

Flexible Sprinkler Drops

Unbraided Flexible Sprinkler Connection Data Sheet

EASYFLEX Flexible Sprinkler Drops are designed to significantly reduce labor and installation costs. By eliminating the need for pipe cutting and midline connections, you save valuable time and money.

Easyflex flexible sprinkler connections offer braided and unbraided flexible hoses in 2', 3', 4', 5', and 6' with top loading or front loading brackets for variety of ceiling and wall applications: T-Bars, metal studs, hat channels, wood beams, concrete sidewalls, and more. The system is qualified to be installed at commercial, hotel, retail, restaurants, cultural, entertainment, educational, government, healthcare, and religious buildings.

EASYFLEX Flexible Sprinkler Drops Appliance Standards

National Fire Protection Association (NFPA):

- NFPA 13 : Standard for the Installation of Sprinkler Systems
- NFPA 13D : Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes
- NFPA 13R : Standard for Installation of Sprinkler Systems in residential Occupancies up to and including four stories in height
- NFPA 13 Section 9.2.1.3.3.3 : No hangers are required for flexible connections as long as the length does not exceed 6ft.

American Society for Testing and Methods (ASTM):

- ASTM C635 : Standard specifications for the manufacture, performance, and testing of metal suspension systems for acoustical tile and lay-in panel ceilings
- ASTM C636 : Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels

Underwriter's Laboratories, Inc. (UL/ULC), cUL us 2443:

- Standard for flexible sprinkler hose with fittings for fire protection service

International Building Code (IBC) Section 1621 / American Society of Civil Engineers (ASCE) 7 9.6.2.6.2 & 9.6.2.6.2.2:

- Flexible Sprinkler Connections are an alternative solution to install without seismic escutcheons

Job Name :

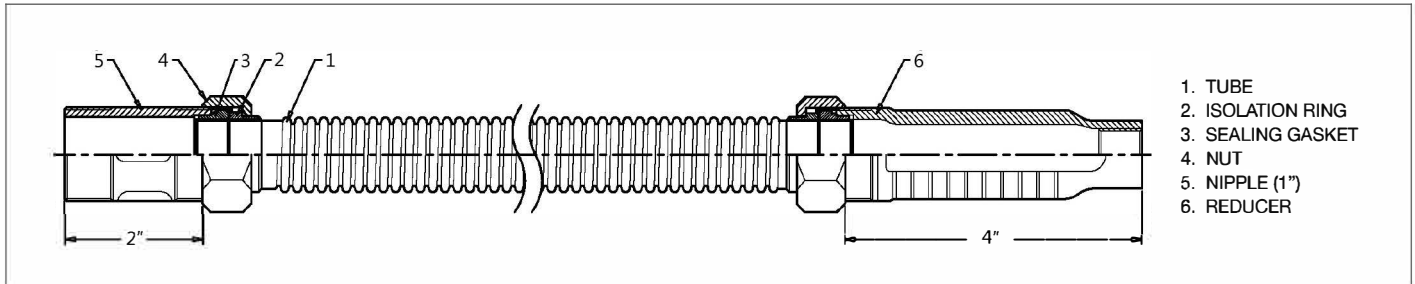
Engineer / Architect :

Job Location :

Wholesaler :

Submittal Date :

Contractor :

UNBRAIDED FLEXIBLE HOSE**SPECIFICATIONS**

Lengths Available	28", 40", 48", 60" and 67"
Outlet	1/2" or 3/4"
Hose Type	Unbraided
Max. Ambient Temperature Rating	225°F
Max. Working Pressure Rating	175 psig

* No hangers and seismic escutcheons required

* Required torque to assemble reducer and nipple with the flexible hose : 50 ft-lb

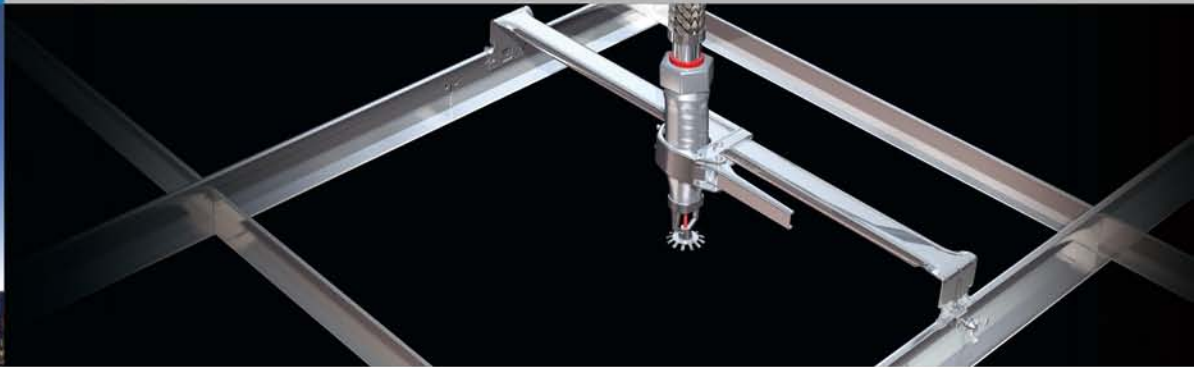
Hose	Stainless Steel 304	
Nut & Nipple	Zinc-Plated Steel	
Sealing Gasket / Isolation Ring	EPDM/ NYLON	
Minimum Bend Radius	6" (UL/ULC) * DO NOT bend within 2.52 inches from connection nuts	
Connection	Inlet	1"NPT
	Outlet	1/2" or 3/4"NPT

**FRICTION LOSS DATA**

EFU Series Unbraided Hose
TBS Bracket Systems

Length (in.)	Outlet Connection	K-Factor	Max. Number of 90° Bends	Equivalent Length of 1 in. Schedule 40 Pipe, ft.
28"	1/2"	5.6	1	18
	3/4"	8.0	1	22
40"	1/2"	5.6	2	32
	3/4"	8.0	2	39
48"	1/2"	5.6	2	38
	3/4"	8.0	2	44
60"	1/2"	5.6	3	55
	3/4"	8.0	3	61
67"	1/2"	5.6	3	63
	3/4"	8.0	3	83

* UL: 6" minimum bend radius, where C=120



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Braided Flexible Sprinkler Connection Data Sheet

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- ASTM C636: Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels

Factory Mutual (FM), FM Class No, 1637:

- Approved standard for flexible sprinkler hose with threaded end fittings

Underwriter's Laboratories, Inc. (UL), UL 2443:

- Standard for flexible sprinkler hose with fittings for fire protection service

International Building Code (IBC) Section 1621 / American Society of Civil Engineers (ASCE) 7 9.6.2.6.2 & 9.6.2.6.2.2:

- Flexible Sprinkler Connections are an alternative solution to install without seismic escutcheons

Job Name :

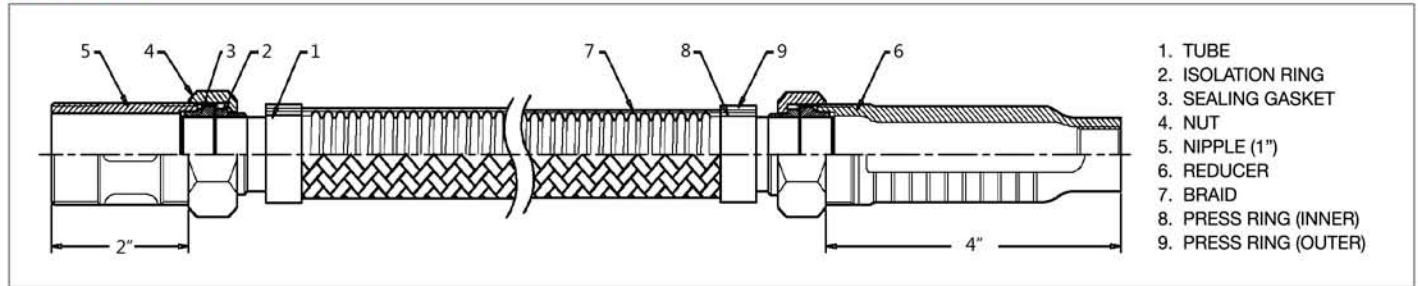
Engineer / Architect :

Job Location :

Wholesaler :

Submittal Date :

Contractor :

BRAIDED FLEXIBLE HOSE**SPECIFICATIONS**

Lengths Available	24", 36", 48", 60" and 72"
Outlet	1/2" or 3/4"
Hose Type	Braided
Max. Ambient Temperature Rating	225°F
Max. Working Pressure Rating	175 psig

* No hangers and seismic escutcheons required

* Required torque to assemble reducer and nipple with the flexible hose : 50 ft-lb

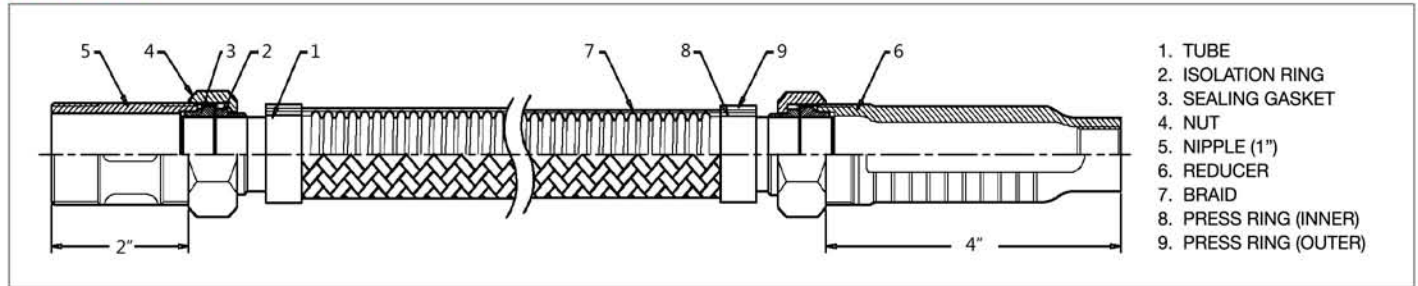
Hose	Stainless Steel 304	
Nut & Nipple	Zinc-Plated Steel	
Sealing Gasket / Isolation Ring	EPDM/ NYLON	
Minimum Bend Radius	4" (UL/ULC) and 8" (FM) * DO NOT bend within 2.52 inches from connection nuts	
Connection	Inlet	1"NPT
	Outlet	1/2" or 3/4"NPT

**FRICTION LOSS DATA**

EFB Series Braided Hose
TBS Bracket Systems

Length (in.)	Outlet Connection	K-Factor	Max. Number of 90° Bends	Equivalent Length of 1 in. Schedule 40 Pipe, ft.
24"	1/2"	5.6	1	18
	3/4"	8.0	1	18
36"	1/2"	5.6	2	31
	3/4"	8.0	2	34
48"	1/2"	5.6	3	48
	3/4"	8.0	3	51
60"	1/2"	5.6	4	60
	3/4"	8.0	4	65
72"	1/2"	5.6	4	71
	3/4"	8.0	4	72

* UL: 4" minimum bend radius, where C=120

BRAIDED FLEXIBLE HOSE**SPECIFICATIONS**

Lengths Available	24", 36", 48", 60" and 72"
Outlet	1/2" or 3/4"
Hose Type	Braided
Max. Ambient Temperature Rating	225°F
Max. Working Pressure Rating	175 psig

* No hangers and seismic escutcheons required
 * Required torque to assemble reducer and nipple with the flexible hose : 50 ft-lb

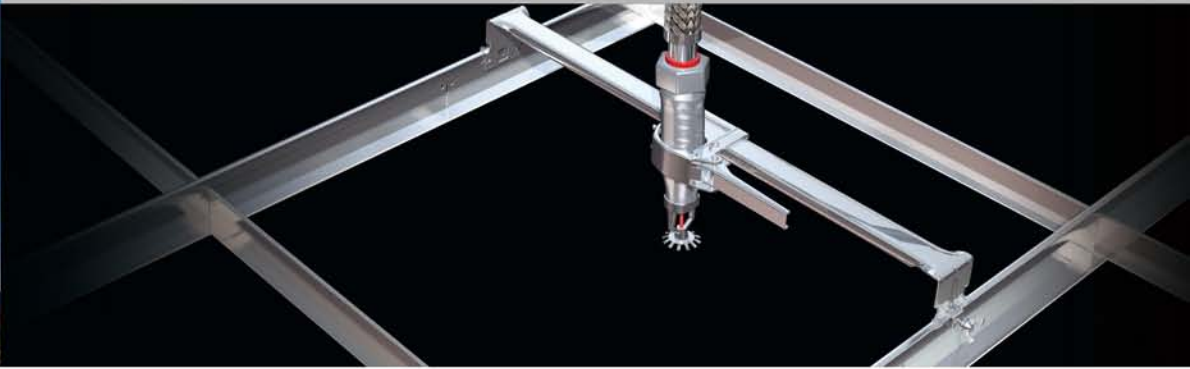
Hose	Stainless Steel 304	
Nut & Nipple	Zinc-Plated Steel	
Sealing Gasket / Isolation Ring	EPDM/ NYLON	
Minimum Bend Radius	4" (UL/ULC) and 8" (FM) * DO NOT bend within 2.52 inches from connection nuts	
Connection	Inlet	1"NPT
	Outlet	1/2" or 3/4"NPT

**FRICTION LOSS DATA**

EFB Series Braided Hose
 OGSB, TBS Bracket Systems

Length (in.)	Outlet Connection	K-Factor	Max. Number of 90° Bends	Equivalent Length of 1 in. Schedule 40 Pipe, ft.
24"	1/2"	5.6	1	27.0
	3/4"	8.0	1	18.6
36"	1/2"	5.6	2	37.4
	3/4"	8.0	2	30.4
48"	1/2"	5.6	3	54.9
	3/4"	8.0	3	48.3
60"	1/2"	5.6	4	72.5
	3/4"	8.0	4	66.2
72"	1/2"	5.6	4	90.5
	3/4"	8.0	4	83.0

* FM: 8" minimum bend radius, where C=120



Flexible Sprinkler Drops

Braided Flexible Sprinkler Connection Data Sheet (High Performance)

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Factory Mutual (FM), FM Class No, 1637:

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Job Name :

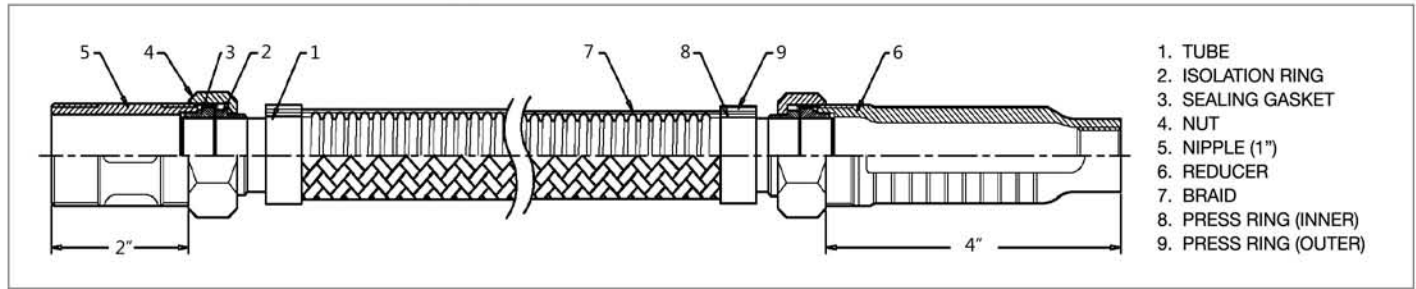
Engineer / Architect :

Job Location :

Wholesaler :

Submittal Date :

Contractor :

BRAIDED FLEXIBLE HOSE (High Performance)**SPECIFICATIONS**

Lengths Available	24", 36", 48", 60" and 72"
Outlet	1/2" or 3/4"
Hose Type	Braided
Max. Ambient Temperature Rating	225°F
Max. Working Pressure Rating	175 psig

* No hangers and seismic escutcheons required

* Required torque to assemble reducer and nipple with the flexible hose : 50 ft-lb

Hose	Stainless Steel 304	
Nut & Nipple	Zinc-Plated Steel	
Sealing Gasket / Isolation Ring	EPDM/ NYLON	
Minimum Bend Radius	8" (FM) * DO NOT bend within 2.52 inches from connection nuts	
Connection	Inlet	1"NPT
	Outlet	1/2" or 3/4"NPT

**FRICITION LOSS DATA**


EFB HP Series Braided Hose
OGSB, TBS Bracket Systems

Length (in.)	Outlet Connection	K-Factor	Max. Number of 90° Bends	Equivalent Length of 1 in. Schedule 40 Pipe, ft.
24"	1/2"	5.6	1	17.8
	3/4"	8.0	1	8.3
		14.0	1	8.3
36"	1/2"	5.6	2	23.0
	3/4"	8.0	2	13.9
		14.0	2	13.7
48"	1/2"	5.6	3	30.2
	3/4"	8.0	3	21.7
		14.0	3	21.6
60"	1/2"	5.6	4	37.4
	3/4"	8.0	4	29.5
		14.0	4	29.5
72"	1/2"	5.6	4	43.3
	3/4"	8.0	4	34.5
		14.0	4	33.2


* FM: 8" minimum bend radius, where C=120

FLEXIBLE SPRINKLER CONNECTION PARTS LIST


UNBRAIDED FLEXIBLE HOSE

Image	Part #	Description	Part #	Description
	EFU 228	1/2"x28" Unbraided hose	EFU 328	3/4"x28" Unbraided hose
	EFU 240	1/2"x40" Unbraided hose	EFU 340	3/4"x40" Unbraided hose
	EFU 248	1/2"x48" Unbraided hose	EFU 348	3/4"x48" Unbraided hose
	EFU 260	1/2"x60" Unbraided hose	EFU 360	3/4"x60" Unbraided hose
	EFU 267	1/2"x67" Unbraided hose	EFU 367	3/4"x67" Unbraided hose



BRAIDED FLEXIBLE HOSE

Image	Part #	Description	Part #	Description
	EFB 224	1/2"x24" Braided hose	EFB 324	3/4"x24" Braided hose
	EFB 236	1/2"x36" Braided hose	EFB 336	3/4"x36" Braided hose
	EFB 248	1/2"x48" Braided hose	EFB 348	3/4"x48" Braided hose
	EFB 260	1/2"x60" Braided hose	EFB 360	3/4"x60" Braided hose
	EFB 272	1/2"x72" Braided hose	EFB 372	3/4"x72" Braided hose

BRAIDED FLEXIBLE HOSE (High Performance)

Image	Part #	Description	Part #	Description
	EFB 224 HP	1/2"x24" Braided hose	EFB 324 HP	3/4"x24" Braided hose
	EFB 236 HP	1/2"x36" Braided hose	EFB 336 HP	3/4"x36" Braided hose
	EFB 248 HP	1/2"x48" Braided hose	EFB 348 HP	3/4"x48" Braided hose
	EFB 260 HP	1/2"x60" Braided hose	EFB 360 HP	3/4"x60" Braided hose
	EFB 272 HP	1/2"x72" Braided hose	EFB 372 HP	3/4"x72" Braided hose

ONE-PIECE BRACKET

Image	Part #	Description
 <p>Available as individual components or pre-assembled</p>	TBS-PA	REQUIRED SYSTEM PARTS <ul style="list-style-type: none"> • Qty.1 Flexible Hose • Qty.1 SQ25 or SQ50 • Qty.2 TBS End Bracket • Qty.1 SSB or OSSB
Image	Part #	Description
 <p>Grid Drop Bracket 24" (one unit bracket)</p>	OGSB-02	REQUIRED SYSTEM PARTS <ul style="list-style-type: none"> • Qty.1 Flexible Hose • Qty.1 OGSB-02

REDUCER & NIPPLE

Image	Part #	Description
	RDL 12	REDUCER 1/2" x 5-1/4"TXT (MXF)
	RDL 34	REDUCER 3/4" x 5-1/4"TXT (MXF)
	LRDS 12 or 34	ELBOW REDUCER SHORT
	LRDL 12 or 34	ELBOW REDUCER LONG
	NP 1	NIPPLE 1" x 2-3/8"

Image	Part #	Description
	RD 126	6" REDUCER
	RD 127 or 347	7" REDUCER
	RD 128	8" REDUCER
	RD 129 or 349	9" REDUCER
	SQ25	25" STOCK BAR
	SQ50	50" STOCK BAR

CENTER BRACKET & END BRACKET

Image	Part #	Description
	SSB	Snap Clamp Center Bracket For Stock Bar
	OSSB	Open Gate Snap Center Bracket For Stock Bar
	SSBW	Wing Clamp Wall Mount Bracket
	OSSBW	Open Gate Snap Side Wall Bracket For Stock Bar
	OSSBJ	Open Gate Bracket With Mounting Threaded Rod

Image	Part #	Description
	TBS	Snap On T-Bar Bracket (for recessed or concealed heads)
	HCB	Hat Furring Channal End Bracket
	MSB	Metal Stud End Bracket
	WSB	Wood Beam Stud Bracket


Image	Part #	Description
	GR	EPDM GASKET

Image	Part #	Description
	PR	NYLON ISOLATION RING

Flexible Sprinkler Connection for Commercial Application

Bracket for Suspended Ceilings | OGSB-02

WARNING

- You must read and understand all instructions and warnings before attempting to install any EASYFLEX Sprinkler Drop system components.
- Failure to follow these instructions could cause improper operation resulting in serious injury of person, property, or worse.
- We recommend wearing safety glasses, a hard hat, and foot protection during installation.



REQUIRED SYSTEM PARTS

Flexible Hose

OGSB-02 One Piece Bracket

REQUIRED TOOL

Pipe Wrench

PTFE Tape



1. Inspect the EASYFLEX sprinkler drop system components for any sign of physical damage. Make sure all components are in proper place.



Disconnect the Inlet Nipple and Outlet Reducer from the Flexible Hose and check that a Sealing Gasket is in each place properly. Reconnect Outlet Reducer to the Flexible Hose.



2. Apply PTFE tape, per its manufacturer's installation instructions, on the Inlet Nipple Thread. Use pipe wrench to connect the Inlet Nipple to the branch line. Torque range should be minimum of 50 to maximum of 58 ft-lbs. Make sure both end threads are clean without any damage.



3. Use the pipe wrench to connect the Flexible Hose to the Outlet Nipple. Torque range should be a minimum of 50 to a maximum of 58 ft-lbs.



DO NOT use PTFE tape on the Outlet Nipple thread to connect to the Flexible Hose.



- 4.** Place the OGSB-02 at the desired position on the ceiling grid.



- 5.** Once OGSB-02 is positioned, tighten the wing bolts to secure onto grid.



- 6.** When securely latched on, open the center bracket gate and load the hose.



- 7.** Close the gate of the center bracket from left to right.



- 8.** Firmly push the lever toward the stock bar to secure the flexible drop.



- 9.** Installation is complete!

When it is necessary to re-position the flexible drop, follow the below steps to release the center gate.



Locate the ring-shaped wire hook on the bracket (pictured above.)



Push the wire hook and grab the lever.



Pull the lever until gate opens.

Flexible Sprinkler Connection for Commercial Application

Bracket for Suspended Ceilings | TBS

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REQUIRED SYSTEM PARTS

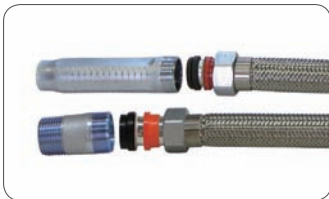
Flexible Hose (Braided/ Unbraided)

TBS End Brackets, SSB or OSSB, SQ 25 or 50

REQUIRED TOOL

Pipe Wrench

PTFE Tape



1. Inspect the EASYFLEX sprinkler drop system components for any sign of physical damage. Make sure all components are in proper place.



Disconnect the Inlet Nipple and Outlet Reducer from the Flexible Hose and check that a Sealing Gasket is in each place properly. Reconnect Outlet Reducer to the Flexible Hose.



2. Apply 7 to 10 wraps of PTFE tape on the Inlet Nipple thread. Use pipe wrench to connect the Inlet Nipple to the branch line. Torque range should be minimum of 50 to maximum of 58 ft-lbs. Make sure both end threads are clean without any damage.



3. Use the pipe wrench to connect the Flexible Hose to the Outlet Nipple. Torque range should be a minimum of 50 to a maximum of 58 ft-lbs.



DO NOT use PTFE tape on the Outlet Nipple thread to connect to the Flexible Hose.



4. Attach TBS mounting bracket to the T-Bar ceiling grid. Fasten TBS bracket into the T-Bar ceiling grid until the clip is fully latched onto the T-Bar. Hand tighten the wing bolt on the TBS bracket to tightly secure on the the grid. Insert Stock Bar into the TBS mounting brackets.



DO NOT over tighten the wing bolt with tools. This may cause damage to the wing bolt.



5. Insert Stock Bar (SQ 25 or SQ 50) through the SSB Center Snap Clamp Bracket.



6. Hand tighten the wing bolt on the TBS bracket to tightly secure on the the grid.
Adjust the Stock Bar for proper position and push the levers in the TBS brackets towards the inside of the configuration to secure with Stock Bar.



7. Place the SSB Center Bracket at the desired position and insert the Outlet Reducer from the Flexible Hose into the SSB.
Adjust height for proper position and push down the lever of the SSB to secure the hose in place.



8. Install the sprinkler head.
USE PTFE tape or a non-hardening pipe-joint compound. Refer to the NFPA guidelines and sprinkler head manufacturer's installation instructions for proper installation.

Flexible Sprinkler Connection for Commercial Application

Bracket for Suspended Ceilings | HCB

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REQUIRED SYSTEM PARTS

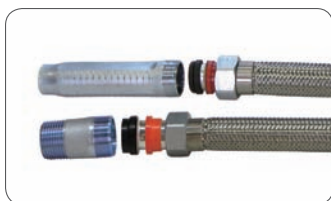
Flexible Hose (Braided/ Unbraided)

HCB End Brackets, SSB or OSSB, SQ 25 or 50

REQUIRED TOOL

Pipe Wrench

PTFE Tape



1. Inspect the EASYFLEX sprinkler drop system components for any sign of physical damage. Make sure all components are in proper place.



Disconnect the Inlet Nipple and Outlet Reducer from the Flexible Hose and check that a Sealing Gasket is in each place properly. Reconnect Outlet Reducer to the Flexible Hose.



2. Apply 7 to 10 wraps of PTFE tape on the Inlet Nipple thread. Use pipe wrench to connect the Inlet Nipple to the branch line. Torque range should be minimum of 50 to maximum of 58 ft-lbs. Make sure both end threads are clean without any damage.



3. Use the pipe wrench to connect the Flexible Hose to the Outlet Nipple. Torque range should be a minimum of 50 to a maximum of 58 ft-lbs.



DO NOT use PTFE tape on the Outlet Nipple thread to connect to the Flexible Hose.



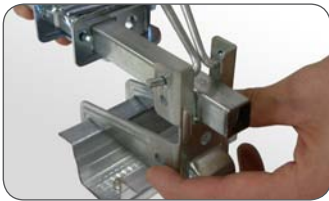
4. Attach HCB to hat channel. Make sure a slot in HCB fit with wing of hat channel grid. Hand tighten the wing bolt into the hat channel. Repeat for the other bracket.



DO NOT over tighten the wing bolts with tool. This may cause damage to wing bolt.



5. Insert Stock Bar (SQ 25 or SQ 50) through SSB.



6. Insert Stock Bar through the Hat Channel Brackets. Adjust the stock bar for proper position and push the levers in HCB to secure with Stock Bar.



7. Insert the Outlet Reducer from Flexible Hose into the center bracket and adjust height for proper position. Pull up the lever in SSB to secure.



8. Install sprinkler head. Use PTFE tape or a non-hardening pipe-joint compound. Refer to the NFPA guidelines and sprinkler head manufacturer's installation instruction for proper installation.

Flexible Sprinkler Connection for Commercial Application

Bracket for Suspended Ceilings | MSB

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REQUIRED SYSTEM PARTS

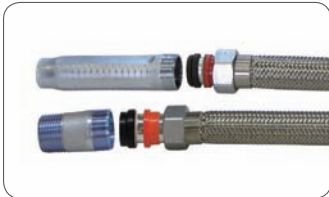
Flexible Hose (Braided/ Unbraided)

MSB End Brackets, SSB or OSSB, SQ 25 or 50

REQUIRED TOOL

Pipe Wrench

PTFE Tape



1. Inspect the EASYFLEX sprinkler drop system components for any sign of physical damage. Make sure all components are in proper place.



Disconnect the Inlet Nipple and Outlet Reducer from the Flexible Hose and check that a Sealing Gasket is in each place properly. Reconnect Outlet Reducer to the Flexible Hose.



2. Apply 7 to 10 wraps of PTFE tape on the Inlet Nipple thread. Use pipe wrench to connect the Inlet Nipple to the branch line. Torque range should be minimum of 50 to maximum of 58 ft-lbs. Make sure both end threads are clean without any damage.



3. Use the pipe wrench to connect the Flexible Hose to the Outlet Nipple. Torque range should be a minimum of 50 to a maximum of 58 ft-lbs.



DO NOT use PTFE tape on the Outlet Nipple thread to connect to the Flexible Hose.



4. Insert Stock Bar (SQ 25 or SQ 50) through SSB.
Place Stock Bar on metal stud to the desired position.



5. Attach Metal Stud Bracket, MSB to the metal stud ceiling grid. Make sure a slot in MSB to fit with metal stud leg as shown on the picture. Hand tighten the wing bolt to secure MSB and metal stud. Repeat for the other bracket.



DO NOT over tighten the wing bolts with tool. This may cause the damage to wing bolt.



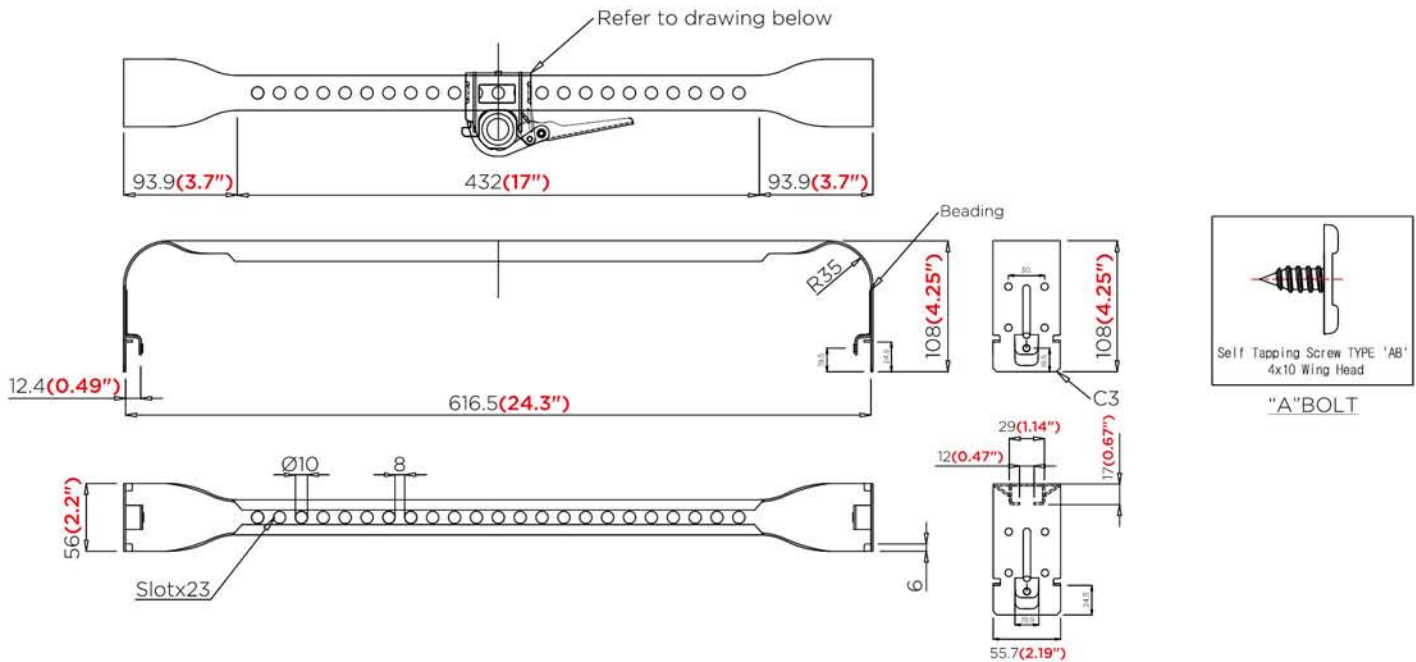
6. Place center bracket, SSB to the desired position and insert the Outlet Reducer into the center bracket and adjust the height for proper position. Push down the lever in center bracket, SSB to secure.



7. Install sprinkler head.
Use PTFE tape or a non-hardening pipe-joint compound. Refer to the NFPA guidelines and sprinkler head manufacturer's installation instruction for proper installation.

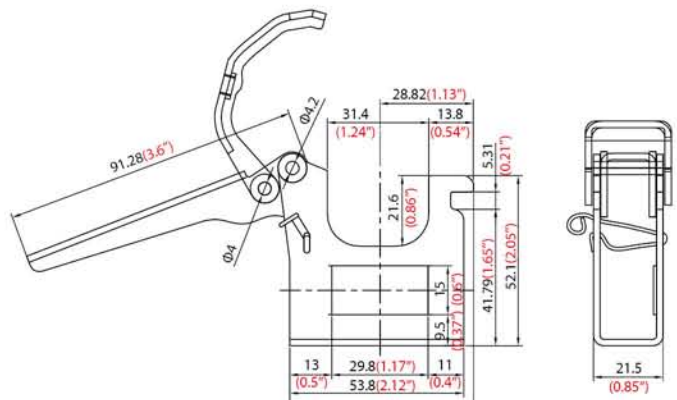
Open Gate Snap Bracket | OGSB-02

Scale	NS
Material	ASTM A-366
Tolerance	2.0mm, ± 0.05
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test



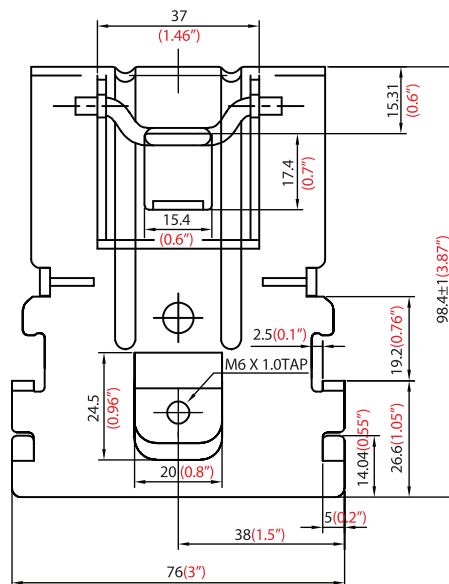
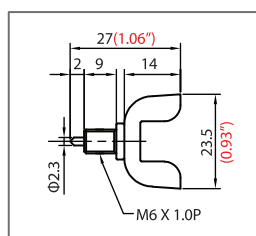
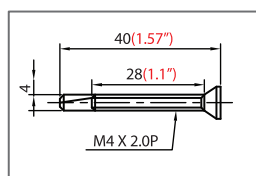
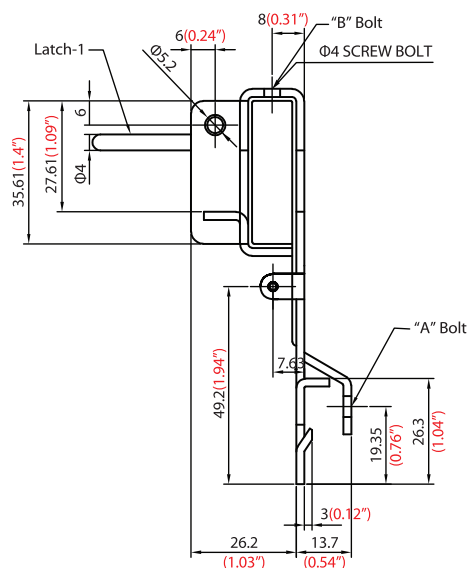
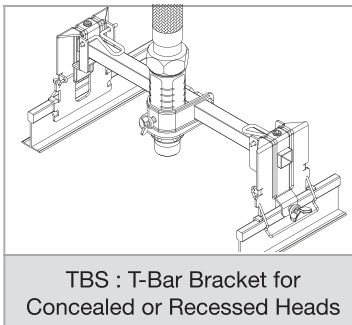
Open Gate Center Bracket | OSSB

Scale	NS
Material	ASTM A-526
Tolerance	± 0.3
Thickness	2.0mm, ± 0.05
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test



T-Bar Bracket | TBS

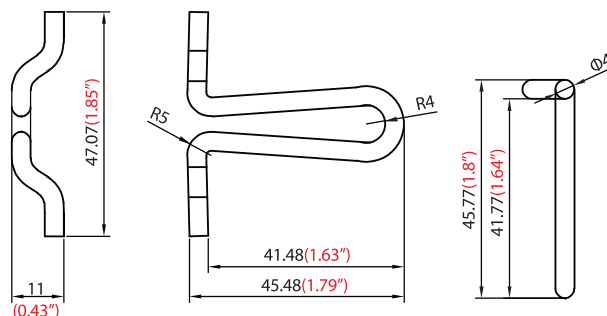
Scale	NS
Material	ASTM A-366
Tolerance	±0.3
Thickness	2.0mm, ±0.05
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test



"A" BOLT MATERIAL: ASTM A-36
 "B" BOLT MATERIAL: ANSI 1010
 LATCH-1 MATERIAL: ASTM A-603

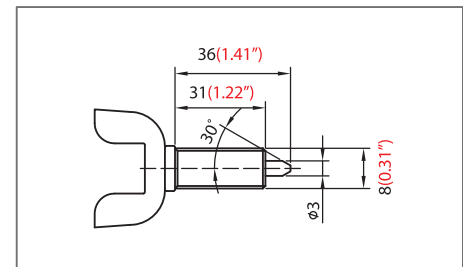
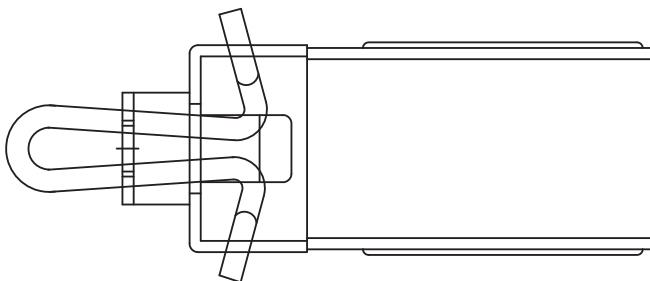
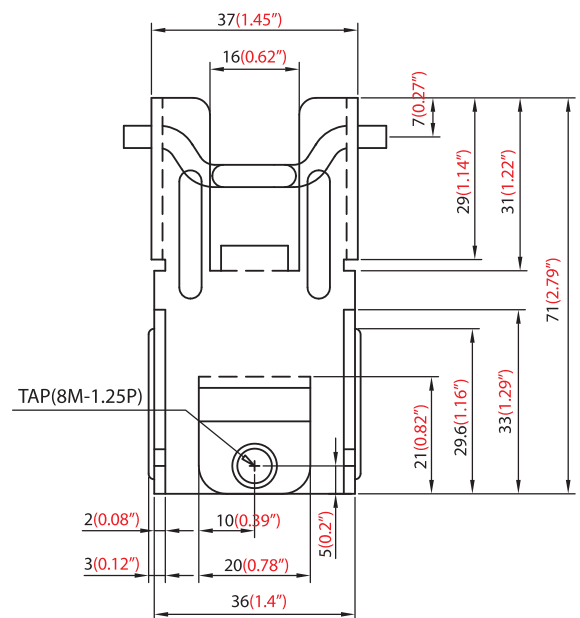
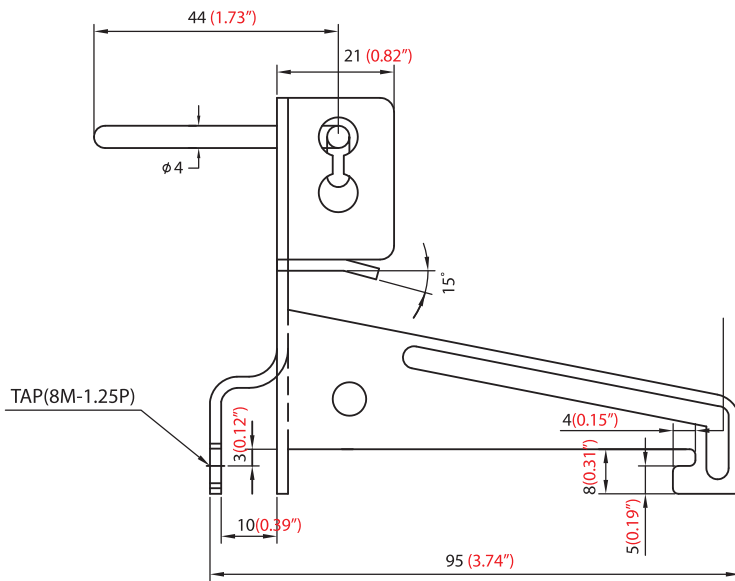
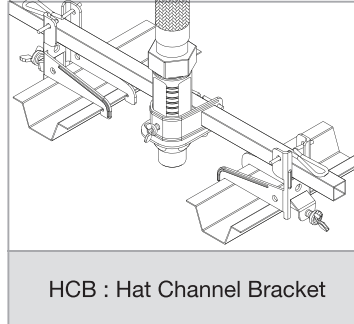
T-Bar Bracket | TBS (LATCH)

Scale	NS
Material	ASTM A-603
Tolerance	±1.0



Open Hat Channel Bracket | HCB

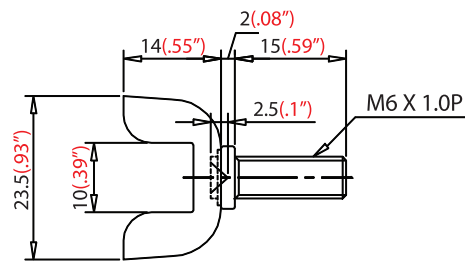
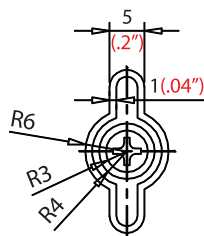
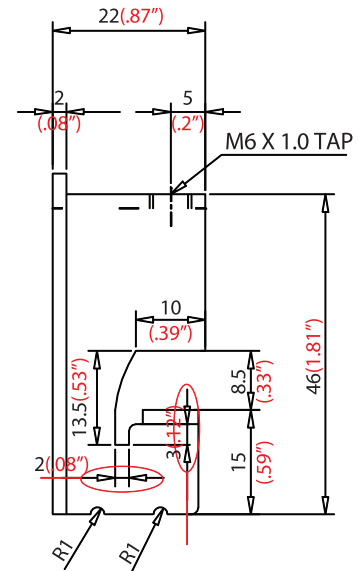
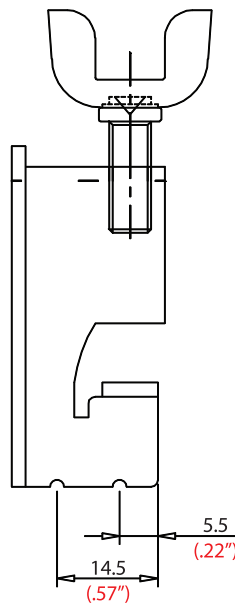
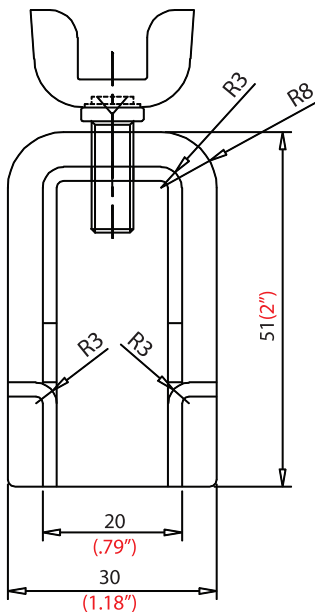
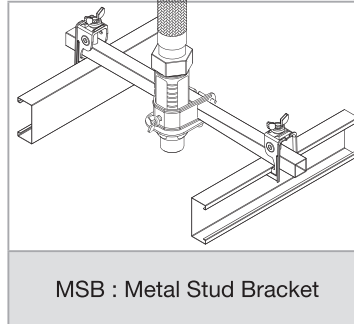
Scale	NS
Material	ASTM A-366
Tolerance	±0.2
Thickness	2mm
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	Anti-Corrosion No indication of corrosion with salt spray test



High tensile bolt(S45C) M8x1.25P

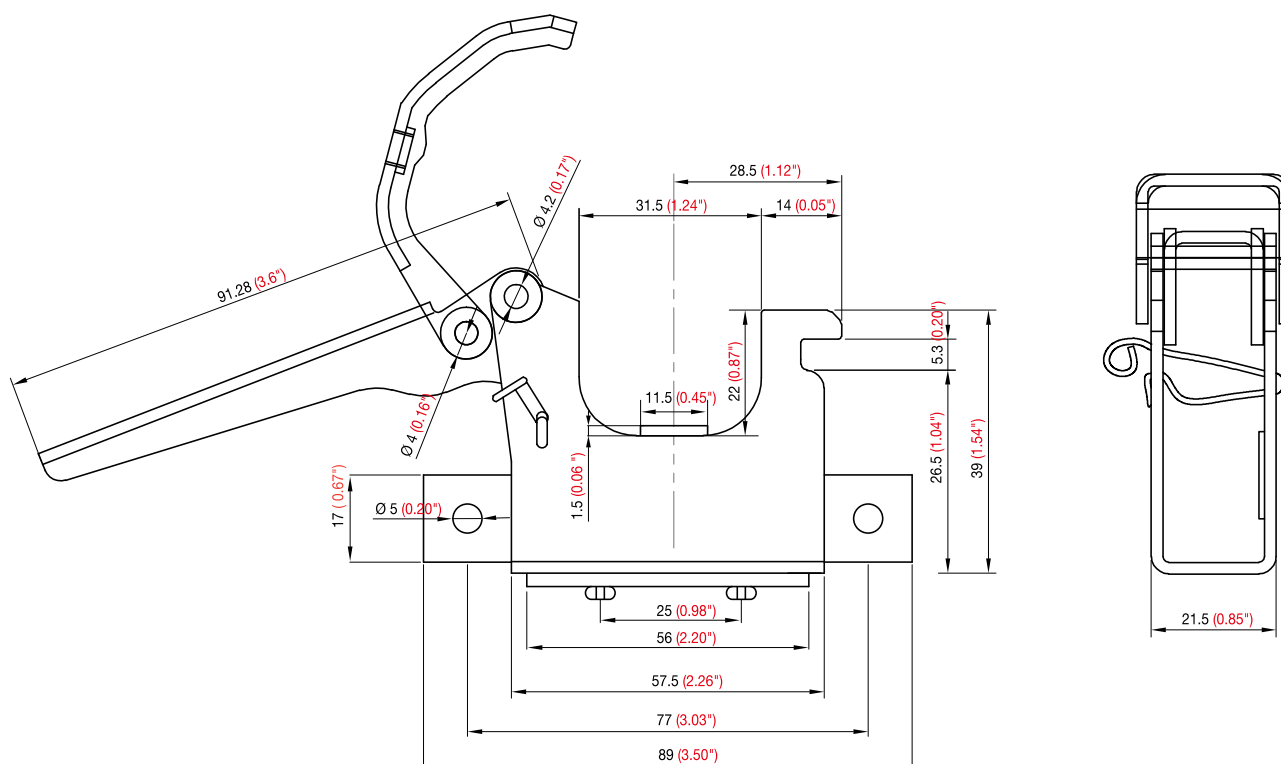
Metal Stud Bracket | MSB

Scale	NS
Material	ASTM A-366
Tolerance	±0.2
Thickness	2mm
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test



Brackets for Side Wall | OSSBW

Scale	NS
Material	ASTM A-526
Tolerance	±0.3
Thickness	2.0mm, ±0.05
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test



Scale	NS
Material	ASTM A-53, Gr A
Tolerance	±0.2
Thickness	12.7µm
Spec.	Zinc Plate
Coating durability	No indication of peeling
Anti-Corrosion	No indication of corrosion with salt spray test

