ECO-FRIENDLY, GZRC, OXIDATION RESISTANT COATING

PIPE HANGERS | PIPE CLAMPS | PIPE SUPPORTS | VIBRATION ISOLATION
PIPE ACCESSORIES & ATTACHMENTS | SEISMIC BRACING SYSTEMS.

CLAMIX

- HVAC
- FIRE FIGHTING
- PLUMBING

ISO 14001 · UL · FM APPROVED · MSS

ISO 14001 is the internationally recognizel standard for enviromental management systems (EMS)

Testing and certification solutions by Underwriter Laboratories, USA for fire sprinkler pipes and fittings.

Factory Mutual (FM),
approval for the installation of sprinkler system.

MSS is to provide its members the means to develop engineering standard practices for the use and benefit of the industry and users of its products.

ABOUT CLAMIX PIPE HANGERS & SUPPORTS

ASCO (Al Sayed Center Co.) Saudi Arabia is proud to present our CLAMIX brand Pipe Hangers & Supports Systems catalog containing a complete and versatile line of pipe hangers, pipe support systems and related products. This selection concentrated and direct exposure to the piping industry, from the design engineer's selection to the piping contractor's installation. This is where needs are discovered and where products and services are genuinely tested. In this area, CLAMIX Pipe Hangers & Support Systems experiences are unequaled.

These products have been selected to effectively answer any pipe support issue in the plumbing, mechanical, HVAC and industrial fields. CLAMIX Pipe Hangers & Support Systems comprehensive line of quality products include pipe hangers, pre-insulated pipe supports, pipe guides, pipe clamps, pipe support chairs and stands, brackets, beam clamps, saddles, and accessories just to name a few.

All CLAMIX Pipe Hangers & Support Systems products are carefully manufactured to meet the highest standards in the industry, like a full-service fabricator with A.W.S.-D1.1 certified welders, a participating member of the Manufacturer's Standardization Society (MSS) and manufactures pipe hangers and supports in accordance with MSS Standard Practice SP-58. Many of CLAMIX Pipe Hangers & Support Systems products meet and exceed Factory Mutual Listings (FM), Underwriters Laboratory Listings (UL), and Federal Specification A-A-1192A, WW-H-171-E, MSS-SP69, MSS-SP58, ASTM, etc.

Our sales team will always provide you with impeccable service and will respond quickly to your product and service needs on both standard items and specialized fabrications.

All units in this catalog are inch-pound unless otherwise noted. Additional information provided at the end of this catalog can aid the user in types of finishes, estimating pipe support loads, the outer diameter of various types of pipes, determining pipe support spacing. determining rod size by pipe size, and determining thickness of sheet metal by gauge.

CLAMIX Pipe Hangers & Support Systems reserves the right to make specification changes without notice. While every effort has been made to assure the accuracy of information contained in this catalog at the time of publication, CLAMIX Pipe Hangers & Support Systems cannot accept responsibility for inaccuracies resulting from undetected errors or omissions.

ABOUT OUR MANUFACTURER

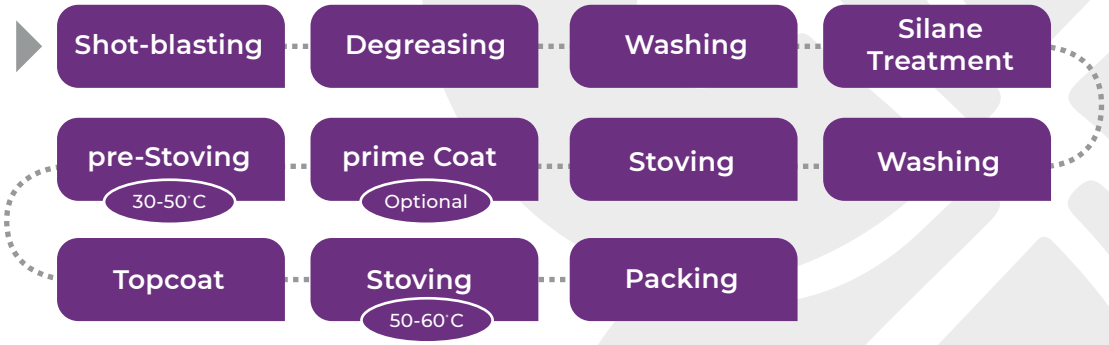
ASCO has established a strong relationship with our strategic partner-Ningbo Runner Industrial Corp. Manufacturing capability is very important for the whole pipe hangers and supports Systems. Our partner- Ningbo Runner has more than 40 years of manufacturing experience and is always dedicated to providing the finest quality products and services for world-class retailers and wholesaler-distributors.

Their products are exported to North America, Europe, the Middle East, Australia, and so on. Depending on solid capability in product design, mold fabrication, plastic injection, metal stamping, and electroplating, PVD, electro-deposition coating, and powder coating, our partner provides a wide range of building products, covering the plumbing HVAC, and hardware industry. For the pipe hangers and supports category, they mainly supply to the North American market. All the hangers and supports conform to the requested industry standards and have achieved most North America/USA approvals, such as FM, UL, MSS. Furthermore, they are widely applied to fire protection, HVAC, and plumbing industry.

As a qualified OEM/ODM pipe hanger manufacturer, our partner keeps concentrating on innovating new production processes, finding ways to improve existing products, creating new products for new markets, and responding more intelligently to customers' needs. They have successfully developed a Green Zinc Rich Composite (GZRC) finish for hangers and supports, in which way they offered an excellent alternative to the traditional zinc/copper plated and HDG hangers & support systems.

ABOUT GREEN ZINC RICH COMPOSITE FINISH

GZRC COATING PROCESS



Green Zinc Rich Composite is a finishing technology that makes use of epoxy resin, epoxy paint, and other organic components to form the protective coating on the parts through different coating technologies, powder-coating, Electrophoretic deposition, and painting.

Green Zinc Rich Composite technology provides the solutions for enhanced corrosion protection and eye-catching metallic luster required in the appliance, automotive, electrical fastener, HVAC, and other industry. Green Zinc Rich Composite finish provides a better level of protection because it acts as a protective barrier between metal pipe and hangers and prevents a Galvanic or Dissimilar Metal Reaction which causes rapid corrosion to piping systems and hangers. Therefore, the pipe hanger industry has recognized the superior performance of Green Zinc Rich Composite coating over traditional zinc plated or hot dip galvanized hangers.

CLAMIX Green Zinc Rich Composite finish hangers will be your preference by means of nice appearance, quality design, exclusive finish, excellent performance, and approval assurance whoever you are, architectural designers, consultants, engineers, contractors, or distributors.

Summary

- Green Zinc Rich Composite is found to be a superior finish; GZRC Hangers should be leading the market.
- Green Zinc Rich Composite hangers meet or exceed the related requirements, especially for Corrosion Resistance.
- Green Zinc Rich Composite hangers is featured with superior performance over HDG/copper & zinc plated finish.

GZRC FINISH SURFACE COMPARISON AFTER 240h OF 20% NATURAL SALT SPRAY TEST

GZRC FINISH SURFACE COMPARISON

Green Zine Rich Composite VS Hot-dip Galvanized

20% NATURAL SALT SPRAY TEST RESULTS TO COMPARE HDG V/S GZRC

Item	Hot-dip galvanized	Green Zine Rich Composite
Appearance	●	○
Tension brittleness	⊙	○
Salt Fog test	⊙	○
20%NSS	> 120H	> 240H
Complexity of technology	⊙	○
Energy Consumption	●	○
Costs	●	○
Environmental impact	○	○

● Negative ⊙ Moderate ○ Positive

GZRC FINISH TEST REPORT FOR 240h OF 20% NATURAL SALT SPRAY TEST

SGS

TEST REPORT

No. : NBMLP140400026
Date : Apr.03,2014
Page: 1 of 2

NINGBO RUNNER INDUSTRIAL CORPORATION
LINGANG INDUSTRIAL PARK, XIZHOU TOWN, XIANGSHAN, NINGBO, ZHEJIANG, CHINA

The test results were transferred from report No.: NBMLP140300114 report dated Apr.01,2014 issued by SGS Ningbo Branch.

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name	:	COATING PIPE CLAMP
Sample No.	:	NBMLP140300114
Material and Mark	:	GREEN GALVANIZED
Manufacturer	:	R&D DEPT
Test Required	:	Selected test(s) as requested by applicant
Date of Receipt	:	Mar.17,2014
Test Period	:	Mar.17,2014 to Apr.01,2014
Test result(s)	:	For further details, please refer to the following page(s)

******* To be continued********

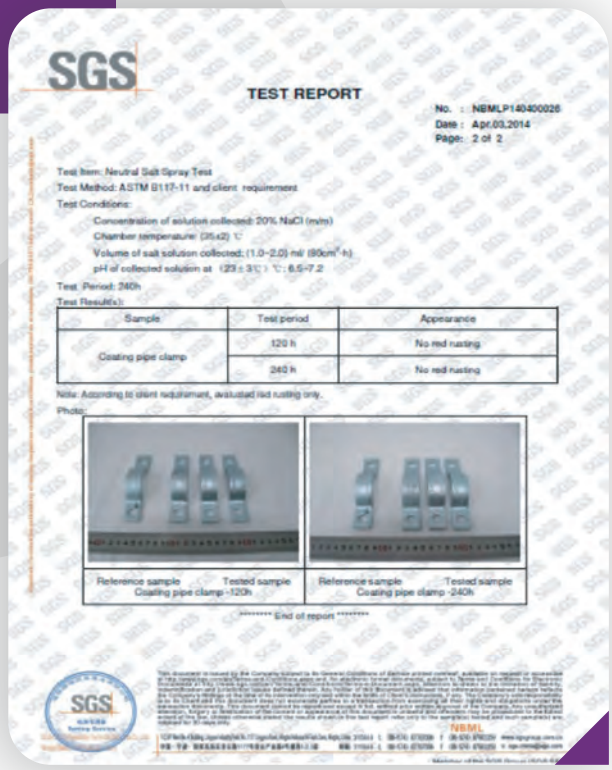
Signed for SGS-CSTC Standards Technical Services Co., Ltd

Dirk Yan
Section Supervisor

SGS

NBML

GZRC FINISH 240h OF 20% NATURAL SALT SPRAY TEST REPORT



SGS

TEST REPORT

No. : NBMLP140400026
Date : Apr.03,2014
Page: 2 of 2

Test Item: Neutral Salt Spray Test
Test Method: ASTM B117-11 and client requirement
Test Conditions:
Concentration of solution collected: 20% NaCl (m/m)
Chamber temperature: (35±2) ℃
Volume of salt solution collected: (1.0-2.0) ml/ (80cm² h)
pH of collected solution at (23 ± 3)℃ : 6.5-7.2
Test Period: 240h
Test Result(s):

Sample	Test period	Appearance
Coating pipe clamp	120 h	No red rusting
	240 h	No red rusting

Note: According to client requirement, evaluated red rusting only.

Photo:

Reference sample Coating pipe clamp -120h | Tested sample Coating pipe clamp -120h | Reference sample Coating pipe clamp -240h | Tested sample Coating pipe clamp -240h

******** End of report ********

SGS

NBML

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PIPE HANGERS

Pipe hangers offered in this section are designed to support insulated or non-insulated pipe allowing for vertical adjustment and limited movement in the piping system.

Materials:

Carbon steel is used in the manufacturing of pipe hangers.

Finishes:

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black, Electro-Galvanized Zinc (ASTM B633 SC3), Pre-Galvanized (ASTM A653 G90), Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Green Zinc Rich Composite, Plastic Coating, Copper Color Epoxy Painted and other special coatings are available upon request.

Note:

Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes i.e. Hot-Dip Galvanized, Green Zinc Rich Composite, PVC etc. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated.

Approvals (as noted):

Items in this section are Underwriters Laboratories Listed, Factory Mutual Approved, and comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

ADJUSTABLE CLEVIS HANGER

Material: Carbon Steel

Size Range: 1/2” thru 24”

Finish: Green Zinc Rich Composite/Electro Galvanized/HotDip Galvanized.

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-CL603

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	LBS	KG	IN	MM	IN	MM	IN	MM
1/2"	610	277	3/8	M10	2	51	1 1/2	37.6
3/4”	610	277	3/8	M10	2 2/7	58.4	1 2/3	42.3
1"	610	277	3/8	M10	2 3/4	70	2	50.5
1-1/4”	610	277	3/8	M10	3 1/3	84	2 1/3	59.9
1-1/2”	610	277	3/8	M10	4	100	2 7/8	72.9
2"	610	277	3/8	M10	4 1/2	114.3	3 1/5	81.2
2-1/2”	1130	513	1/2	M12	5 2/9	132.7	3 2/3	92.7
3"	1130	513	1/2	M12	6	152.6	4 1/9	104.4
3-1/2”	1130	513	1/2	M12	6 3/5	167.8	4 1/2	113.3
4"	1130	513	5/8	M16	7 5/9	192	5 1/8	130.4
5"	1430	649	5/8	M16	9 1/3	237.8	6 1/3	161.4
6"	1940	880	3/4	M20	10 5/7	272.3	7 1/8	181.2
8"	2000	907	3/4	M20	13 1/8	333.4	8 1/2	216.4
10"	3600	1633	7/8	M20	15 3/4	400	10	254.5
12"	3800	1724	7/8	M20	18 6/7	479.1	12 1/8	308.2
14"	4200	1905	1	M24	21 2/5	543.5	13 2/3	347.2
16"	4200	1905	1	M24	23 5/7	602.5	15	380.8
18"	4800	2177	1	M24	27 1/7	689.5	17 2/5	442.4
20"	4800	2177	1 1/4	M30	30	763.5	19 1/7	486
24"	4800	2177	1 1/4	M30	34 1/7	867.5	21 2/9	539.2

PVC COATED ADJUSTABLE CLEVIS HANGER

Material: Carbon Steel

Size Range: 1/2” thru 24”

Finish: Green Zinc Rich Composite/Electro Galvanized/HotDip Galvanized with PVC Coating at the bottom of hanger to prevent metal to metal contact between hanger and pipe for the protection of corrosion and noise reduction.

MODEL #CX-CCL034

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	LBS	KG	IN	MM	IN	MM	IN	MM
1/2"	610	277	3/8	M10	2	51	1 1/2	37.6
3/4”	610	277	3/8	M10	2 2/7	58.4	1 2/3	42.3
1"	610	277	3/8	M10	2 3/4	70	2	50.5
1-1/4”	610	277	3/8	M10	3 1/3	84	2 1/3	59.9
1-1/2”	610	277	3/8	M10	4	100	2 7/8	72.9
2"	610	277	3/8	M10	4 1/2	114.3	3 1/5	81.2
2-1/2”	1130	513	1/2	M12	5 2/9	132.7	3 2/3	92.7
3"	1130	513	1/2	M12	6	152.6	4 1/9	104.4
3-1/2”	1130	513	1/2	M12	6 3/5	167.8	4 1/2	113.3
4"	1130	513	5/8	M16	7 5/9	192	5 1/8	130.4
5"	1430	649	5/8	M16	9 1/3	237.8	6 1/3	161.4
6"	1940	880	3/4	M20	10 5/7	272.3	7 1/8	181.2
8"	2000	907	3/4	M20	13 1/8	333.4	8 1/2	216.4
10"	3600	1633	7/8	M20	15 3/4	400	10	254.5
12"	3800	1724	7/8	M20	18 6/7	479.1	12 1/8	308.2
14"	4200	1905	1	M24	21 2/5	543.5	13 2/3	347.2
16"	4200	1905	1	M24	23 5/7	602.5	15	380.8
18"	4800	2177	1	M24	27 1/7	689.5	17 2/5	442.4
20"	4800	2177	1 1/4	M30	30	763.5	19 1/7	486
24"	4800	2177	1 1/4	M30	34 1/7	867.5	21 2/9	539.2

COPPER COLOR EPOXY PLATED ADJUSTABLE CLEVIS HANGER

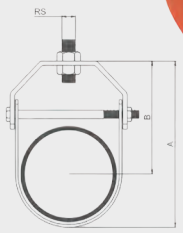
Material: Carbon Steel

Size Range: 1/2" thru 6"

Finish: Copper colored epoxy plated

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-CCL035



Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	LBS	KG	IN	MM	IN	MM	IN	MM
1/2"	150	68	3/8	M10	1 5/6	51	1 3/7	36
3/4"	250	113	3/8	M10	2	58.4	1 5/9	39
1"	250	113	3/8	M10	2 1/2	70	1 5/6	47
1-1/4"	250	113	3/8	M10	2 6/7	84	2	53
1-1/2"	250	113	3/8	M10	3 2/7	100	2 3/8	60
2"	250	113	3/8	M10	4 1/9	114.3	3	75
2-1/2"	350	159	1/2	M12	5 1/4	132.7	3 4/5	97
3"	350	159	1/2	M12	5 2/3	152.6	4	102
4"	400	181	1/2	M12	6 5/8	167.8	4 3/7	112
5"	550	249	1/2	M12	9 2/9	192	6 1/2	164
6"	550	249	5/8	M16	11 1/5	237.8	8	201

ADJUSTABLE SWIVEL RING HANGER

Material: Carbon Steel

Size Range: 1/2" thru 8"

Finish: Green Zinc Rich Composite/Electro Galvanized/HotDip Galvanized.

MODEL #CX-SW06

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2"	300	136	3/8	M10	2 5/6	72	1	25
3/4"	300	136	3/8	M10	3	78	1	25
1"	300	136	3/8	M10	3 3/8	86	1	25
1-1/4"	300	136	3/8	M10	3 5/7	94	1	25
1-1/2"	300	136	3/8	M10	4	99	1	25
2"	300	136	3/8	M10	4 2/7	109	1	25
2-1/2"	1000	454	3/8	M10	5 1/2	141	1 1/4	32
3"	1000	454	3/8	M10	6 3/8	162	1 1/4	32
3-1/2"	1000	454	3/8	M10	7	179	1 1/4	32
4"	1100	499	3/8	M10	7 2/3	195	1 5/16	33
5"	1100	499	1/2	M12	9	226	1 5/16	33
6"	1250	567	1/2	M12	10 1/2	267	1 9/16	40
8"	1250	567	1/2	M12	12 1/2	316	1 5/8	41

PVC COATED ADJUSTABLE SWIVEL RING HANGER

Material: Carbon Steel

Size Range: 1/2” thru 8”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized with PVC Coating at the bottom of hanger to prevent metal to metal contact between hanger and pipe for the protection of corrosion and noise reduction.

MODEL #CX-CSW067

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2”	300	136	3/8	M10	2 5/6	72	1	25
3/4”	300	136	3/8	M10	3	78	1	25
1"	300	136	3/8	M10	3 3/8	86	1	25
1-1/4”	300	136	3/8	M10	3 5/7	94	1	25
1-1/2”	300	136	3/8	M10	4	99	1	25
2"	300	136	3/8	M10	4 2/7	109	1	25
2-1/2”	1000	454	3/8	M10	5 1/2	141	1 1/4	32
3"	1000	454	3/8	M10	6 3/8	162	1 1/4	32
3-1/2”	1000	454	3/8	M10	7	179	1 1/4	32
4"	1100	499	3/8	M10	7 2/3	195	1 5/16	33
5"	1100	499	1/2	M12	9	226	1 5/16	33
6"	1250	567	1/2	M12	10 1/2	267	1 9/16	40
8"	1250	567	1/2	M12	12 1/2	316	1 5/8	41

COPPER COLOR EPOXY PLATED ADJUSTABLE SWIVEL RING HANGER

Material: Carbon Steel

Size Range: 1/2" thru 8"

Finish: Copper colored epoxy plated

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-CSW068

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2"	300	136	3/8	M10	2 5/6	72	1	25
3/4"	300	136	3/8	M10	3	78	1	25
1"	300	136	3/8	M10	3 3/8	86	1	25
1-1/4"	300	136	3/8	M10	3 5/7	94	1	25
1-1/2"	300	136	3/8	M10	4	99	1	25
2"	300	136	3/8	M10	4 2/7	109	1	25
2-1/2"	1000	454	3/8	M10	5 1/2	141	1 1/4	32
3"	1000	454	3/8	M10	6 3/8	162	1 1/4	32
3-1/2"	1000	454	3/8	M10	7	179	1 1/4	32
4"	1100	499	3/8	M10	7 2/3	195	1 5/16	33
5"	1100	499	1/2	M12	9	226	1 5/16	33
6"	1250	567	1/2	M12	10 1/2	267	1 9/16	40
8"	1250	567	1/2	M12	12 1/2	316	1 5/8	41

J-HANGER

Material: Carbon Steel

Size Range: 1/2" thru 8"

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized.

MODEL #CX-JH061

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2"	400	181	3/8	M10	2 7/8	73	9-16	14
3/4"	400	181	3/8	M10	3 1/2	88	9-16	14
1"	400	181	3/8	M10	3 5/7	94	9-16	14
1-1/4"	400	181	3/8	M10	4 4/9	113	9-16	14
1-1/2"	400	181	3/8	M10	4 1/2	115	9-16	14
2"	400	181	1/2	M10	5 1/4	133	9-16	14
2-1/2"	800	363	1/2	M12	6 1/7	156	11-16	17
3"	800	363	1/2	M12	7	178	11-16	17
4"	800	363	5/8	M16	8 4/7	218	13/16	21
5"	800	363	5/8	M16	9 2/5	239	13/16	21
6"	1000	454	3/4	M20	11 1/3	288	15/16	24
8"	1200	544	3/4	M20	14	357.2	1 1/16	27

PVC COATED J-HANGER

Material: Carbon Steel

Size Range: 1/2” thru 8”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized with PVC Coating at the bottom of hanger to prevent metal to metal contact between hanger and pipe for the protection of corrosion and noise reduction

MODEL #CX-JH062

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Rod Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2”	400	181	3/8	M10	2 7/8	73	9-16	14
3/4”	400	181	3/8	M10	3 1/2	88	9-16	14
1"	400	181	3/8	M10	3 5/7	94	9-16	14
1-1/4”	400	181	3/8	M10	4 4/9	113	9-16	14
1-1/2”	400	181	3/8	M10	4 1/2	115	9-16	14
2"	400	181	1/2	M10	5 1/4	133	9-16	14
2-1/2”	800	363	1/2	M12	6 1/7	156	11-16	17
3"	800	363	1/2	M12	7	178	11-16	17
4"	800	363	5/8	M16	8 4/7	218	13/16	21
5"	800	363	5/8	M16	9 2/5	239	13/16	21
6"	1000	454	3/4	M20	11 1/3	288	15/16	24
8"	1200	544	3/4	M20	14	357.2	1 1/16	27

SPLIT PIPE CLAMPS

Pipe clamps offered in this section are designed to support insulated or non-insulated pipe allowing for vertical adjustment and limited movement in the piping system.

Materials:

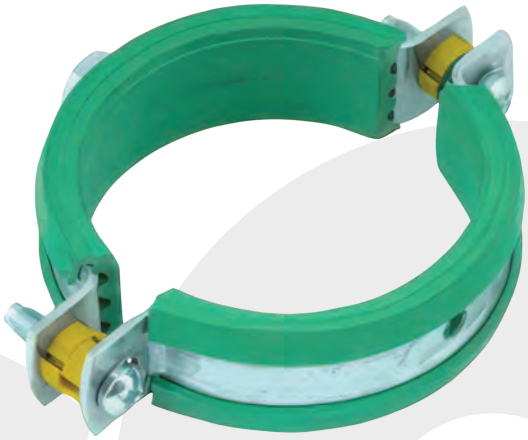
Carbon steel is used in the manufacturing of pipe clamps.

Finishes:

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black, Electro-Galvanized Zinc (ASTM B633 SC3), Pre-Galvanized (ASTM A653 G90), Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Green Zinc Rich Composite, Plastic Coating, Copper Color Epoxy Painted and other special coatings are available upon request.

Note:

Due to the design of some products, (threads, connecting hardware) items may or may not
be uniformly coated with special finishes i.e. Hot-Dip Galvanized, Green Zinc Rich Composite, PVC etc. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated.



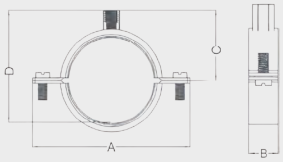
EPDM LINED SPLIT CLAMP

Material: Carbon Steel

Size Range: 1/4 ” thru 8’

Finish: Green Zinc Rich Composite/Electro Galvanized/HotDip Galvanized with EPDM Lining to prevent metal to metal contact between clamp and pipe for the protection of corrosion and noise reduction

MODEL #CX-SPCR08



Nominal Pipe Size			Max. Rec.Load		Rod Size	A		B		C		D	
IN	MM		IBS	KG	MM	IN	MM	IN	MM	IN	MM	IN	MM
3/8"	φ18	15-19	440	200	M8/M10	2 1/3"	60	4/5"	20	1"	26	1 3/7"	36
1/2"	φ22	20-25	440	200	M8/M10	2 5/9"	65	4/5"	20	1 1/7"	29	1 2/3"	43
3/4"	φ28	26-30	440	200	M8/M10	2 3/4"	70	4/5"	20	1 1/4"	32	2"	50
1"	φ35	32-36	440	200	M8/M10	2 1/3"	85	4/5"	20	1 3/7"	36	2 1/5"	56
1-1/4"	φ42	38-43	440	200	M8/M10	3 5/8"	92	4/5"	20	1 1/2"	39	2 1/2"	63
1-1/2"	φ48	47-51	440	200	M8/M10	3 6/7"	98	4/5"	20	1 2/3"	42	2 5/6"	72
-	φ54	53-58	440	200	M8/M10	4"	104	4/5"	20	1 7/9"	45	3"	75
2"	φ60	60-64	440	200	M8/M10	4 1/3"	110	4/5"	20	1 8/9"	48	3 1/5"	81
-	φ63	63-66	440	200	M8/M10	4 1/2"	115	4/5"	20	2"	51	3 1/2"	88
-	φ70	68-72	440	200	M8/M10	4 5/7"	120	4/5"	20	2"	53	3 4/7"	91
2-1/2"	φ75	75-80	440	200	M8/M10	5"	125	4/5"	20	2 1/5"	56	3 7/9"	96
-	φ83	81-86	440	200	M8/M10	5 1/2"	139	4/5"	20	2 1/3"	60	4 1/4"	108
3"	φ90	87-92	440	200	M8/M10	5 3/4"	146	4/5"	20	2 1/2"	63	4 3/8"	111
3-1/2"	φ100	99-105	440	200	M8/M10	6 1/7"	156	4/5"	20	2 2/3"	68	4 3/4"	121
-	φ110	109-112	440	200	M8/M10	6 1/2"	166	4/5"	20	2 7/8"	73	5 1/6"	131
4"	φ115	113-118	440	200	M8/M10	6 3/4"	171	4/5"	20	3"	76	5 1/3"	136
-	φ125	125-130	440	200	M8/M10	7 1/8"	181	4/5"	20	3 1/5"	81	5 3/4"	146
-	φ133	132-137	440	200	M8/M10	7 1/4"	184	4/5"	20	3 1/3"	85	6 1/9"	155
5"	φ140	138-142	660	299	M8/M10	7 5/7"	196	4/5"	20	3 1/2"	88	6 1/3"	161
-	φ150	148-152	660	299	M8/M10	8 1/9"	206	4/5"	20	3 2/3"	93	6 3/4"	171
-	φ160	159-166	660	299	M8/M10	8 1/2"	216	1"	25	3 6/7"	98	7 1/8"	181
6"	φ168	168-172	660	299	M8/M10	8 5/6"	224	1"	25	4"	102	7 4/9"	189
-	φ200	200-212	660	299	M8/M10	10"	256	1"	25	4 2/3"	118	8 5/7"	221
8"	φ220	215-220	660	299	M8/M10	10 6/7"	276	1"	25	5"	128	9 1/2"	241
-	φ250	248-252	660	299	M8/M10	12"	306	1"	25	5 5/8"	143	10 2/3"	271
-	φ315	313-318	660	299	M8/M10	14 3/5"	371	1"	25	7"	176	13 2/9"	336

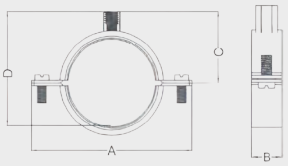
SPLIT CLAMP

Material: Carbon Steel

Size Range: 1/4” thru 8”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized.

MODEL #CX-SPC081



Nominal Pipe Size			Max. Rec.Load		Rod Size	A		B		C		D	
IN	MM		IBS	KG	MM	IN	MM	IN	MM	IN	MM	IN	MM
3/8"	φ18	15-19	440	200	M8/M10	2 1/3	59	-5Apr	20	1	23	1 1/6	30
1/2"	φ22	20-25	440	200	M8/M10	2 3/5	66	-5Apr	20	1	26	1 1/2	37
3/4"	φ28	26-30	440	200	M8/M10	2 5/6	72	-5Apr	20	1 1/7	29	1 2/3	43
1"	φ35	32-36	440	200	M8/M10	3 1/9	79	-5Apr	20	1 2/7	33	2	50
1-1/4"	φ42	38-43	440	200	M8/M10	3 2/5	86	-5Apr	20	1 3/7	36	2 1/4	57
1-1/2"	φ48	47-51	440	200	M8/M10	3 5/8	92	-5Apr	20	1 1/2	39	2 1/2	63
-	φ54	53-58	440	200	M8/M10	3 6/7	98	-5Apr	20	1 2/3	42	2 5/7	69
2"	φ60	60-64	440	200	M8/M10	4	104	-5Apr	20	1 7/9	45	3	75
-	φ63	63-66	440	200	M8/M10	4 1/4	108	-5Apr	20	1 6/7	47	2 5/6	72
-	φ70	68-72	440	200	M8/M10	4 1/2	114	-5Apr	20	2	50	3 1/3	85
2-1/2"	φ75	75-80	440	200	M8/M10	4 2/3	119	-5Apr	20	2	53	3 1/2	90
-	φ83	81-86	440	200	M8/M10	5	127	-5Apr	20	2 1/4	57	3 6/7	98
3"	φ80	87-92	440	200	M8/M10	5 2/7	134	-5Apr	20	2 1/3	60	4 1/7	105
3-1/2"	φ100	99-105	440	200	M8/M10	5 2/3	144	-5Apr	20	2 5/9	65	4 1/2	115
-	φ110	109-112	440	200	M8/M10	6 1/2	164	-5Apr	20	2 3/4	70	5	125
4"	φ115	113-118	440	200	M8/M10	6 1/4	159	-5Apr	20	2 7/8	73	5 1/8	130
-	φ125	125-130	440	200	M8/M10	6 2/3	169	-5Apr	20	3	78	5 1/2	140
-	φ133	132-137	440	200	M8/M10	7	177	-5Apr	20	3 2/9	82	5 5/6	148
5"	φ140	138-142	660	299	M8/M10	7 1/4	184	-5Apr	20	3 1/3	85	6 1/9	155
-	φ150	148-152	660	299	M8/M10	7 2/3	194	-5Apr	20	3 1/2	90	6 1/2	165
-	φ160	159-166	660	299	M8/M10	8	204	1	25	3 3/4	95	6 8/9	175
6"	φ168	168-172	660	299	M8/M10	8 1/3	212	1	25	3 8/9	99	7 1/5	183
-	φ200	200-212	660	299	M8/M10	9 3/5	244	1	25	4 1/2	115	8 1/2	215
8"	φ220	215-220	660	299	M8/M10	10 2/5	264	1	25	5	125	9 1/4	235
-	φ250	248-252	660	299	M8/M10	11 4/7	294	1	25	5 1/2	140	10 3/7	265
-	φ315	313-318	660	299	M8/M10	14 1/7	359	1	25	6 4/5	173	13	330

PIPE CLAMPS

Pipe clamps offered in this section are designed for support and attachment of pipe to structural members. A wide range of pipe clamps are available for various applications.

Materials:

Carbon Steel is used in the manufacturing of riser and pipe clamps. Stainless Steel and other materials are available.

Finishes:

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro Galvanized Zinc (ASTM B633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Plastic Coating, Green Zinc Rich Composite, and other special coatings are available upon request.

Note:

Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper Plated, or in Stainless Steel.

Recommended Torque (Pipe Clamp Hardware):

1/4"-20 6 ft/lbs (8 Nm)	5/16"-18 11 ft/lbs (19 Nm)	3/8"-16 19 ft/lbs (26 Nm)
1/2"-13 50 ft/lbs (68 Nm)	5/8"-11 65 ft/lbs (88 Nm)	3/4"-10 & larger 75 ft/lbs (101 Nm)

Approvals (as noted):

Items in this section are Underwriters Laboratories Listed, Factory Mutual Approved, and comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

All pipe hangers and supports in this section are sized to fit schedule 40/80 pipe unless otherwise noted. Some steel items may be specially fabricated to fit other pipe diameters i.e. ductile iron, cast iron, etc.

RISER CLAMP

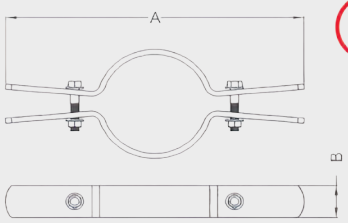
Material: Carbon Steel

Size Range: 1/2” thru 30”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized
UL Approved up to 8”

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-RI10



Nominal Pipe Size	Max. Rec.Load		Bolt Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2”	220	100	3/8	M10	8 1/2	215	1	25
3/4”	220	100	3/8	M10	9	228.5	1	25
1"	220	100	3/8	M10	9	229.5	1	25
1-1/4"	250	113	3/8	M10	9 1/2	240.5	1	25
1-1/2”	250	113	3/8	M10	9 7/8	251	1	25
2"	300	136	3/8	M10	10 2/7	261.6	1 1/6	30
2-1/2"	400	181	3/8	M10	11	281.3	1 1/6	30
3"	500	227	3/8	M10	11 3/4	298.5	1 1/6	30
4"	750	340	1/2	M12	13	328.6	1 1/2	38
5"	1500	680	1/2	M12	14 1/4	362	1 1/2	38
6"	1600	726	1/2	M12	15 1/2	393.7	2	50
8"	2500	1134	5/8	M16	18 1/4	463.5	2	50
10"	2500	1134	5/8	M16	20 1/8	511	2	50
12"	2700	1225	5/8	M16	22 1/3	568	2	50
14	2900	1315	5/8	M16	23 9/16	598.5	2	50
16	2900	1315	3/4	M20	26 3/8	669.9	2 1/2	62
18	2900	1315	3/4	M20	28 7/8	733.4	2 1/2	62
20	2900	1315	3/4	M20	30 7/8	784.2	2 1/2	62
24	2900	1315	3/4	M20	34 7/8	885.8	3	75
30	2900	1315	7/8	M22	40 3/4	1035.1	3	75

PVC COATED RISER CLAMP

Material: Carbon Steel

Size Range: 1/2” thru 30”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized with PVC Coating at the bottom of hanger to prevent metal to metal contact between hanger and pipe for the protection of corrosion and noise reduction

MODEL #CX-RI101

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Bolt Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2”	220	100	3/8	M10	8 1/2	215	1	25
3/4”	220	100	3/8	M10	9	228.5	1	25
1"	220	100	3/8	M10	9	229.5	1	25
1-1/4"	250	113	3/8	M10	9 1/2	240.5	1	25
1-1/2”	250	113	3/8	M10	9 7/8	251	1	25
2"	300	136	3/8	M10	10 2/7	261.6	1 1/6	30
2-1/2"	400	181	3/8	M10	11	281.3	1 1/6	30
3"	500	227	3/8	M10	11 3/4	298.5	1 1/6	30
4"	750	340	1/2	M12	13	328.6	1 1/2	38
5"	1500	680	1/2	M12	14 1/4	362	1 1/2	38
6"	1600	726	1/2	M12	15 1/2	393.7	2	50
8"	2500	1134	5/8	M16	18 1/4	463.5	2	50
10"	2500	1134	5/8	M16	20 1/8	511	2	50
12"	2700	1225	5/8	M16	22 1/3	568	2	50
14	2900	1315	5/8	M16	23 9/16	598.5	2	50
16	2900	1315	3/4	M20	26 3/8	669.9	2 1/2	62
18	2900	1315	3/4	M20	28 7/8	733.4	2 1/2	62
20	2900	1315	3/4	M20	30 7/8	784.2	2 1/2	62
24	2900	1315	3/4	M20	34 7/8	885.8	3	75
30	2900	1315	7/8	M22	40 3/4	1035.1	3	75

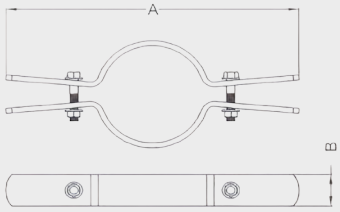
COPPER COLORED EPOXY PLATED RISER CLAMP

Material: Carbon Steel

Size Range: 1/2" thru 30"

Finish: Copper colored epoxy platedCop-per colored epoxy plated

MODEL #CX-RI102



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec.Load		Bolt Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1/2"	220	100	3/8	M10	8 1/2	215	1	25
3/4"	220	100	3/8	M10	9	228.5	1	25
1"	220	100	3/8	M10	9	229.5	1	25
1-1/4"	250	113	3/8	M10	9 1/2	240.5	1	25
1-1/2"	250	113	3/8	M10	9 7/8	251	1	25
2"	300	136	3/8	M10	10 2/7	261.6	1 1/6	30
2-1/2"	400	181	3/8	M10	11	281.3	1 1/6	30
3"	500	227	3/8	M10	11 3/4	298.5	1 1/6	30
4"	750	340	1/2	M12	13	328.6	1 1/2	38
5"	1500	680	1/2	M12	14 1/4	362	1 1/2	38
6"	1600	726	1/2	M12	15 1/2	393.7	2	50
8"	2500	1134	5/8	M16	18 1/4	463.5	2	50
10"	2500	1134	5/8	M16	20 1/8	511	2	50
12"	2700	1225	5/8	M16	22 1/3	568	2	50
14	2900	1315	5/8	M16	23 9/16	598.5	2	50
16	2900	1315	3/4	M20	26 3/8	669.9	2 1/2	62
18	2900	1315	3/4	M20	28 7/8	733.4	2 1/2	62
20	2900	1315	3/4	M20	30 7/8	784.2	2 1/2	62
24	2900	1315	3/4	M20	34 7/8	885.8	3	75
30	2900	1315	7/8	M22	40 3/4	1035.1	3	75

STANDARD PIPE CLAMP

Material: Carbon Steel

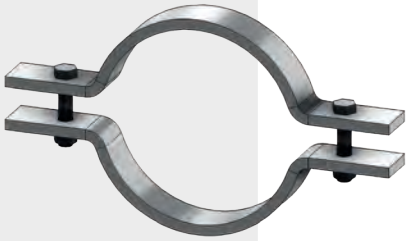
Size Range: 1/2” thru 30”

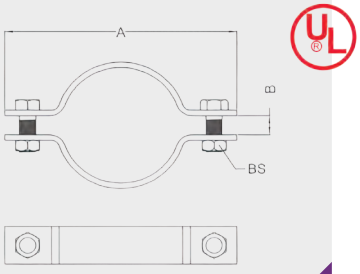
Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

UL Approved: up to 12”

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-ST09





Nominal Pipe Size	Max. Rec.Load		Bolt Size(RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1-2	500	227	5/16	M8	3	77.6	3/7	10.6
3-4	500	227	5/16	M8	3 1/5	81	1/2	12
1"	500	227	5/16	M8	3 3/4	95	1/2	12.2
1-1/4"	500	227	5/16	M8	3 8/9	99	1/2	12.2
1-1/2"	800	363	5/16	M8	4 1/4	108	1/2	12.2
2"	1040	472	1/2	M12	5 3/7	138	2/3	16.4
2-1/2"	1040	472	1/2	M12	6 1/2	164.5	5/8	16
3"	1040	472	1/2	M12	7 2/7	185	5/7	18
3-1/2"	1040	472	1/2	M12	7 5/7	196	3/4	18.6
4"	1040	472	5/8	M16	9	226.3	3/4	19.4
5"	1040	472	5/8	M16	11	278	3/4	19.4
6"	1615	733	3/4	M20	11 2/3	296	1/2	12.2
8"	1615	733	3/4	M20	14 1/7	359	1	24
10"	2400	1089	7/8	M20	17 4/9	443	1 1/4	32
12"	2400	1089	7/8	M20	19 2/5	493	1 4/9	36.8
14"	2400	1089	7/8	M20	21 1/4	539.8	1 1/8	28.6
16"	2400	1089	7/8	M20	23 1/4	590.6	1 1/8	28.6
18"	3060	1388	1	M25	26	660.4	1 1/4	31.8
20"	3060	1388	1 1/8	M28	28 1/4	717.6	1 3/8	34
24"	3060	1388	1 1/8	M28	33 3/4	857.3	1 5/8	41.3
30"	3500	1588	1 3/4	M40	42	1066.8	2	50.8

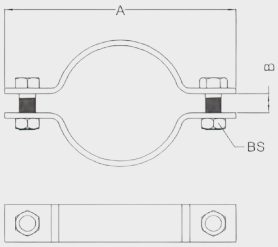
PVC COATED STANDARD PIPE CLAMP

Material: Carbon Steel

Size Range: 1/2” thru 30”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized with PVC Coating at the bottom of hanger to prevent metal to metal contact between hanger and pipe for the protection of corrosion and noise reduction

MODEL #CX-ST091



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	Max. Rec. Load		Bolt Size (RS)		A		B	
IN	IBS	KG	IN	MM	IN	MM	IN	MM
1-2	500	227	5/16	M8	3	77.6	3/7	10.6
3-4	500	227	5/16	M8	3 1/5	81	1/2	12
1"	500	227	5/16	M8	3 3/4	95	1/2	12.2
1-1/4"	500	227	5/16	M8	3 8/9	99	1/2	12.2
1-1/2"	800	363	5/16	M8	4 1/4	108	1/2	12.2
2"	1040	472	1/2	M12	5 3/7	138	2/3	16.4
2-1/2"	1040	472	1/2	M12	6 1/2	164.5	5/8	16
3"	1040	472	1/2	M12	7 2/7	185	5/7	18
3-1/2"	1040	472	1/2	M12	7 5/7	196	3/4	18.6
4"	1040	472	5/8	M16	9	226.3	3/4	19.4
5"	1040	472	5/8	M16	11	278	3/4	19.4
6"	1615	733	3/4	M20	11 2/3	296	1/2	12.2
8"	1615	733	3/4	M20	14 1/7	359	1	24
10"	2400	1089	7/8	M20	17 4/9	443	1 1/4	32
12"	2400	1089	7/8	M20	19 2/5	493	1 4/9	36.8
14"	2400	1089	7/8	M20	21 1/4	539.8	1 1/8	28.6
16"	2400	1089	7/8	M20	23 1/4	590.6	1 1/8	28.6
18"	3060	1388	1	M25	26	660.4	1 1/4	31.8
20"	3060	1388	1 1/8	M28	28 1/4	717.6	1 3/8	34
24"	3060	1388	1 1/8	M28	33 3/4	857.3	1 5/8	41.3
30"	3500	1588	1 3/4	M40	42	1066.8	2	50.8

OFFSET PIPE CLAMP

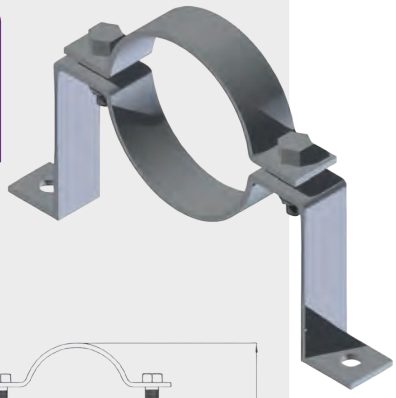
Material: Carbon Steel

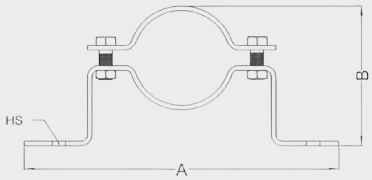
Size Range: 1/2” thru 8”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

Function: Recommended for support of pipe-lines running at a definite distance from the wall or floor of a building or structure

MODEL #CX-OPC074





Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	A	B	HS	Max. Rec.Load (IBS)
1/2"	9 3/4	3 3/8	3 - 8	190
3/4"	8 4/9	3 5/16	3 - 8	200
1"	9	3 9/16	3 - 8	200
1 - 1/4"	9 3/8	3 15/16	3 - 8	200
1 -1/2"	93/4	4 1/8	3 - 8	200
2"	10 5/8	4 5/8	3 - 8	410
2 -1/2"	11 5/8	5 1/8	3 - 8	410
3"	12 7/8	5 3/4	3 - 8	410
4"	14 7/8	6 3/4	1 - 2	600
5"	15 3/4	7 13/16	1 - 3	600
6"	45 1/4	9	1 - 4	850
8"	20 5/8	11	1 - 2	850

U-STRAP SUITABLE WITH RUBBER INSERT

Material: Carbon Steel

Size Range: 1/2" thru 24"

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

Function: Designed and recommended for the mounting of insulated or non-insulated pipes and can be used with rubber support inserts

MODEL #CX-USRI071

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

RSI Size Inch	D	A	B	Strip Size	Bolt Size
	MM	MM	MM	MM	MM
1/2 X1	68	120	95	25X3	M8
3/4X1	74	144	113	25X3	M8
1X1	81	151	119	25X3	M8
1 1/4X1	90	160	128	25X3	M8
1 1/2X1	96	166	132	25X3	M8
2X1	108	178	146	25X3	M8
2 1/2X1	121	191	159	38X3	M10
3X1	137	207	175	38X3	M10
3 1/2X1	149	219	187	38X3	M10
4X1	162	232	200	38X3	M10
5X1	189	259	227	38X3	M10
6X1	216	292	260	50X4.5	M10
3/4X2	124	194	162	25X3	M10
1X2	131	201	169	25X3	M10
1 1/4X2	140	210	178	25X3	M10
1 1/2X2	146	216	184	25X3	M10
2X2	158	228	196	25X3	M10
2 1/2X2	171	241	209	38X3	M10
3X2	187	257	225	38X3	M10
3 1/2X2	199	269	237	38X3	M10
4X2	212	282	250	38X3	M10
5X2	239	330	289	38X3	M12
6X2	266	357	316	50X4.5	M12
8X2	317	420	379	50X4.5	M18
10X2	371	463	422	50X4.5	M18
12X2	422	533	492	50X4.5	M18
14X2	454	545	503	50X4.5	M18
16X2	504	595	554	50X4.5	M18
18X2	555	646	605	50X4.5	M18
20X2	606	705	664	50X4.5	M18
24X2	707	815	767	50X6	M18

PIPE ROLLERS & INSERTS

Pipe rollers and rollers supports offered in this section are designed to compensate for longitudinal movement due to the expansion or contraction of both insulated or non-insulated pipe.

Materials:

Carbon Steel with Cast Iron rollers are used in the manufacture of pipe roller supports. Compounded Rubber and Wood are used to manufacture support inserts. Stainless Steel and other materials are available.

Finishes:

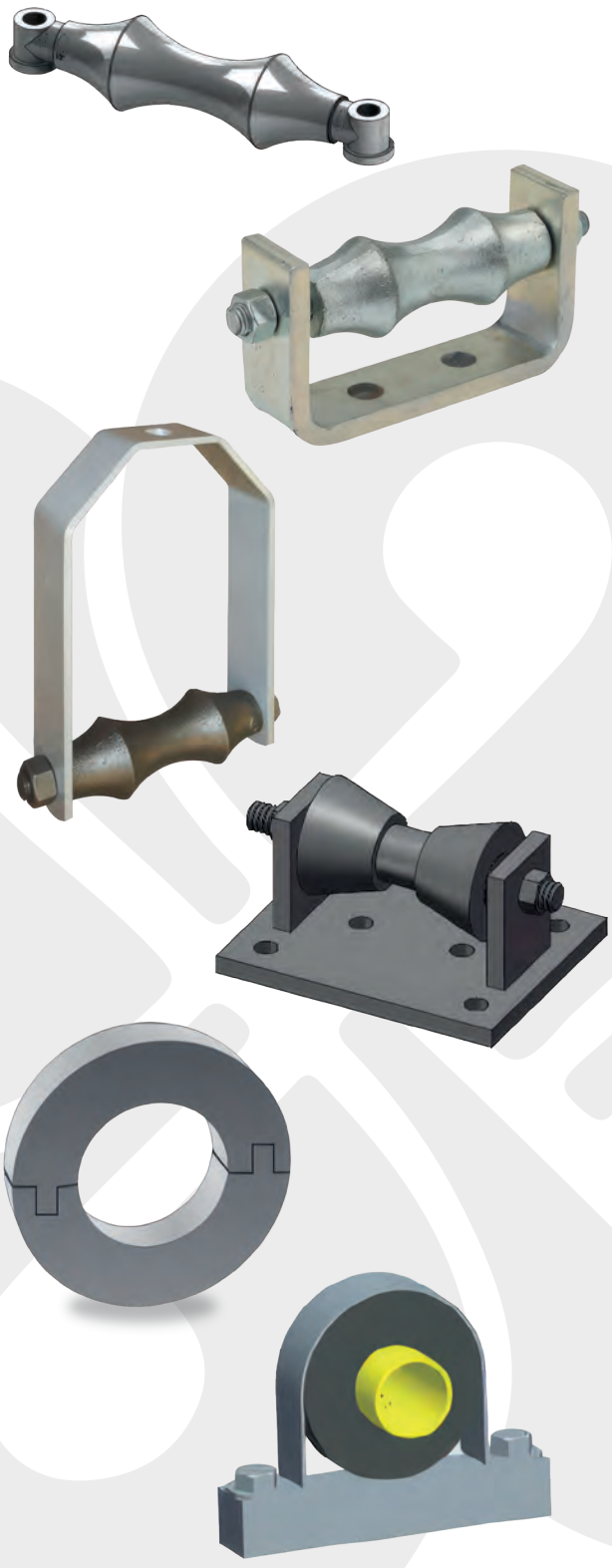
The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro Galvanized Zinc (ASTM B633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Plastic Coating, Green Zinc Rich Composite and other special coatings are available upon request.

Note:

Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper plated, or in Stainless Steel.

Approvals (as noted):

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society



ROLLER CHAIR

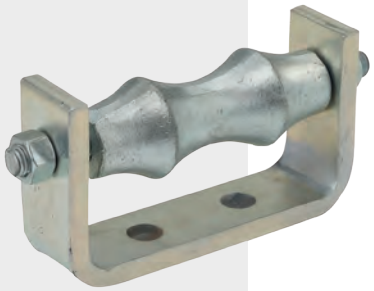
Material: Carbon Steel with Cast Iron Roller

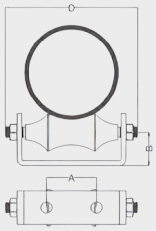
Size Range: 2” thru 24”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-PR04





Nominal Pipe Size	Dimensions (mm)				Max. Rec.Load	
	D	A	B	Bracket Size	IBS	KG
2"	110	35	40	6x32	300	135
2-1/2"	110	35	40	6x32	600	270
3"	145	50	45	6x32	600	270
3 1/2"	145	50	45	8x40	600	270
4"	180	50	50	8x40	700	315
5"	215	75	55	10x50	700	315
6"	250	80	60	10x50	1000	450
8"	285	85	75	12x50	1300	585
10"	345	130	90	12x50	1700	765
12"	395	140	105	12x50	2300	1035
14"	440	165	120	12x50	3100	1395
16"	480	210	140	12x75	3900	1755
18"	525	235	155	12x75	4200	1890
20"	555	260	165	12x75	4500	2025
24"	665	310	200	16x100	6000	2700

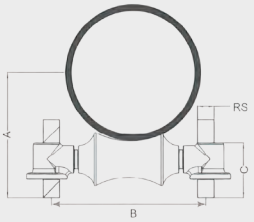
ADJUSTABLE ROLLER SUPPORT

Material: Carbon Steel with Cast Iron Roller

Size Range: 2 1/2" thru 30"

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized.

MODEL #CX-ARS082



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size	RS	A	B	C	Max.Rec.Load	
					LBS	KG
2-1/2"	1/2	3 9/16	4 7/8	1 13/16	600	272
3"	1/2	3 7/8	5 5/8	1 13/16	700	318
3-1/2"	1/2	4 3/8	6 1/8	1 13/16	750	340
4"	5/8	5	6 2/3	2 1/4	750	340
5"	5/8	5 13/16	8	2 1/4	750	340
6"	3/4	7 3/16	9 4/7	2 5/8	1070	485
8"	7/8	8 7/16	12	3 1/16	1350	612
10"	7/8	9 5/8	14	3 1/16	1730	785
12"	7/8	10 7/8	15 3/4	3 3/16	2400	1089
14"	1	12	17 5/8	3 1/2	3130	1420
16"	1	13 1/16	19 1/3	3 9/16	3970	1801
18"	1	14 9/16	21 5/8	3 9/16	4200	1905
20"	1 1/4	17 3/8	24 1/8	4 5/16	4550	2064
24"	1 1/4	17 3/8	28 3/8	4 15/16	6160	2794
30"	1 1/2	20 15/16	35 3/8	5 9/16	7290	3307

ADJUSTABLE ROLLER HANGER

Material: Carbon Steel with Cast Iron Roller

Size Range: 2” thru 24”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-ARH80

Nominal Pipe Size	Dimensions (mm)							Max. Rec.Load	
	A	B	C	D	H	K	Bracket Size	IBS	KG
2"	10	35	122	64	41	57	3x25	150	68
2-1/2"	12	44	148	92	50	74	3x25	225	101
3"	12	44	161	94	56	81	6x32	310	140
3-1/2"	12	45	180	110	65	88	6x32	390	176
4"	12	46	192	122	69	93	6x40	475	214
5"	12	50	233	152	88	114	6x50	685	308
6"	19	50	260	180	102	125	6x50	780	351
8"	22	50	326	230	131	152	10x65	780	351
10"	22	50	381	285	161	178	10x65	965	434
12"	22	55	440	335	192	208	12x65	965	434
14"	25	55	478	372	212	221	12x65	1200	540
16"	25	55	524	421	233	247	12x65	1400	630
18"	25	65	590	474	267	283	12x65	1400	630
20"	32	65	664	522	300	305	16x75	1600	720
24"	32	75	788	630	351	367	16x100	1800	810

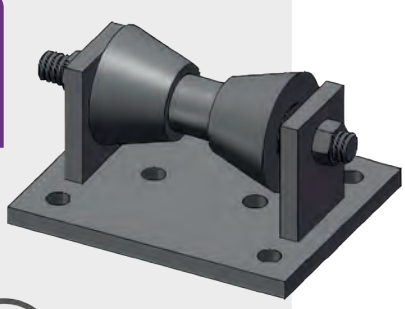
PIPE ROLLER STAND

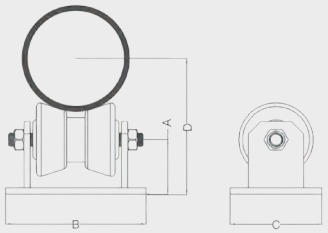
Material: Carbon Steel with Cast Iron Roller

Size Range: 2” thru 30”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized.

MODEL #CX-PRS083





Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Nominal Pipe Size		A		B		C		D		Max.Rec.Load	
IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	LBS	KG
2"	50	1 3/4	44.4	8 3/8	212.7	6	152.4	3 11/16	93.7	390	177
2-1/2"	65	1 3/4	44.4	8 3/8	212.7	6	152.4	3 15/16	100	390	177
3"	80	1 3/4	44.4	8 3/8	212.7	6	152.4	4 1/4	107.9	390	177
3-1/2"	90	1 3/4	44.4	8 3/8	212.7	6	152.4	1 1/2	114.3	390	177
4"	100	2 1/16	52.4	9 7/8	250.8	6	152.4	5	127	950	431
5"	125	2 1/16	52.4	9 7/8	250.8	6	152.4	5 9/16	141.3	950	431
6"	1150	2 1/16	52.4	9 7/8	250.8	8	152.4	6 1/16	154	950	431
8"	200	3 7/16	52.4	8 5/8	219.1	8	203.2	8 13/16	223.8	2100	953
10"	250	3 7/16	87.3	8 5/8	219.1	8	203.2	9 7/8	250.8	2100	953
12"	300	3 7/8	87.3	10 15/16	277.8	8	203.2	11 7/16	290.5	3075	1395
14"	350	3 7/8	98.4	10 15/16	277.8	8	203.2	12 1/16	306.4	3075	1395
16"	400	4 1/4	98.4	12 3/8	314.3	10	254	13 5/8	346.1	4980	2259
18"	450	4 1/4	107.9	12 3/8	314.3	10	254	14 11/16	373.1	4980	2259
20"	500	4 3/8	107.9	12 3/8	314.3	10	254	15 11/16	398.5	4980	2259
24"	600	5 1/8	111.1	13 1/2	431.8	10	254	17 11/16	449.3	6100	2767
30"	750	5 3/4	130.2	17	508	10 3/4	273	21 3/4	552.4	7500	3402

RUBBER INSERT

Material: Compounded Rubber

Size Range: 1/2” thru 8”

Desity: 1400kg/m3

Thermal Conductivity: 0.16W/m°C

Temperature Range: 20°CTo 110°C

Very High Load Bearing Capacity

Excellent Resistance to Deterioration or Distortion

Used at The Supporting Points of Insulated Pipes to Prevent crushing of Insulation

Different Thickness (T) is available (19mm,25mm,32mm,38mm,50mm, 65 mm,75mm,100mm)

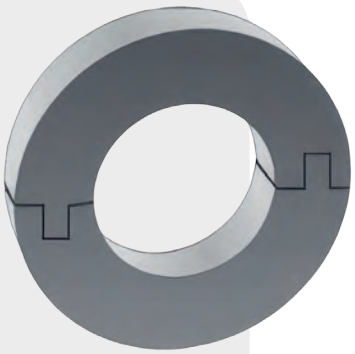
Standard Width(W) for Rubber Support Inserts

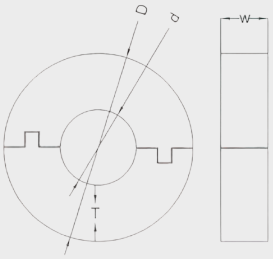
1/2" to 2" —25mm

2-1/2" to 5" —38mm

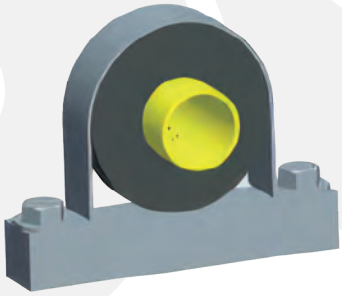
6" to above —50mm

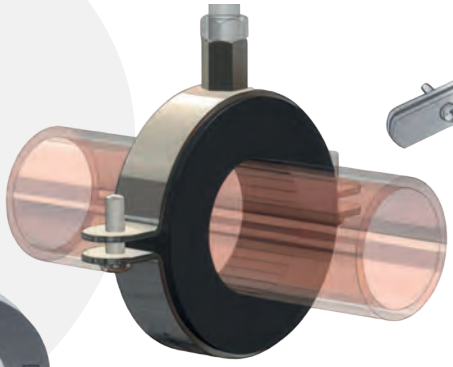
MODEL
#CX-RI085

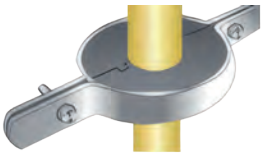




Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.







WOODEN INSERT

Material: White wood (red wood & oil treated wood)

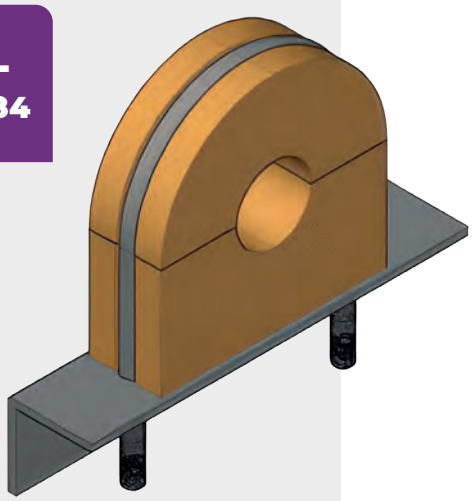
Size Range: 40mm, 50mm, 80mm, 100mm. Nonstandard widths also available

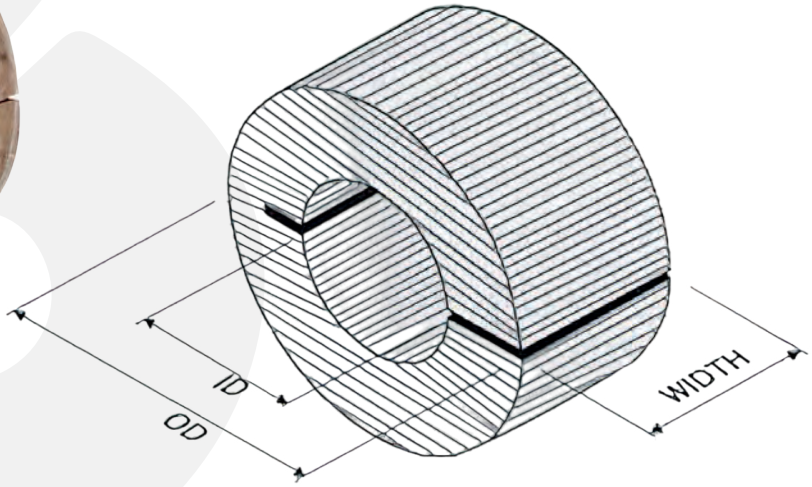
Finish: Thermal Resistance: Excellent, Moisture effects are minimal.

Sound Level: D.B response is minimal.

Sound Resistance: In significant.

MODEL #CX-WI084





CALCIUM SILICATE INSERT

Material: Asbestos-free, Hydrous Calcium Silicate Insulation

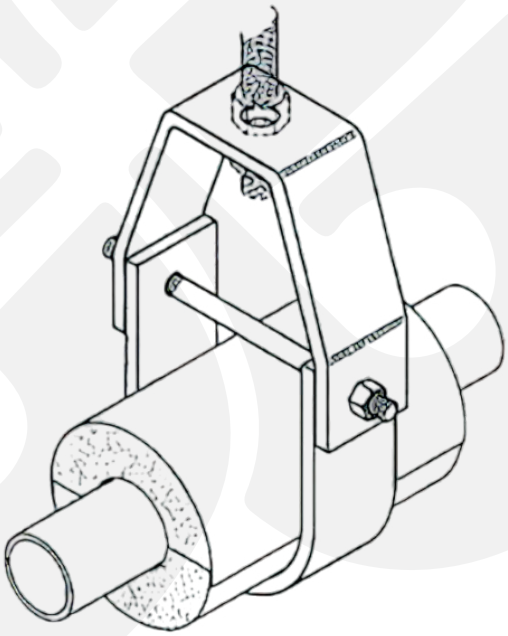
Size Range: Up to 24” (600mm)

Function: Designed to provide a crush resistant insulation insert at pipe support points. Can be used with hangers or straps. Standard type has functionality for both chilled water and hot water.

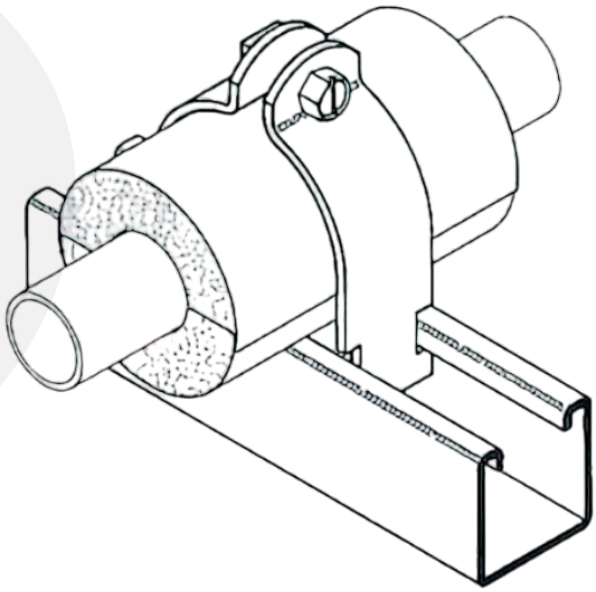
MODEL
#CX-CSI086

Miscellaneous Information: Flame retardant, water, and rot resistant, temperature range from -20°F (-29°C) to 1200°F (649°C). Easily installed in a pipe hanger or mounted to strut.

Applications



Pipe Hanger



Strut Mounted

PIPE SUPPORTS GUIDES & SHIELDS

Pipe supports offered in this section are designed to support pipe from a base structure where vertical adjustment may be required. Pipe guides and slides are designed to allow longitudinal movement due to thermal expansion and contraction of pipe. Protection shields and saddles are designed to prevent damage to pipe insulation.

Materials:

Carbon Steel is used in the manufacturing of pipe supports, guides, shields, and saddles. Stainless Steel and other materials are available. .

Finishes:

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Green Zinc Rich Composite and other special coatings are available upon request.

Note:

Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper plated, or in Stainless Steel.

Approvals (as noted):

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58. All pipe supports in this section are sized to fit schedule 40/80 pipe unless otherwise noted. Some steel items may be specially fabricated to fit other pipe diameters i.e. ductile iron, cast iron, etc.

PIPE SUPPORT WITH U-BOLT

Material: Carbon Steel

Size Range: 2 1/2” thru 36”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized Stanchion Type Support Where Vertical Adjustment is Not Needed U-bolt Provides Additional Stability

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-PSU087

Pipe Size	A	B	C(MPS)
2-1/2"	3 1/8	4	1 1/2
3"	3 7/16	4	1 1/2
4"	4 1/4	4	2 1/2
5"	4 9/16	4	2 1/2
6"	5 1/2	4	2 1/2
8"	7	4	2 1/2
10"	8	4	2 1/2
12"	9 3/16	4	2 1/2
14"	10 9/16	4	3
16"	11 9/16	4	3
18"	13 9/16	4	4
20"	14 9/16	4	4
24"	16 9/16	4	4
26"	17 9/16	4	4
30"	20 11/16	4	4
32"	21 11/16	4	4
36"	23 11/16	4	4

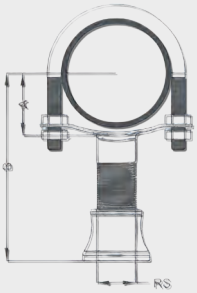
ADJUSTABLE PIPE SADDLE SUPPORT WITH YOKE

Material: Carbon Steel with Cast Iron reducer.

Size Range: 2 1/2" thru 36"

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized Supports Horizontal Pipe from Stanchions Where Vertical Adjustment is Needed

MODEL #CX-APS088



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Pipe Size	A	B	
		Min	Max
2-1/2"	3 1/8	8 3/8	12 7/8
3"	3 7/16	8 11/16	13 3/16
4"	41/4	9 15/16	14 7/16
5"	4 9/16	10 1/4	14 3/4
6"	5 1/2	11 3/16	15 11/16
8"	7	12 11/16	17 3/16
10"	8	13 11/16	18 3/16
12"	9 3/16	14 7/8	19 3/8
14"	10 9/16	18	22 1/2
16"	11 9/16	19	23 1/2
18"	13 9/16	21 9/16	26 1/16
20"	14 9/16	22 9/16	27 1/16
24"	16 9/16	24 9/16	29 1/16
26"	17 9/16	25 9/16	30 1/16
30"	20 11/16	28 11/16	33 3/16
32"	21 11/16	29 11/16	34 3/16
36"	23 11/16	31 11/16	36 3/16

ADJUSTABLE PIPE SADDLE SUPPORT

Material: Carbon Steel

Size Range: 4” thru 10”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

N.RT. Pipe Welded to Pipe Saddle with a N.P.T. Pipe Lock Nut Allowing for Vertical Adjustment in The Pipe Stanchion

Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

MODEL #CX-APS089

Pipe Size	A
4"	10-5/8"
6"	11-11/16"
8"	12-11/16"
10"	13-3/4"

ADJUSTABLE PIPE SADDLE SUPPORT

Material: Carbon Steel with Cast Iron reducer.

Size Range: 2 1/2" thru 36"

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

MODEL #CX-APS090

Supports Horizontal Pipe from Stanchions where Vertical Adjustment is Needed
Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

Pipe Size	RS	A	B	
			Min	Max
2-1/2"	1 1/2	2 11/16	7 15/16	12 7/16
3"	1 1/2	2 7/8	8 1/8	12 5/8
3-1/2"	1 1/2	3 1/8	8 3/8	12 7/8
4"	2 1/2	3 3/4	9 7/16	13 15/16
5"	2 1/2	3 3/4	9 3/4	14 1/4
6"	2 1/2	4 1/16	10 7/16	14 5/16
8"	2 1/2	4 3/4	12 3/8	16 15/16
10"	2 1/2	6 11/16	13 7/16	16 7/8
12"	2 1/2	7 3/4	14 7/16	17 15/16
14"	3	8 3/4	18 3/16	18 15/16
16"	3	10 3/4	19 3/16	22 11/16
18"	4	11 3/4	21 1/2	23 11/16
20"	4	13 1/2	22 1/2	26
24"	4	14 1/2	25 3/4	27
26"	4	17 3/4	26 3/4	30 1/4
30"	4	18 3/4	28 7/8	31 1/4
32"	4	20 7/8	29 7/8	33 7/8
36"	4	32 7/8	31 7/8	36 3/8

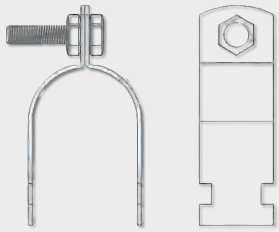
STRUT MOUNTED PIPE GUIDE

Material: Carbon Steel

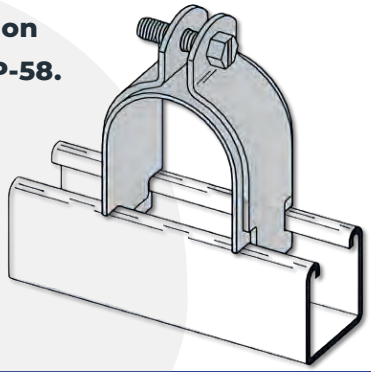
Size Range: 3/8” thru 12”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

MODEL #CX-SMP073



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.



Nominal Pipe Size	Max. Rec.Load (IBS)	Gauge
3/8”	400	16
1/2"	400	16
3/4"	600	14
1"	600	14
1-1/4"	600	14
1-1/2"	600	14
2"	600	14
2-1/2"	800	12
3"	800	12
3-1/2"	800	12
4"	800	12
5"	800	12
6"	800	12
8"	800	12
10"	1000	10
12"	1000	10

PIPE ALLIGNMENT GUIDE

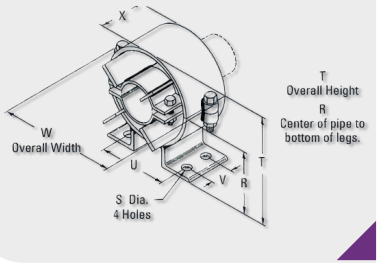
Material: Carbon Steel

Size Range: 3 1/2” thru 12”

Finish: Green Zinc Rich Composite/Electro Galvanized/Hot Dip Galvanized

Function: Designed for use in directing thermal expansion of insulated or non-insulated pipe in the direction permitted by expansion joints or loops. The use of two or more guides on both sides of an expansion joint or loop is recommended. Pipelines should be supported with hangers or rollers so that when properly installed, the guides will not be supporting any pipe loads. Maximum operating temperature should not exceed 750o F (399°C).

MODEL #CX-PAG091



Comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

INSULATION PROTECTION SHIELD

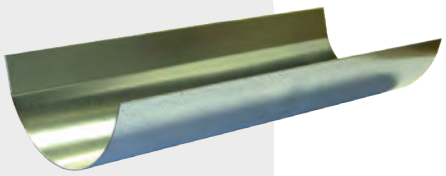
Material: Steel

Size Range: 1/2” Thru 24”

Function: Designed for protection of foam, fiberglass, or high-density insulation when used with pipe hangers.

Finish: Pre-Galvanized/Hot Dip Galvanized

MODEL #CX-SMP073



METAL FRAMING CHANNELS & FIXING ACCESSORIES

Channel:

Metal framing channel is cold formed on our modern rolling mills from 1.5mm to 2.5mm low carbon steel strips. A continuous slot with inturned lips provides the ability to make attachments at any point.

Slots :

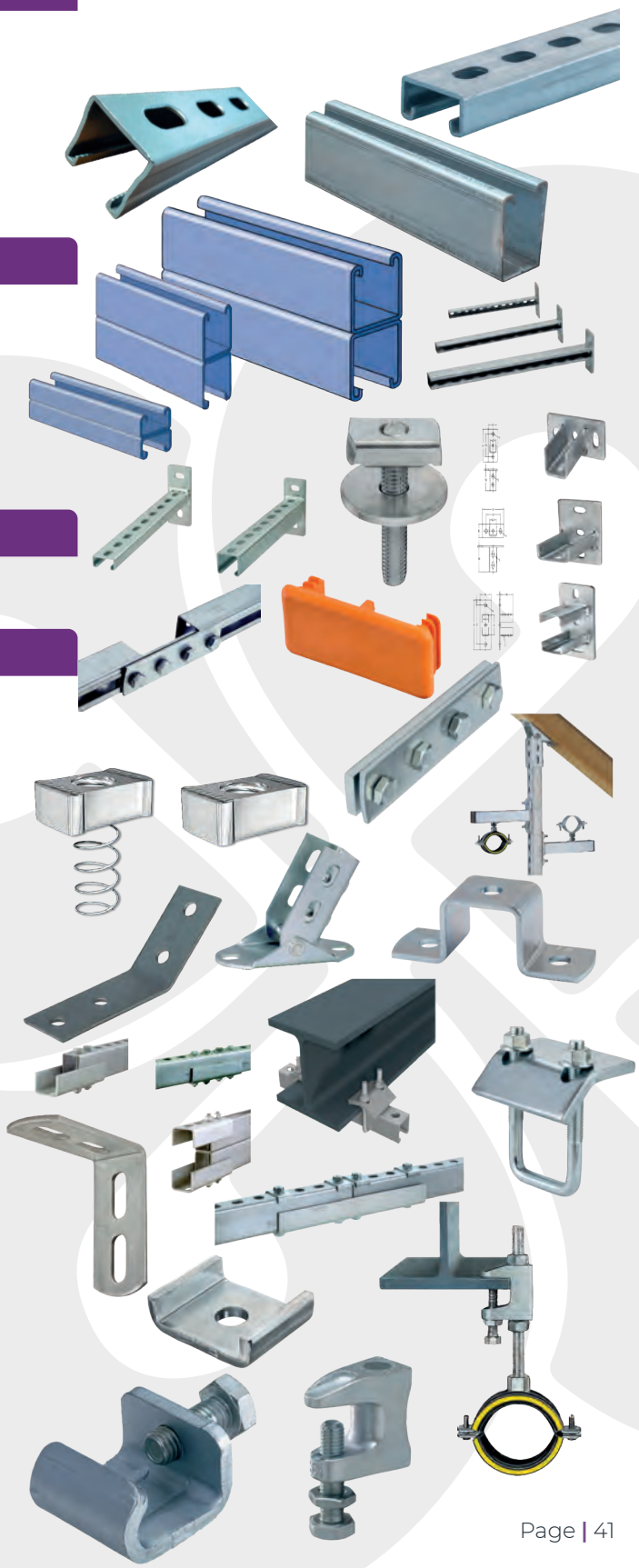
Slotted series of channels offer full flexibility. A variety of pre-punched slot patterns eliminate the need for precise field measuring for hole locations. Slots offer wide adjustments in the alignment and bolt sizing.

Material:

Steel

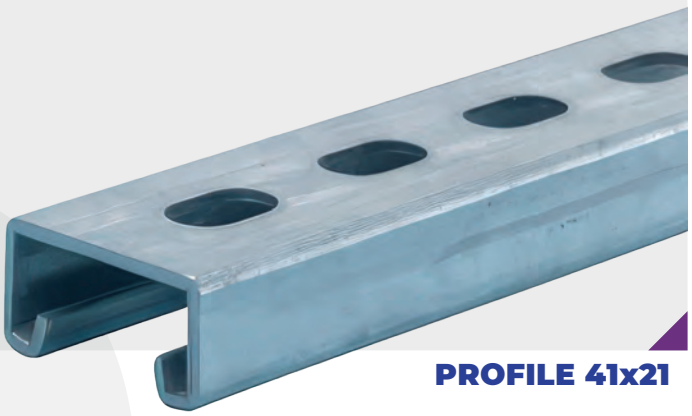
Finish:

Zinc Rich Composite/Pre-galvanized/Hot Dip Galvanized.



SLOTTED CHANNELS
ZINC RICH COMPOSITE FINISH
PRE-GALVANIZED/HOT DIP GALVANIZED

MODEL
#CX-SC21



PROFILE 41x21

Application

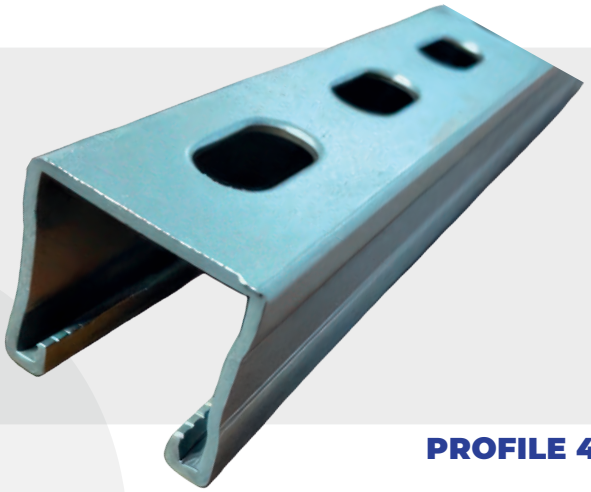
Ideal for pipe installation as support structure as well as for air ducts in dry interiors
Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

Fast and efficient attachment of piping and pipe routes.
High bending stiffness due to the cross-section design.
Scale marks sideways and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site.
For secure fixing that is adjustable laterally and vertically.
For setting up structures with correctly measured static loads by means of diverse connection components.
Meshing into the channel slot for positive-fit attachment of add-on parts.
Clean-cut appearance using protection caps.

SLOTTED CHANNELS
GZRC/PRE-GALVANIZED/HOT DIP GALVANIZED

MODEL
#CX-041



PROFILE 41x41

Application

Ideal for pipe installation as support structure as well as for air ducts in dry interiors

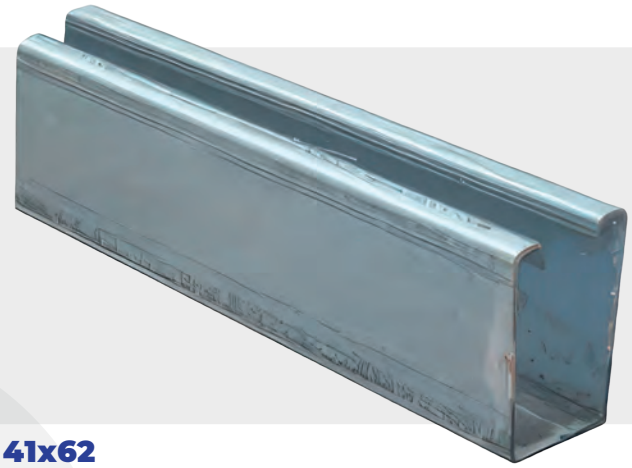
Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

Fast and efficient attachment of piping and pipe routes
High bending stiffness due to the cross-section design
Scale marks sideways and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site.
For secure fixing that is adjustable laterally and vertically
For setting up structures with correctly measured static loads by means of diverse connection components
Meshing into the channel slot for positive-fit attachment of add-on parts
Clean-cut appearance using protection caps

SLOTTED CHANNELS
GZRC/GALVANIZED/HOT DIP GALVANIZED

MODEL
#CX-SC061



PROFILE 41x62

Application

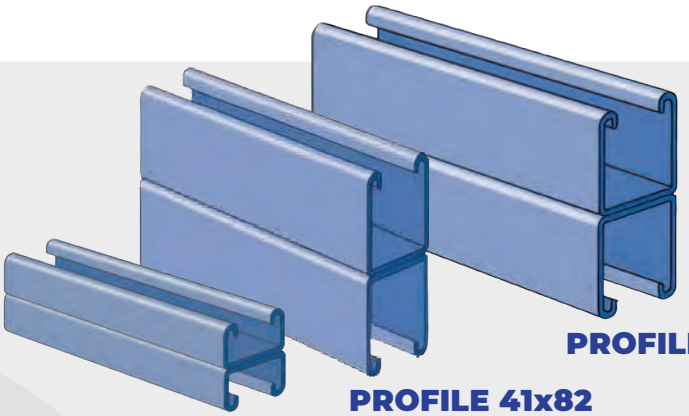
Ideal for pipe installation as support structure as well as for air ducts in dry interiors
Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

Fast and efficient attachment of piping and pipe routes
High bending stiffness due to the cross-section design
Scale marks sideways and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site.
For secure fixing that is adjustable laterally and vertically
For setting up structures with correctly measured static loads by means of diverse connection components
Meshing into the channel slot for positive-fit attachment of add-on parts
Clean-cut appearance using protection caps

H-PROFILE SLOTTED CHANNELS
GZRC/GALVANIZED/HOT DIP GALVANIZED

MODEL
#CX-HPSC041



Application

Ideal for space-saving support of multi section pipe ways between ceiling beams
Ideal for pipe installation as support structure as well as for air ducts in dry interiors
Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components

Advantages

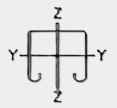
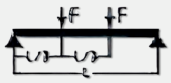
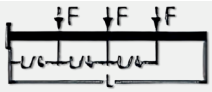
Fast and efficient attachment of piping and pipe routes
High bending stiffness due to the cross-section design
Scale marks sideways and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site.
For secure fixing that is adjustable laterally and vertically
For setting up structures with correctly measured static loads by means of diverse connection components
Meshing into the channel slot for positive-fit attachment of add-on parts
Clean-cut appearance using protection caps

SLOTTED CHANNELS TECHNICAL DATA

Techinical data of profile

Features										
Profile	Material	Surface	Admissible steel stress σ_{Adm} [N/mm²]	Available threaded plates	Profile weight [kg/m]	Profile cross-section cm²]	Moment of inertia		Resistance moment	
							Ly [cm³]	Lz [cm³]	Wy [cm³]	Wz [cm³]
41/21/1.5	S250GD+Z	sendzimir galvanised	162	M6,M8, M10,M12, M16	1.08	1.3	0.767	3.521	0.695	1.718
41/21/2.0					1.45	1.62	0.8894	4.5246	0.839	2.207
41/41/2.0			188		2.08	2.42	4.9736	7.5692	2.451	3.692
41/41/2.5					2.53	3.08	5.8103	9.0333	2.839	4.406
41/62/2.5	S250GD				3.38	3.98	17.209	12.9297	5.671	6.307
2.0/42/41 H					2.9	3.24	5.2844	9.0492	2.516	4.414
2.0/82/41H					4.16	4.83	30.6876	15.1385	7.485	7.385
41/124/2.5H					6.76	7.96	111.7528	25.8595	18.025	12.614

Load bearing capacities of profiles for bending around the y-axis[N]

Profile	L[m]						L[m]					
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
												
41/21/1.5	895	379	161	83	-	-	667	223	95	48	-	-
41/21/2.0	1,090	440	190	90			800	260	110	60		
41/41/2.0	3,681	1,833	1,095	601	106		2,755	1,376	643	353	62	
41/41/2.5	4,262	2,122	1278	701	121		3,190	1,593	750	411	71	
41/62/2.5	8,521	4,248	2,818	2,099	459	117	6,378	3,189	2,114	1,248	270	68
2.0/42/41H	3,08	1,878	1,157	630	95	-	1,540	1,41	679	370	56	
2.0/82/41H	6,563	5,608	3,722	2,774	865	277	3,281	3,281	2,791	2079	508	162
2.5/124/41H	13,646	13,522	8,987	6,711	3,256	1,316	6,823	6823	6,740	5031	1,969	772
												
41/21/1.5	445	159	68	35	-	-	370	125	53	27	-	-
41/21/2.0	540	180	80	40			450	150	60	30		
41/41/2.0	1,841	916	461	253	44		1534	764	362	199	35	
41/41/2.5	2131	1061	538	295	51		1,776	884	423	232	40	
41/62/2.5	4,260	2124	1,409	896	193	49	3,550	1,770	1174	703	152	39
2.0/42/41H	1027	939	487	265	40	-	770	770	383	208	32	
2.0/82/41H	2,188	2,188	1,861	1387	364	116	1641	1,641	1551	1,156	286	91
2.5/124/41H	4549	4549	4493	3356	1412	554	3411	3411	3411	2796	1109	435

Please note additional information on the catalog pages of threaded plates/hammer head fasteners. The determined loads apply for static loads. Calculation based on Eurocode (EC3). The safety coefficient γ = 1.54 considers the partial and combination coefficients as well as the safety factor of the material. For the given values, the permissible steel stress and the maximum permissible deflection L/200 are not exceeded, taking the deadweight into consideration.

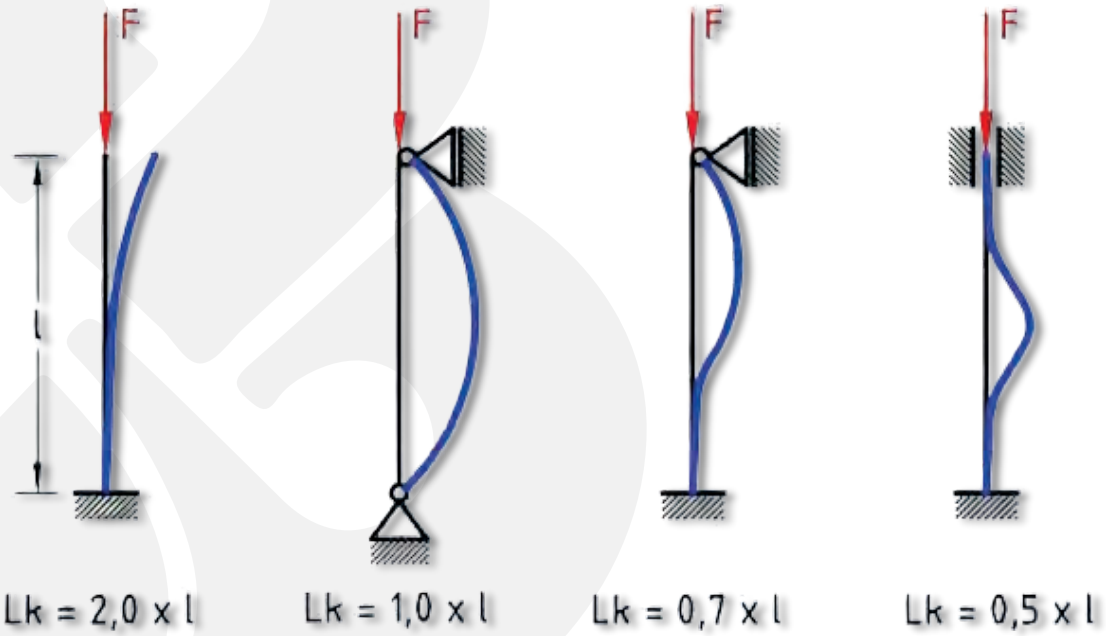
SLOTTED CHANNELS TECHNICAL DATA

Permissible buckling loads for profiles [N]:

Bucking Length Lk [mm]	41/21/1.5	41/21/20	41/41/20	41/4125	41/62/2.5	422.0/41H	2.0/82/41H	12425/41H
200	20,424	29,182	45,567	56,946	75,004	60,984	91,020	150,007
300	19,270	27,244	44,788	55,811	75,004	59,289	91.010	150,007
400	17,934	24,922	43,416	54,027	73,330	57,182	89,656	147,921
500	16,341	22.127	41,962	52,126	71,527	54,901	88,232	145,627
600	14,508	19,030	40,383	50,048	69,639	52,369	86,698	143,164
700	12,578	16,008	38,641	47,743	67,631	49,527	85,009	140,464
800	10,746	13,362	36,711	45,181	65,469	46,359	83,114	137,446
900	9,139	11,181	34,586	42,366	63,124	42,910	80,954	134,020
1,000	7,792	9,427	32,296	39,350	60,579	39,301	78,468	130,091
1,100	6,683	8,024	29,902	36,233	57,831	35,692	75,599	125,569
1,200	5,774	6,896	27,489	33,134	54,898	32,234	72,317	120,394
1,300	5,029	5,981	25,140	30,161	51,823	29.033	68,635	114,570
1,400	4,412	5,232	22,922	27,392	48,668	26,139	64,626	108,190
1,500	3,899	4,613	20,875	24,864	45,505	23,563	60,419	101,439
1,600	3,468	4,095	19,015	22,589	42,406	21,289	56,168	94,553
1,700	3,104	3,659	17,342	20,558	39,428	19,290	52.015	87,762
1,800	2,793	3,289	15,846	18,752	36,612	17,533	48,063	81,249
1,900	2,526	2,971	14,512	17.150	33,983	15,989	44,375	75,131
2,000	2,295	2,697	13,324	15.728	31,550	14,629	40.978	69,467
2,100	2,094	2,459	12,265	14,464	29,314	13,426	37,877	64,274
2,200	1,918	2,251	11,319	13,338	27,266	12,361	35,059	59,541
2,300	1.764	2,068	10,473	12,333	25,395	11,413	32,506	55,240
2,400	1,627	1,907	9,715	11,433	23.688	10,568	30,194	51,340
2,500	1,505	1,764	9,033	10,625	22,131	9,811	28,101	47,802
2,600	1,397	1,636	8,418	9,898	20,711	9.130	26,204	44,592
2,700	1,300	1,521	7,862	9,240	19,413	8,517	24,483	41,676
2,800	1,212	1,419	7,358	8,645	18,227	7,963	22,918	39,022
2,900	1,133	1,326	6,900	8,105	17,141	7,461	21,492	36,604
3,000	1,062	1,242	6,483	7,613	16,144	7,004	20,192	34,395
3.100	997	1.166	6,102	7,164	15,229	6,587	19,002	32,374
3,200	938	1,096	5,753	6,753	14,387	6,206	17,912	30,522
3,300	884	1.033	5,433	6,376	13,611	5,857	16,911	28,820
3,400	834	975	5,138	6,029	12,894	5,536	15,990	27,254
3,500	789	921	4,867	5,710	12,231	5,241	15,141	25,810
3,600	747	872	4,616	5,415	11,617	4,959	14,357	24,475
3,700	708	827	4,385	5,142	11,047	4,717	13,631	23,241
3,800	672	785	4.170	4,889	10,517	4,484	12,959	22,096
3,900	639	747	3,970	4,655	10,024	4,268	12,334	21,032
4,000	609	711	3,784	4,436	9,565	4.067	11,753	20,043
4,100	580	677	3,611	4,233	9,136	3.879	11212	19,121
4,200	554	646	3,450	4,043	8.734	3,705	10,707	18,261
4,300	529	617	3,299	3,866	8,359	3,542	10,235	17,457
4,400	505	590	3,157	3,700	8,006	3,389	9,794	16,705
4,500	484	565	3.025	3,544	7,676	3,246	9,380	16,000
4,600	464	541	2,900	3,398	7,365	3.112	8,992	15,338
4,700	444	519	2,784	3,261	7.073	2,986	8,627	14,717
4,800	427	498	2,674	3,132	6,797	2,867	8,284	14.132
4,900	410	478	2,570	3.011	6,538	2,755	7,961	13,581
5,000	394	459	2,472	2,896	6,293	2,650	7,656	13,062
5.100	379	442	2,380	2,788	6,061	2,551	7,368	12,571
5,200	365	425	2,293	2,686	5,842	2,457	7,097	12,108
5,300	351	410	2,211	2,589	5,634	2,368	6,840	11,670
5,400	339	395	2.132	2,497	5,437	2,284	6,596	11,255
5,500	327	381	2,058	2,410	5,250	2,204	6,366	10,862
5,600	315	368	1,988	2,328	5,073	2.129	6,147	10,489
5,700	305	355	1,921	2,250	4,905	2,057	5,939	10,135
5,800	294	343	1,858	2.175	4,744	1,989	5,742	9,798
5,900	285	332	1,798	2,105	4,592	1,924	5,554	9,478
6,000	275	321	1,740	2,037	4,446	1,862	5.375	9,173

SLOTTED CHANNELS TECHNICAL DATA

Buckling loads as per DIN EN 1993-1-1 sections 6.2 and 6.3.
The values in the table apply for fully bearing cross-sections and central load transmission! The potentially lower slenderness parameter for buckling and lateral torsional buckling must be examined separately!
Buckling about the z-axis and the y-axis was considered. The least favorable buckling load is documented in the table.
The safety coefficient γ = 1.54 considers the safety and combination coefficients as well as the safety factor of the material.
Determine the authoritative buckling length Lk depending on the storage conditions and the rod length l, as shown in the figure.
Read off the buckling load F as Lk from the table.



WALL HANGER BRACKETS
GZRC/GALVANIZED/HOT DIP GALVANIZED

Application

Ideal as cantilever support structure of multi section pipe ways
Applicable as cantilever bracket for air ducts and cable trays
Applicable in combination with saddle support and channel support brackets as a crossbeam for pipe attachments in shafts and ducts
Solid wall bracket for valves and equipment
For indoor use

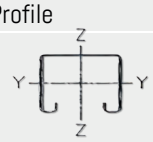
MODEL
#CX-WHB041

Advantages

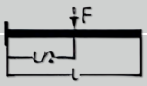
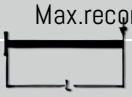
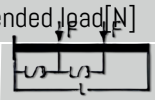
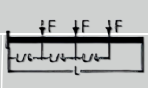
The strong base plate ensures a high load carrying capacity
Elongated- and cross-hole for flexible attachment to the building structure
Variety of lengths covers all construction requirements
Clean-cut appearance using protection caps

Profile	Length L[mm]	VdS	Fire protection certified	Dimensions [mm]			
				A	B	s	V
41/21/2.0	160			125	50	6	13.5×20
	240						
	320						
	400						
41/41/2.0	160					8	
	240						
	320						
	400						
	480						
	560						
	640						
	720						
	800						
	1040						
2.5/41/41 BV	150	×	×				
	300	×	×				
	450	×	×				
2.5/62/41 BV		×	×	165	60		
	600	×	×				
	800	×	×				
	1000	×					

WALL HANGER BRACKETS TECHNICAL DATA

Profile	Base plates		
	Dimensions H×W×D [mm]	Material	Admissible steel stress σ_{Adm} [N/mm²]
41/21/2.0	125×50×6	S235	162
41/41/2.0	125×50×8		
41/41/2.5			
41/62/2.5	165×60×8	S355MC	231

Load bearing capacities of brackets for bending around the y-axis

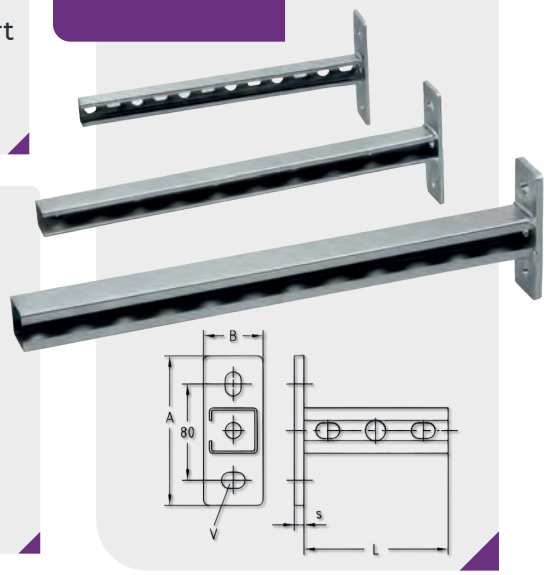
Profile	Base plate Mmax [Nmm]	Length L [mm]	Max.recommended load [N]			
						
41/21/2.0	112,154	160	1,399	700	700	466
		240	931	466	466	310
		320	696	348	348	232
		400	555	231	278	185
41/41/2.0	275,080	160	3,435	1.718	1,718	1,145
		240	2,287	1,144	1,144	762
		320	1,712	856	856	571
		400	1,367	684	684	456
		480	1,136	568	568	379
		560	971	485	485	324
		640	846	422	423	282
		720	749	373	375	250
		800	671	320	336	224
		1.040	508	185	254	169
41/41/2.5		150	3,664	1,832	1,832	1,227
		300	1.826	913	913	609
		450	1,211	606	606	403
41/62/2.5	542,490		2,397	1,199	1,199	798
		600	1,790	895	895	597
		800	1.332	666	666	444
		1.000	1.054	527	527	351

WALL HANGER BRACKETS
with lateral slot
GZRC/GALVANIZED/HOT DIP GALVANIZED

Application

Ideal as cantilever support structure for riser pipes
Applicable as cantilever bracket for air ducts and cable trays
Applicable in combination with saddle support and channel support brackets as a crossbeam for pipe attachments in shafts and ducts

MODEL
#CX-WHBLS041



Advantages

The strong base plate ensures a high load carrying capacity
The vertical and horizontal holes in the base plate allow easy height adjustment of the bracket
Fixing in the side slot of the support channel allows simple alignment of parallel pipelines
Clean-cut appearance using protection caps

Profile	Length L	Dimensions [mm]			
		A	B	s	v
41/41/2.0	320	125	50	8	13.5×20
	480				

HAMMER HEAD FASTENERS
GALVANIZED/HOT DIP GALVANIZED

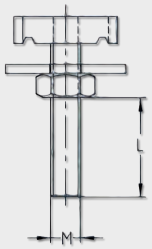
Application

For timesaving, efficient attachment of pipe clamps to CLAMIX-Support channels
For indoor use

Advantages

Easy and fast assembly in the rail slot
Lateral adjustment at any time, allows perfect alignment of the pipeline after installation
Various lengths and thread diameters can be combined within the same channel
Interlocking threaded plate for secure positive connection in the rail slot of the CLAMIX-Support channels

MODEL
#CX-HHF011



Features			
Material thickness of support channel [mm]	Connecting thread	Max recommended tensile load Fz [N]	Tightening torque[Nm]
1.5	M8	3,100	9
	M10		17
	M12		29
2.0	M8	4,500	9
	M10		17
	M12		29
	M16		
2.5	M8		9
	M10	5.000	17
	M12		29
	M16		

For profiles	Connecting thread	Length [mm]	Usable thread length L[mm]
41/21/1.5,41/21/2.0, 41/41/2.0, 41/41/2.5,41/62/2.5, 41/42/2.0, 41/82/2.0, 41/124/2.5 	M8	35	10
		40	15
		50	25
		80	55
		100	75
	M10	35	8
		40	13
		55	28
		60	33
		80	53
		100	73
41/21/1,5, 41/21/2.0, 41/41/2.0, 41/41/2.5,41/62/2.5, 41/82/2.0, 41/124/2.5	M12	40	9
		55	24
41/41/2.0, 41/41/2.5, 41/62/2.5, 41/82/2.0,41/124/2.5	M16	100	65

SPRING NUTS AND CHANNEL NUTS GALVANIZED/HOT DIP GALVANIZED

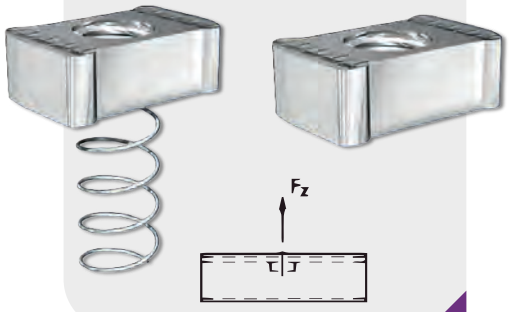
Application

For fixing of attachment parts in the rail slot of the CLAMIX-Support channels
For indoor use

Advantages

Interlocking threaded plate for secure positive connection in the rail slot of the CLAMIX-Support channels
Galvanized version for use in dry interiors

MODEL
#CX-SCN012



Features			
Material thickness ofsupport channel[mm]	Connecting thread	Max. recommended tensile load Fz [N] with threaded pin 4.6 and washer 3×40mm	Tightening torque[Nm]
1.5	M8	3,100	9
	M10		17
	M12		29
20	M6	2,400	4
	M8	4,500	9
	M10		17
	M12		29
	M16		
25	M6	2,400	4
	M8	4,500	9
	M10	5,000	17
	M12		29
	M16		

For profiles	Thread	Dimensions [mm]		
		B	L	S
41/21/2.0, 41/41/2.0, 41/41/2.5, 41/62/2.5,41/42/2.0, 41/82/2.0, 41/124/2.5	M6	19.5	34.5	6
41/21/1.5,41/21/2.0,41/41/2.0, 41/41/2.5,41/62/2.5, 41/42/2.0, 41/82/2.0, 41/124/2.5	M8			8
41/21/1,5, 41/21/2.0,41/41/2.0, 41/41/2.5,41/62/2.5, 41/82/2.0, 41/124/2.5	M10			
	M12			9
41/41/2.0, 41/41/2.5, 41/62/2.5, 41/82/2.0,41/124/2.5	M16	30.5		10

PROTECTION CAPS

Application

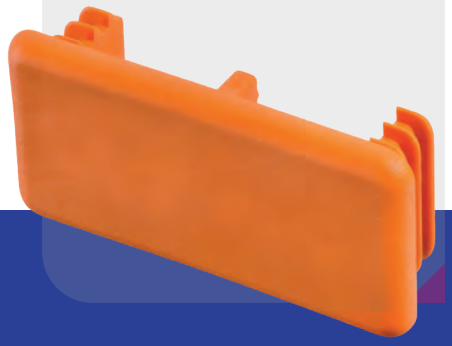
Plastic protection cap for mounting on open ends of the CLAMIX-Support channels

Advantages

Visually clean finish of the MPRSupport channels protects from injury

Weather-resistant plastic material for long service life

MODEL
#CX-PC013



For support channels
41/21,41/42
41/41,41/82
41/62,41/124

CHANNEL CONNECTORS GZRC/GALVANIZED/HOT DIP GALVANIZED

Application

Quick butt-joint connection for CLAMIX-Support channel

Advantages

Enables exact alignment of the channels

Four bolts provide a frictional joint

Smooth attachment by sliding into the channel section

MODEL
#CX-CC015

For profiles	Dimensions [mm]	
	b	L
41/21-41/62	40	152

CLAMP BRACKETS
GZRC/GALVANIZED/HOT DIP GALVANIZED

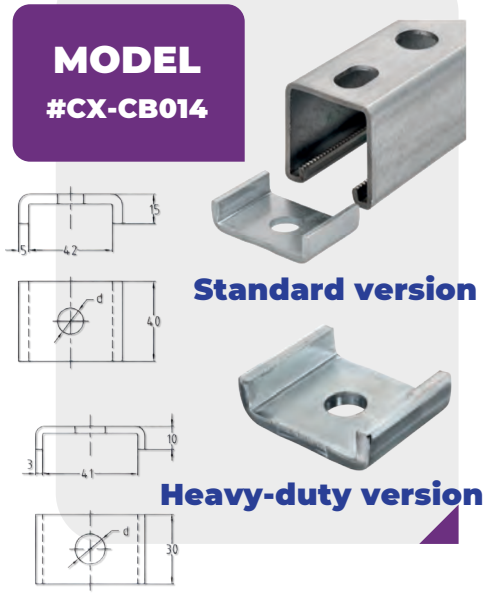
Application

For safe force transmission when installing CLAMIX-Support channels together with threaded rods, anchor plugs and screws.

Advantages

Two versions available
Heavy-duty type available for transferring large forces
Safe, folded edge prevents expansion of the rail slot

MODEL
#CX-CB014



Standard version

Heavy-duty version

Design	For support channels	For thread d
Standard version	41/21-41/124	M10
		M12
Heavy-duty version		M8
		M10
		M12
		M16

SADDLE SUPPORTS
GZRC/GALVANIZED/HOT DIP GALVANIZED

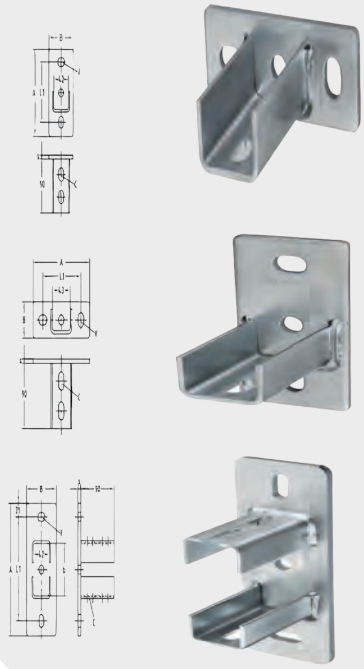
Application

Simple assembly of strong crossbeams using CLAMIX-Support channels
Applicable for cramped installation conditions in shafts and ducts
For indoor use

Advantages

Good load transfer due to the high bending stiffness of the saddle connection
Ideal connecting element for channel constructions
Type for 41/82 and 41/124 profiles with rotation-free bearing due to clamping on both sides by the CLAMIX-Support channels

MODEL
#CX-SS016



Design	For profiles	Dimensions[mm]							
		A	b	B	C	L	L1	S	V
crosswise	41/21-41/62	136	42	50	13×25	90	91.5	6	13.5×20
lengthwise	41/21-41/62	144		70			100		
	41/82	205	83	80	13		160	8	
	41/124	245	125				200		

VARIABLE SADDLE SUPPORTS
GZRC/GALVANIZED/HOT DIP GALVANIZED

Application

Ideal for attachment to inclined roof trusses, vaults and in round cable shafts
For use in dry interiors

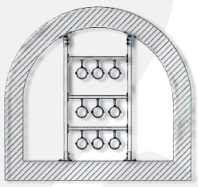
Advantages

Variable angle adjustment possible during installation
Simple and quick installation due to pre-installed screws and CLAMIX-Threaded plate
Attachment to the slot of support channels 41/41 possible in all directions
Positive-fit joining due to interlocking CLAMIX-Support channels and CLAMIX-Threaded plates

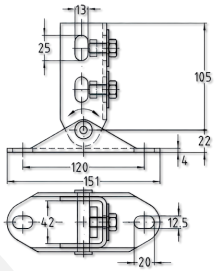
MODEL
#CX-VSS017

Attachment of a pipe run to an inclined roof truss

Pipes installed on an wall hanger brakket with diagonal strut



Installation of brackets in vaults or round cable ducts and shafts



Completely pre-assembled:
1 CLAMIX-Variable Saddle support
2 CLAMIX-Threaded plates M10
2 Hexagonal head bolts M10 2 Washers

For profiles	Min.angle[°]
41/21-41/62	20

MOUNTING ANGLE 45°
GZRC/GALVANIZED/HOT DIP GALVANIZED

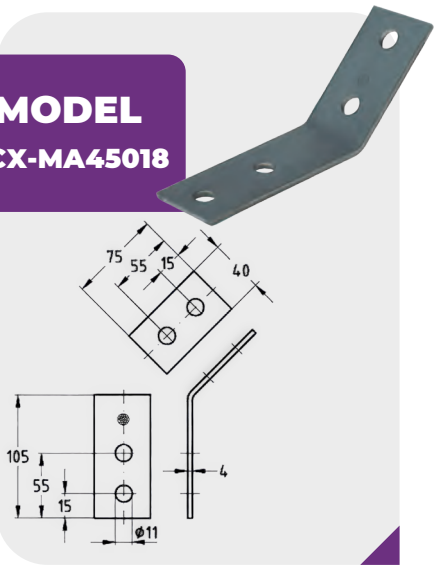
Application

Solid fixing element for construction of pre-wall installations and shelves as well as for channel constructions for attachments of pipelines and air ducts without welding
Also applicable for direct mounting on walls, ceilings, or floors

Advantages

Variable mounting options
Versatile, e.g. as: support bracket, connecting element, angle bracket
Multi-purpose component for professional, practical installation solutions

MODEL
#CX-MA45018



For profiles
41/21-41/124

CROSS CHANNEL CONNECTORS
GZRC/GALVANIZED/HOT DIP GALVANIZED

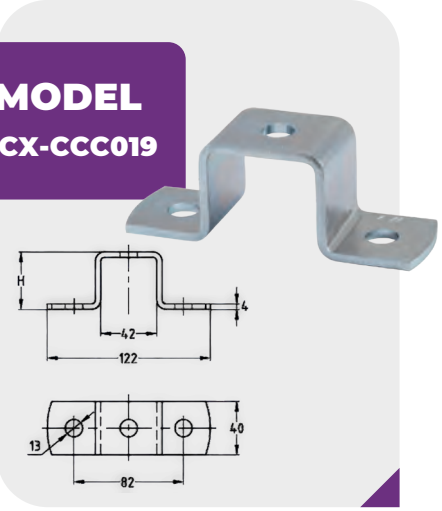
Application

For cross-connections in pre-wall mounted installations and shelves made from CLAMIX-Support channels.

Advantages

Easy-to-install connection element for setting up structures with correctly designed static loads using CLAMIX-Support channels.
Greater flexibility when setting up structures made from channels.
For rotation-resistant attachment to building structure.

MODEL
#CX-CCC019



For profiles	Dimensions H[mm]
41/21	23
41/41,41/42	43
41/62	64
41/82	84
41/124	126

GIRDER CLEATS
GALVANIZED/HOT DIP GALVANIZED

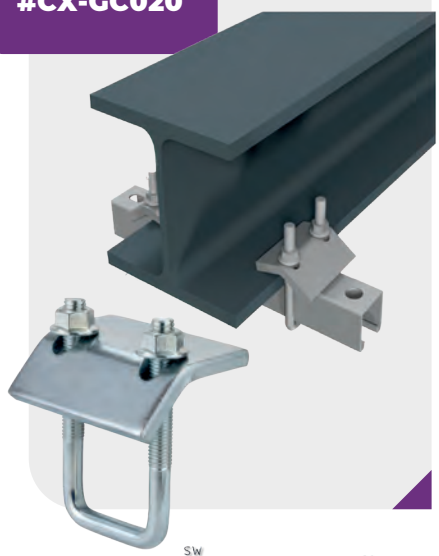
Application

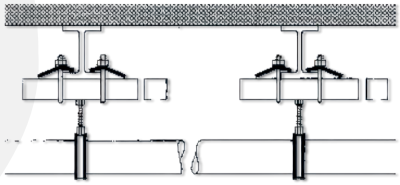
Attachment of CLAMIX-Support channels to steel girders without drilling or welding
For use in dry interiors

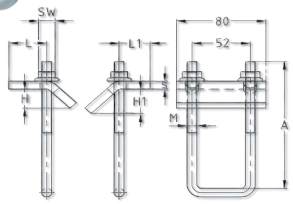
Advantages

Ideal solution for attachment of CLAMIX-Support channels to steel girders
Allows subsequent adjustment of the channels along and across the supporting beam
Suitable for flange thicknesses of common support profiles
Easy to install, pre-assembled kit
Proper attachment of suspended loads on girders
Girder cleats M8 or M10

MODEL
#CX-GC020

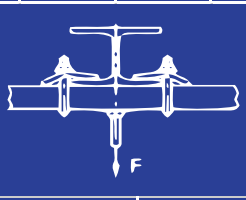






For profiles	Max.clamping hickness[mm]	Thread	Spanner width[mm]	Dimensions [mm]							
				A	B	C	H	H1	L	L2	s
41/21,41/41,41/42	22	M8	13	48	70	90	17	24.5	38.2	27.2	6
41/62, 41/82		M10	15	50	80	130	18.5		39.7	30.7	8
41/124						170					

For profiles	Thread	Max. permitted loading/pair with hammer head fasteners [N]			
	U-brackets	M8	M10	M12	M16
41/21/2.0,	M8	4,500	4,500	4,500	4,500
41/41/2.0,					
41/42/2.0					
41/41/2.5			5,000	5,000	5,000
41/21/2.0.	M10		4,500	4,500	4,500
41/41/2.0.					
41/42/2.0					
41/41/2.5			5,000	5,000	5,000
41/62/2.5					
41/82/2.0			4,500	4,500	4,500
41/124/2.5			5,000	5,000	5,000



Girder cleats	Profiles	For threaded connection with hammer head fasteners.
M8	41/2.0	M8,M10, M12
M10	41/2.0, 41/2.5	(M8), M10, M12, M16

CHANNEL CONNECTOR
HEAVY DUTY VERSION
GZRC/GALVANIZED/HOT DIP GALVANIZED

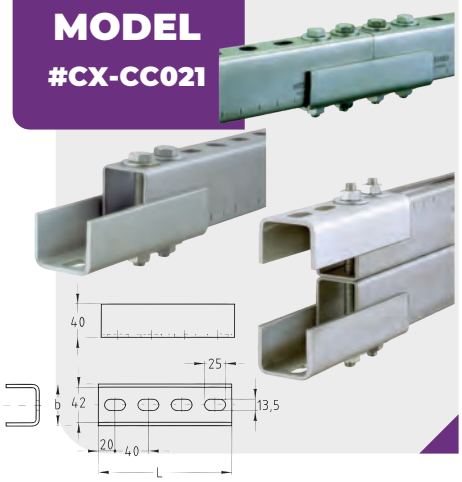
Application

Quick butt-joint connection for CLAMIX-Support channels.

Advantages

Ideal solution for attachment of CLAMIX-Support channels to steel girders
Enables exact alignment of the channels
Four bolts provide a frictional joint
Form-locking connection between channel and connector (passthrough installation)
Also available in double length for heavy-duty connections.

MODEL
#CX-CC021



For profiles	Dimensions [mm]	
	b	L
41/21-41/124	50	160

CHANNEL CONNECTOR
HEAVY DUTY VERSION DOUBLE LENGTH
GZRC/GALVANIZED/HOT DIP GALVANIZED

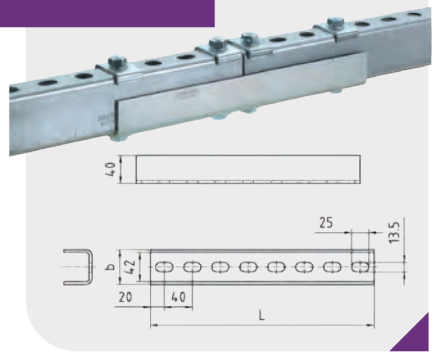
Application

Channel connector in heavy, stable design for secure connection of CLAMIX-Support channels

Advantages

Form-locking connection due to max. eightfold screw connection
Especially long guidance of the connected CLAMIX-Support channels ensures a high level of protection against lateral deflection
Oblong holes in the channel connector compensate tolerances when installing
Form-locking connection due to max.

MODEL
#CX-CCDL022



For profiles	Dimensions [mm]	
	b	L
41/21-41/124	50	320

MOUNTING ANGLE 90°
GZRC/GALVANIZED/HOT DIP GALVANIZED

Application

Solid fixing element for construction of pre-wall installations and shelves as well as for channel constructions for attachments of pipelines and air ducts without welding
Also applicable for direct mounting on walls, ceilings, or floors.

Advantages

Variable mounting options
Versatile, e.g. as: support bracket, connecting element, angle bracket
Multi-purpose component for professional, practical installation solutions

MODEL
#CX-MA90023

For profiles
41/21-41/124

ANGLE & T CONNECTION PLATES
GZRC/GALVANIZED/HOT DIP GALVANIZED

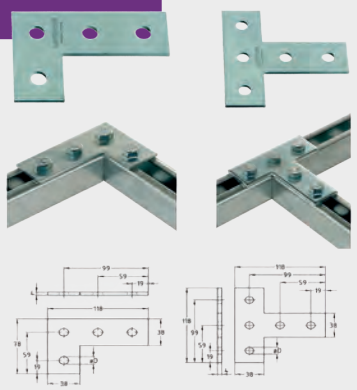
Application

Strong connection elements for frames and pre-wall installations using the CLAMIX-Support channels

Advantages

Simple and quick connection of angles and T-connections
The mounting plates enable frame construc-tion in one plane in which the channel slots have the same alignment
Good adaptation to rail widths; in the case of frame constructions, the corners remain free
Hole spacings allow pass-through mounting using the CLAMIX-Support channels

MODEL
#CX-ATCP024



For profiles
41/21-41/124

CROSS CONNECTION PLATES
GZRC/GALVANIZED/HOT DIP GALVANIZED

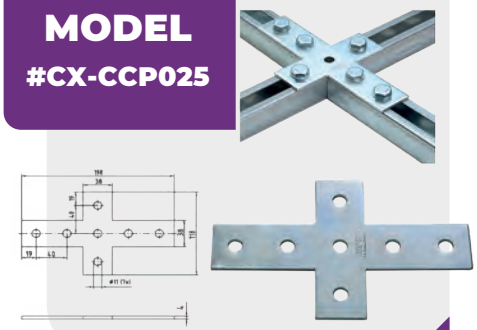
Application

Cross connection plate for connecting to four CLAMIX-Support channels in one.

Advantages

Attachment at the rear perforation of the CLAMIX-Support channel leaves the channel slot free in all directions and enables fast installation of add-on parts
Ideal connection element for creating sub constructions for ceiling suspensions

MODEL
#CX-CCP025



For profiles
41/21-41/124

TOP BEAM CLAMP
GZRC/GALVANIZED/HOT DIP GALVANIZED

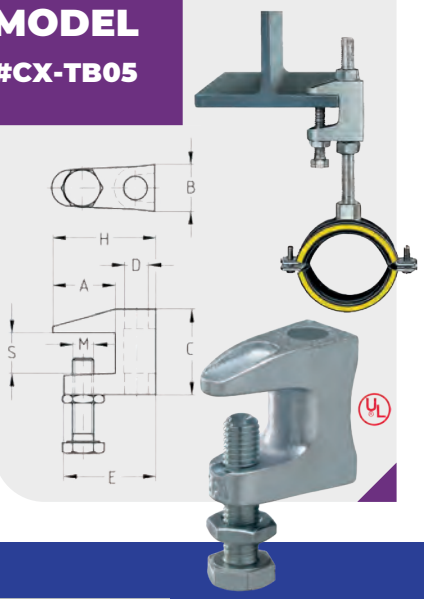
Application

For attachment of pipelines, air ducts and sprinkler systems on steel girders
For suspension of threaded pins and threaded rods for the attachment of pipe clamps or crossbeams made with CLAMIX-Support channels

Advantages

Attachment on girder without welding or drilling
Subsequent alignment on the girder possible
High loading capacity
Quick, subsequent height adjustment of the threaded rods at the nonthreaded through-hole

MODEL
#CX-TB05



Design	Size	Max. recommended load [N]
with clearance hole	M8	1,200
	M10	2,500
	M12	3.500
with internal thread	M8	1,200
	M10	2,500
	M12	3,500

DUCT JOINT CLAMPS
GALVANIZED

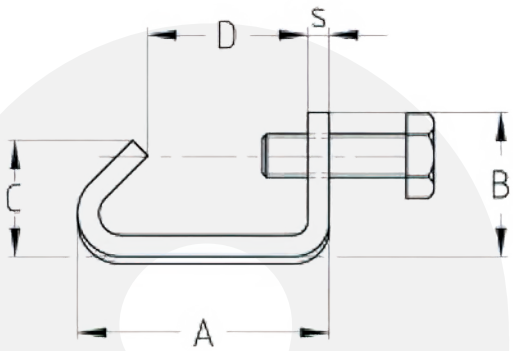
Application

Simple and quick flange connection for large cross-section ducts and high-pressure conditions

Advantages

No pre-clamping or drilling required
Supplied with hexagon head bolt already inserted
High load capacity due to reinforcing rib

MODEL
#CX-DJC026



Design	Length[mm]	Hexagon head bolt	Dimensions [mm]				
			A	B	C	D	S
galvanized	35	M20 × 8 mm	35	20	17	23	3
	31		31	23		18	4
	35	M25 ×8 mm	35	20		23	3

Normally recommended spacing 300-400 mm. For ducts with a side length of less than 800 mm, one clamp needs to be mounted in center of each side.

THREADED ACCESSORIES

Threaded accessories offered in this section are designed to reduce installation time. A wide range of types and sizes are available for various applications.

Material:

For maximum loading design, Carbon Steel, Forged Steel, and Malleable Iron are used in the manufacturing of threaded accessories. Stainless Steel and other materials are available.

Finish:

The standard finishes for threaded accessories are Electro Galvanized Zinc (ASTM B633 SC1). Hot-Dip Galvanized After Fabrication (ASTM A153) and other special coatings are available upon request.

Approvals: (as noted)

Items in this section are Underwriters Laboratories Listed and comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS

CONTINUOS THREADED RODS

Material: Low Carbon Steel Grade 4.8 DIN 975

Size Range: M6 thru M20

Finish: Electro Galvanized/Hot Dip Galvanized

Threaded rods strength class Grade 8.8 available upon request

MODEL
#CX-CTD027

Size	Max. Rec. Load (KN)
M6	2.0
M8	2.2
M10	2.5
M12	4.5
M16	8.0
M18	10.0
M20	12.0

HEX ROD CONNECTOR

Material: Low Carbon Steel Grade 4.8

Size Range: M6 thru M20

Finish: Electro Galvanized/Hot Dip Galvanized

Hex rod connector strength class Grade 8.8 available upon request

MODEL
#CX-HRC028

Rod Size	Length (MM)	Hex Width (MM)	Max. Rec. Load/lbs	Wt. Each (in lbs)
M6	22	9	230	0.06
M8	45	15	730	0.11
M10	45	18	1350	0.14
M12	55	20	1810	0.17
M16	58	25	2710	0.28
M18	63	32	3770	0.56
M20	70	35	4960	0.72

HEXAGONAL HEAD BOLTS

Material: Low Carbon Steel Grade 4.8 DIN 933

Size Range: M6 thru M20

Finish: Electro Galvanized/Hot Dip Galvanized

Hex bolts strength class Grade 8.8 available upon request

MODEL
#CX-HHB029

Thread	Length [mm]	Spanner width[mm]
M6	20	10
	30	
M8	16	13
	20	
	25	
	30	
	35	
	45	
	55	
	60	
	75	
	85	
	100	
	110	
	120	
M10	20	17
	25	
	30	

Thread	Length [mm]	Spanner width[mm]
M10	35	17
	40	
	55	
	60	
	80	
	90	
	100	
	120	
M12	25	19
	30	
	35	
	60	
	80	
M16	45	24
	60	
	80	
	100	
	120	
M20	50	30

HEXAGONAL NUTS

Material: Low Carbon Steel Grade 4.8 DIN 934

Size Range: M6 thru M20

Finish: Electro Galvanized/Hot Dip Galvanized

Hex nuts strength class Grade 8.8 available upon request

MODEL
#CX-HN030

Thread	Height[mm]	Spanner width[mm]
M6	5	10
M8	6.5	13
M10	8	17
M12	10	19
M16	13	24
M20	16	30

FLAT WASHERS

Material: Low Carbon Steel DIN 125

Size Range: M6 thru M20

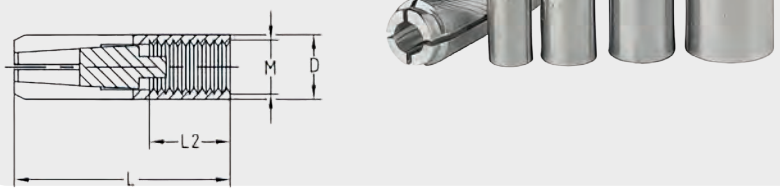
Finish: Electro Galvanized/Hot Dip Galvanized

MODEL
#CX-FW031

Nominal Size (mm)	A - Hole Diameter(mm)	B - Outside Diameter(mm)	C - Washer Thickness(mm)
M6	6.4	16	1.5
M8	8.4	22	1.5
M10	10.5	25	2.0
M12	13	30	2.5
M16	17	35	3.0
M18	19	38	3.0
M20	21	40	3.0

DROP IN ANCHORS

MODEL
#CX-SC21



Application

For anchorages of medium weight loads in concrete and natural stone (hard) in dry interiors of buildings
Versatile and suitable for attachment with screws or threaded rods in all plumbing, heating, and ventilation installations
Anchors with a length of 25 mm are admitted as multiple attachment of non-load bearing systems for use in prestressed concrete hollow core slab ceilings

Advantages

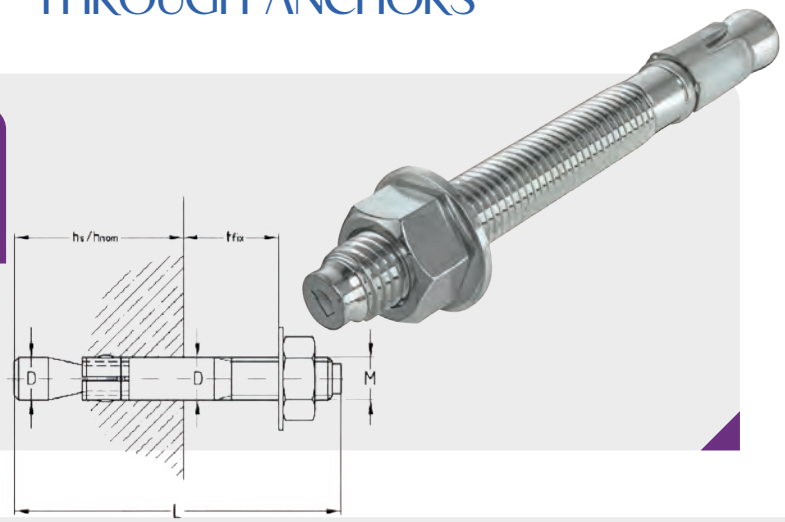
Secure grip due to controlled splaying as the taper is driven in
Requires only small drilling depth
Flush finish with surface of the building material
Secure expansion force even when the mounting screw is loosened

	Connecting thread	Anchor length L [mm]	Drilled hole depth ho [mm]	Approvedload [kN]	Drilled hole depth ho[mm]	Approved load [kN]
Steel anchor	M6	30	30	1.2	30	3.3
	M8			1.7		2.8
		40	40	2	40	3.6
	M10					5.1
	M12	50	50	2.4	50	7.1
	M16	65	65	6.3	65	10.5

1) Use as multiple attachment of non-load-bearing systems according to ETAG 001, part 6. The overall safety coefficient according to ETA is taken into consideration (γM und γF). The max. permitted load for each attachment point can be below the permitted load of the anchor, depending on national regulations. The permitted loads for each attachment point are regulated by ETAG 001, part 6 for the different countries. The European Technical Assessment 05/0161 shall be observed for dimensioning.
2) The admissible loads apply for single anchors in concrete strength class ≥ C20/25 (B25) for axially applied tension without the influence of axial and edge spacings. The safety coefficient according to ETA is included. The European Technical Assessment 05/0160 shall be observed for dimensioning.
3) Only for use in statically indeterminate systems.

THROUGH ANCHORS

MODEL
#CX-TA033



Application

For anchorages of medium weight loads in non-cracked concrete
Attachment of metal and wood constructions, handrails, shelves, cable ducts and ventilation
Also applicable in hard natural pipes stone

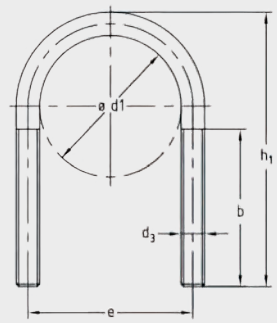
Advantages

Quick handling: Simply insert and tighten
Practical through-fitting
Splaying controlled by the tightening torque
High security due to increasing splaying with increase in load

		Uncracked concrete with central tensile load ETA assessment	
Drill-Ø D[mm]	Drilled hole depth[mm]	Setting depth hs[mm]	Approved load "[kN]
8	65	55	5.7
10	70	60	7.6
12	90	80	11.9
16	110	98	17.2

U-BOLTS

MODEL
#CX-UB034



Application

For simple pipe attachment in building technology and industrial construction

Advantages

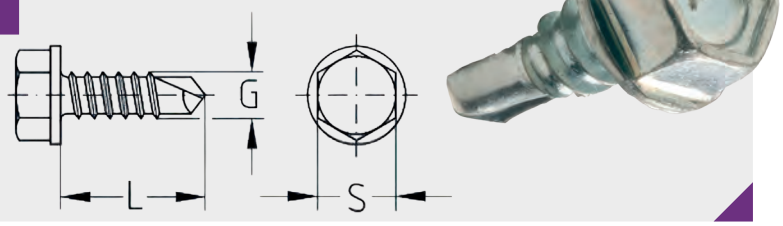
Design like DIN 3570
Electrolytically galvanized
Supplied with 4 nuts acc. to DIN 934. In the M8 to M12 versions, also with 4 washers

Pipe outer diameter d1[mm]	Nominal size	Dimensions[mm]			
		b	d_3	e	h_1
22	15	25	M8	30	52
27	20	40		35	67
34	25			42	74
43	32			51	83
49	40			57	89
61	50	45	M10	71	104
77	65			87	120
89	80			100	132
108	100	55	M12	121	162
115				127	168
133	125			146	183
140				152	191
159	150			172	208
169				182	218
220	200		M16	233	278
273	250	70	M20	295	334
324	300			352	385

U-bolts with M8 to M12 threads are supplied with 4 washers and 4 nuts acc. to DIN 934 in electrolytically galvanized finish. For M16 threads and bigger, they are supplied with 4 nuts but without washers. Other sizes can be supplied upon request

SELF-DRILLING SCREWS

MODEL
#CX-SDS035



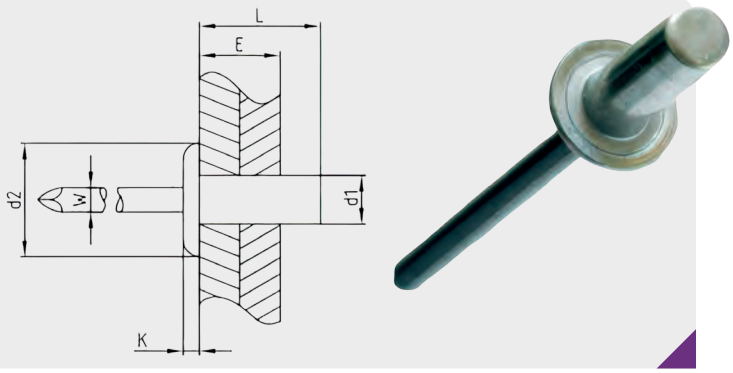
Application

DIN 7504, with hexagonal head, for the attachment of air pipes, ducts, spiral-seam pipes, without pre-drilling, galvanized

Length[mm]	Sheet thread [mm]	Screw headØ[mm]	Spanner size S [mm]
13	4.2	8.5	7
16			
19			
22			
13	4.8	10.0	8
16			
19			
38			
32	5.5	10.5	
16	6.3	12.7	10
25			
32			
45			
13	4.2	9	7
	4.8	10	8

BLIND RIVETS

MODEL
#CX-BR036



Application

For the attachment of duct fixing angles and brackets on air ducts and spiral-seam tubes respectively

Advantages

Blind rivet with large surface to secure various materials
No surface damaging after riveting
No loosening by dynamic influences (vibration resistant)
Good behavior at temperature fluctuations
High-quality, simple, and quick mounting

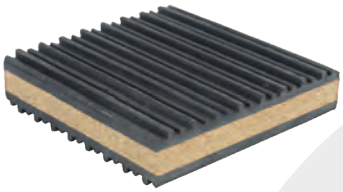
Type	Material sleeve	Materia lmandrel	Dimensions [mm]					
			D1	L	E	D2	K	W
flat round head	aluminium	steel	3,2	9.5	3,5-5,0	6.2	1.0	1.65
			4,0	11.0	5,0-6,5	7.9	1.2	2.20
			4,8	14.5	8.0-9.5	9.3	1.5	2.65

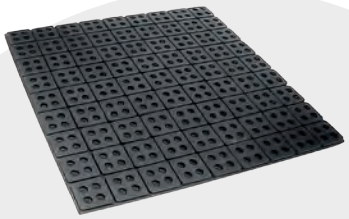
VIBRATION ISOLATION

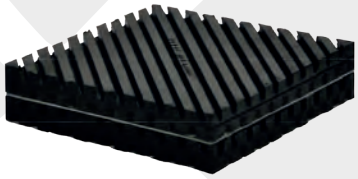
To help address the issues of vibration and noise control/dampening vibration in mechanical, refrigeration, HVAC, and electrical installations, CLAMIX offers the following vibration isolation products. It is our continuing effort to offer the industry quality support system products that meet the demands of today's construction environment.

The following pages depict vibration isolation and noise control products that are commonly specified and required on piping, duct, and equipment, but not limited to mechanical rooms. As an aid in choosing the proper vibration control device, the chart shown on the following page is a reference for obtaining Vibration Isolation Efficiency.

The Theory of Vibration Isolation Background Soils, floors, ceilings, walls, etc. deflect as the result of applied forces. Cyclical forces generated by machines result in work done on the floors, etc. Under steady state conditions, this work is stored as potential energy in the floor each cycle and returned as work in forcing the machine back to its equilibrium position. Disturbance is transmitted during this flexing.







Vibration Isolation is needed when disturbing force magnitudes are expected to be great enough to cause damage or annoyance:

Assumption	Fact
1. We know the effects of vibration isolation (efficiency)	Formula for calculation shown below.
2. We know the magnitude of the disturbing forces created by the machines	Equipment manufacturers rarely provide these data. These forces are seldom known except in generalities.
3. We know the magnitude of disturbing forces beyond	Detailed calculations require so many simplifying assumptions that the resulting answers have questionable value in addition to being prohibitively expensive. Reliance is placed on brief calculations, general rules, and past experience.

Consideration of items 1. and 2. is essential to determine acceptable isolation efficiency. Unfortunately manifold complexities prevent inclusion of steps for determination of these efficiencies in this document.

VIBRATION ISOLATION DATA

Natural frequency of isolation system f_n (cycles per minute)
Visualize a machine suspended barely above 4 springs (one on each corner). Now release the suspension. The machine will deflect the springs and be pushed up and return a number of times with diminishing deflection until it comes to rest. The spring deflection at rest is called the static deflection. The number of cycles per unit time is the natural frequency of the isolation system. Unlike multi-degree of freedom floors with limitless natural frequencies, springs essentially have only one natural frequency.

$$f_n = 188 \sqrt{\frac{1}{\text{static deflection (inches)}}}$$

$$\text{Vibration isolation efficiency \%} = 100\% \times \left[1 - \frac{1}{(f_d \div f_n)^2 - 1}\right]$$

Transmitted force f_t (pounds) $f_t = f_d$ (100% – isolation efficiency)
Note that fn must be compared to f_d for satisfactory isolation efficiency. Also note that the force transmitted can be greater than the disturbing force when f_n is close to or equals f_d. This condition is called resonance and is avoided in vibration isolation.

Natural frequency of floor or soil
Visualize the effect of dropping a load on the floor. This floor will deflect and spring back diminishingly a number of cycles until it comes to rest. The number of these cycles per unit time is a natural frequency of the floor. It is essentially independent of the magnitude of deflection and hence is a characteristic of a given floor if given a light tap or a hard jolt at the same location. The floor has many natural frequencies. The lowest natural frequency is called the fundamental. It is characterized by maximum deflection at mid span. The higher natural frequencies are generally less bothersome than the fundamental since they are less likely to be excited by machines in common use and are more quickly damped. The greater a floor deflects under a given load, the lower the fundamental frequency of that floor. Soft, springy floors have low fundamentals. Hard, solid floors have high fundamentals.

Disturbing frequency f_d (cycles per minute)
With few exceptions, the speed (RPM) of the machine will be most representative of the frequency of the disturbance. Disturbances are more readily transmitted when the disturbing frequency is close to a natural frequency of the floor or soil. For this reason, these characteristics are important considerations i designing a trouble-free installation.

Disturbing force f_d (pounds)
The disturbing force causes the problem. It is constantly changing from maximum positive through zero to maximum negative through zero to maximum positive each cycle. It results from unbalanced reciprocating and rotating masses. Its peak magnitude varies from ounces to tons. From less than 1% to over 60% of the weight of some types of machines. Generally this force will increase with time in a given machine as bearings wear, deposits form and moving parts get out of balance with each other.

Proper Sizing

Once it is determined as to what type of vibration dampening device is needed, weight loading is the next crucial step. As a built in safety measure, take the actual weight of supported pipe or equipment (consider all accessories - i.e. valves, insulation, brackets, etc...) and multiply by 1.25. Then refer to the sizing chart for the selected product to determine part number.

Sizing: Divide weight of equipment by points of support to determine load requirement per support.

Example: 240 Lb. (90.7 kg) piece of equipment, 4 support points, take 240 x 1.25 = 300 Lbs. (136.1kg) (safety measure), then take 300 ÷ 4 = 75 Lbs. (34.0 kg) Specify appropriate vibration device rated at 75 Lbs. (34.0 kg) for each of the support points.

If weight of equipment is unequally proportionate, select mounts to satisfy the weight distribution.

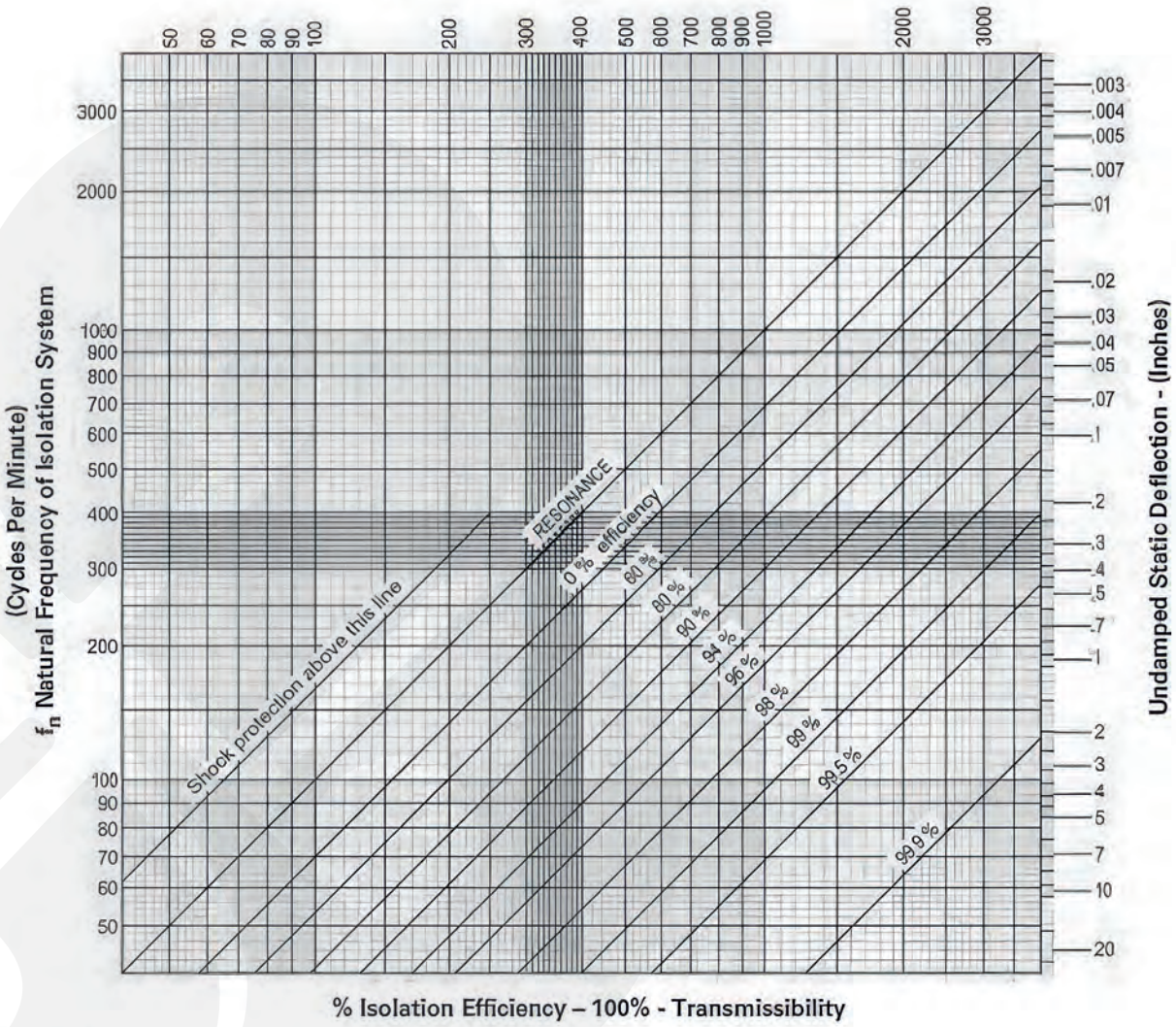
VIBRATION ISOLATION DATA

IE Computer Isolation Efficiency

$$f_n = 188\sqrt{\frac{1}{\text{static deflection (inches)}}} \qquad \text{Transmissibility} = \frac{1}{(f_d \div f_n)^2 - 1}$$

3 HX = 180 cpm = 1.1" Deflection

f_d Disturbing Frequency - (cycles per minute)



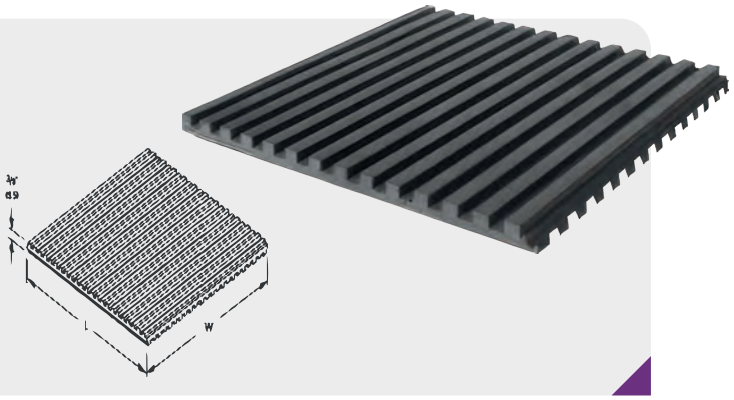
Critical Installations
96% to 99% Vibration Isolation Efficiency recommended (only 1% to 4% of disturbing vibration transmitted).

Standard Installations
90% to 95% Vibration Isolation Efficiency recommended (only 5% to 10% of disturbing vibration transmitted).

Non-Critical Installations
75% to 89% Vibration Isolation Efficiency recommended (only 11% to 24% of disturbing vibration transmitted).

RIBBED RUBBER MOUNTING PADS

MODEL
#CX-RRM037

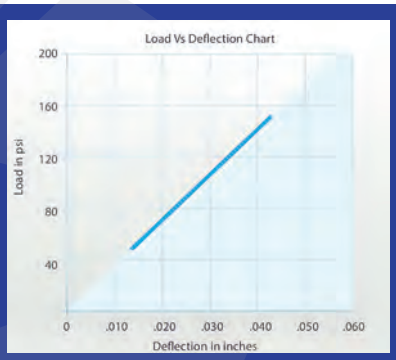


Application

The Ribbed Rubber Vibration Pad is suitable for applications where bolting is to be avoided and minor non-critical vibration conditions exist. It is also recommended for HVAC, motors, pumps, generators, air conditioning units, chillers, machine shop machines, etc.
Working Range: 50 to 150 psi

Advantages

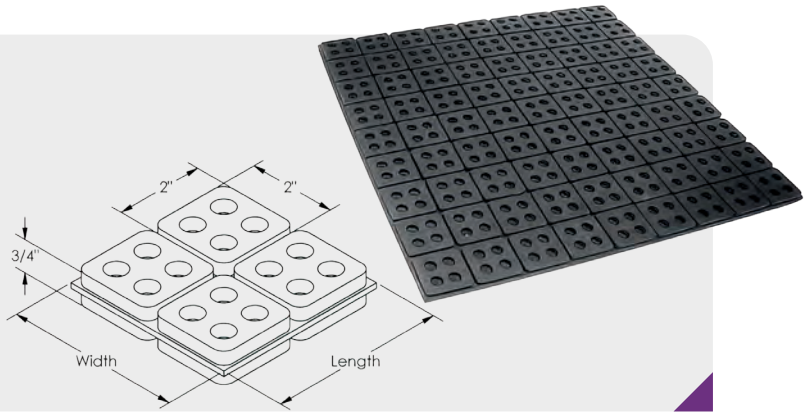
Reduce noise and minor vibrations
Anti-skid surfaces through alternate high-low rib construction design
Can be reused when machines are relocated
High-quality, simple, and quick mounting



Load Range per square inch (psi)	Length (inch)	Width (inch)	Thickness (inch)	Color
50-150	2	2	3/8	Black
50-150	3	3	3/8	Black
50-150	4	4	3/8	Black
50-150	6	6	3/8	Black
50-150	8	8	3/8	Black
50-150	12	12	3/8	Black
50-150	18	18	3/8	Black

ECRMP-EASY CUT RUBBER MOUNTING PADS

MODEL
#CX-ECR038

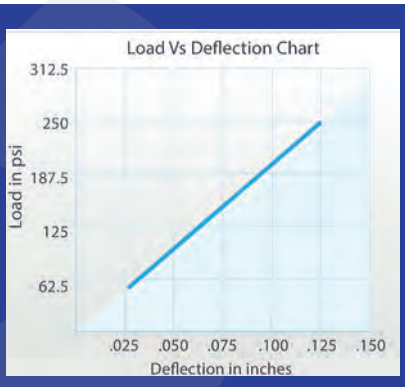


Application

The ECRMP is suitable for applications where bolting is to be avoided and minor non-critical vibration conditions exist. It is also recommended for HVAC, motors, pumps, generators, air conditioning units, chillers, machine shop machines, etc.
Working Range: 50 to 120 psi

Advantages

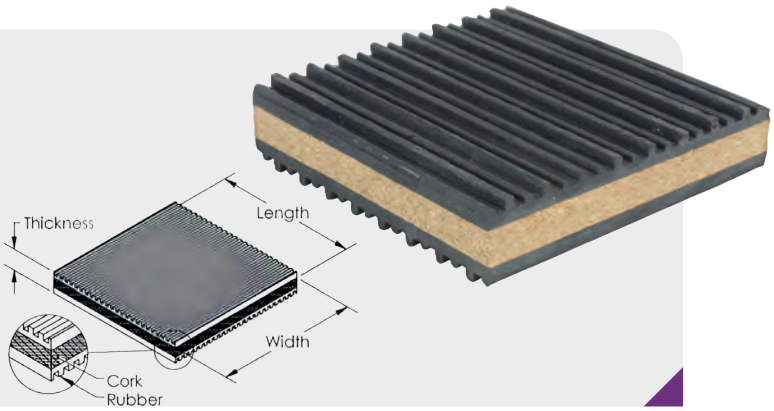
Reduce noise and minor vibrations
Anti-skid surfaces through alternate high-low rib construction design
Can be reused when machines are relocated
High-quality, simple, and quick mounting



Load Range per square inch (psi)	Length (inch)	Width (inch)	Thickness (inch)	Color
50-120	2	2	3/4	Black
50-120	4	4	3/4	Black
50-120	6	6	3/4	Black
50-120	8	8	3/4	Black
50-120	12	12	3/4	Black
50-120	18	18	3/4	Black

RUBBER CORK RUBBER MOUNTING PADS

MODEL
#CX-RCR039

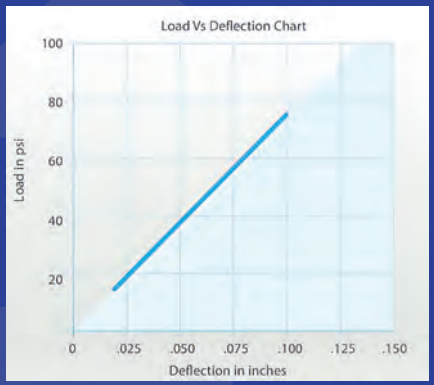


Application

The ECRMP is suitable for applications where bolting is to be avoided and minor non-critical vibration conditions exist. It is also recommended for HVAC, motors, pumps, generators, air conditioning units, chillers, machine shop machines, etc.
Working Range: 50 to 120 psi

Advantages

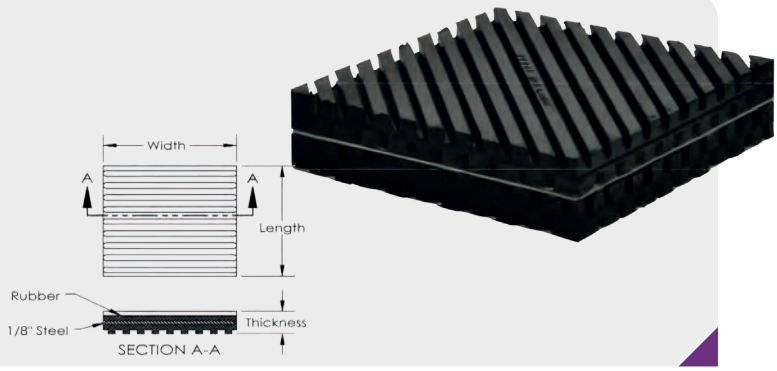
Reduce noise and minor vibrations
Anti-skid surfaces through alternate high-low rib construction design
Can be reused when machines are relocated
High-quality, simple, and quick mounting



Load Range per square inch (psi)	Length (inch)	Width (inch)	Thickness (inch)
15-75	2	2	7/8
15-75	3	3	7/8
15-75	4	4	7/8
15-75	6	6	7/8
15-75	8	8	7/8
15-75	12	12	7/8
15-75	18	18	7/8

STEEL RUBBER MOUNTING PADS

MODEL
#CX-SRM040

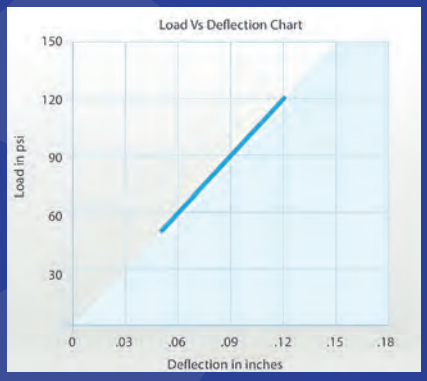


Application

Any installations with non-critical vibration where anchoring of the equipment is not required, and load distribution is important. It is also recommended for pumps, chillers, boilers, etc.
Working Range: 50 to 250 psi

Advantages

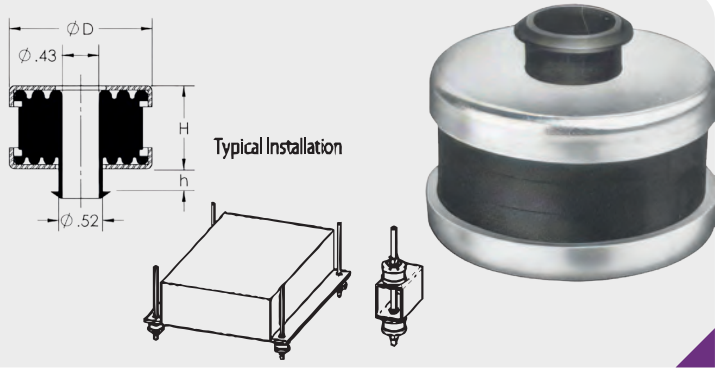
Reduce noise and minor vibrations
SRMP are Pads made of special rubber with a middle layer of mild steel plate.
The design incorporates the main feature of a ribbed top and bottom surface for better non-slip grip.
Can be reused when machines are relocated.
High-quality, simple, and quick mounting.



Load Range per square inch (psi)	Length (inch)	Width (inch)	Thickness (inch)
50-250	3	3	3/4
50-250	4	4	7/8
50-250	6	6	7/8

CEILING HANGERS

MODEL
#CX-CH041

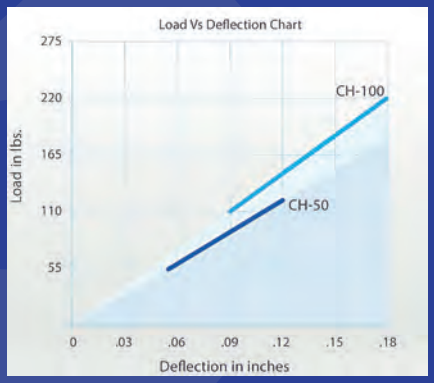


Application

Ceiling installation
Suspended building services in plenum ceiling spaces

Advantages

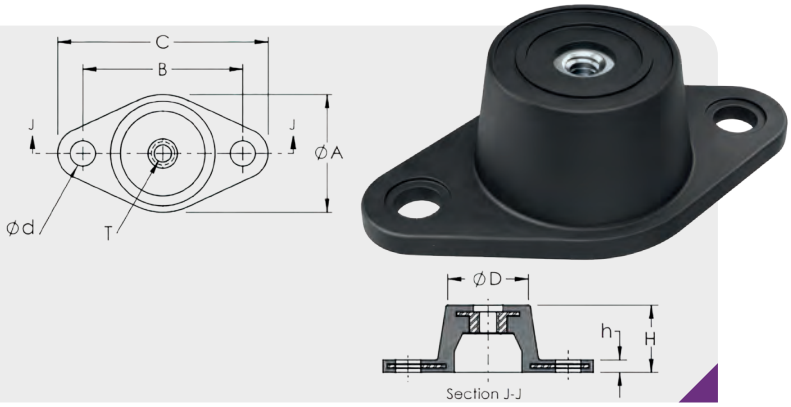
Ceiling hangers have a rubber element with collar to prevent metal to metal contact
Reduces transfer vibration and noise
Economical alternative to other type of plate ceiling hangers
Fast and simple installation



Model	Maximum Load (lbs)	Deflection at Max Load (inch)	D	H	h	Color
CH-50	120	0.12	1.25	0.75	0.20	Black
CH-100	220	0.18	1.68	1.00	0.25	Black

COMPRESSION RUBBER MOUNTS

MODEL
#CX-CRM042

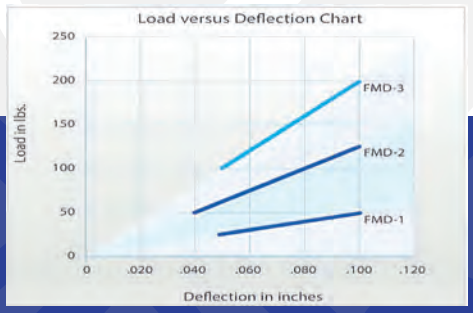


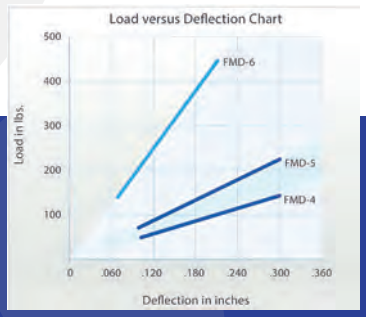
Application

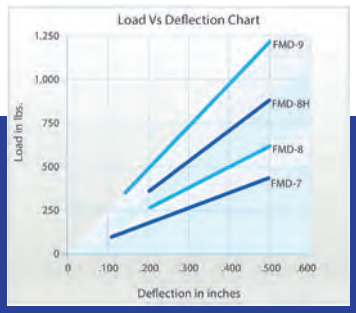
Rubber Mounts are used to isolate HVAC units and ductwork to prevent vibrations from being transmitted to the building structure.

Advantages

CRM models 1 to 6 can be used for wall ceiling mounts installations.
Reduces transfer vibration and noise
Maximum dynamic loads should not exceed 70% of the maximum load capacity.
Durable and corrosion resistant



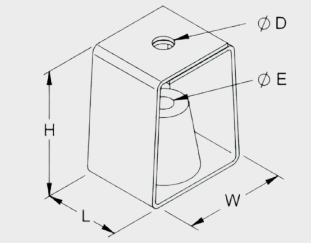




Mount Dimensions in inches(in)										
Model	Maximum Load (lbs)	Width A	Hole Spacing B	Length C	D	Height H	h	Hole Ø d	Thread T	Color
CRM1-	50	1 3/4	2 3/8	3 1/8	1 1/4	1 1/4	-16Mar	-16May	5/16/2018	Red
CRM2-	125	1 3/4	2 3/8	3 1/8	1 1/4	1 1/4	-16Mar	-16May	5/16/2018	Green
CRM3-	200	1 3/4	2 3/8	3 1/8	1 1/4	-4Nov	-16Mar	-16May	5/16/2018	Black
CRM4-	150	2 3/8	3	3 7/8	1 5/8	13/4	-4Jan	-16May	3/8 16	Red
CRM5-	225	2 3/8	3	3 7/8	1 5/8	13/4	-4Jan	-16May	3/8 16	Green
CRM6-	450	2 3/8	3	3 7/8	1 5/8	13/4	-4Jan	-16May	3/8 16	Black
CRM7-	450	3 3/8	4 3/8	5 1/2	2 3/8	3	-16May	-16Sep	1/2 13	Red
CRM8-	600	3 3/8	43/8	5 1/2	2 3/8	3	-16May	-16Sep	1/2 13	Green
CRM8-H	900	3 3/8	4 3/8	5 1/2	2 3/8	3	-16May	-16Sep	1/2 13	Green
CRM9-	1200	3 3/8	43/8	5 1/2	2 3/8	3	-16May	-16Sep	1/2 13	Black

AV HANGERS

MODEL
#CX-AVH043



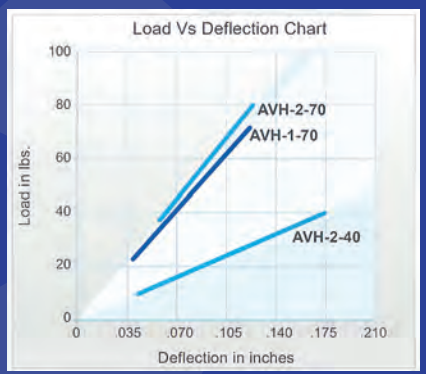
Model	H (in)	W (in)	L (in)	D (in)	E (in)
AVH-1-40	2-1/2	2	1-1/2	3/8	1/4
AVH-2-40	3	2	2	1/2	1/2
AVH-2-70	3	2-1/4	2	1/2	1/2

Application

AV hangers are used in installation of fans, A/C, pipes, ducts, transformers, air compressors, pumps, distribution cabinets, and other suspended structures and building services

Advantages

Light duty and very economical for less critical applications.
Painted steel frame for better corrosion resistance.
Fitted rubber inserts for better isolation of transferred vibrations and noise level reduction.
Rubber elements are made of neoprene



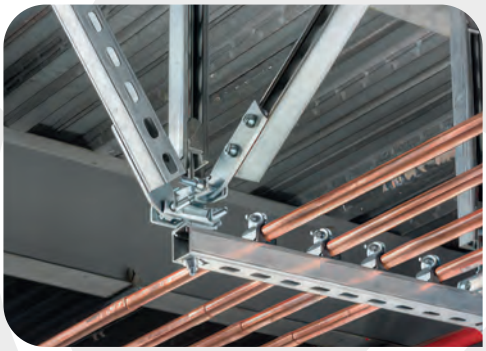
Model	Maximum Recommended Load (lbs.)	Deflection at Rated Load (in)	Spring Rate (lbs./in)	Durometer (Shore A)
AVH-1-70	70	0.100	700	70
AVH-2-40	40	0.175	228	40
AVH-2-70	80	0.120	667	80

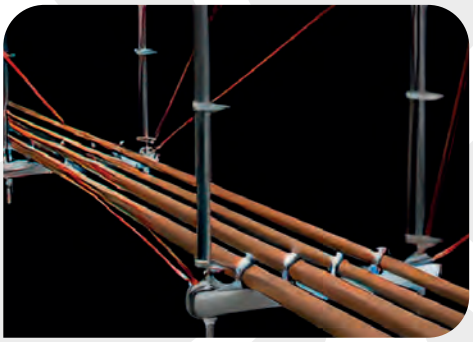
SEISMIC BRACING SYSTEMS

CLAMIX® Seismic Bracing Systems are designed and constructed to resist virtually all code specified seismic forces in the event of an earthquake; therefore, keeping non-building structural components of hospitals and other essential facilities operational and intact.

Essential facilities are those structures, which are necessary for emergency post-earthquake operations. Such facilities shall include, but not be limited to: Hospitals and other medical facilities having surgery of emergency treatment areas; fire and police stations; municipal government disaster operation and communication centers deemed to be vital in emergencies.

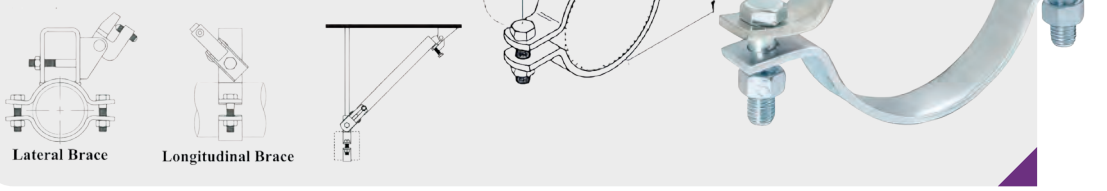
Seismic bracing shall not limit the expansion and contraction of systems; the engineer of record shall ascertain that consideration is given to the individual dynamic and thermal properties of these systems and the building structure. Proper seismic & thermal joints should be provided as directed by the project engineer. The details and schedules presented do not include the weights from branch lines. The project engineer must verify the additional load from branch lines are within the allowable capacity of the bracing details.

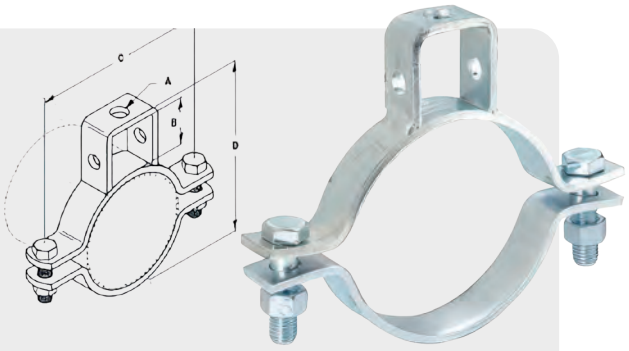




SEISMIC SWAY BRACE SUPPORTING PIPE CLAMP

MODEL
#CX-SBS044





Material

Carbon Steel – Zinc Plated
Grade 5 Clamping Bolts

Application

Designed for combined with the “bracing pipe” and transitional and structural attachment component(s) to form a complete bracing assembly

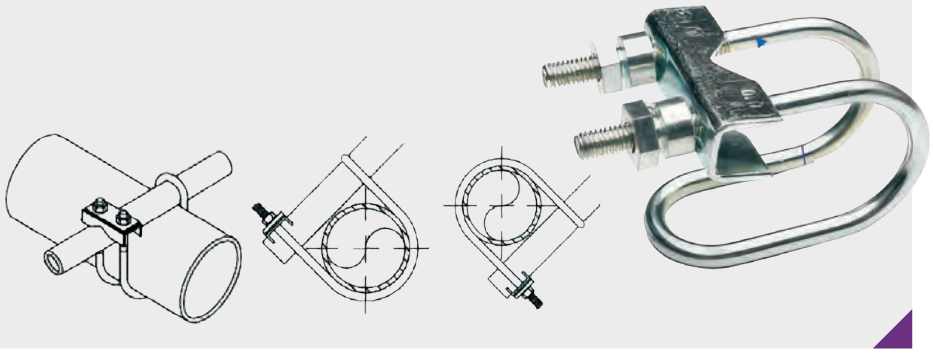
Installation

Place the assembly around the pipe to be braced, positioning welded clevis on top of the pipe, then tighten clamping bolts and nuts finger tight. Adjust the brace element to the desired angle then tighten the supplied fastener to lock the structural attachment fitting, securely in position then evenly torque clamping bolts until hex portion of clamping nuts break off.

ServicePipe Size			Top Hole Size (A)		C	D
in	DN	OD(mm)	in	mm	mm	mm
2-1/2	65	76	1/2	M12	122	138
3	80	89	1/2	M12	136	152
4	100	114	1/2	M12	178	185
6	150	169	3/4	M20	232	245
8	200	219	3/4	M20	284	295
10	250	273	3/4	M20	348	349
12	300	324	3/4	M20	398	399

SEISMIC SWAY BRACE PIPE ATTACHMENT

MODEL
#CX-SPB045



Material

Carbon Steel – Zinc Plated

Application

Designed for bracing pipe against sway and seismic disturbance. The pipe attachment component of a sway brace system used in conjunction with structural attachment fitting, and joined together with a bracing pipe element forms a complete sway brace assembly.

Installation

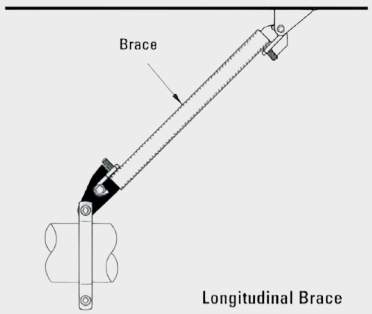
Place over the pipe to be braced, adjust brace angle, and insert bracing pipe through opening leaving a minimum of 1" extending from attachment. Brace pipe can be installed on top or bottom of pipe to be braced but must be a minimum 6” away from a pipe joint. Tighten nuts down evenly until hex heads break off.

Pipe Size (B)		Brace Pipe Size(A)	
in	DN	in	DN
1	25	1	25
1-1/4	32	1	25
1-1/2	40	1	25
2	50	1	25
2-1/2	65	1	25
3	80	1	25
4	100	1	25
6	150	1	25

Pipe Size (B)		Brace Pipe Size(A)	
in	DN	in	DN
1	25	1-1/4	32
1-1/4	32	1-1/4	32
1-1/2	40	1-1/4	32
2	50	1-1/4	32
2-1/2	65	1-1/4	32
3	80	1-1/4	32
4	100	1-1/4	32
6	150	1-1/4	32

LONGITUDINAL IN LINE SWAY BRACE ATTACHMENT

MODEL
#CX-LIS046



Material

Carbon Steel – Zinc Plated
Grade 5 Clamping Bolts

Application

Designed for bracing pipe against sway and seismic disturbance. Versatile design allows for attachment at any angle and the ability to be used in a lateral or longitudinal bracing configuration.

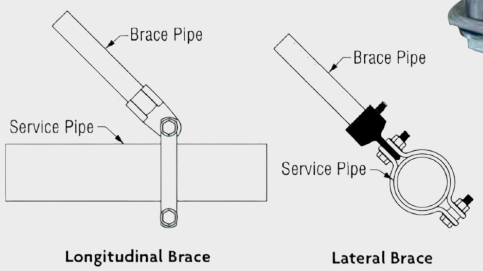
Installation

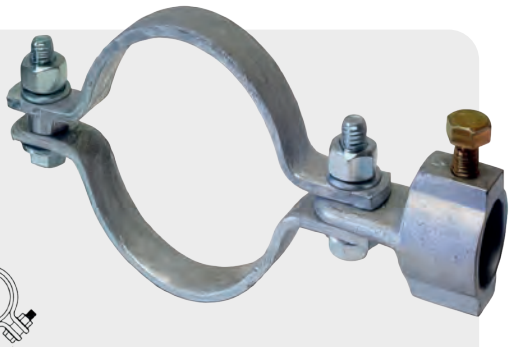
Place attachment around pipe to be braced, positioning brace attachment as needed, then tighten clamping bolts and nuts finger tight. Insert brace component into fitting against back of jaw. Tighten set screw finger tight, adjust brace angle as needed, then tighten set screw until hex head breaks off. Then evenly torque clamping bolts until hex portion of clamping nuts break off.

Pipe Size		Pipe Clamp (Width x Thick)	Bracing Pipe Size	Bracing Structural Steel	Bracing Strut Channel
in	DN	mm	in	thick(in)	thick(ga.)
2	50	25×6.0	2 ~ 1 sch40	1/4 ~ 3/8	12
2-1/2	65	25×6.0	2~1 sch40	1/4 ~ 3/8	12
3	80	25×6.0	2 ~1 sch40	1/4 ~ 3/8	12
4	100	25×6.0	2 ~ 1 sch40	1/4 ~ 3/8	12
5	125	30×6.0	2~ 1 sch40	1/4 ~ 3/8	12
6	150	38×10.0	2~1 sch40	1/4 ~ 3/8	12
8	200	38×10.0	2~1 sch40	1/4 ~ 3/8	12

LONGITUDINAL & LATERAL SWAY BRACE PIPE ATTACHMENT

MODEL
#CX-LLS047





Material

Ductile Iron & Carbon Steel – Zinc Plated
Grade 5 Clamping Bolts

Application

Designed for rigidly brace piping systems subjected to longitudinal and lateral seismic loads. May also be installed to brace piping systems subjected to vertical seismic loads.

Installation

Position the clamp at the desired location on the service pipe and hand tighten the hex bolts.
Ensure the spacer and the brace socket attachment are positioned on the bolt between the pipe clamps ears.
Insert brace pipe into the socket until the brace pipe bottoms out.
Torque shear off bolt until the bolt head breaks off.
Ensure the brace pipe is set to the desired installation brace angle.
Tighten the clamp bolts and nuts equally and alternately until metal-to-metal contact is achieved with the proper torque value.

ServicePip e Size		Pipe Clamp (Width x Thick)	BracingPipe Size
in	DN	mm	in
2	50	25×6.0	1 (DN25) sch40
2-1/2	65	25x6.0	1 (DN25) sch40
3	80	25x6.0	1 (DN25) sch40
4	100	25×6.0	1 (DN25) sch40
5	125	30×6.0	1 (DN25) sch40
6	150	38×10.0	1 (DN25) sch40
8	200	38×10.0	1 (DN25) sch40

UNIVERSAL SWIVEL SWAY BRACE ATTACHMENT

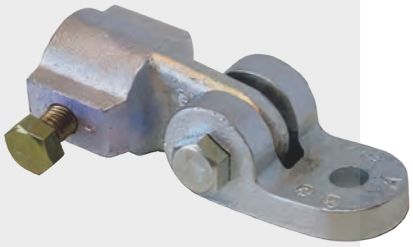
MODEL
#CX-USS048

Material	Carbon Steel – Zinc Plated Grade 5 Clamping Bolts
Application	Designed for bracing pipe against sway and seismic disturbances. Universal swivel design allows for attachment at any surface angle combined with concentric loading.
Installation	Mount device to structure then insert brace element into fitting against back of jaw. Tighten set screw finger tight, then tighten until hex head breaks off. Adjust attachment to proper brace angle.

Fixing Hole Size		Bracing Strut Channel		Bracing Pipe Size	Service Pipe Size
in	mm	ga.	mm	in	in
1/2	14.0	12	2.5	2~1(DN25~DN50)sch40	2~ 8

SEISMIC SWAY BRACE PIPE ROTATING JOINT ATTACHMENT

MODEL
#CX-SSB049

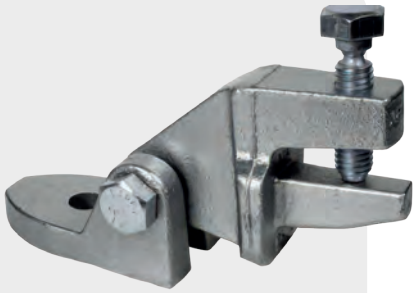


Material	Ductile Iron with Carbon Steel Hardware – Zinc Plated
Application	Designed for connect brace pipe to the building structure or to a seismic structural attachment. The Sway Brace Swivel Attachment rigidly braces piping systems subjected to horizontal seismic loads. The Sway Brace Swivel Attachment may also be installed to rigidly brace piping systems subjected to vertical seismic loads.
Installation	Insert anchor through the mounting hole and into the structure or seismic structural attachment Insert Sch. 40 brace pipe into the brace socket until the brace pipe bottoms out. Torque shear off bolt until head shears off. Check the cross bolt and nut and ensure the nut is wrench tight.

Inner Dia (D)	Fix Hole Size		Bracing Pipe Size	Service Pipe Size
mm	in	mm	in	in
35	1/2	14.0	1 (DN25) sch40	2~8

SEISMIC SWAY BRACE ROTATING CONNECTOR

MODEL
#CX-SBR050

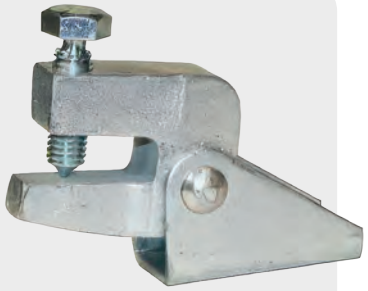


Material	Ductile Iron with Carbon Steel Hardware – Zinc Plated
Application	Designed for connect brace pipe to the building structure or to a seismic structural attachment.
Installation	Insert anchor through the mounting hole and into the structure or seismic structural attachment. Insert Sch. 40 brace pipe or brace the 12g(2.5mm) Strut Channel into the brace jaw until the brace pipe bottoms out. Torque shear off bolt until head shears off. Check the cross bolt and nut and ensure the nut is wrench tight.

Open Size		Bracing Strut Channel		Bracing Pipe Size	Service Pipe Size
in	mm	ga.	mm	in	in
1/2	12.7	12	2.5	1~2 (DN25~DN50)sch40	2~8

SEISMIC SWAY BRACE C-CLAMP STRUCTURAL ATTACHMENT

MODEL
#CX-SBC051



Material
Ductile Iron with Carbon Steel Hardware – Zinc Plated

Application
Designed for bracing pipe against sway and seismic disturbances. Universal swivel design allows for attachment at any surface angle combined with concentric loading.

Installation
Mount device to structure then insert brace element into fitting against back of jaw. Tighten set screw finger tight, then tighten until hex head breaks off. Adjust attachment to proper brace angle.

Open Size		Bracing Strut Channel		Bracing Pipe Size	Service Pipe Size
in	mm	ga.	mm	in	in
9/16	14.3	12	2.5	2~1 (DN25 ~ DN50)sch40	2 ~ 8

SEISMIC SWAY BRACE BAR JOIST ADAPTER

MODEL
#CX-SSB052

Material

Ductile Iron with Carbon Steel Hardware – Zinc Plated

Application

Designed for attaching sway brace assembly to a steel bar joist structural member of 3/8" maximum thickness. To provide a point of connection when drilling or welding is not allowed or impractical.

Installation

Steel bar joist manufacturer's warranty requires attachment within 6" of chord panel point. Place on structural member with the flange contacting the back of the jaw. Tighten set screws finger tight, then evenly tighten until hex head breaks off.

M12 Hex Bolt Type		Open Size		Bracing Structural Steel	Service Pipe Size
Shear off bolt	Mounting bolt	in	mm	in	in
2pcs	1pcs	1/2	12.5	3/8 maximum	2 ~ 8

4 WAY LONGITUDINAL SWAY BRACE ATTACHMENT

MODEL
#CX-LSB053

Material	Carbon Steel - Zinc Plated
Application	Designed for bracing pipe against sway and seismic disturbances, Functions as a longitudinal brace connection when attached to a lateral brace pipe. Bracing connection must be positioned as close as physically possible to the braced pipe (No more than 3” away)
Installation	Steel bar joist manufacturer's warranty requires attachment within 6" of chord panel point. Place on structural member with the flange contacting the back of the jaw. Tighten set screws finger tight, then evenly tighten until hex head breaks off.

A		B		Bracing Pipe Size
in	mm	in	mm	in
4-4/5	122	3-3/4	95	1x1

SEISMIC SWAY BRACE STRUCTURAL ADAPTER

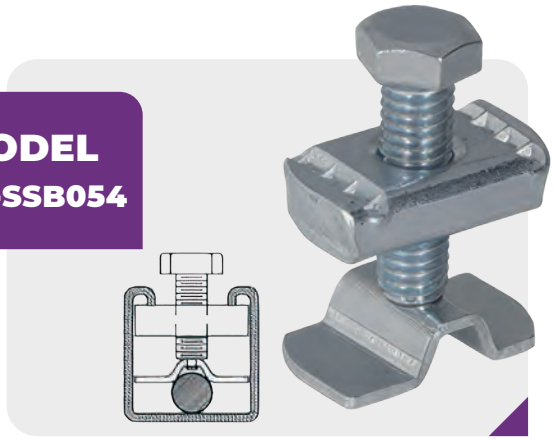
MODEL
#CX-SSB054

Material	Ductile Iron with Carbon Steel Hardware - Zinc Plated
Application	Designed for attach a sway brace assembly to a steel structural member of 3/8" minimum and 1¼" maximum thickness. To provide a point of connection when drilling or welding is not allowed or not practical.
Installation	Place on structural member with the flange contacting the back of the jaw. Tighten set screws finger tight, then evenly tighten until hex heads break off. Attach structural attachment to with the supplied attachment bolt, ensuring that the attachment bolt head bottoms out securely. Please note that the maximum load will be limited by the structural attachment utilized with this adapter.

M12 Hex Bolt Type		Open Size		Bracing Structural Steel	Service Pipe Size
Shear off bolt	Mounting bolt	in	mm	in	in
2pcs	1pcs	1-1/4	31.75	3/8 ~ 1-1/4	2~8

SEISMIC HANGER ROD STIFFENER

MODEL
#CX-SSB054



Material	Carbon Steel Hardware - Zinc Plated
Application	Designed for Secures channel to hanger rod for vertical seismic bracing. Slight distortion of the channel (strut) may occur upon installation of rod stiffeners. Secures 3/8” through 5/8” diameter rod.

Channel Nuts	Bolt Size	Rod Diameter	
mm	mm	in	mm
35x19x9.0	M35×12	3/8~5/8	M10 ~ M16

REFERENCE DATA

Schedule 40 Steel Pipe Data

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water		Maximum Span	Recommended Hanger Rod
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m	Ft.Meter	Sizes
3/8"	(10)	0.675	(17.1)	0.091	(2.3)	0.6	(0.9)	0.7	(1.0)	7 (2.13)	3/8"-16
1/2"	(15)	0.840	(21.3)	0.109	(2.7)	0.8	(1.2)	0.9	(1.2)	7 (2.13)	3/8"-16
3/4"	(20)	1.050	(26.7)	0.113	(2.9)	1.1	(1.7)	1.3	(2.0)	7 (2.13)	3/8"-16
1"	(25)	1.315	(33.4)	0.133	(3.4)	1.7	(2.5)	2.1	(3.0)	7 (2.13)	3/8"-16
1-1/4"	(32)	1.660	(42.1)	0.140	(3.5)	23	(3.4)	2.9	(4.3)	7 (2.13)	3/8"-16
1-1/2"	(40)	1.900	(48.2)	0.145	(3.7)	27	(4.0)	3.6	(5.3)	9 (2.74)	3/8"-16
2"	(50)	2.375	(60.3)	0.154	(3.9)	3.6	(5.4)	5	(7.5)	10 (3.05)	3/8"-16
2-1/2"	(65)	2.875	(73.0)	0.203	(5.1)	5.8	(8.6)	7.9	(11.7)	11 (3.35)	1/2"-13
3"	(80)	3.500	(88.9)	0.216	(5.5)	7.6	(11.2)	10.8	(15.9)	12 (3.66)	1/2"-14
3-1/2"	(90)	4.000	(101.6)	0.226	(5.7)	9.1	(13.5)	13.4	(19.8)	13 (3.96)	1/2"-15
4"	(100)	4.500	(114.3)	0.237	(6.0)	10.8	(16.0)	16.3	(24.2)	14 (4.27)	5/8"-11
5"	(125)	5.563	(141.3)	0.258	(6.5)	14.6	(21.7)	23.2	(34.6)	16 (4.87)	5/8"-11
6"	(150)	6.625	(168.3)	0.280	(7.1)	19	(28.2)	31.5	(46.8)	17 (5.18)	3/4"-11
8"	(200)	8.625	(219.1)	0.322	(8.2)	28.5	(42.5)	50.1	(74.6)	19 (5.79)	3/4"-11
10"	(250)	10.750	(273.0)	0.365	(9.3)	40.5	(60.2)	74.6	(110.9)	22 (6.69)	3/8"-9
12"	(300)	12.750	(323.8)	0.406	(10.3)	51.1	(75.9)	102.1	(151.9)	23 (7.01)	3/8"-9
14"	(350)	14.000	(355.6)	0.437	(11.1)	63	(93.7)	121.5	(180.7)	25 (7.62)	1"-8
16"	(400)	16.000	(406.4)	0.500	(12.7)	83	(123.5)	159.5	(237.3)	27 (8.23)	1"-8
18"	(450)	18.000	(457.2)	0.563	(14.3)	105	(156.2)	202.2	(300.8)	28 (8.53)	1"-8
20"	(500)	20.000	(508.0)	0.593	(15.1)	123	(183.0)	243.4	(361.8)	30 (9.14)	1-1/4"-7
24"	(600)	24.000	(609.6)	0.687	(17.4)	171	(254.5)	345.2	(513.7)	32 (9.75)	1-1/4"-7

Based on ASTM A53-86.
1 cubic ft. of water weighs 62.41 lbs.
1 gallon (U. S.) weighs 8.335 lbs.
1 cubic meter of water weighs 999.97 kg.
1 liter weighs .999 kg.
Based on MSS SP-69 Table 3 & 4.
*Many codes require pipe hangers to be spaced every 10'(3.048 meters) regardless of size. Check local codes. Spacing and capacities are based on water filled pipe. Closer hanger spacing may be required where additional valves and fittings increase the load.

REFERENCE DATA

Schedule 80 Steel Pipe Data

NominalPipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water		Maximum Span	Recommended Hanger Rod
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)	Ft.(Meter)	Sizes
3/8"	(10)	0.675	(17.1)	0.126	(3.2)	0.7	(1.1)	0.8	(1.2)	7 (2.13)	3/8"-16
1/2"	(15)	0.840	(21.3)	0.147	(3.7)	1.1	(1.6)	1.2	(1.7)	7 (2.13)	3/8"-16
3/4"	(20)	1.050	(26.7)	0.154	(3.9)	1.5	(2.2)	1.7	(2.5)	7 (2.13)	3/8"-16
1"	(25)	1.315	(33.4)	0.179	(4.5)	2.2	(3.2)	2.5	(3.6)	7 (2.13)	3/8"-16
1-1/4"	(32)	1.660	(42.1)	0.191	(4.8)	3.0	(4.4)	3.5	(5.2)	7 (2.13)	3/8"-16
1-1/2"	(40)	1.900	(48.2)	0.200	(5.1)	3.6	(5.4)	4.3	(6.5)	9 (2.74)	3/8"-16
2"	(50)	2.375	(60.3)	0.218	(5.5)	5.0	(7.5)	6.3	(9.4)	10 (3.05)	3/8"-16
2-1/2"	(65)	2.875	(73.0)	0.276	(7.0)	7.6	(11.4)	9.4	(14.1)	11 (3.35)	1/2"-13
3"	(80)	3.500	(88.9)	0.300	(7.6)	10.2	(15.2)	13.0	(19.4)	12 (3.66)	1/2"-14
3-1/2"	(90)	4.000	(101.6)	0.318	(8.1)	12.5	(18.6)	16.3	(24.3)	13 (3.96)	1/2"-15
4"	(100)	4.500	(114.3)	0.337	(8.5)	15.0	(22.3)	20.0	(29.7)	14 (4.27)	5/8"-11
5"	(125)	5.563	(141.3)	0.375	(9.5)	20.8	(30.9)	28.7	(42.6)	16 (4.87)	5/8"-11
6"	(150)	6.625	(168.3)	0.432	(11.0)	28.6	(42.5)	39.9	(59.3)	17 (5.18)	3/4"-11
8"	(200)	8.625	(219.1)	0.500	(12.7)	43.4	(64.5)	63.1	(93.9)	19 (5.79)	3/4"-11
10"	(250)	10.750	(273.0)	0.593	(15.0)	64.4	(95.8)	95.5	(142.1)	22 (6.69)	3/8"-9
12"	(300)	12.750	(323.8)	0.687	(17.4)	88.6	(131.8)	132.6	(197.3)	23 (7.01)	3/8"-9
14"	(350)	14.000	(355.6)	0.750	(19.0)	107.0	(159.2)	158.2	(235.4)	25 (7.62)	1"-8
16"	(400)	16.000	(406.4)	0.843	(21.4)	137.0	(203.9)	206.7	(306.6)	27 (8.23)	1"-8
18"	(450)	18.000	(457.2)	0.937	(23.8)	171.0	(254.5)	259.5	(386.2)	28 (8.53)	1"-8
20"	(500)	20.000	(508.0)	1.031	(26.2)	209.0	(311.0)	318.4	(473.8)	30 (9.14)	1-1/4"-7
24"	(600)	24.000	(609.6)	0.687	(17.4)	171	(254.5)	345.2	(513.7)	32 (9.75)	1-1/4"-7

Based on ASTM A53-86.
1 cubic ft. of water weighs 62.41 lbs.
1 gallon (U. S.) weighs 8.335 lbs.
1 cubic meter of water weighs 999.97 kg.
1 liter weighs .999 kg.
Based on MSS SP-69 Table 3 & 4.
*Many codes require pipe hangers to be spaced every 10'(3.048 meters)regardless of size. Check local codes. Spacing and capacities are based on water filled pipe. Closer hanger spacing may be required where additional valves and fittings increase the load.

REFERENCE DATA

AWWA Ductile Iron Pipe Data

Nominal Pipe Size		Class	O.D.of Ductile Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)		In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
3"	(80)	53	3.96	(100.6)	0.31	(7.9)	11.2	(16.6)	15.0	(22.2)
4"	(100)	53	4.80	(121.9)	0.32	(8.1)	14.2	(21.1)	20.1	(29.9)
6"	(150)	53	6.90	(175.2)	0.34	(8.6)	22.0	(32.7)	35.1	(52.2)
8"	(200)	53	9.05	(229.9)	0.36	(9.1)	31.0	(46.1)	54.0	(80.3)
10"	(250)	53	11.10	(281.9)	0.38	(9.6)	40.4	(60.1)	76.8	(114.2)
12"	(300)	53	13.20	(335.3)	0.40	(10.1)	50.7	(75.4)	103.0	(153.2)
14"	(350)	53	15.30	(388.6)	0.42	(10.6)	62.4	(92.8)	133.5	(198.6)
16"	(400)	53	17.40	(441.9)	0.43	(10.9)	72.8	(108.3)	165.9	(246.8)
18"	(450)	53	19.50	(495.3)	0.44	(11.1)	83.6	(124.4)	201.5	(299.8)
20"	(500)	53	21.60	(548.6)	0.45	(11.4)	95.2	(141.7)	241.0	(358.7)
24"	(600)	53	25.80	(655.3)	0.47	(11.9)	119.2	(177.4)	329.4	(490.2)
30"	(750)	53	32.00	(812.8)	0.51	(12.9)	161.3	(240.0)	487.8	(597.1)
36"	(900)	53	38.30	(972.8)	0.58	(14.7)	219.5	(326.6)	688.8	(1025.0)
42"	(1050)	53	44.50	(1130.3)	0.65	(16.5)	285.2	(424.4)	920.1	(1369.2)
48"	(1200)	53	50.80	(1290.3)	0.72	(18.3)	360.3	(536.2)	1189.2	(1769.7)
54"	(1350)	53	57.10	(1450.3)	0.81	(20.6)	455.0	(677.1)	1502.2	(2135.5)

Based on AWWA C108-70,Table 8.2.

Add flange weight for flanged cast iron pipe.

Ductile Iron Pipe Size

Ductile Iron Pipe Size		B3110	B3114	B3120	B3122	B3122A	B3124	B3126	B3117SL
In.	(mm)								
3"	(80)	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	2 to 3-1/2	2 to 3-1/2	2 to 3-1/2
4"	(100)	4	4	4	4	4	4 to 6	4 to 6	4 to 6
6"	(150)	6	6	6	6	6	4 to 6	4 to6	4 to6
8"	(200)	10	8	8	8	8	8 to 10	8 to 10	8 to 10
10"	(250)	12	10	10	10	10	8 to 10	8 to 10	8 to 10
12"	(300)	12	12	12	12	12	12 to 14	12 to 14	12 to 14
14"	(350)	16	14	14	14	14	12 to 14	12 to 14	12 to 14
16"	(400)	18	16	16	16	16	16 to 20	16 to 20	16 to 20
18"	(450)	20	18	18	18	18	16 to 20	16 to 20	16 to 20
20"	(500)	24	20	20	20	20	16 to 20	16 to 20	16 to 20
24"	(600)	30	24	24	24	24			24

Ductile Iron Pipe Size		B3118SL	B3119SL	B218	B219	B379	B479	B3114R	B3117R
In.	(mm)								
3"	(80)	2 to 3-1/2	2 to 3-1/2	B218	B219-1	—	—	3½	2 to 3-1/2
4"	(100)	4to 6	4 to 6	B218	B219-2	—	—	4	4 to 6
6"	(150)	4 to 6	4 to 6	B218	B219-3	B379	—	6	4 to 6
8"	(200)	8 to 10	8 to 10	—	B219-4	B379	—	8	8 to 10
10"	(250)	8 to 10	8 to 10	—	B219-4	B379	—	10	8 to 10
12"	(300)	12 to 14	12 to 14	—	B219-5	B379	—	12	12 to 14
14"	(350)	12 to 14	12 to 14	—	—	B379	——	14	12 to 14
16"	(400)	16 to 20	16 to 20	—	—	B379	B479	16	16 to 20
18"	(450)	16 to 20	16 to 20	—	—	—	B479	18	16 to 20
20"	(500)	16 to 20	16 to 20	—	——	—	B479	20	16 to 20
24"	(600)	24	24	—	—	—	B479	24	24

REFERENCE DATA

Service Weight Cast Iron Soil Pipe Data(Bell and Spigot Type)									
Nominal Pipe Size		O.D. of Ductile Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
2"	(50)	2.25	(57.1)	.17	(4.3)	4.0	(5.9)	5.5	(8.1)
3"	(80)	3.25	(82.5)	.17	(4.3)	6.0	(8.9)	9.4	(13.9)
4"	(100)	4.25	(107.9)	.18	(4.6)	8.0	(11.9)	14.2	(21.1)
5"	(125)	5.25	(133.3)	.18	(4.6)	10.4	(15.5)	22.7	(33.8)
6"	(150)	6.25	(158.7)	.18	(4.6)	13.0	(19.3)	26.9	(40.0)
8"	(200)	8.38	(212.8)	.23	(5.8)	20.0	(29.7)	45.7	(67.9)
10"	(250)	10.50	(266.7)	.28	(7.1)	29.0	(43.1)	69.6	(103.5)
12"	(300)	12.50	(317.5)	.28	(7.1)	38.0	(56.5)	96.2	(143.1)
15"	(380)	15.62	(396.7)	.31	(7.9)	51.0	(75.9)	147.6	(219.6)
Based on ASTM A74-Table2.									

Extra Weight Cast Iron Soil Pipe Date(Bell and Spigot Type)									
Nominal Pipe Size		O.D. of Ductile Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
2"	(50)	2.38	(60.4)	.190	(4.8)	5.0	(7.2)	6.6	(9.5)
3"	(80)	3.50	(88.9)	.250	(6.3)	9.0	(13.0)	12.7	(18.3)
4"	(100)	4.50	(114.3)	.250	(6.3)	12.0	(17.4)	18.5	(26.8)
5"	(125)	5.50	(139.7)	.250	(6.3)	15.0	(21.7)	25.2	(36.5)
6"	(150)	6.50	(165.1)	.250	(6.3)	19.0	(27.5)	33.7	(48.8)
8"	(200)	8.62	(218.9)	.310	(7.9)	30.0	(43.4)	56.1	(81.2)
10"	(250)	10.75	(273.0)	.375	(9.5)	43.0	(62.3)	83.8	(121.4)
12"	(300)	12.75	(323.8)	.375	(9.5)	54.0	(78.2)	112.8	(163.3)
15"	(380)	15.88	(403.3)	.440	(11.2)	75.0	(108.6)	166.8	(241.5)
Based on ASTM A74-Table1.									

No-Hub Cast Iron Soil Pipe Data									
Nominal Pipe Size		O.D. of Ductile Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	**(mm)**	**In.**	**(mm)**	**In.**	**(mm)**	**Lbs./Ft.**	**(kg/m)**	**Lbs./Ft.**	**(kg/m)**
1-1/2"	(40)	1.90	(48.2)	.16	(4.0)	2.7	(4.0)	6.2	(9.2)
2"	(50)	2.35	(59.7)	.16	(4.0)	3.6	(5.3)	8.6	(12.5)
3"	(80)	3.35	(85.1)	.16	(4.0)	5.2	(7.7)	13.5	(20.0)
4"	(100)	4.38	(111.2)	.19	(4.8)	7.4	(11.0)	20.2	(30.0)
5"	(125)	5.30	(134.6)	.19	(4.8)	9.6	(14.3)	27.5	(41.0)
6"	(150)	6.30	(160.0)	.19	(4.8)	11.0	(16.3)	34.0	(50.5)
8"	(200)	8.38	(212.8)	.23	(5.8)	18.0	(26.8)	57.5	(85.6)
Based on Cast Iron Soil Pipe Institute Standards 301-72, Table 1.									

REFERENCE DATA

Copper Tubing (Type L) Data

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Tubing		Weight of Tubing Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1/4"	(6)	0.375	(9.5)	.030	(.7)	.12	(.17)	.15	(.21)
3/8"	(10)	0.500	(12.7)	.035	(.9)	.20	(.30)	.26	(.39)
1/2"	(15)	0.625	(15.9)	.040	(1.0)	.28	(.41)	.38	(.56)
5/8"	(17)	0.750	(19.0)	.042	(1.0)	.36	(.53)	.51	(.75)
3/4"	(20)	0.875	(22.2)	.045	(1.1)	.45	(.67)	.66	(.98)
1°	(25)	1.125	(28.6)	.050	(1.3)	.65	(.97)	1.01	(1.50)
1-1/4"	(32)	1.375	(34.9)	.055	(1.4)	.88	(1.31)	1.42	(2.11)
1-1/2"	(40)	1.625	(41.3)	.060	(1.5)	1.14	(1.69)	1.91	(2.83)
2"	(50)	2.125	(54.0)	.070	(1.8)	1.75	(2.60)	3.09	(4.59)
2-1/2"	(65)	2.625	(66.7)	.080	(2.0)	2.48	(3.69)	4.54	(6.75)
3"	(80)	3.125	(79.4)	.090	(2.3)	3.33	(4.95)	6.28	(9.34)
3-1/2"	(90)	3.625	(92.1)	.100	(2.5)	4.29	(6.38)	8.28	(12.32)
4"	(100)	4.125	(104.8)		(2.8)	5.38	(8.00)	10.57	(15.72)
5"	(125)	5.125	(130.2)	.125	(3.2)	7.61	(11.32)	15.69	(23.34)
6"	(150)	6.125	(155.6)	.140	(3.5)	10.20	(15.18)	21.81	(32.46)
8"	(200)	8.125	(206.4)	.200	(5.1)	19.29	(28.70)	39.49	(58.89)

Dimensions taken from ASTM B88-83.

Copper Tubing (Type K) Data

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Tubing		Weight of Tubing Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1/4"	(6)	0.375	(9.5)	0.035	(.9)	0.14	(.21)	0.17	(.25)
3/8"	(10)	0.5	(12.7)	0.049	(1.2)	0.27	(.40)	0.32	(.47)
1/2"	(15)	0.625	(15.9)	0.049	(1.2)	0.34	(.50)	0.43	(.63)
5/8"	(17)	0.75	(19.0)	0.049	(1.2)	0.42	(.62)	0.56	(.83)
3/4"	(20)	0.875	(22.2)	0.065	(1.6)	0.64	(.95)	0.83	(1.23)
1°	(25)	1.125	(28.6)	0.065	(1.6)	0.84	(1.25)	1.18	(1.75)
1-1/4"	(32)	1.375	(34.9)	0.065	(1.6)	1.04	(1.55)	1.57	(2.34)
1-1/2"	(40)	1.625	(41.3)	0.072	(1.8)	1.36	(2.02)	2.1	(3.12)
2"	(50)	2.125	(54.0)	0.083	(2.1)	2.06	(3.06)	3.37	(5.01)
2-1/2"	(65)	2.625	(66.7)	0.095	(2.4)	2.92	(4.34)	4.92	(7.31)
3"	(80)	3.125	(79.4)	0.109	(2.8)	4	(5.95)	6.96	(10.35)
3-1/2"	(90)	3.625	(92.1)	0.12	(3.0)	5.12	(7.62)	9.02	(13.42)
4"	(100)	4.125	(104.8)	0.134	(3.4)	6.51	(9.69)	11.57	(17.22)
5"	(125)	5.125	(130.2)	0.16	(4.0)	9.67	(14.39)	17.67	(26.29)
6"	(150)	6.125	(155.6)	0.192	(4.9)	13.87	(20.60)	25.07	(37.27)
8"	(200)	8.125	(206.4)	0.271	(6.9)	25.90	(38.50)	45.40	(67.52)

Dimensions taken from ASTM B88-83.
1 cubic ft.of water weighs 62.41 lbs.
1 cubic meter of water weighs 999.97kg.
1 gallon (U. S.) weighs 8.335 lbs.
1 liter weighs .999 kg.

REFERENCE DATA

Recommended Hanger Spacing And Rod Size For Copper Tubing

Nominal Pipe Size		Maximum Span		Recommended Hanger Rod
In.	(mm)	Ft.	(Meter)	Size
1/2"	(15)	5	(1.52)	3/8"-16
3/4"	(20)	5	(1.52)	3/8"-16
1"	(25)	6	(1.83)	3/8"-16
1-1/4"	(32)	7	(2.13)	3/8"-16
1-1/2"	(40)	8	(2.44)	3/8"-16
2"	(50)	8	(2.44)	3/8"-16
2-1/2"	(65)	9	(2.74)	1/2"-13
3"	(80)	10	(3.05)	1/2"-13
3-1/2"	(90)	11	(3.35)	1/2"-13
4"	(100)	13	(3.66)	1/2"-13
5"	(125)	12	(3.96)	1/2"-13
6"	(150)	12	(4.27)	5/8"-11
8"	(200)	16	(4.87)	3/4"-10

Based on MSS-SP-69, Table 4 & 3.

Glass Pipe Data
Regular Schedule

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1-1/2"	(40)	1.84	(46.7)	0.12	(3.0)	0.6	(0.9)	1.5	(2.2)
2"	(50)	2.34	(59.4)	0.14	(3.5)	0.9	(1.4)	2.3	(3.5)
3"	(80)	3.41	(86.6)	0.17	(4.3)	1.6	(2.4)	4.8	(7.1)
4"	(100)	4.53	(115.0)	0.2	(5.1)	2.6	(3.8)	8.4	(12.4)
6"	(150)	6.66	(169.1)	0.24	(6.1)	4.7	(7.0)	17.5	(26.0)

Consult manufacturer for support spacing requirements.

Heavy Schedule

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1"	(25)	1.31	(33.3)	.16	(4.0)	0.6	(0.9)	0.9	(1.4)
1-1/2"	(40)	1.84	(46.7)	.17	(4.3)	0.8	(1.3)	1.5	(2.4)
2"	(50)	2.34	(59.4)	.17	(4.3)	1.1	(1.6)	2.4	(3.6)
3"	(80)	3.41	(86.6)	.20	(5.1)	2	(3.0)	5.0	(7.5)
4"	(100)	4.53	(115.0)	.26	(6.6)	3.4	(5.0)	8.8	(13.1)
6"	(150)	6.66	(169.1)	.33	(8.4)	6.3	(9.4)	18.7	(27.9)

Consult manufacturer for support spacing requirements.

1 cubic ft. of water weighs 62.41 lbs.
1 cubic meter of water weighs 999.97 kg.
1 gallon (U. S.) weighs 8.335 lbs.
1 liter weighs .999 kg.

REFERENCE DATA

Schedule 40 PVC Plastic Pipe Data

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1/8"	(3)	0.405	(10.3)	0.068	(1.7)	0.04	(.06)	0.06	(.09)
1/4"	(6)	0.540	(13.7)	0.088	(2.2)	0.07	(.11)	0.11	(.17)
3/8"	(10)	0.675	(17.1)	0.091	(2.3)	0.1	(.14)	0.18	(.26)
1/2"	(15)	0.840	(21.3)	0.109	(2.7)	0.15	(.20)	0.25	(.40)
3/4"	(20)	1.050	(26.7)	0.113	(2.9)	0.2	(.30)	0.4	(.60)
1"	(25)	1.315	(33.4)	0.133	(3.4)	0.3	(.40)	0.7	(.90)
1-1/4"	(32)	1.660	(42.1)	0.140	(3.5)	0.4	(.60)	1	(1.50)
1-1/2"	(40)	1.900	(48.2)	0.145	(3.7)	0.5	(.70)	1.4	(2.00)
2"	(50)	2.375	(60.3)	0.154	(3.9)	0.6	(90)	2	(3.00)
2-1/2"	(65)	2.875	(73.0)	0.203	(5.1)	1	(1.50)	3.1	(4.51)
3"	(80)	3.500	(88.9)	0.216	(5.5)	1.3	(2.00)	4.5	(6.70)
3-1/2"	(90)	4.000	(101.6)	0.226	(5.7)	1.6	(2.40)	5.9	(8.70)
4"	(100)	4.500	(114.3)	0.237	(6.0)	1.9	(2.80)	7.4	(11.00)
5"	(125)	5.563	(141.3)	0.258	(6.5)	2.8	(4.10)	11.4	(17.00)
6"	(150)	6.625	(168.3)	0.280	(7.1)	3.3	(4.90)	15.4	(23.00)
8"	(200)	8.625	(219.1)	0.322	(8.2)	5.3	(7.80)	26.9	(39.90)
10"	(250)	10.750	(273.0)	0.366	(9.3)	7.5	(11.10)	41.6	(61.80)
12"	(300)	12.750	(323.8)	0.406	(10.3)	10	(14.90)	58.5	(87.00)

Schedule 80 PVC Plastic Pipe Data

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	(mm)	In.	(mm)	In.	(mm)	Lbs./Ft.	(kg/m)	Lbs./Ft.	(kg/m)
1/8"	(3)	0.405	(10.3)	0.095	(2.4)	0.05	(.08)	0.06	(.10)
1/4"	(6)	0.540	(13.7)	0.119	(3.0)	0.09	(.14)	0.12	(.18)
3/8"	(10)	0.675	(17.1)	0.126	(3.2)	0.1	(.19)	0.16	(.28)
1/2"	(15)	0.840	(21.3)	0.147	(3.7)	0.1	(.20)	0.2	(.30)
3/4"	(20)	1.050	(26.7)	0.154	(3.9)	0.2	(.40)	0.4	(.70)
1"	(25)	1.315	(33.4)	0.179	(4.5)	0.4	(.50)	0.7	(.90)
1-1/4"	(32)	1.660	(42.1)	0.191	(4.8)	0.5	(.80)	1	(1.60)
1-1/2"	(40)	1.900	(48.2)	0.200	(5.1)	0.6	(.90)	1.3	(2.00)
2"	(50)	2.375	(60.3)	0.218	(5.5)	0.9	(1.30)	2.2	(3.20)
2-1/2"	(65)	2.875	(73.0)	0.276	(7.0)	1.3	(2.00)	3.1	(4.70)
3"	(80)	3.500	(88.9)	0.300	(7.6)	1.8	(2.70)	4.6	(6.90)
3-1/2"	(90)	4.000	(101.6)	0.318	(8.1)	2.2	(3.20)	6	(8.90)
4"	(100)	4.500	(114.3)	0.337	(8.5)	2.6	(3.90)	7.6	(11.30)
5"	(125)	5.563	(141.3)	0.375	(9.5)	4.1	(6.10)	12	(17.80)
6"	(150)	6.625	(168.3)	0.432	(11.0)	5	(7.50)	16.30	(24.30)
8"	(200)	8.625	(219.1)	0.500	(12.7)	8	(11.90)	27.80	(41.30)
10"	(250)	10.750	(273.0)	0.593	(15.0)	11.9	(17.70)	43.20	(77.60)
12"	(300)	12.750	(323.8)	0.687	(17.4)	16.3	(24.30)	60.3	(89.80)

1 cubic ft. of water weighs 62.41 lbs.
1 cubic meter of water weighs 999.97 kg.
1 gallon (U. S.) weighs 8.335 lbs.
1 liter weighs .999 kg.

REFERENCE DATA

Spacing Of Hangers For Schedule 40 PVC Plastic Pipe

Support Spacing in Ft.(Meter)For Pipe Sizes of

Temperature	1/2"-3/4"(15-20mm)	1"-1-1/4"(25-32mm)	1-1/2"-2"(40-50mm)	2-65)"2/1mm)	80)"3mm)	100)"4mm)	150)"6mm)
°20F (-6.6℃)	5.00 (1.52)	5.50 (1.67)	5.80 (1.77)	6.66 (2.03)	6.80 (2.07)	7.33 (2.23)	7.80 (2.38)
°40F (4.4℃)	4.75 (1.45)	5.25 (1.60)	5.50 (1.67)	6.33 (1.93)	6.50 (1.98)	7.00 (2.13)	7.50 (2.28)
°60F (15.5℃)	4.50 (1.37)	5.00 (1.52)	5.25 (1.60)	6.00 (1.83)	6.25 (1.90)	6.50 (1.98)	7.00 (2.13)
°80F (°26.6C)	4.25 (1.29)	4.66 (1.42)	5.00 (1.52)	5.50 (1.67)	5.80 (1.77)	6.25 (1.90)	6.80 (2.07)
°100F(37.8℃)	4.00 (1.22)	4.33 (1.32)	4.66 (1.42)	5.25 (1.60)	5.50 (1.67)	5.80 (1.77)	6.33 (1.93)
°110F(43.3℃)	3.75 (1.14)	4.00 (1.22)	4.33 (1.32)	4.80 (1.46)	5.25 (1.60)	5.50 (1.67)	5.80 (1.77)
°120F(°48.9C)	3.33 (1.01)	3.75 (1.14)	3.80 (1.16)	4.50 (1.37)	4.75 (1.45)	5.00 (1.52)	5.33 (1.62)
°130F(54.4℃)	3.00 (.91)	3.33 (1.01)	3.50 (1.06)	4.00 (1.22)	4.25 (1.29)	4.50 (1.37)	4.80 (1.46)
°140F(60.0℃)	2.66 (.81)	2.80 (.85)	3.00 (.91)	3.50 (1.16)	3.66 (1.11)	3.80 (1.16)	4.25 (1.29)
°150F(65.5℃)	2.00(.61)	2.25 (.68)	2.50 (.76)	2.80 (.85)	3.00 (.91)	3.25 (.99)	3.50 (1.06)

Spacing Of Hangers For Schedule 80 PVC Plastic Pipe

Support Spacing in Ft.(Meter)For Pipe Sizes of

Temperature	1/2"-3/4"(15-20mm)	25)"1mm)	1-1/4"-1-1/2"(32-40mm)	50)"2mm)	2-65)"2/1mm)	80)"3mm)	100)"4mm)	150)"6mm)
°20F (-6.6℃)	5.75 (1.75)	6.33(1.93)	6.66(2.03)	7.00(2.13)	7.80(2.38)	8.20 (2.50)	8.66 (2.64)	9.80 (2.99)
°40F (4.4℃)	5.50 (1.67)	6.00(1.83)	6.33(1.93)	6.50(1.98)	7.50(2.28)	7.75(2.36)	8.25 (2.51)	9.33 (2.84)
°60F (15.5℃)	5.25 (1.60)	5.75(1.75)	6.00(1.83)	6.25(1.90)	7.00(2.13)	7.33(2.23)	7.80 (2.38)	8.80 (2.68)
°80F (26.6℃)	4.80 (1.46)	5.33(1.62)	5.66(1.72)	6.00(1.83)	6.66(2.03)	7.00 (2.13)	7.33 (2.23)	8.33 (2.54)
°100F (37.8℃)	4.50 (1.37)	5.00(1.52)	5.25(1.60)	5.50(1.67)	6.33(1.93)	6.50(1.98)	6.80 (2.07)	7.80 (2.38)
°110F(43.3℃)	4.33 (1.32)	4.60(1.40)	4.80(1.46)	5.12(1.56)	5.80(1.77)	6.00(1.83)	6.33 (1.93)	7.33 (2.23)
°120F(48.9℃)	3.80 (1.16)	4.33(1.32)	4.50(1.37)	4.75(1.45)	5.33(1.62)	5.50(1.67)	5.80 (1.77)	6.50 (1.98)
°130F(54.4℃)	3.50 (1.06)	3.80(1.16)	4.00(1.22)	4.33(1.32)	4.75(1.45)	5.00 (1.52)	5.25 (1.60)	6.00 (1.83)
°140F(60.0℃)	3.00 (.91)	3.33(1.01)	3.50(1.06)	3.66(1.11)	4.25(1.29)	4.33(1.32)	4.66 (1.42)	5.12 (1.55)
°150F(65.5℃)	2.50 (.76)	2.75 (.84)	3.00 (.91)	3.12 (.95)	3.33(1.01)	3.50(1.06)	3.75 (1.14)	4.25 (1.29)

Hanger spacing for PVC plastic Pip e assumes fluid loads up to 1.35 specific gravity (85 Lbs/Ft.136.5)³kg /m³)| but not concentrated heavy loads.

UL CERTIFICATE

UL Product iQ®

Hangers, Pipe

COMPANY

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Landmark: Behind Al Hokama Medical Center,
P.O.Box: 25033
Riyadh, Saudi Arabia, 11466 Saudi Arabia

EX29300

Trademark and/or Tradename:

Note: For additional marking information, refer to the Guide Information Page.

View model for additional information

Hanger, Model(s): CX-CL03, CX-CL03, CX-RI10, CX-ST09, CX-SW06, CX-TB05

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Clevis Hangers	Loop Hangers
Model CX-CL03	Models CX-SW06, CX-SW06-FL

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King Abdul Aziz Street, Malaz Dist.,
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