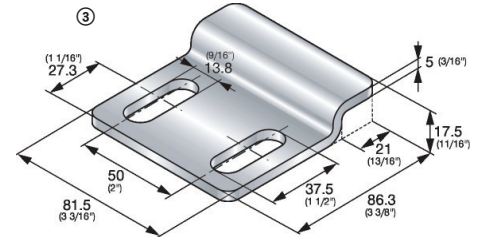
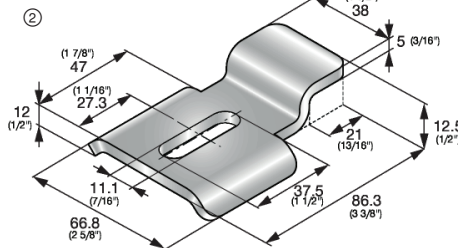
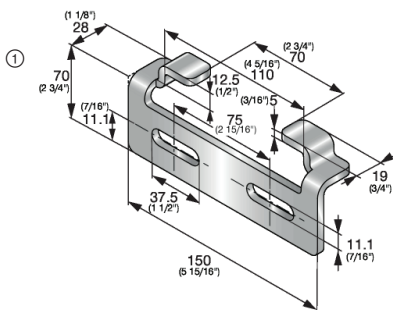
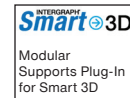
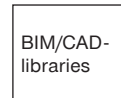
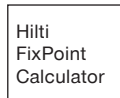
- Fastening MP-PS pipe shoes to MT girders restricting the movement to an axial sliding
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- Easier to install — slotted anchor holes to simplify pipe shoe positioning and fastening
- Adaptable — suitable for any size and configuration of Hilti MP pipe shoe
- Safer jobsites — avoid welding and drilling
- One-step installation — quicker and easier fastening by using Hilti MT thread-forming bolts
- Load data available for pipe shoe components (see applicable pages in this document)

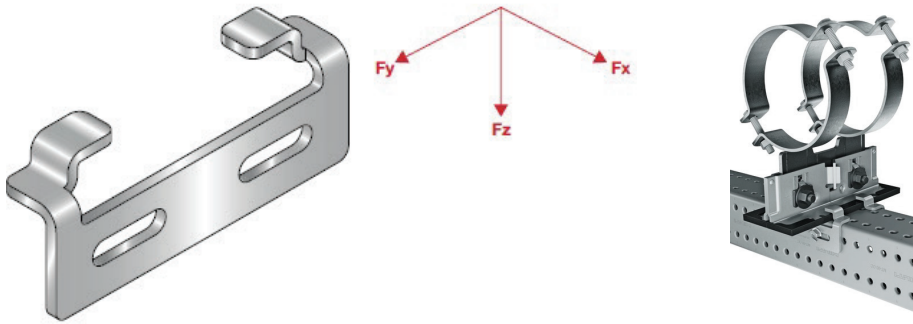
Product Information

Surface finish	Zinc-Magnesium coating
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)



Order Designation	Height	Length	Material thickness	Modular girders type	Weight	Sales qty	Item number
MT-FPS-SF OC ①	3.25 in (82.5 mm)	5.91 in (150 mm)	0.20 in (5 mm)	MT 70/80/90/100, MT-U-GL1	0.60 lb (0.27 kg)	8 pcs	2330920
MT-FPS-SZ1 OC ②	0.69 in (17.5 mm)	3.39 in (86 mm)	0.20 in (5 mm)	MT 70/80	0.40 lb (0.18 kg)	12 pcs	2331078
MT-FPS-SZ2 OC ③	0.69 in (17.5 mm)	3.39 in (86 mm)	0.20 in (5 mm)	MT 80/90/100,	0.57 lb (0.26 kg)	10 pcs	2331079

MT-FPS-SF OC TECHNICAL DATA



- **2 brackets** = SF connector each side of supporting MT member for 1-1 and 2-2 configurations as shown
- **4 brackets** = SF connector each side of supporting MT member for each base element of 4-2 configuration (not shown)

 Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/- Fy [lb]	- Fz [lb]
2 Brackets	850 / H _{Center}	490
4 Brackets	3250 / H _{Center}	980

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

 Allowable Loading (ASD) ^{1,3,4}

Configuration	+/- Fy [lb]	- Fz ² [lb]
2 Brackets	1970 / H _{Center}	800
4 Brackets	7540 / H _{Center}	1600

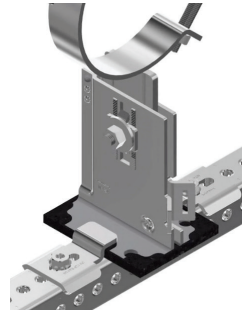
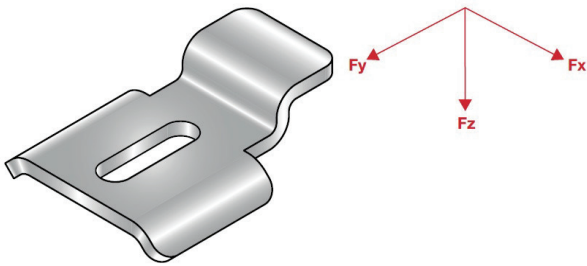
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

 Limit State Design (LSD) ^{1,3}

Configuration	+/- Fy [lb]	- Fz ² [lb]
2 Brackets	2420 / H _{Center}	990
4 Brackets	9260 / H _{Center}	1980

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

MT-FPS-SF OC TECHNICAL DATA



- **2 brackets** = SZ1 connector each side of base for 1-1 configuration as shown

Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/- Fy [lb]	-Fz [lb]
2 Brackets	360 / H _{Center}	980

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

Configuration	+/- Fy [lb]	-Fz ² [lb]
2 Brackets	1180 / H _{Center}	340

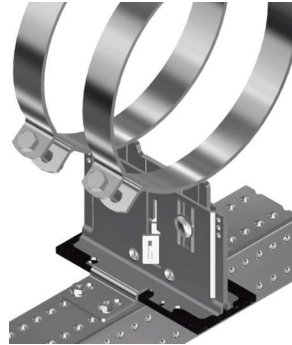
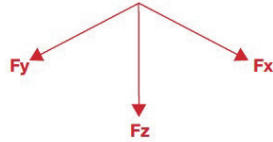
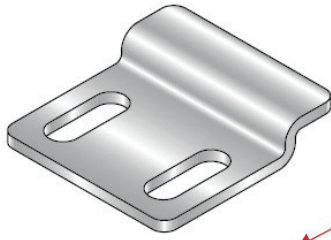
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert SD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,3}

Configuration	+/- Fy [lb]	-Fz ² [lb]
2 Brackets	1020 / H _{Center}	420

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

MT-FPS-SZ2 OC TECHNICAL DATA



- **2 brackets** = SZ2 connector each side of base for 1-1 and 2-2 configurations as shown
- **4 brackets** = SZ2 connector each outer side for each base element of 4-2 configuration (not shown)

Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/- Fy [lb]	- Fz [lb]
2 Brackets	520 / H _{Center}	290
4 Brackets	1330 / H _{Center}	290

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,3,4}

Configuration	+/- Fy [lb]	- Fz ² [lb]
2 Brackets	1180 / H _{Center}	490
4 Brackets	3010 / H _{Center}	490

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 4 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,3}

Configuration	+/- Fy [lb]	- Fz ² [lb]
2 Brackets	1450 / H _{Center}	600
4 Brackets	3700 / H _{Center}	600

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 An additional safety of 1.35 was applied to the Fz values due to unknown installation environments
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

PIPE SHOE GUIDE MT-FPS-G

Adjustable guiding bracket for fastening MP-PS pipe shoes to Hilti MT modular girders.



APPLICATIONS

- Fastening MP-PS pipe shoes to MT girders restricting the movement to axial sliding and vertical lifting
- Recommended for use in Indoor or Outdoor with low to moderate pollution (C3) or high pollution (C4)

ADVANTAGES

- Easier to install — slotted anchor holes to simplify pipe shoe positioning and fastening
- Adaptable — suitable for any size of Hilti MP pipe shoe in stand-up configuration
- Safer jobsites — avoid welding and drilling
- One-step installation — quicker and easier fastening by using Hilti MT thread-forming bolts
- Load data available for pipe shoe components (see applicable pages in this document).

Product Information

Surface finish	Zinc-Magnesium coating
Environmental conditions	Outdoor, low to moderate pollution (C3) or high pollution (C4)

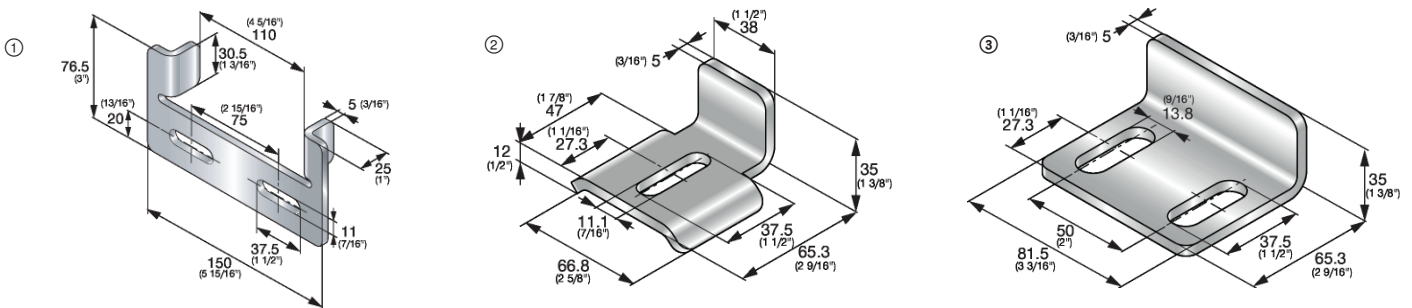
PWIS / LABS Conform
VDMA 24384

Hilti FixPoint Calculator

BIM/CAD-libraries

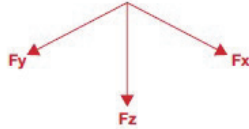
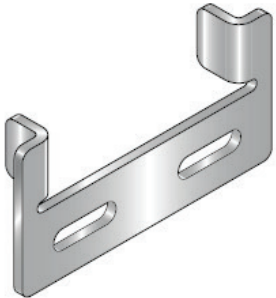
Modular Supports Plug-In for Smart 3D

Modular Supports Plug-In for PDMS & E3D



Order Designation	Height	Length	Material thickness	Modular girders type	Weight	Sales qty	Item number
MT-FPS-GF OC ①	3.01 in (76.5 mm)	5.91 in (150 mm)	0.20 in (5 mm)	MT 70/80/90/100, MT-U-GL1	0.66 lb (0.3 kg)	8 pcs	2330921
MT-FPS-GL1 OC ②	1.38 in (35 mm)	2.56 in (65 mm)	0.20 in (5 mm)	MT 70/80	0.40 lb (0.18 kg)	12 pcs	2331080
MT-FPS-GL2 OC ③	1.38 in (35 mm)	2.56 in (65 mm)	0.20 in (5 mm)	MT 80/90/100, MT-U-GL1	0.57 lb (0.26 kg)	10 pcs	2331081

MT-FPS-GF OC TECHNICAL DATA



- **2 brackets** = GF connector each side of supporting MT member for 1-1 and 2-2 configurations as shown
- **4 brackets** = GF connector each side of supporting MT member for each base element of 4-2 configuration (not shown)

Allowable Loading (ASD) per MSS-SP58 1,2,3

Configuration	+/- Fy [lb]
2 Brackets	360
4 Brackets	720

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) 1,2,3

Configuration	+/- Fy [lb]
2 Brackets	820
4 Brackets	1640

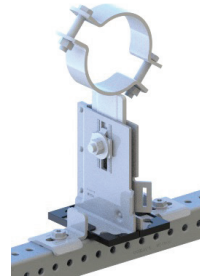
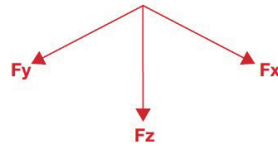
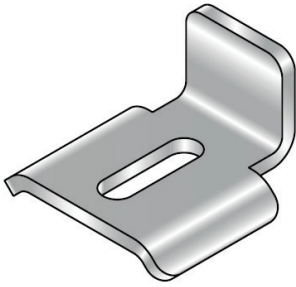
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 3 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

Limit State Design (LSD) 1,2

Configuration	+/- Fy [lb]
2 Brackets	1000
4 Brackets	2000

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

MT-FPS-GL1 OC TECHNICAL DATA



- **2 brackets** = GL1 connector each side of base for 1-1 configuration as shown

Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/- Fy [lb]
2 Brackets	350

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,2,3}

Configuration	+/- Fy [lb]
2 Brackets	760

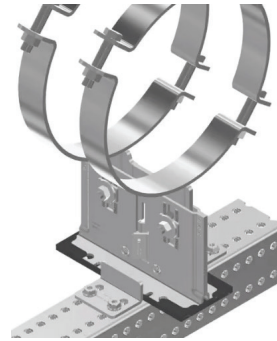
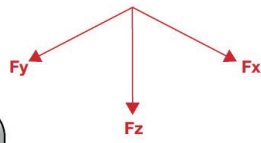
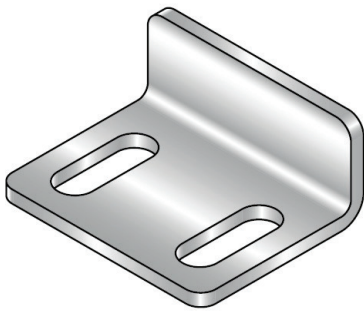
- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 3 Multiply tabulated values by 1.5 to convert AD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,2}

Configuration	+/- Fy [lb]
2 Brackets	930

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

MT-FPS-GL2 OC TECHNICAL DATA



- **2 brackets** = GL2 connector each side of base for 1-1 and 2-2 configurations as shown

Allowable Loading (ASD) per MSS-SP58 ^{1,2,3}

Configuration	+/- Fy [lb]
2 Brackets	490

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 MSS SP-58 values are based off the safety factors provided in the MSS SP-58
- 3 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values

Allowable Loading (ASD) ^{1,2,3}

Configuration	+/- Fy [lb]
2 Brackets	1080

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values
- 3 Multiply tabulated values by 1.5 to convert ASD values to Design Strength (LRFD)

Limit State Design (LSD) ^{1,2}

Configuration	+/- Fy [lb]
2 Brackets	1320

- 1 Tabulated directional values apply separately in each direction. A combination of loads must be considered separately, and an appropriate interaction equation must be used
- 2 Tabulated values as shown does not include or account for anchorage. Anchorage must be determined separately and may reduce the overall capacity from the tabulated values



In the US:

Hilti, Inc.
7250 Dallas Parkway, Suite 1000, Plano, TX 75024
Customer Service: 1-800-879-8000
en español: 1-800-879-5000
Fax: 1-800-879-7000

www.hilti.com

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In Canada:

Hilti (Canada) Corporation
2201 Bristol Circle
Oakville ON | L6H 0J8
Canada
Customer Service: 1-800-363-4458
Fax: 1-800-363-4459

www.hilti.ca



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The data contained in this literature was current as of the date of publication. Updates and changes may be made based on later testing. If verification is needed that the data is still current, please contact the Hilti Technical Support Specialists at 1-800-879-8000. All published load values contained in this literature represent the results of testing by Hilti or test organizations. Local base materials were used. Because of variations in materials, on-site testing is necessary to determine performance at any specific site. Laser beams represented by red lines in this publication. Printed in the United States.