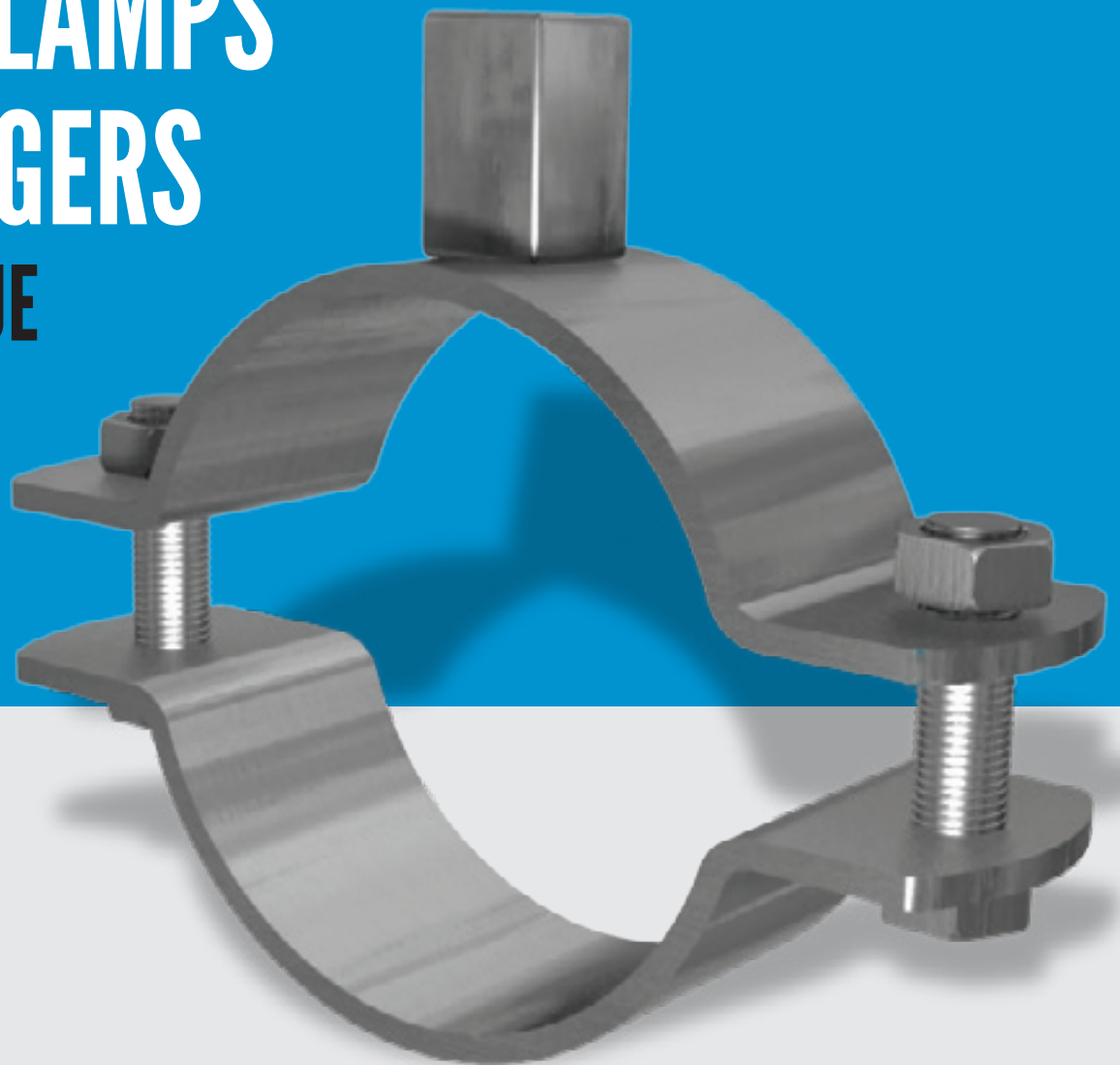


PIPE CLAMPS & HANGERS CATALOGUE



PIPE CLAMPS & HANGERS

Pipe Clamps and Hangers from PIPING used in the support of pipes and equipment are manufactured according to the highest standards of fabrication. A diversified choice of Pipe Hangers, Pipe Clamps, EMT Straps, Omega Clamps, Beam Clamps, J and U-Bolts and Threaded Accessories.

Calculations are provided by our design office in Stuttgart, Germany.

APPLICABLE STANDARDS

- BS 3974 Specifications for pipe hangers and support
- ASTM F 708 (standard practice for design and installation of rigid pipe hangers)
- Federal Specifications
WW-H-171 E (Hanger and Support)
A-A-1192 A (Bracket, Pipe)
- Manufacturers Standardization Society (MSS)

ANSI/MSS SP-58 Pipe Hangers and Supports

- Materials, Design, Manufacture, Selection, Application, and Installation

MSS SP-69 Pipe Hangers and Support-Selection and Application

MSS SP-77 Guidelines for Pipe Support Contractual Relationships

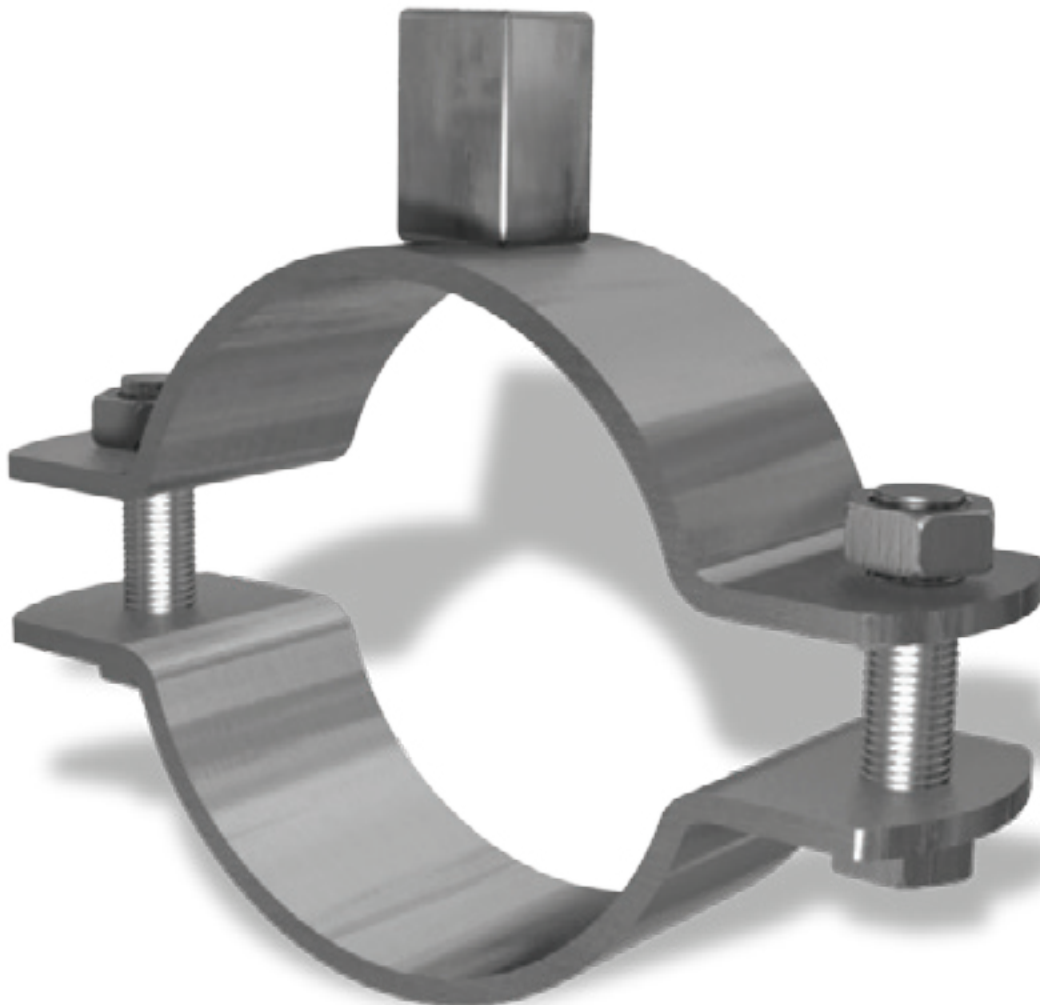
MSS SP-89 Pipe Hangers and Support-Fabrication and Installation Practices

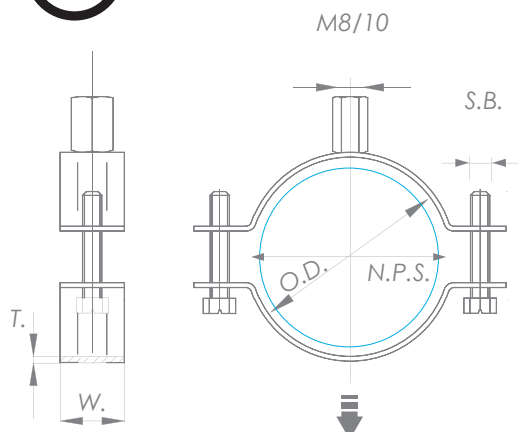
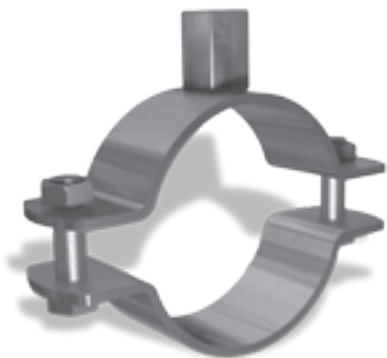
MSS SP-90 Guidelines for Terminology for Pipe Hangers and Support

MSS SP-127 Bracing for Piping Systems Seismic - Wind - Dynamic Design, Selection, Application

Pipe hangers offered in this section are designed to support pipes allowing for vertical adjustment and limited movement in the piping system.

- Material: Carbon Steels are used in the manufacturing of pipe hangers.
- Load Data: The load data published includes a safety factor of 4.0 unless noted (safety factor = ratio of ultimate load to the design load).

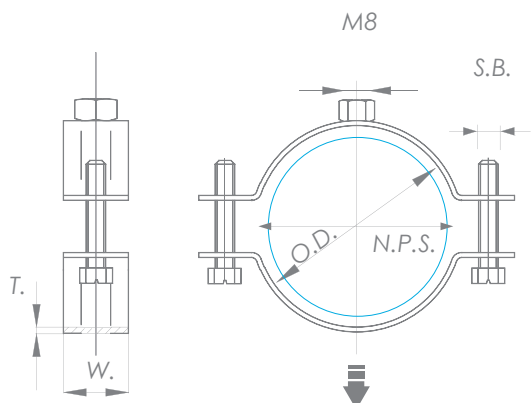




Split Pipe Clamp with Long Nut M8/ M10 without rubber gasket

- **Material:** Steel S235
- **Service:** Multifunction screw with hexagonal combination head (slot & crosshead), c/ w retaining washer
- **Finish:** Electro Zinc Plated
- **Applications:**
 - Fresh water distribution pipes
 - Waste water distribution pipes
 - Gas distribution pipes
 - Heating pipes
 - Industrial pipe fitting
 - Mechanical installation
 - Process and control lines

Part No.	Nominal Pipe Size		Outside Diameter	Side Bolt	Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0010-C-HSPC0500810	1/2	15	20-25	M6x20	2.0x20	1.30
PC-0015-C-HSPC0750810	3/4	20	26-30	M6x20	2.0x20	1.30
PC-0020-C-HSPC1000810	1	25	32-36	M6x20	2.0x20	1.30
PC-0025-C-HSPC1250810	5/4	32	38-45	M6x20	2.0x20	1.30
PC-0030-C-HSPC1500810	3/2	40	47-51	M6x20	2.0x20	1.30
PC-0035-C-HSPC2000810	2	50	60-64	M6x20	2.0x20	1.30
PC-0040-C-HSPC2500810	5/2	65	74-80	M6x20	2.5x20	1.90
PC-0045-C-HSPC3000810	3	80	87-92	M6x20	2.5x20	1.90
PC-0150-C-HSPC4000810	4	100	113-118	M6x20	2.5x20	1.90
PC-0155-C-HSPC5000810	5	125	138-142	M6x20	2.5x20	1.90
PC-0160-C-HSPC6000810	6	150	159-166	M6x30	2.5x20	1.90



Split Pipe Clamp with Standard Nut M8 without rubber gasket

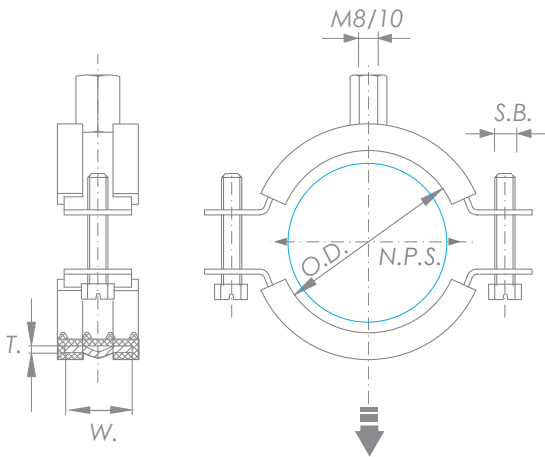
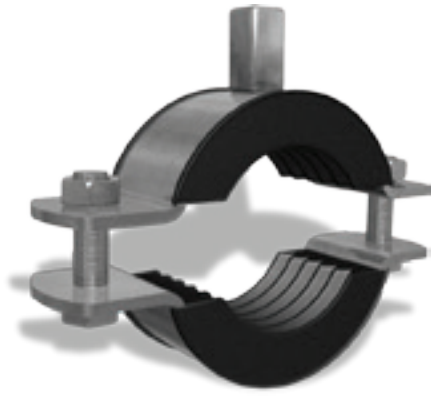
- **Material:** Steel S235
- **Service:** Economy option
- **Finish:** Electro Zinc Plated
- **Applications:**
 - Unassembled in plastic bags per 2 sets
 - M6 screw with cross head

Part No.	Nominal Pipe Size		Outside Diameter	Side Bolt	Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0110-C-SPC05008	1/2	15	20-25	M6x20	2.0x20	1.30
PC-0115-C-SPC07508	3/4	20	26-30	M6x20	2.0x20	1.30
PC-0120-C-SPC10008	1	25	32-36	M6x20	2.0x20	1.30
PC-0125-C-SPC12508	5/4	32	38-45	M6x20	2.0x20	1.30
PC-0130-C-SPC15008	3/2	40	47-51	M6x20	2.0x20	1.30
PC-0135-C-SPC20008	2	50	60-64	M6x20	2.0x20	1.30
PC-0140-C-SPC25008	5/2	65	74-80	M6x20	2.5x20	1.90
PC-0145-C-SPC30008	3	80	87-92	M6x20	2.5x20	1.90
PC-0150-C-SPC40008	4	100	113-118	M6x20	2.5x20	1.90
PC-0155-C-SPC50008	5	125	138-142	M6x20	2.5x20	1.90
PC-0160-C-SPC60008	6	150	159-166	M6x20	2.5x20	1.90

NPS: Nominal Pipe Size - OD: Outside Diameter - SB: Side Bolt - T-W: Thickness - Width

Split Pipe Clamp with Rubber with Long Nut M8/ M10

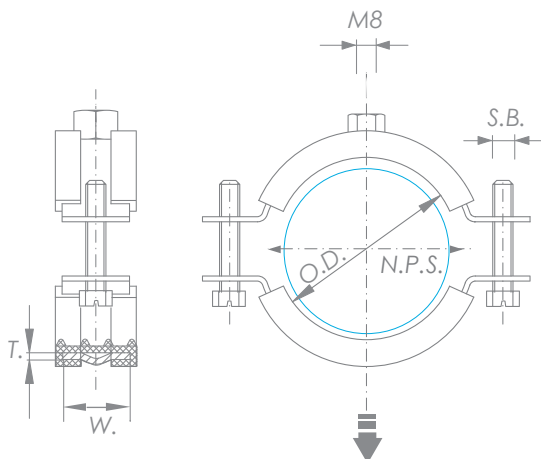
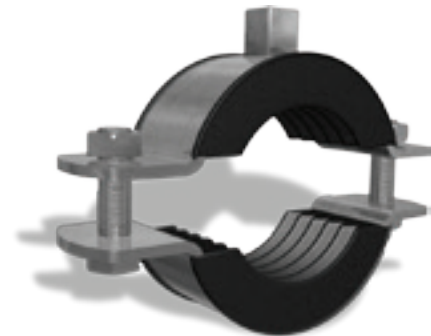
- **Material:** Steel S235
- **Service:** EPDM rubber insulation for sound reduction compliant with DIN 4109
- **Finish:** Electro Zinc Plated



Part No.	Nominal Pipe Size		Outside Diameter	Side Bolt	Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0210-C-HSPCR0500810	1/2	15	20-25	M6x20	2.0x20	1.30
PC-0215-C-HSPCR0750810	3/4	20	26-30	M6x20	2.0x20	1.30
PC-0220-C-HSPCR1000810	1	25	32-36	M6x20	2.0x20	1.30
PC-0225-C-HSPCR1250810	5/4	32	38-45	M6x20	2.0x20	1.30
PC-0230-C-HSPCR1500810	3/2	40	47-51	M6x20	2.0x20	1.30
PC-0235-C-HSPCR2000810	2	50	60-64	M6x20	2.0x20	1.30
PC-0240-C-HSPCR2500810	5/2	65	74-80	M6x20	2.5x20	1.90
PC-0245-C-HSPCR3000810	3	80	87-92	M6x20	2.5x20	1.90
PC-0250-C-HSPCR4000810	4	100	113-118	M6x20	2.5x20	1.90
PC-0255-C-HSPCR5000810	5	125	138-142	M6x20	2.5x20	1.90
PC-0260-C-HSPCR6000810	6	150	159-166	M6x30	2.5x20	1.90

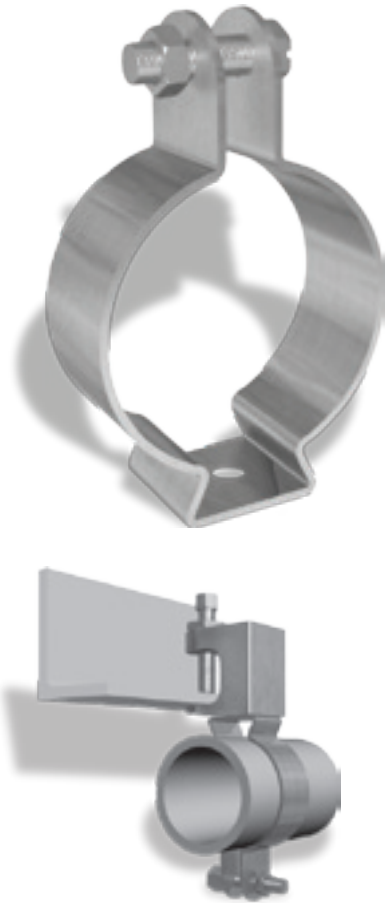
Split Pipe Clamp with Rubber with Standard Nut M8

- **Material:** Steel S235
- **Service:** EPDM rubber insulation for sound reduction compliant with DIN 4109
- **Finish:** Electro Zinc Plated



Part No.	Nominal Pipe Size		Outside Diameter	Side Bolt	Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0310-C-SPCR05008	1/2	15	20-25	M6x20	2.0x20	1.30
PC-0315-C-SPCR07508	3/4	20	26-30	M6x20	2.0x20	1.30
PC-0320-C-SPCR10008	1	25	32-36	M6x20	2.0x20	1.30
PC-0325-C-SPCR12508	5/4	32	38-45	M6x20	2.0x20	1.30
PC-0330-C-SPCR15008	3/2	40	47-51	M6x20	2.0x20	1.30
PC-0335-C-SPCR20008	2	50	60-64	M6x20	2.0x20	1.30
PC-0340-C-SPCR25008	5/2	65	74-80	M6x20	2.5x20	1.90
PC-0345-C-SPCR30008	3	80	87-92	M6x20	2.5x20	1.90
PC-0350-C-SPCR40008	4	100	113-118	M6x20	2.5x20	1.90
PC-0355-C-SPCR50008	5	125	138-142	M6x20	2.5x20	1.90
PC-0360-C-SPCR60008	6	150	159-166	M6x20	2.5x20	1.90

NPS: Nominal Pipe Size - OD: Outside Diameter - SB: Side Bolt -
T-W: Thickness - Width



Omega Conduit & Pipe Clamp

- **Material:** Steel S235
- **Service:** Designed for hanging conduit (rigid or EMT) to beam clamps, available with or without closure bolt
- **Finish:** Electro Zinc Plated

	Nominal Pipe Size		Outside Diameter	Side Bolt	Thickness & Width	Load Capacity
Part No.	In	mm	mm	mm	mm	KN
PC-0410-C-OMCPC050	1/2	15	20-25	M6x20	2.0x20	1.30
PC-0415-C-OMCPC075	3/4	20	26-30	M6x20	2.0x20	1.30
PC-0420-C-OMCPC100	1	25	32-36	M6x20	2.0x20	1.30
PC-0425-C-OMCPC125	5/4	32	38-45	M6x20	2.0x20	1.30
PC-0430-C-OMCPC150	3/2	40	47-51	M6x20	2.0x20	1.30
PC-0435-C-OMCPC200	2	50	60-64	M6x20	2.0x20	1.30
PC-0440-C-OMCPC250	5/2	65	74-80	M6x20	2.5x20	1.90
PC-0445-C-OMCPC300	3	80	87-92	M6x20	2.5x20	1.90
PC-0450-C-OMCPC400	4	100	113-118	M6x20	2.5x20	1.90
PC-0455-C-OMCPC500	5	125	138-142	M6x20	2.5x20	1.90
PC-0460-C-OMCPC600	6	150	159-166	M6x20	2.5x20	1.90

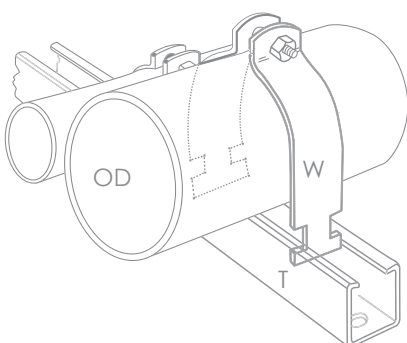


Channel Clamp

- **Material:** Steel S235
- **Service:** For mounting (rigid or EMT) and steel pipes on C-Channels
- **Finish:** Electro Zinc Plated or Hot-dip Galvanized

Part No.	Nominal Pipe Size		Outside Diameter		Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0510-C-CHC050	1/2	15	20	25	1.5x28	1.30
PC-0515-C-CHC075	3/4	20	26	30	1.5x28	1.30
PC-0520-C-CHC100	1	25	32	40	2.0x28	1.30
PC-0525-C-CHC100	5/4	32	42	45	2.0x28	1.30
PC-0530-C-CHC150	3/2	40	46	50	2.5x28	1.30
PC-0535-C-CHC200	2	50	60	64	2.5x28	1.30
PC-0540-C-CHC250	5/2	65	74	80	2.5x28	1.90
PC-0545-C-CHC300	3	80	86	92	2.8x28	1.90
PC-0550-C-CHC400	4	100	112	118	3.0x28	1.90
PC-0555-C-CHC500	5	125	138	142	3.0x28	1.90
PC-0560-C-CHC600	6	150	160	165	3.0x28	1.90

Pipe Straps for thin metallic wall conduits (EMT)
(Electrical Metallic Tubing)



NPS: Nominal Pipe Size - OD: Outside Diameter - CB: Closure Bolt - T-W: Thickness - Width

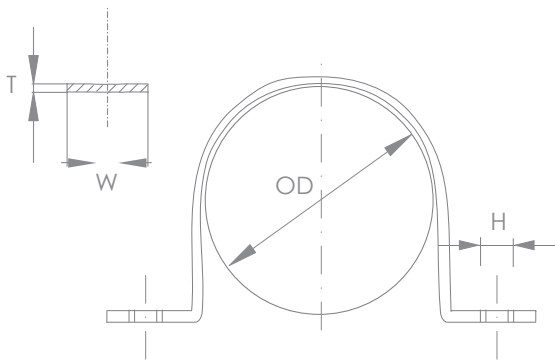
Pipe Strap

Two-Hole Pipe Strap/ U-Clip

- **Material:** Steel S235
- **Service:** Designed for supporting pipe runs on walls and on C-Channels
- **Finish:** Electro Zinc Plated



Part No.	Nominal Pipe Size		Outside Diameter	Thickness & Width	Hole Size	Load Capacity
	In	mm	mm	mm	mm	KN
PC-0510-C-PSUC050	1/2	15	22	1.5x25	6	1.30
PC-0515-C-PSUC075	3/4	20	28	1.5x25	6	1.30
PC-0520-C-PSUC100	1	25	35	1.5x25	6	1.30
PC-0525-C-PSUC150	5/4	32	42	1.5x25	6	1.30
PC-0530-C-PSUC200	3/2	40	54	1.5x25	6	1.30
PC-0535-C-PSUC250	2	50	60	2.0x30	8	1.90
PC-0540-C-PSUC300	5/2	65	75	2.0x30	8	1.90
PC-0545-C-PSUC350	3	80	90	2.0x40	8	1.90

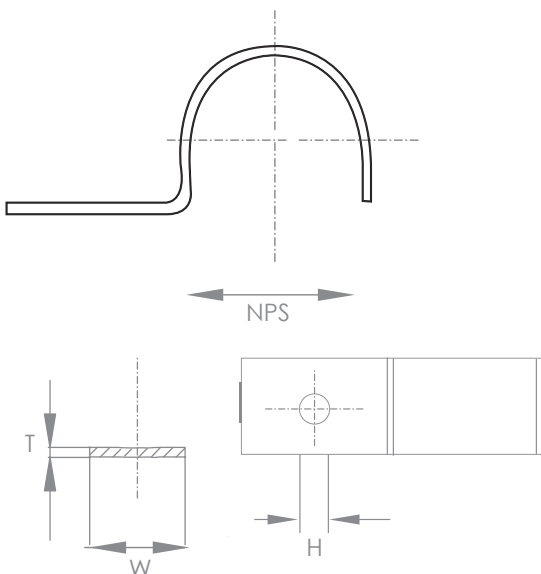


One-Hole Pipe Strap <Snap Type>

- **Material:** Steel S235
 - **Service:** Designed for supporting standard conduits, cable and steel pipes on walls or sides of beams or on C-Channels
 - **Finish:** Electro Zinc Plated
- Not recommended for use horizontally on ceilings, bottoms of beams and similar installations since the factor of safety is greatly reduced when so used



Part No.	Nominal Pipe Size		Thickness & Width	Hole Size	Load Capacity
	In	mm	mm	mm	KN
PC-0610-C-PSST050	1/2	15	1.0x25	6	0.40
PC-0615-C-PSST075	3/4	20	1.0x25	6	0.40
PC-0620-C-PSST100	1	25	1.0x25	6	0.40
PC-0625-C-PSST150	5/4	32	1.5x25	6	0.40
PC-0630-C-PSST200	3/2	40	1.5x25	6	0.40
PC-0635-C-PSST250	2	50	1.5x25	8	0.40
PC-0640-C-PSST300	5/2	65	2.0x25	8	0.45
PC-0645-C-PSST350	3	80	2.5x25	8	0.45



NPS: Nominal Pipe Size - OD: Outside Diameter - T-W: Thickness - Width
H: Hole Size



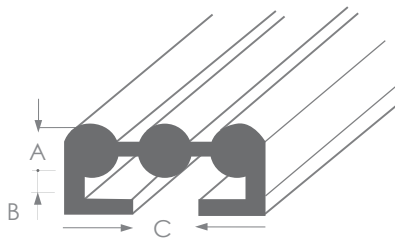
Rubber DIN 4109

Noise Suppression Profile

SR noise-suppression strip for insertion in clamps and hangers

- **Material:** EPDM. Rubber
- **Load Data:** At normal frequency and pressure range, noise suppression 20 dB(A) & the temperature-resistant from -40 °C to + 100 °C
- **Electrical values:** Specific resistance: 2×10^9 M ohm cm^2 & the Surface resistance: 2×10^9 M ohm

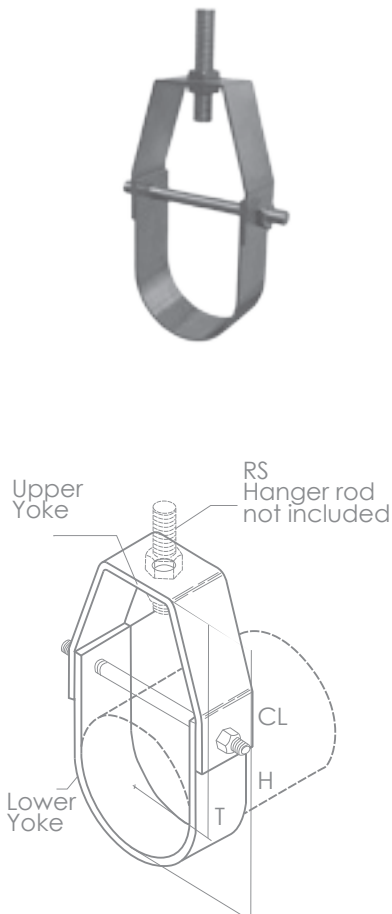
Part No.	Size mm	Dimension		
		A mm	B mm	C mm
PC-0005-C-RNS	20x6	6	3	20



Clevis Hanger

- **Material:** Steel S235
- **Finish:** Electro Zinc Plated or Hot-dip Galvanized
- **Application:** Designed for suspending pipes

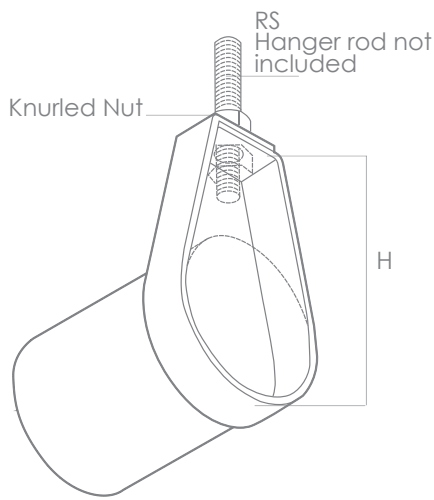
Part No.	Nominal Pipe Size		Rod Size	Center Line	Height	Transverse	Thickness & Width	Load Capacity
	In	mm	mm	mm	mm	mm	mm	KN
PC-0710-C-CLH050	1/2	15	M10	44	55	6	3x25	2.70
PC-0715-C-CLH075	3/4	20	M10	54	68	6	3x25	2.70
PC-0720-C-CLH100	1	25	M10	58	75	6	3x25	2.70
PC-0725-C-CLH100	5/4	32	M10	80	100	6	3x25	2.70
PC-0730-C-CLH150	3/2	40	M10	81	106	6	3x25	2.70
PC-0735-C-CLH200	2	50	M10	86	117	6	3x25	2.70
PC-0740-C-CLH250	5/2	65	M12	106	144	8	3x30	5.00
PC-0745-C-CLH300	3	80	M12	127	172	8	3x30	5.00
PC-0750-C-CLH400	4	100	M16	141	199	10	4x30	6.30
PC-0755-C-CLH500	5	125	M16	159	229	10	4x30	6.30
PC-0760-C-CLH600	6	150	M20	174	257	12	4x40	8.50



CL: Center Line - H: Height - T: Transverse



Swivel Hangers with rubber gaskets can be supplied also.



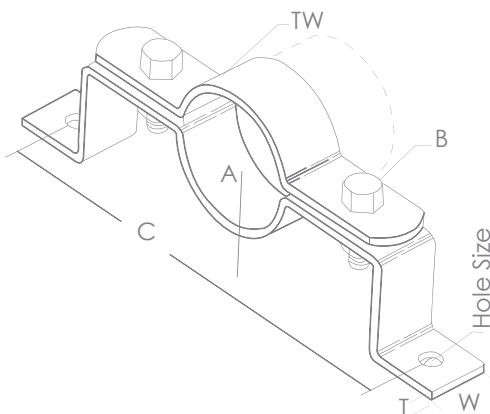
Adjustable Band Hanger

- **Material:** Steel S235
- **Finish:** Electro Zinc Plated or Hot-dip Galvanized
- **Application:** Designed for suspending non-insulated stationary pipe line. Knurled nut can be supplied in 8 to 10 mm diameter

	Nominal Pipe Size		Rod Size	Height	Thickness & Width	Load Capacity
Part No.	In	mm	mm	mm	mm	KN
PC-0810-C-ADBH05008	1/2	15	M8	54	1.0x25	0.30
PC-0815-C-ADBH07508	3/4	20	M8	64	1.0x25	0.30
PC-0820-C-ADBH10008	1	25	M8	72	1.2x25	0.30
PC-0825-C-ADBH12508	5/4	32	M8	83	1.2x25	0.30
PC-0830-C-ADBH15008	3/2	40	M8	96	1.2x25	0.30
PC-0835-C-ADBH20008	2	50	M8	113	1.2x25	0.30
PC-0840-C-ADBH25010	5/2	65	M10	130	1.2x25	0.60
PC-0845-C-ADBH30010	3	80	M10	156	1.2x25	0.60
PC-0850-C-ADBH40010	4	100	M10	215	1.2x25	0.60
PC-0855-C-ADBH50010	5	125	M10	242	2.0x25	1.10
PC-0860-C-ADBH60010	6	150	M10	279	2.0x25	1.10

Offset Pipe Clamp

- **Material:** Steel S235
- **Service:** Designed for supporting and stabilizing vertical pipe runs
- **Finish:** Electro Zinc Plated or Hot-dip Galvanized



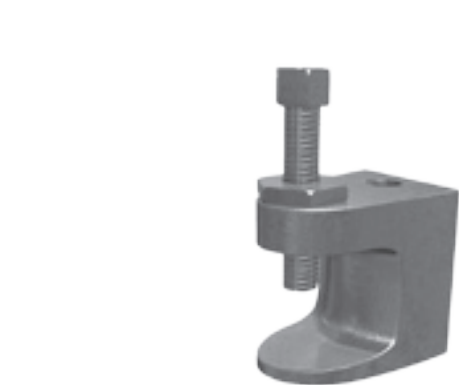
	Nominal Pipe Size		A	B	C	Hole Size	Thickness & Width	Load Capacity
Part No.	In	mm	mm	mm	mm	mm	mm	KN
PC-0910-C-OFFP050	1/2	15	60	8x40	150	10	3x30	0.90
PC-0915-C-OFFP075	3/4	20	60	8x40	175	10	3x30	0.90
PC-0920-C-OFFP100	1	25	65	8x40	190	10	3x30	0.90
PC-0925-C-OFFP125	5/4	32	75	8x40	200	10	3x30	0.90
PC-0930-C-OFFP200	2	50	80	10x50	225	12	4.5x30	1.20
PC-0935-C-OFFP250	5/2	65	85	10x50	250	12	4.5x30	1.20
PC-0940-C-OFFP300	3	80	95	10x50	275	12	4.5x30	1.20
PC-0945-C-OFFP400	4	100	105	12x50	300	14	5x40	1.80
PC-0950-C-OFFP600	6	150	130	12x50	400	14	5x40	1.80
PC-0955-C-OFFP800	8	200	160	12x50	450	14	5x40	1.80

T-W: Thickness - Width



Beam Clamps

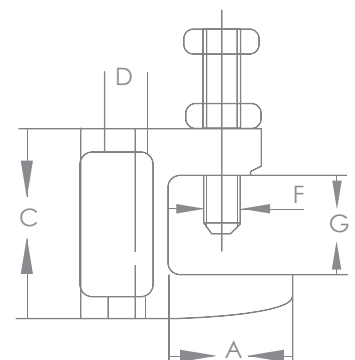
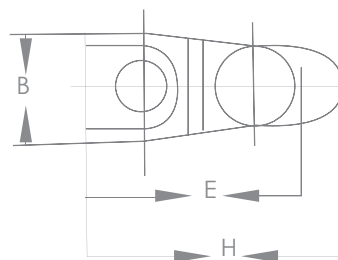
Beam Clamps offered in this section are designed to provide attachment of hanger rods to structures without drilling or welding. A wide range of types and sizes are available for various applications.



C-Clamp

- **Material:** Malleable Cast Iron Zinc plated

Casting tolerance according to DIN 1684 GTA/17 with hexagon head screw DIN 933 8.8, threaded end with cup point according to EN ISO 4753 and locknut DIN 439 for sprinkler systems, heating, ventilation and air conditioning, acoustic tubes and sanitary installation machines and steel constructions. Safety Factor



Part No.	A	B	C	D	E	F	G	H	Load Capacity
mm	mm	mm	mm	mm	mm	mm	mm	mm	KN
PC-1105-C-MCC06	20	19	35	M6 Ø7	35	M8	17	36	1.1
PC-1110-C-MCC08	21	19	35	M8 Ø9	35	M8	18	38	1.2
PC-1115-C-MCC08	29	21	45	M8 Ø9	41	M10	23	50	2.5
PC-1120-C-MCC10	23	21	42	M10 Ø11	41	M10	20	44	2.5
PC-1125-C-MCC12	35	23.5	54	M12 Ø13	48	M10	26	58	3.5
PC-1130-C-MCC16	30	29.5	58	M16 Ø17	55.5	M12	28	58.3	5.5

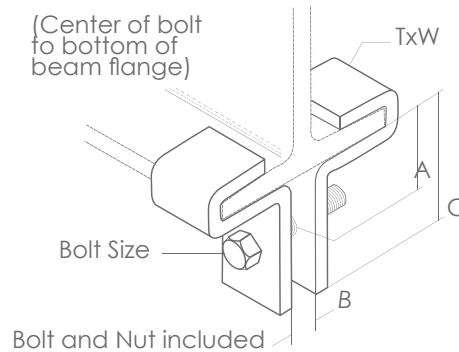
The Load Data the Load data includes a safety factor of 4, (safety factor = ratio of ultimate load divided to the design Load : Safety factor 4:1)



Part No. **PC-1160-C-SBCO0530**

Steel Beam Clamp Open

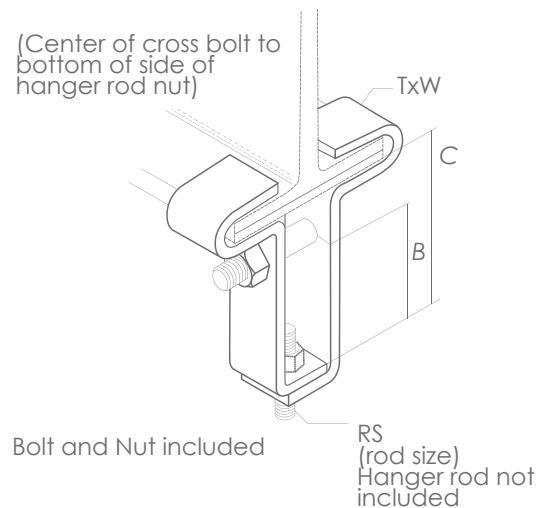
- **Material:** Steel S235
- **Service:** Designed for attaching hanger rods to the top or bottom flange of a beam
- **Finish:** Hot-dip Galvanized
- **Ordering:** Specify flange width and thickness
- **Steel Size:** 5X30 mm



Part No. **PC-1170-C-SBCC0530**

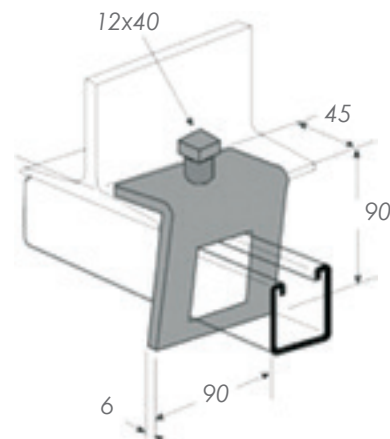
Steel Beam Clamp Closed

- **Material:** Steel S235
- **Service:** Designed for attaching hanger rods to the top or bottom flange of a beam
- **Finish:** Hot-dip Galvanized
- **Ordering:** Specify flange width and thickness
- **Steel Size:** 5X30 mm, 5X40 mm



Window Beam Clamp

- **Material:** Steel S235
- **Service:** Designed for attaching C-Channel to a top or bottom flange of a beam
- **Finish:** Electro Zinc Plated
- **Steel Size:** 6x90 mm



GENERAL INFORMATION

CHANNEL

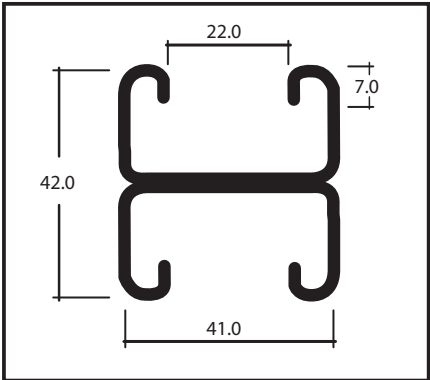
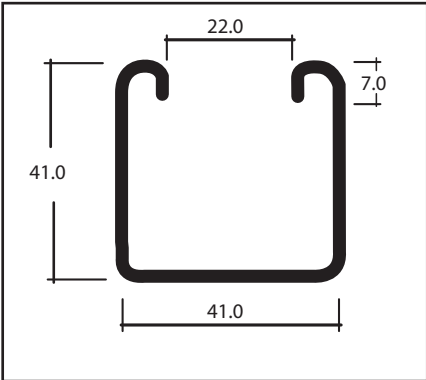
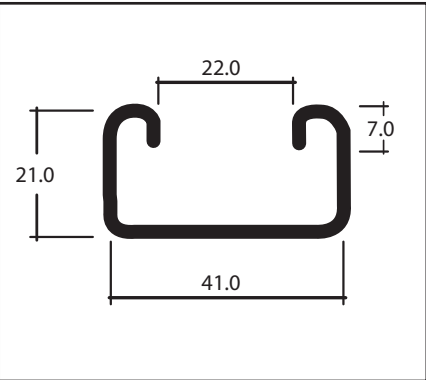
PIPING’s metal framing channel is cold formed on modern rolling machines from low carbon steel manufactured according to BS 6946:1988. A continuous slot provides the ability to make attachments at any point.

LENGTHS

Standard length: 3000mm with ± 3.2mm length tolerance.
Custom lengths are available upon request.

FINISHES

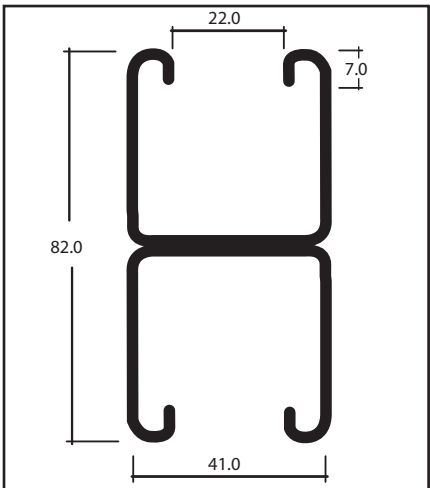
Standard Finishes: Pre-Galvanized finish (ASTM A653M coating G90 and G60). Hot Dip Galvanized after fabrication (ASTM A123 or BSEN ISO1461:2009) . Other custom coatings are available upon request.



Metal Framing Channels

SELECTION CHART

Part No	Channel Dimensions		Thickness
	Height “H”	Width “W”	
CCH - 220/221	21.0 mm	41.0 mm	1.5 mm
CCH - 240/241	41.0 mm	41.0 mm	1.5 mm
CCH - 320/321	21.0 mm	41.0 mm	2.0 mm
CCH - 340/341	41.0 mm	41.0 mm	2.0 mm
CCH - 420/421	21.0 mm	41.0 mm	2.5 mm
CCH - 440/441	41.0 mm	41.0 mm	2.5 mm



For Toothed Channel add
“T” after the Part no. ex.:
CCH-220T

CCH 320

3

2

0

T

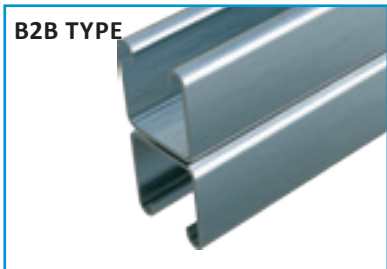
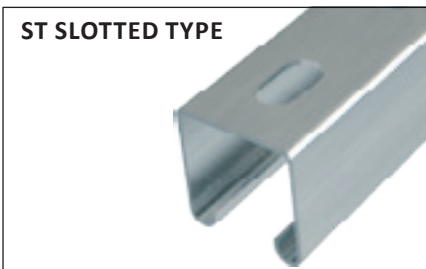
Material Thickness
for 1.5 mm 2
for 2.0 mm 3
for 2.5 mm 4

Size
mm 21/41 - 2
mm 41/41 - 4

Channel Patterns
PT - 0
ST - 1
B2B - 2

Toothed
channel

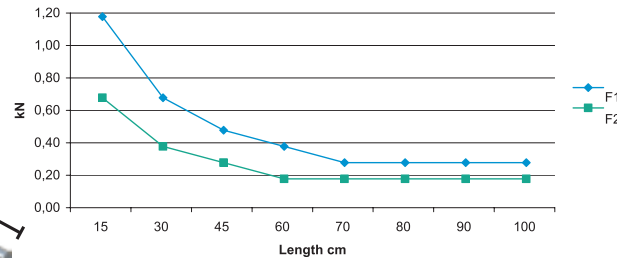
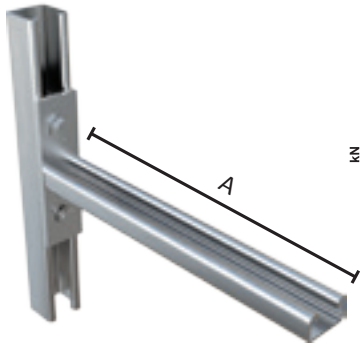
Channel Hole Patterns



CANTILEVER ARM BRACKET

Cantilever Arm Brackets - SCA

CCH421 41x21x2.5

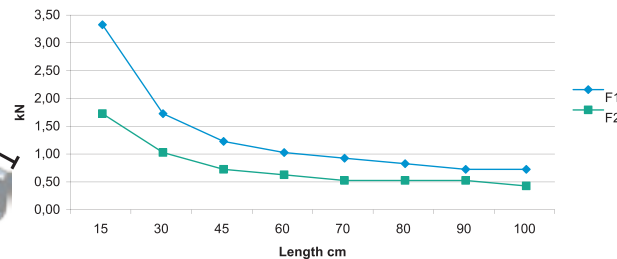
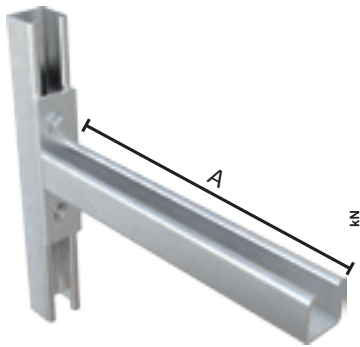


Length A (mm)	Allowable Load		
	F ₁ *	F ₂ *	F _z **
150	1.10	0.60	3.10
300	0.60	0.30	3.10
450	0.40	0.20	3.10
600	0.30	0.10	3.10
700	0.20	0.10	3.10
800	0.20	0.10	3.10
900	0.20	0.10	3.10
1000	0.20	0.10	3.10

Base plate : height (h) x width (b) x thickness (t)
100 50 8

- In the case of concrete support frame, use anchor M10
- In the case of concrete C-Channel frame, Hex bolt M8 .

** **Connection force (pull-out force) : 3.10 (kN)**



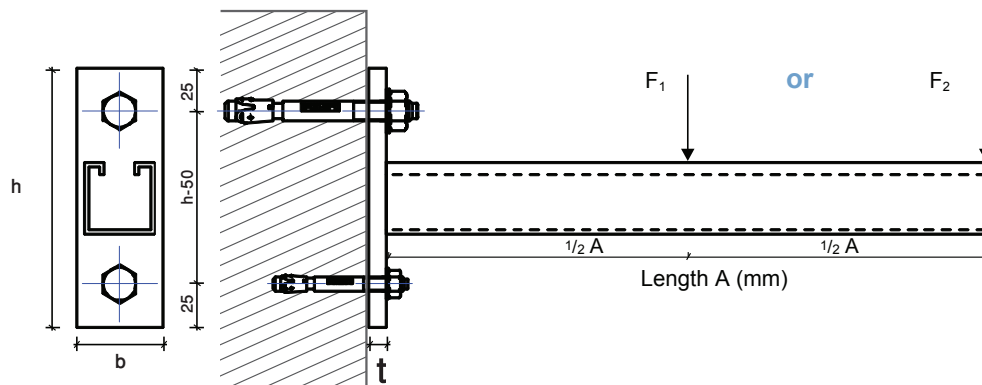
Length A (mm)	Allowable Load		
	F ₁ *	F ₂ *	F _z **
150	3.10	1.50	7.50
300	1.50	0.80	7.50
450	1.00	0.50	7.50
600	0.80	0.40	7.50
700	0.70	0.30	7.50
800	0.60	0.30	7.50
900	0.50	0.30	7.50
1000	0.50	0.20	7.50

Base plate : height (h) x width (b) x thickness (t)
140 50 10

- In the case of concrete support frame, use anchor M16 .
- In the case of concrete C-Channel frame, Hex bolt M8.

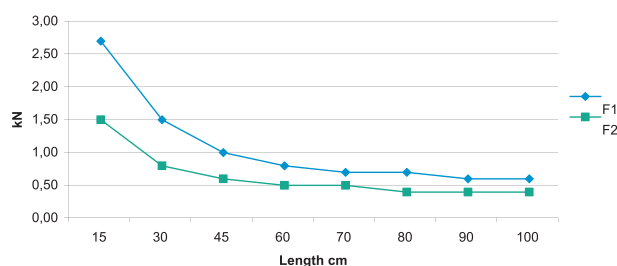
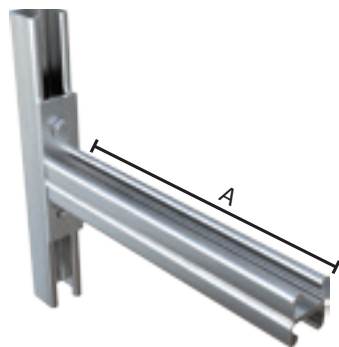
** **Connection force (pull-out force) : 7.50 (kN)**

* Given Loads are always in [kN] " Allowable characteristic live load "



Cantilever Arm Brackets - SCA

CCH422 41x21x2.5 B2B



Length A (mm)	Allowable Load		
	F ₁ *	F ₂ *	F _z **
150	2.50	1.30	4.80
300	1.30	0.60	4.80
450	0.80	0.40	4.80
600	0.60	0.30	4.80
700	0.50	0.30	4.80
800	0.50	0.20	4.80
900	0.40	0.20	4.80
1000	0.40	0.20	4.80

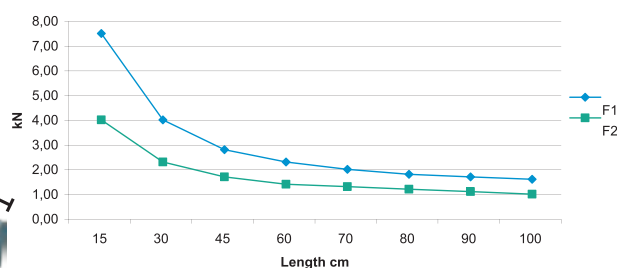
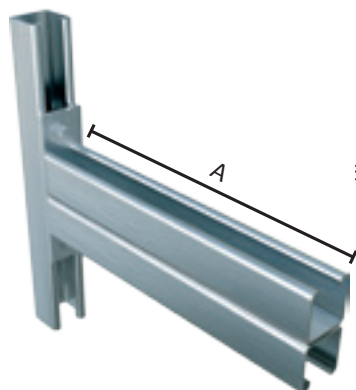
Base plate : height (h) x width (b) x thickness (t)

140 50 10

- In the case of concrete support frame, use anchor M12.
- In the case of concrete C-Channel frame, Hexbolt M8.

** Connection force (pull-out force) : 4,8 (kN)

CCH442 41x41x2.5 B2B



Length A (mm)	Allowable Load		
	F ₁ *	F ₂ *	F _z **
150	7.00	3.50	8.30
300	3.50	1.80	8.30
450	2.30	1.20	8.30
600	1.80	0.90	8.30
700	1.50	0.80	8.30
800	1.30	0.70	8.30
900	1.20	0.60	8.30
1000	1.10	0.50	8.30

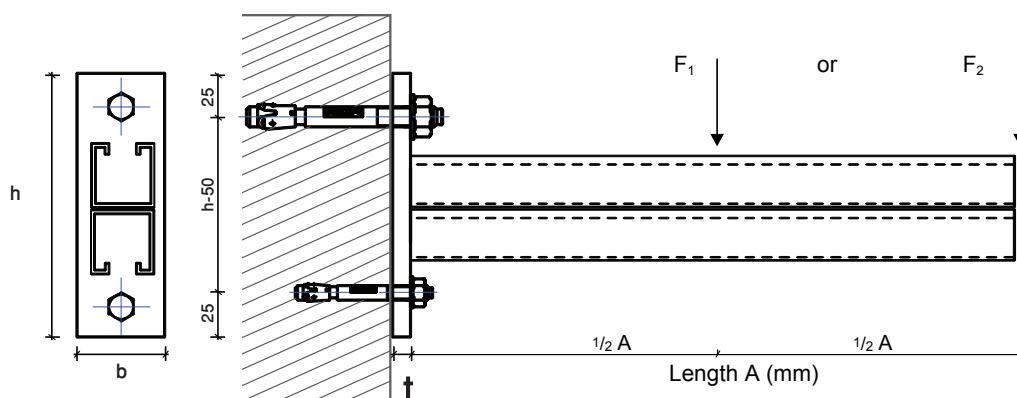
Base plate : height (h) x width (b) x thickness (t)

180 60 12

- In the case of concrete support frame, use anchor M16.
- In the case of concrete C-Channel frame, Hex bolt M10 .

** Connection force (pull-out force) : 8,30 (kN)

* Given Loads are always in [kN] " Allowable characteristic live load "

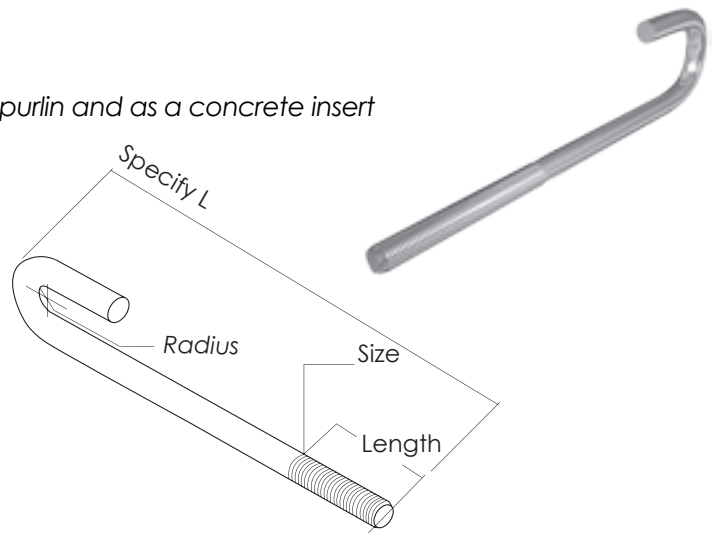


Anchor Bolts

J - Bolt

- **Material:** Steel S235
- **Service:** Designed for attaching to beam flange or purlin and as a concrete insert
- **Finish:** Electro Zinc Plated

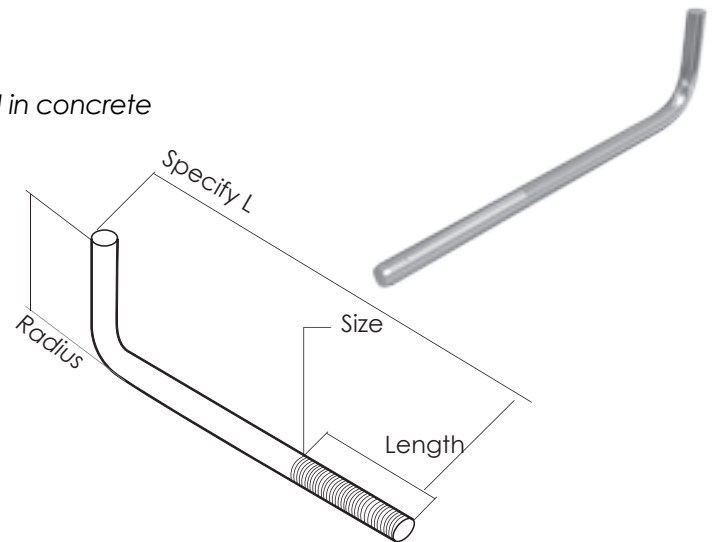
Part No.	Thread		Radius	Load Capacity
	Size	Length		
	mm	mm	mm	KN
PC-1220-C-JB1050	10	50	13.0	1.00
PC-1225-C-JB1250	12	50	16.0	1.90
PC-1230-C-JB1660	16	60	19.0	3.10
PC-1235-C-JB2060	20	60	22.1	4.60
PC-1240-C-JB2260	22	60	25.1	6.50
PC-1245-C-JB2575	25	75	35.0	7.00



L - Bolt

- **Material:** Steel S235
- **Service:** Designed for use as an anchor embedded in concrete
- **Finish:** Electro Zinc Plated

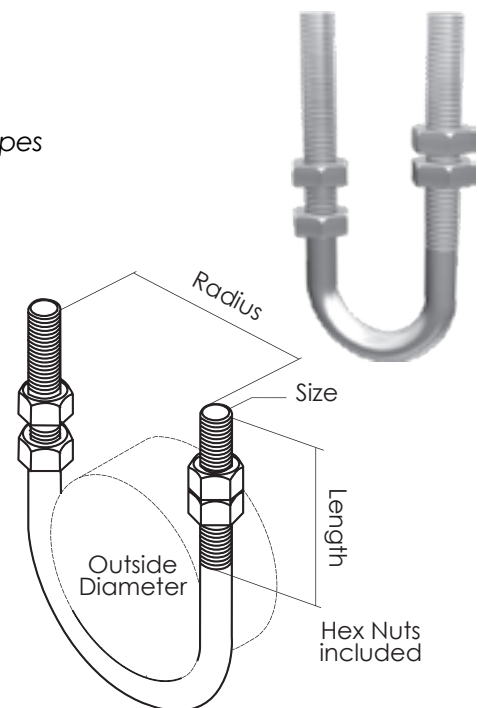
Part No.	Thread		Radius	Load Capacity
	Size	Length		
	mm	mm	mm	KN
PC-1320-C-AB1050	10	50	50	1.00
PC-1325-C-AB1250	12	50	60	1.90
PC-1330-C-AB1660	16	60	70	3.10
PC-1335-C-AB2060	20	60	75	4.60
PC-1340-C-AB2260	22	60	90	6.50
PC-1345-C-AB2575	25	75	35.0	7.00



Light Duty U - Bolt

- **Material:** Steel S235
- **Finish:** Electro Zinc Plated
- **Application:** Designed as a support, guide, or anchor for light - duty pipes

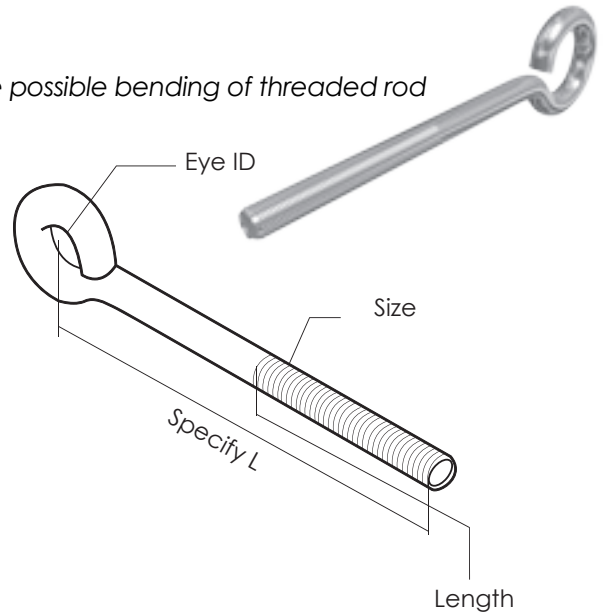
Part No.	Nominal Pipe Size		Thread		Outside Diameter	Load Capacity
	In	mm	Size	Length		
			mm	mm	mm	KN
PC-1410-C-LDUB05006	1/2	15	6	20	22	0.40
PC-1415-C-LDUB07506	3/4	20	6	30	28	0.40
PC-1420-C-LDUB10006	1	25	6	30	35	0.40
PC-1425-C-LDUB12506	5/4	32	6	30	43	0.40
PC-1430-C-LDUB15006	3/2	40	6	35	50	0.40
PC-1435-C-LDUB20006	2	50	6	35	61	0.40
PC-1440-C-LDUB25008	5/2	65	8	35	78	0.90
PC-1445-C-LDUB30008	3	80	8	40	92	0.90
PC-1450-C-LDUB40010	4	100	10	50	116	1.00
PC-1455-C-LDUB60012	6	150	12	50	170	2.00



Eye Rod

- **Material:** Steel S235
- **Finish:** Electro Zinc Plated
- **Application:** Designed for use in hanger supports to eliminate possible bending of threaded rod

Part No.	Thread		Eye	Load Capacity
	Size	Length		
	mm	mm	mm	KN
PC-1510-C-ERD0608	6	40	8	0.50
PC-1515-C-ERD0810	8	40	10	0.80
PC-1520-C-ERD1012	10	50	12	1.00
PC-1525-C-ERD1216	12	50	16	2.00
PC-1530-C-ERD1620	16	50	20	3.10
PC-1535-C-ERD2022	20	75	22	4.70
PC-1540-C-ERD2225	22	90	25	6.50
PC-1545-C-ERD2528	25	100	28	8.60
PC-1550-C-ERD2830	28	115	30	10.80
PC-1555-C-ERD3034	30	130	34	14.00

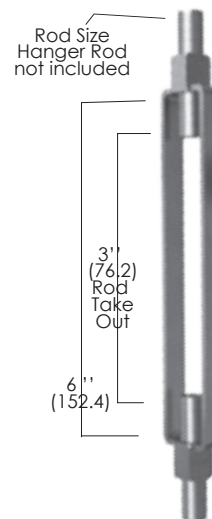


Buckle

Turnbuckle

- **Material:** Steel S235
- **Finish:** Electro Zinc Plated

Part No.	Rod Size
	mm
PC-1605-C-TBKL06	6
PC-1610-C-TBKL08	8
PC-1615-C-TBKL10	10
PC-1620-C-TBKL12	12
PC-1625-C-TBKL16	16
PC-1630-C-TBKL20	20
PC-1635-C-TBKL22	22
PC-1640-C-TBKL25	25
PC-1645-C-TBKL25	25
PC-1650-C-TBKL25	25
PC-1655-C-TBKL25	25
PC-1660-C-TBKL25	25



- Available in Zinc Plated Thread & Stainless Steel Thread

ASTM F436

Washers (SRW) | DIN 125 | ASTM F436

Zinc Plated	Stainless Steel	D	d	S
		(mm)	(mm)	(mm)
M6	M6	12	6.4	1.6
M8	M8	16	8.4	1.6
M10	M10	21	10.5	2
M12	M12	24	13	2.5
M16	M16	30	17	3
M18	M18	34	19	3.2
M20	M20	39	20.5	3.6



Order Example: SRW - M 12 -DIN 115

Round Washers DIN 440, DIN 9021

Washers (SRW) | DIN 440 | DIN 9021

DIN	Zinc Plated	Stainless Steel	D	d	S
			(mm)	(mm)	(mm)
440	M6		22	6.6	2
9021	M8	M8	24	8.4	2
9021	M10	M10	30	10.5	2.5
440	M12		45	13.5	4
9021	M12	M12	37	13	3
9021	M16	M16	50	17	3



Order Example: SRW - M 12 DIN 9021

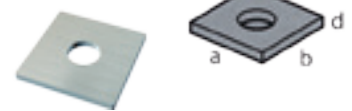
Square Washers SSW

Square Washers (SSW)

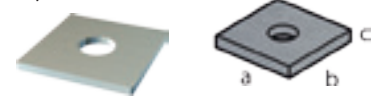
H.D. Galvanized Bolt	Stainless Steel Bolt	a x b x d
		(mm)
M8	M10	40 x 40 x (4-5-6)
M10	M12	40 x 40 x (4-5-6)
M12	M16	40 x 40 x (4-5-6)

Order Example: SSW 41/41 M 12 - d

SSW 40/40 for all channels
41/21 Series



SSW 41/41 for all channels
41/41 Series



Round Head Machine Screws

Round Head (SRH) | DIN 7985

Zinc Plated Thread	Length	d
	(mm)	(mm)
M6	30-40	6.0
M8	30-40	8.0
M10	20-60	10.0

SRH - M10 DIN 7985



Coupler Sleeves Rounded

Coupler Sleeves (SCS)

Electro-plated Thread	Stainless Steel Thread	D	L	Load Capacity
		(mm)	(mm)	(kN)
M6	M6	10/10	15	2.2
M8	M8	12/14	20	4.0
M10	M10	13/16	25	6.4
M12	M12	16/20	30	9.3
M16	M16	21/25	40	17.3
M20	M20	26/32	50	27.0

SCS - M16



Fully Threaded Rods Grade 4.6 DIN 975 ASTM A 36, A193

Threaded Rod (STR) - DIN 975 - ASTM A36

Zinc Plated Thread	Length	Load cap.
	(mm)	(kN)
M6	2000/3000	2.2
M8	2000/3000	4.0
M10	2000/3000	6.4
M12	2000/3000	12.9
M16	2000/3000	17.3
M18	2000	22.0
M20	2000	27.0



Roofing Bolts

Roofing Bolts (SRB)

- Materials : low carbon steel , carbon steel
- Steel S235 , grade 4.6 , 4.8 and 8.8
- Surfaces : plain , black and zinc plated
- Length = X (mm) – Y (mm)



Thread Size	M4 x - y	M5 x - y	M6 x - y	M8 x - y
	(mm)	(mm)	(mm)	(mm)
Length	10 - 50	10 - 80	12 - 120	16 - 150

Order Example: SRB - M6

Hexagon Nuts DIN 934, DIN EN 24032, ASTM A 563

Hexagon nut (SHN) | DIN 934 or ISO 4032 (= DIN EN 24032) | ASTM A563



Zinc Plated Thread	Stainless Steel Thread	S/m DIN	S/m ISO	e
		(mm)	(mm)	(mm)
M6	M6	10/5	10/6	11.5
M8	M8	13/6.5	13/7.5	15.0
M10	M10	17/8	16/9.5	19.6
M12	M12	19/10	18/12	21.9
M16	M16	24/13	24/15.5	27.7
M18	M18	26/16	26/16	22.0
M20	M20	30/18	29/20.5	27.0

Order Example: SHN - M12

Hexagonal Rod Coupler Grade 8.8 ASTM a 563

Hexagonal Rod Coupler with view hole (SHR)



Electroplated Thread	Stainless Steel Thread	D	L	Load capacity
		(mm)	(mm)	(kN)
M10	M10	13	40	6.4
M12	M12	17	40	9.3
M16	M16	22	50	17.3
M 18	M 18	23	60	22.0
M 20	M 20	25	70	27.0

Order Example: HRC - GV - M 12

Carriage Bolts with Nut Below Head DIN 603

Carriage Bolts (STC)



Zinc Plated	H.D. Galvanized Grade 4.6	Length	Head	Square Width	Square Depth
(E)	(E)	(A) mm	(H) mm	(O) mm	(P) mm
M5	M5	12.0	3.0	5.0	3.2
M6	M6	15.1	3.70	6.40	4.0
M8	M8	18.3	4.50	8.23	4.75
M10	M10	21.44	5.30	9.86	5.56
M16	M16	34.14	8.74	16.3	8.74

Order Example: STC - M6

DIN 933, DIN 24017, ASTM A307, A449

Hex Head Bolt (SHB) | DIN 933 or EN 24017 ASTM A307, A449 (without nut)



Zinc Plated Dimension	Stainless Steel Dimension	S DIN	S EN
		(mm)	(mm)
M 6 x 12		10	10
M 6 x 25			
M 8 x 25	M 8 x 25	13	13
M 8 x 40			
M 10 x 20		17	16
M 10 x 30	M 10 x 30		
M 10 x 45	M 10 x 45		
M 10 x 60			
M 10 x 70		19	18
M 12 x 22			
M 12 x 25	M 12 x 25		
M 12 x 30	M 12 x 30		
M 12 x 40	M 12 x 40		
M 12 x 50			
M 12 x 60	M 12 x 60	24	24
M 12 x 80	M 12 x 80		
M 12 x 90			
M 16 x 40	M 16 x 40		
M 16 x 60	M 16 x 60	27	26
M 16 x 90	M 16 x 90		
M 18 x 40	M 18 x 40		
M 18 x 50	M 18 x 50	32	32
M 18 x 60	M 18 x 60		
M 18 x 80	M 18 x 80		
M 20 x 40	M 20 x 40		
M 20 x 50	M 20 x 50	32	32
M 20 x 60	M 20 x 60		
M 20 x 80	M 20 x 80		

Rigid Steel Conduit (Heavy Wall Conduit)

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10 m
3/8	10	0.67	17.1	0.49	12.5	51.5	7.8
1/2	15	0.84	21.3	0.63	16.0	79.0	11.6
3/4	20	1.05	26.7	0.83	21.3	105.0	15.8
1	25	1.31	33.4	1.06	27.0	153.0	23.1
5/4	32	1.66	42.2	1.39	35.4	201.0	30.4
3/2	40	1.90	48.3	1.62	41.3	249.0	37.6
2	50	2.37	60.3	2.08	52.9	332.0	50.2
5/2	65	2.87	73.0	2.48	63.2	527.0	79.7
3	80	3.50	88.9	3.09	78.5	682.6	103.2
7/2	90	4.00	101.6	3.57	90.7	831.0	125.6
4	100	4.50	114.3	4.05	102.9	972.3	147.0
5	125	5.56	141.3	5.07	128.9	1313.6	198.6
6	150	6.62	168.3	6.09	154.8	1745.3	263.9

Intermediate Metal Conduit (IMC)

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10 m
1/2	15	0.81	20.7	0.74	18.9	60.0	0.7
3/4	20	1.02	26.1	0.95	24.2	82.0	12.4
1	25	1.29	32.7	1.20	30.6	116.0	17.5
5/4	32	1.63	41.6	1.55	38.9	150.0	22.6
3/2	40	1.88	47.8	1.79	45.5	182.0	27.3
2	50	2.36	59.9	2.26	57.5	242.0	36.5
5/2	65	2.85	72.5	2.72	69.2	401.0	60.6
3	80	3.47	88.3	3.34	85.0	493.0	74.5
7/2	90	3.97	100.8	3.84	97.5	573.0	86.6
4	100	4.46	113.4	4.33	110.1	638.0	96.4

Conduit Size		Maximum Support Span	
In	mm	Feet	Meters
1	25	12	3.60
5/4 - 3/2	32 - 40	14	4.30
2 - 5/2	50 - 65	16	4.90
3 - 6	80 - 150	20	6.00

Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code. Rigid and Intermediate Metal Conduit shall be supported at least every 10 feet (3.05m) and within 3 feet (914mm) of each outlet box, junction box, cabinet, or fitting. Except for straight runs of conduit connected with couplings which may be supported in accordance with NEC Article 345 and 346, provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

Pipe Comparison Data

Nominal Pipe Size		Outside Diameter	
In	mm	DIN(mm)	ISO(mm)
3/8	10	14	17.2
1/2	15	20	21.3
3/4	20	25	26.9
1	25	30	33.7
5/4	32	38	42.4
3/2	40	44.5	48.3
2	50	57	60.3
5/2	65	76.1	76.1
3	80	88.9	88.9
7/2	90	101.6	101.6
4	100	108	114.3
5	125	133	139.7
6	150	159	168.3
8	200	216	219.1
10	250	267	273.0
12	300	318	323.9
14	350	368	355.6
16	400	419	406.4
18	450	459	457.2
20	500	521	508.0
24	600	622	609.6
28	700	720	711.2
32	800	820	812.8
36	900	920	944
40	1000	1020	1016.0

Electrical Metallic Tubing (EMT) Thinwall Conduit

Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code. Electrical Metallic tubing shall be supported at least every 10 feet and within 3 feet (914mm) of each outlet box, junction box, cabinet, or fitting. See NEC Article 348.

Dimensions taken from ANSI C80.3-1977

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10m
3/8	10	0.57	14.7	0.49	12.5	23.0	3.4
1/2	15	0.70	17.9	0.62	15.8	28.5	4.3
3/4	20	0.92	23.4	0.82	20.9	43.5	6.5
1	25	1.16	29.5	1.04	26.6	64.0	9.6
5/4	32	1.51	38.3	1.38	35.1	95.0	14.3
3/2	40	1.74	44.2	1.61	40.9	110.0	16.6
2	50	2.19	55.8	2.06	52.5	140.0	21.1
5/2	65	2.87	73.0	2.73	69.4	205.0	31.0
3	80	3.50	88.9	3.35	85.2	250.0	37.8
7/2	90	4.00	101.6	3.83	97.4	325.0	49.1
4	100	4.50	114.3	4.33	110.1	370.0	55.9

Rigid Aluminum Conduit

Dimensions taken from ANSI C80.5-1977.

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10m
1/2	15	0.84	21.3	0.63	16.1	27.4	5.3
3/4	20	1.05	26.7	0.83	21.2	36.4	12.4
1	25	1.31	33.4	1.06	27.0	53.0	17.5
5/4	32	1.66	42.2	1.39	35.4	69.6	22.6
3/2	40	1.90	48.3	1.62	41.2	82.2	27.5
2	50	2.37	60.3	2.08	52.9	115.7	36.5
5/2	65	2.87	73.0	2.48	63.2	182.5	60.6
3	80	3.50	88.9	3.09	78.5	238.9	74.5
7/2	90	4.00	101.6	3.57	90.7	287.7	86.6
4	100	4.50	114.3	4.05	102.9	340.0	51.4
5	125	5.56	141.3	5.07	128.9	465.4	70.3
6	150	6.62	168.3	6.09	154.8	612.5	92.6

Conduit Size		Maximum Support Span	
In	mm	Feet	Meters
1/2 -3/4	15-20	10	3.00
1	25	12	3.60
5/4-3/2	32-40	14	4.30
2-5/2	50-65	16	4.90
3-6	80-150	20	6.00

Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code. Aluminum Rigid Conduit shall be supported at least every 10 feet (3.05m) and within 3 feet (914mm) of each outlet box, junction box, cabinet, or fitting. Except for straight runs of conduit connected with couplings which may be supported in accordance with NEC Table 346-12, provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.



Copper Tubing, Type L

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10m
3/8	10	0.67	17.1	0.49	12.5	57.0	8.6
1/2	15	0.84	21.3	0.62	15.8	85.0	12.8
3/4	20	1.05	26.7	0.82	20.9	113.0	17.1
1	25	1.31	33.4	1.04	26.6	168.0	26.0
5/4	32	1.66	42.2	1.38	35.1	227.0	34.3
3/2	40	1.90	48.3	1.61	40.9	272.0	41.1
2	50	2.37	60.3	2.06	52.5	365.0	55.2
5/2	65	2.87	73.0	2.46	62.7	579.0	87.5
3	80	3.50	88.9	3.06	77.9	758.0	114.6
7/2	90	4.00	101.9	3.54	90.1	911.0	137.6
4	100	4.50	114.3	4.02	102.3	1079.0	163.1
5	125	5.56	141.3	5.04	128.2	1462.0	221.0
6	150	6.62	168.3	6.06	154.1	1897.0	286.8
8	200	8.62	219.1	10.02	202.7	2855.0	431.6
10	250	10.75	271.1	7.98	254.5	4048.0	612.0
12	300	12.75	323.1	12.00	304.8	4956.0	749.3
14	350	14.00	355.6	13.25	336.6	5457.0	825.1
16	400	16.00	406.4	15.25	387.4	6258.0	946.2
18	450	18.00	457.2	17.20	438.2	7059.0	1067.3
20	500	20.00	508.0	19.25	489.0	7860.0	1188.4
24	600	24.00	609.6	23.25	590.6	9462.0	1430.6

Schedule 40 PUC Plastic Pipe

Nominal Conduit Size		Outside Diameter		Nominal Inside Diameter		Minimum Weight with Couplings Attached	
In	mm	In	mm	In	mm	Lbs/100 Ft.	Kg/10m
1/8	3	0.40	10.3	0.26	6.8	4.7	0.7
1/4	6	0.54	13.7	0.36	9.2	8.2	1.2
3/8	10	0.67	17.1	0.49	12.5	10.9	1.6
1/2	15	0.84	21.3	0.62	15.8	16.4	2.4
3/4	20	1.05	26.7	0.82	20.9	21.8	3
1	25	1.31	33.4	1.04	26.6	32.1	4.8
5/4	32	1.66	42.2	1.38	35.1	43.4	6.5
3/2	40	1.90	48.3	1.61	40.9	51.8	7.8
2	50	2.37	60.3	2.06	52.5	69.5	10.3
5/2	65	2.87	73.0	2.46	62.7	109.6	16.5
3	80	3.50	88.9	3.06	77.9	143.5	21.7
7/2	90	4.00	101.6	3.54	90.1	175.6	26.5
4	100	4.50	114.3	4.02	102.3	204.3	30.9
5	125	5.56	141.3	5.04	128.2	281.7	42.6
6	150	6.62	168.3	6.06	154.1	360.9	54.5
8	200	8.62	219.1	7.98	202.7	545.3	82.4
10	250	10.75	273.1	10.02	254.5	791.3	119.6
12	300	12.75	323.9	11.93	303.2	1035.2	156.5