

System Channels & Pipe Supports, Clamp



■ ■ ■ ■
DAESANG SYNERS

대상시너스주식회사



System Channels & Pipe Supports, Clamp



CONTENTS

■ 1. SYSTEM CHANNEL -----	P3
SYSTEM CHANNEL -----	P3
■ 2. BRACKET -----	P4~P11
S-BRACKET / BRIDGE -----	P4
L-BRACKET / T-BRACKET -----	P5
T-BRACKET / LC-BRACKET -----	P6
LR-BRACKET / V-BRACKET / A-BRACKET -----	P7
A-BRACKET / X-BRACKET -----	P8
X-BRACKET / C-BRACKET / INSERT PLATE -----	P9
B-CLAMP / R-CAP -----	P10
T-BOLT / T-NUT / FLG. BOLT / C-WASHER -----	P11
■ 3. SUPPORT 및 BRACKET 조립 -----	P12~P18
U-SUPPORT / W-SUPPORT 40x40 3HOLE 일반 -----	P12
U-SUPPORT / W-SUPPORT 40x40 3HOLE 조합 -----	P13
U-SUPPORT / W-SUPPORT 40x60 1HOLE 일반 -----	P14
U-SUPPORT / W-SUPPORT 40x60 1HOLE 조합 -----	P15
V-SUPPORT / L-SUPPORT 40x40 3HOLE -----	P16
BRACKET 조립 -----	P17
BRACKET 조립 -----	P18
■ 4. U-BAND -----	P19~P22
U-BAND 방진, 절연 -----	P19
U-BAND 방진, 절연 / 제진 LINER -----	P20
U-BAND 일반 -----	P21
U-BOLT -----	P22
■ 5. CLAMP SHOE -----	P23~P24
CLAMP SHOE (일반) -----	P23
CLAMP SHOE (입상) -----	P24
■ 6. HANGER CLAMP -----	P25~28
HANGER CLAMP (1HOLE) -----	P25
HANGER CLAMP (1HOLE), BRACKET -----	P26
HANGER CLAMP (2HOLE), BRACKET -----	P27
BEAM-CLAMP -----	P28
■ 7. 기술 자료 -----	P29
SYSTEM CHANNEL 및 배관 하중표 -----	P29
■ 8. 인증서 -----	P30~31
특허 -----	P30
특허 -----	P31

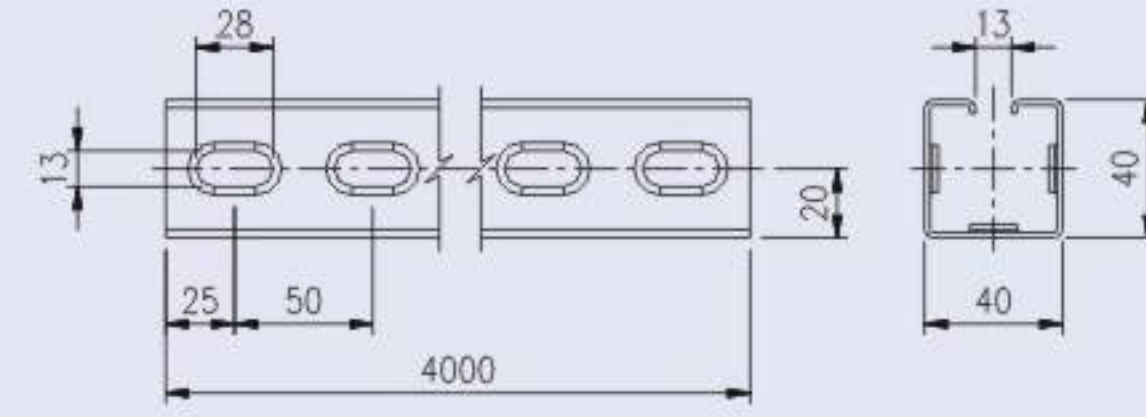
1. SYSTEM CHANNEL

SYSTEM CHANNEL

SC401
40x40 3HOLE



- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용



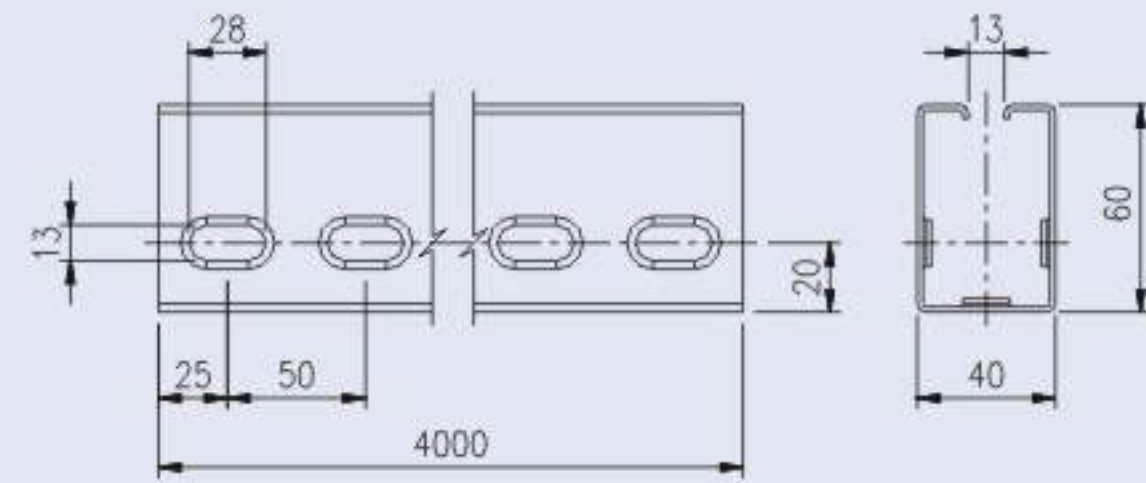
- ▶ CHANNEL 3HOLE : 40x40x4000L

SYSTEM CHANNEL

SC601
40x60 3HOLE



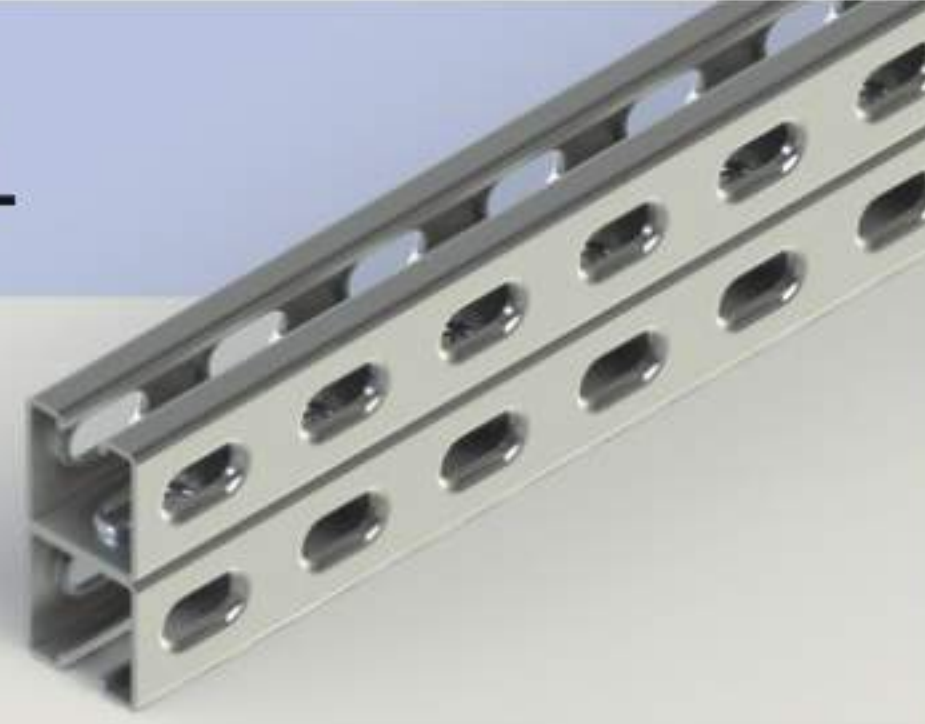
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용



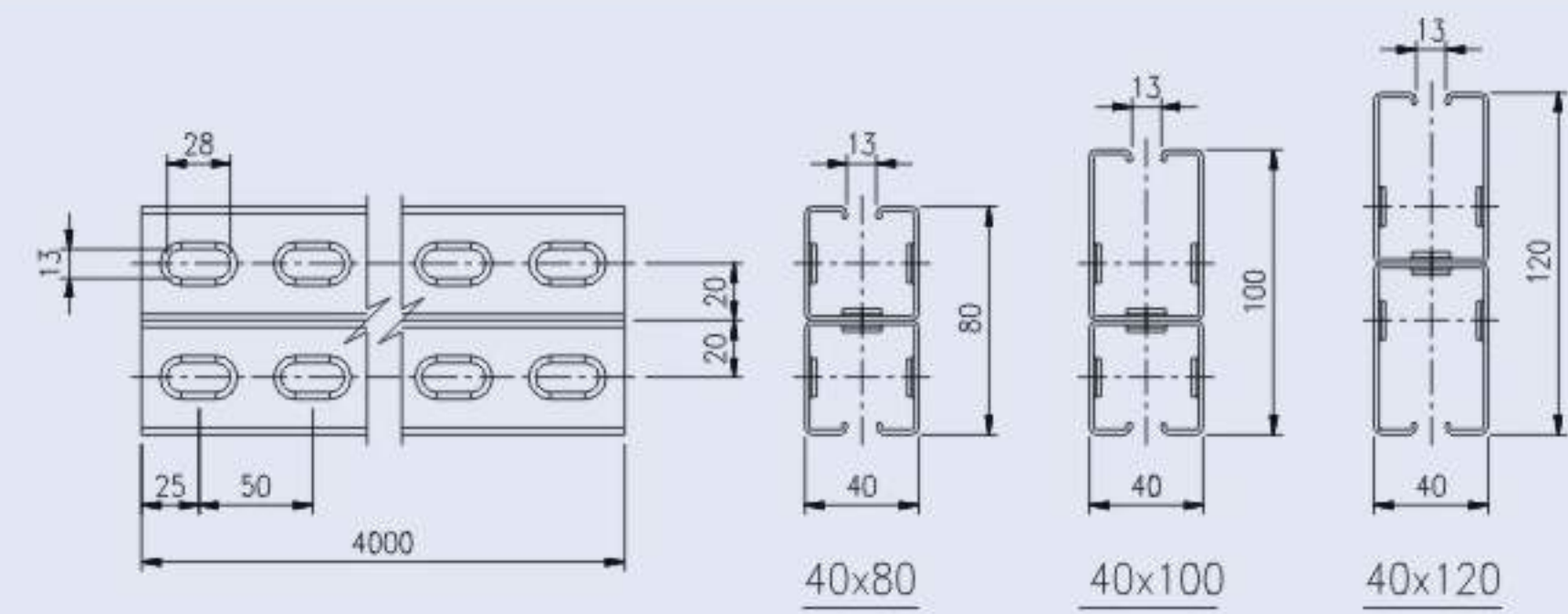
- ▶ CHANNEL 3HOLE : 40x60x4000L

SYSTEM CHANNEL

조합
3HOLE



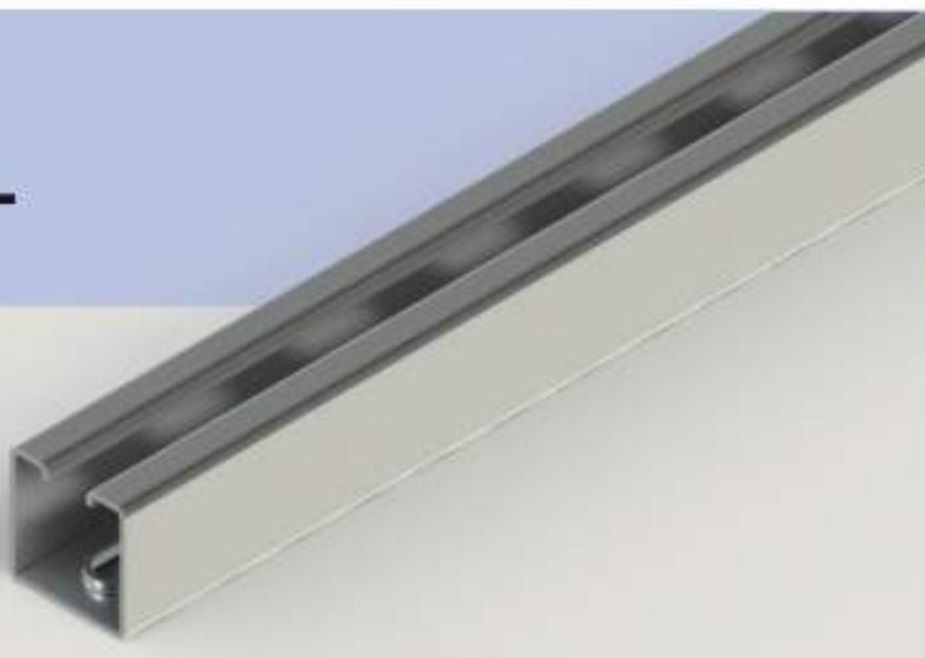
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용



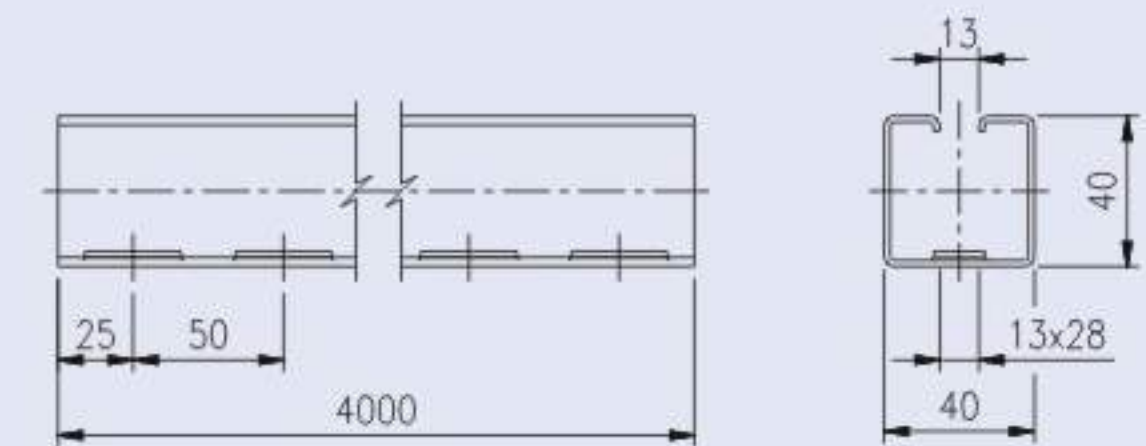
- ▶ CHANNEL의 조합
 - 40x40 + 40x40 = 40x80
 - 40x40 + 40x60 = 40x100
 - 40x60 + 40x60 = 40x120

SYSTEM CHANNEL

SC402
40x40 1HOLE



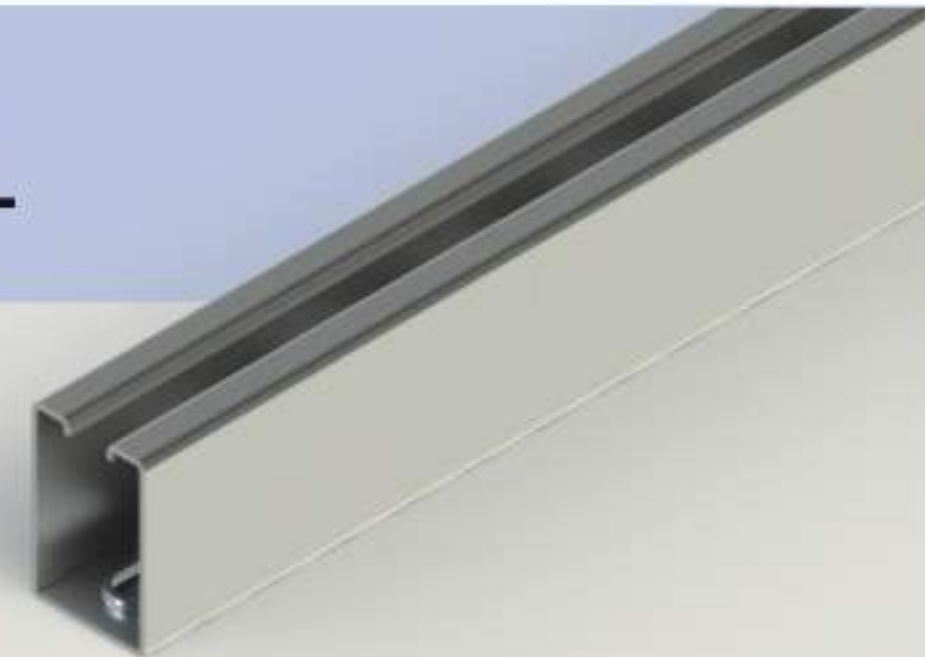
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용



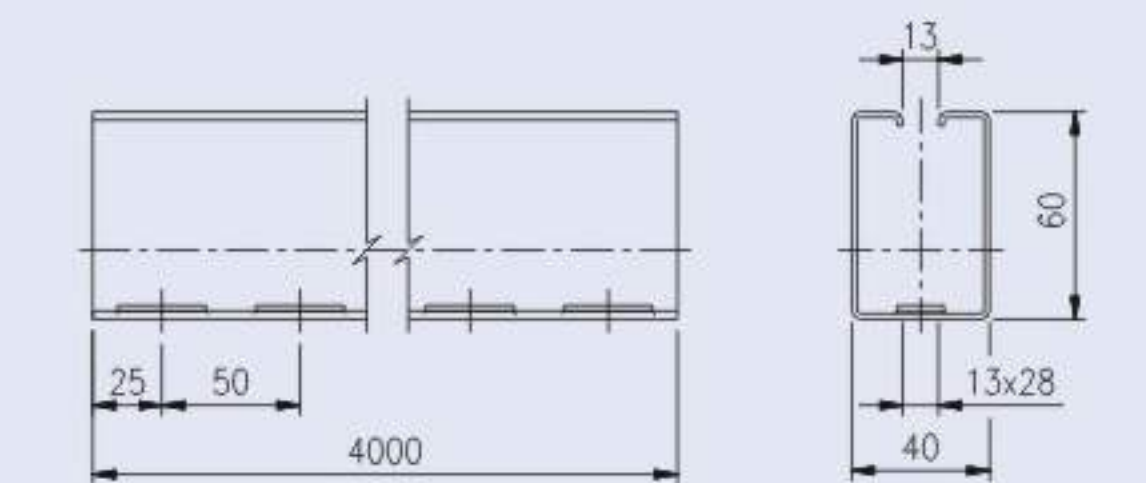
- ▶ CHANNEL 1HOLE : 40x40x4000L

SYSTEM CHANNEL

SC602
40x60 1HOLE



- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용



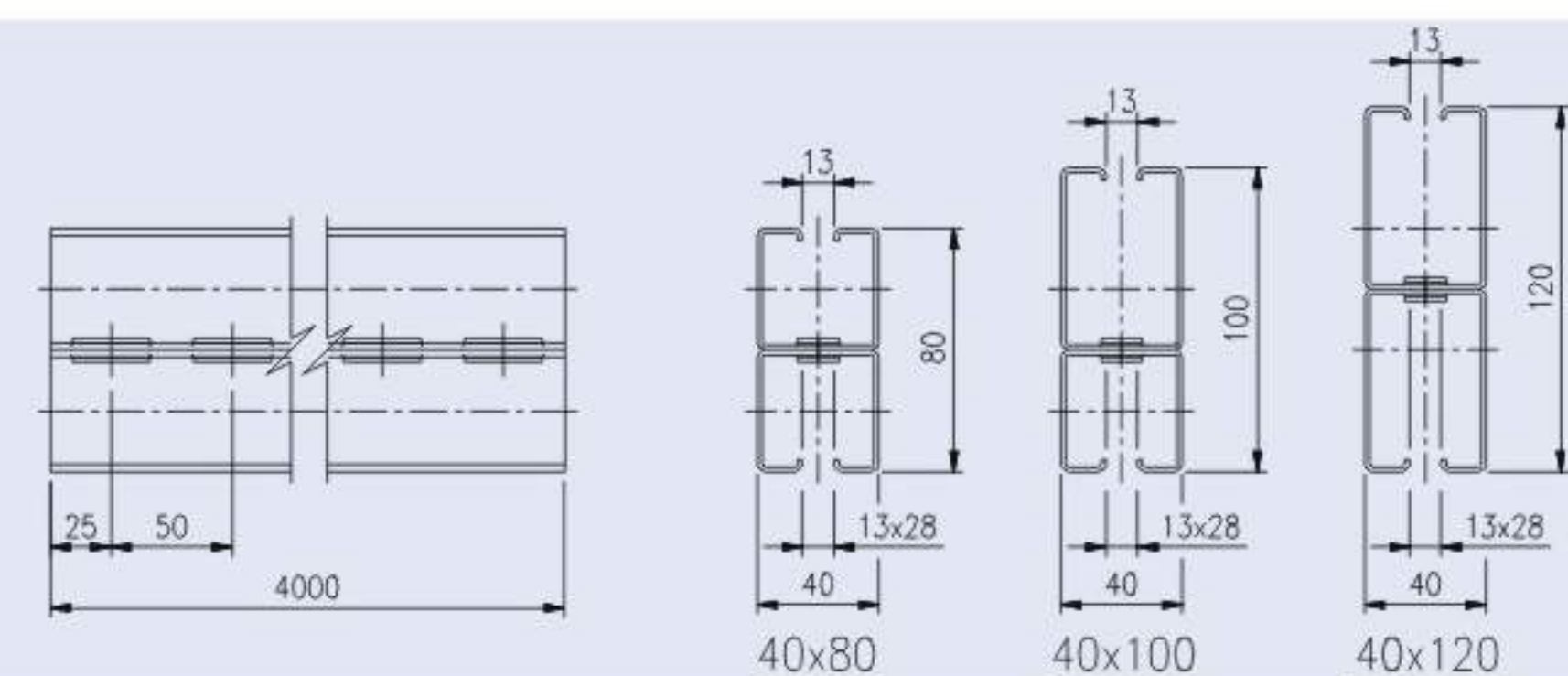
- ▶ CHANNEL 1HOLE : 40x60x4000L

SYSTEM CHANNEL

조합
1HOLE



- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장
- ▶ BOLT는 T-BOLT 및 FLG-BOLT M10, M12 사용

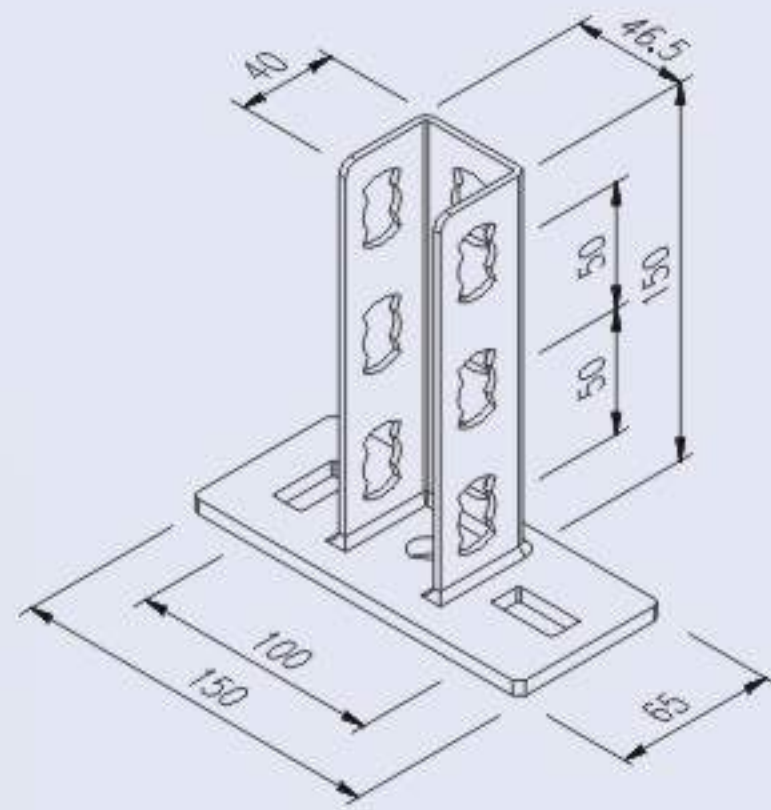


- ▶ CHANNEL의 조합
 - 40x40 + 40x40 = 40x80
 - 40x40 + 40x60 = 40x100
 - 40x60 + 40x60 = 40x120

2. BRACKET

S-BRACKET

SB401

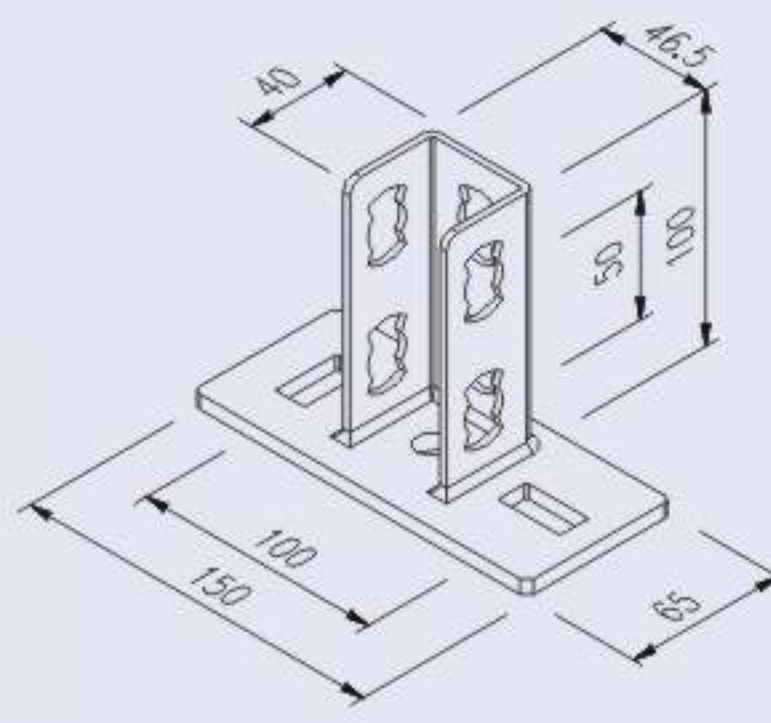


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ ANCHOR BASE BRACKET
▶ FLG-BOLT M10x60L 사용

S-BRACKET

SB402

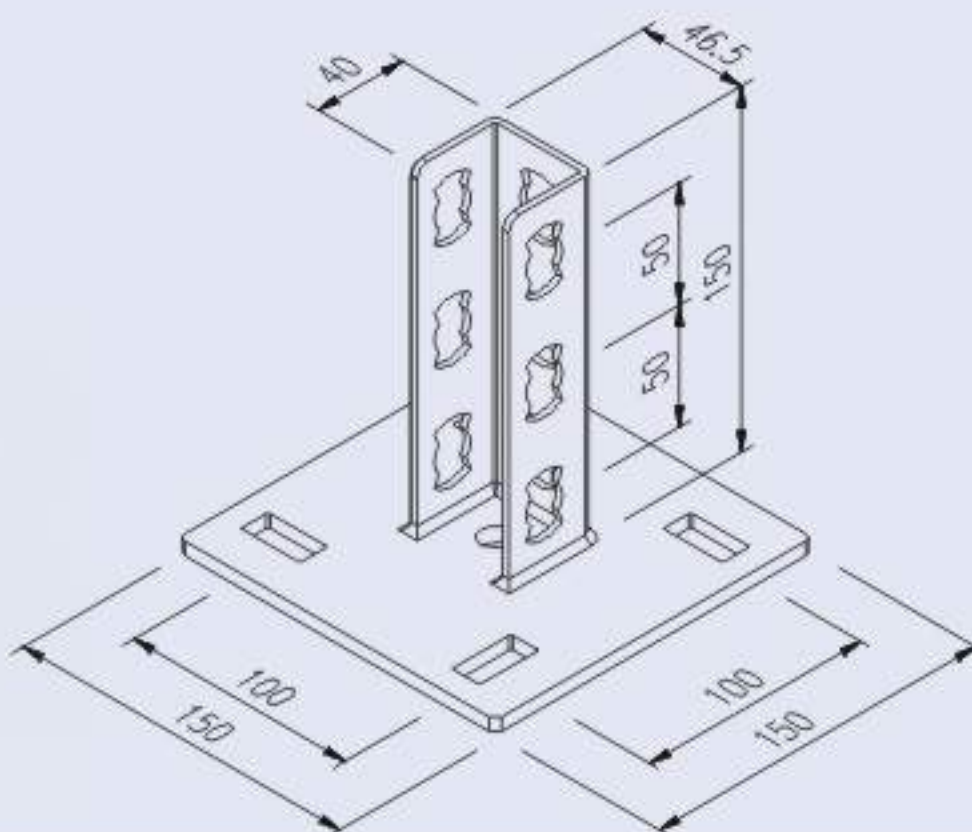
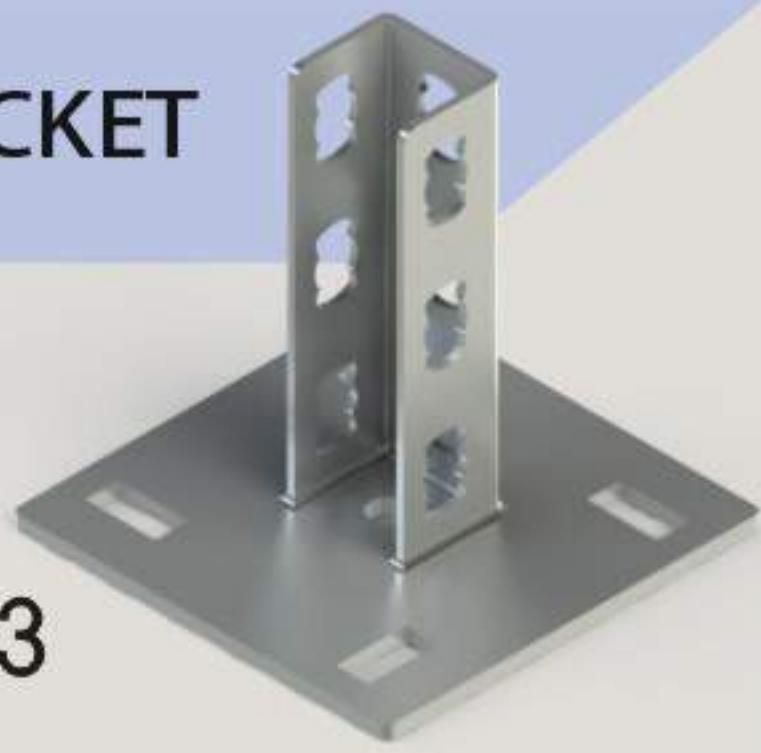


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ ANCHOR BASE BRACKET
▶ FLG-BOLT M10x60L 사용

S-BRACKET

SB403

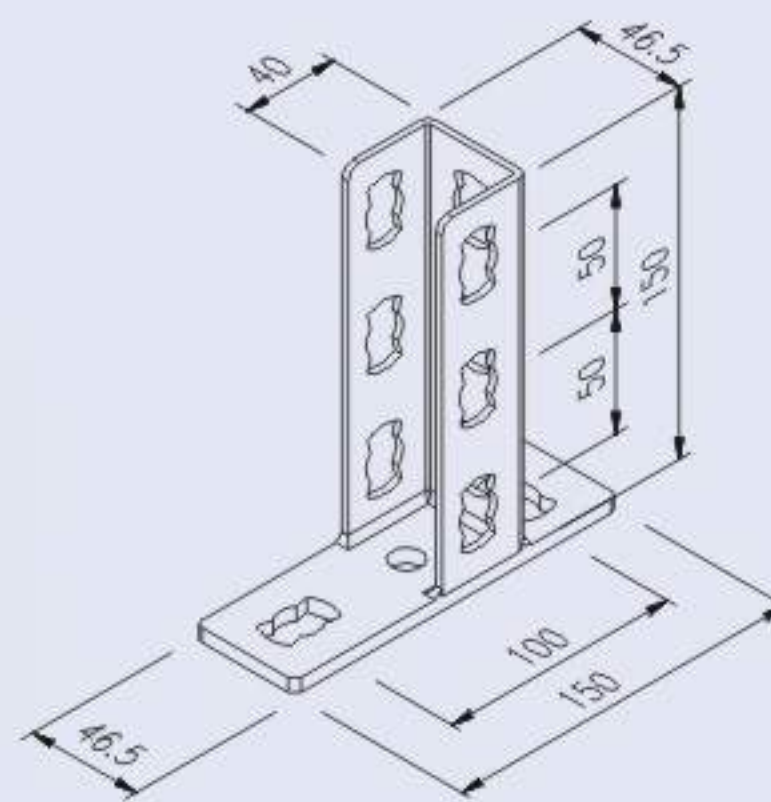
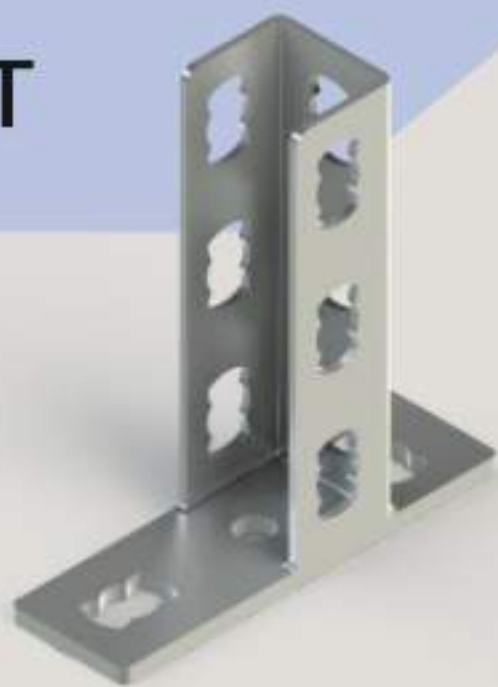


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ ANCHOR BASE BRACKET
▶ FLG-BOLT M10x60L 사용

S-BRACKET

SB601

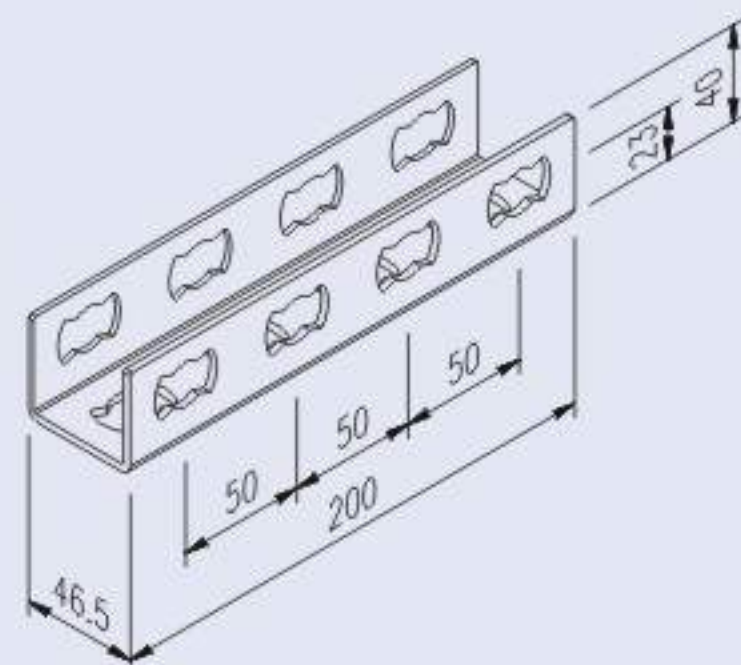
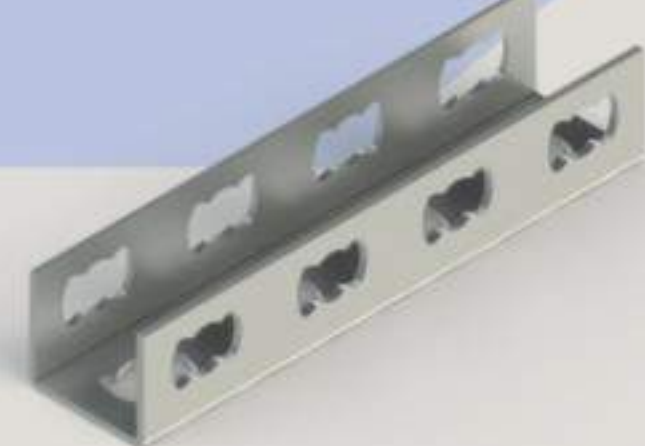


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T 부위 연결용
▶ FLG-BOLT M10x80L 사용

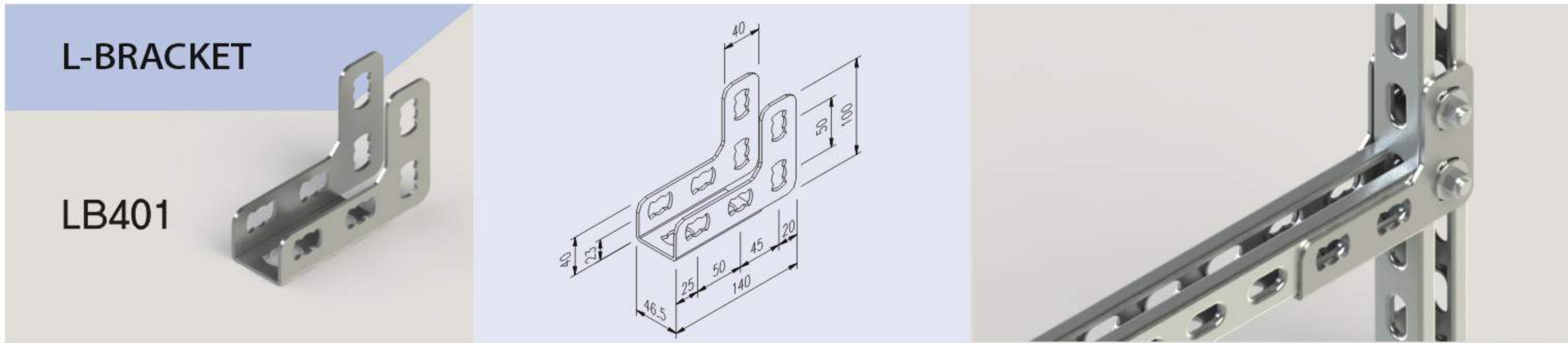
BRIDGE

BG401



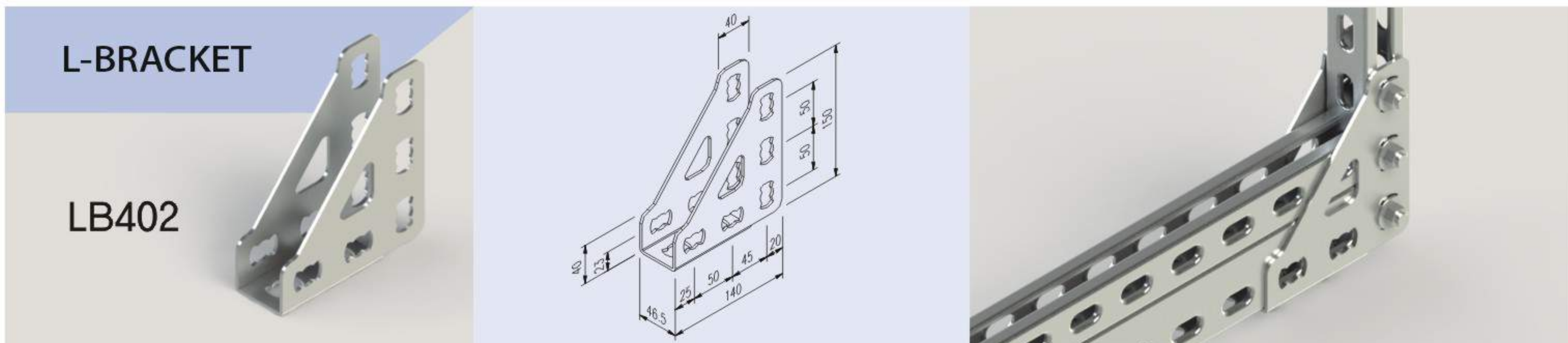
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 연결용
▶ T-BOLT M10x28L 사용



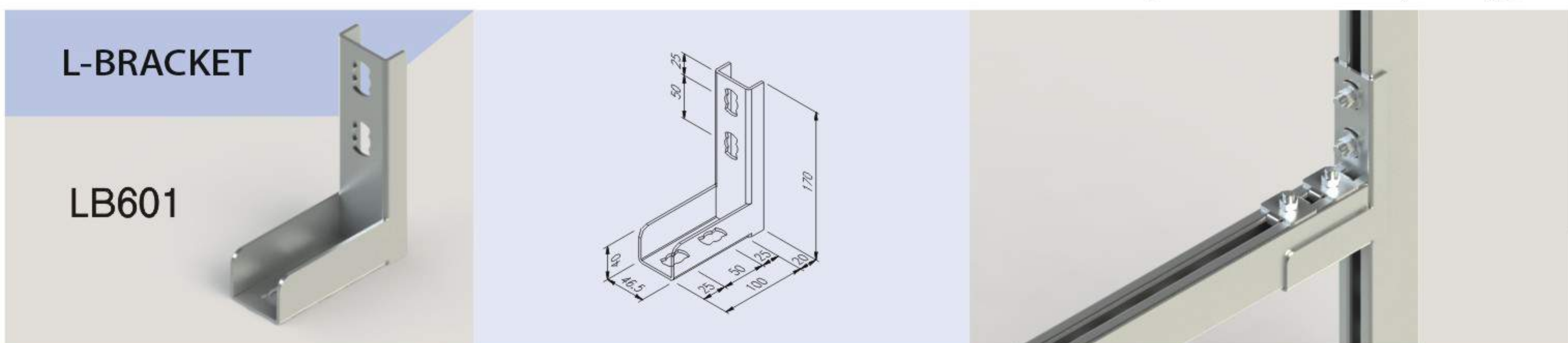
▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, L 부위 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x40 사용
- ▶ FLG-BOLT M10x60L / T-BOLT M10x28L 사용



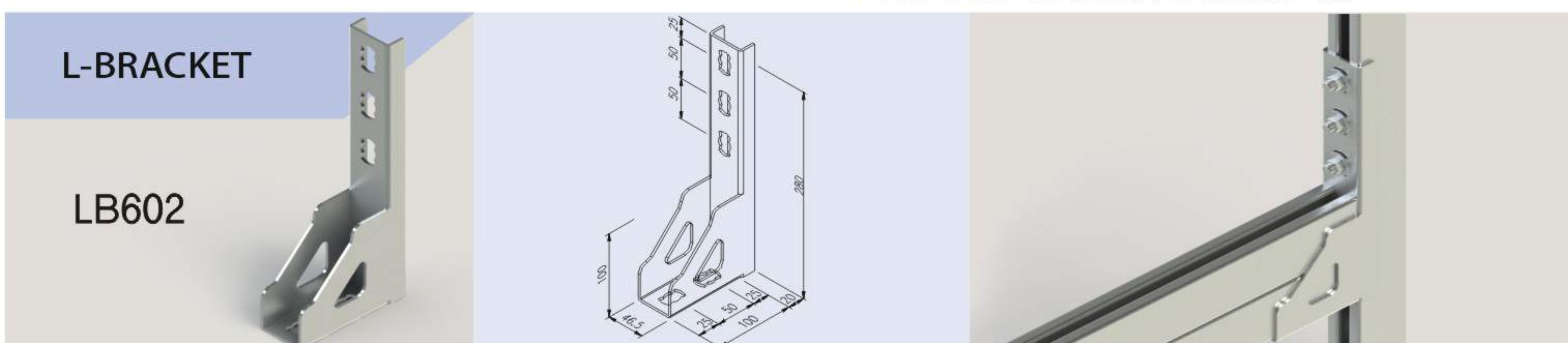
▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, L 부위 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100, 40x120 사용
- ▶ FLG-BOLT M10x60L / T-BOLT M10x60L, 80L 사용



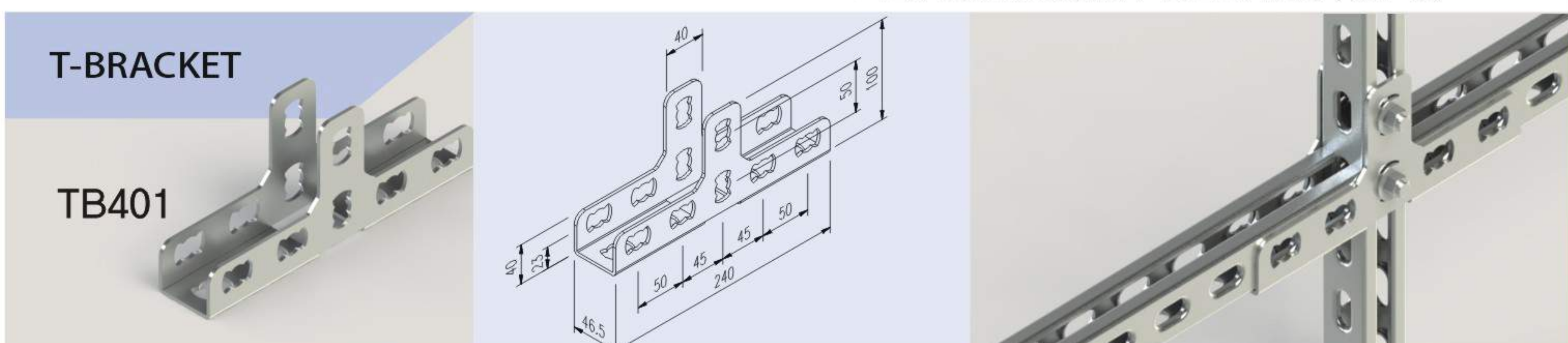
▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, L 부위 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x40 사용
- ▶ FLG-BOLT M10x60L / M10x60L 사용



▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, L 부위 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100, 40x120 사용
- ▶ FLG-BOLT M10x60L / T-BOLT M10x60L, 80L 사용



▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

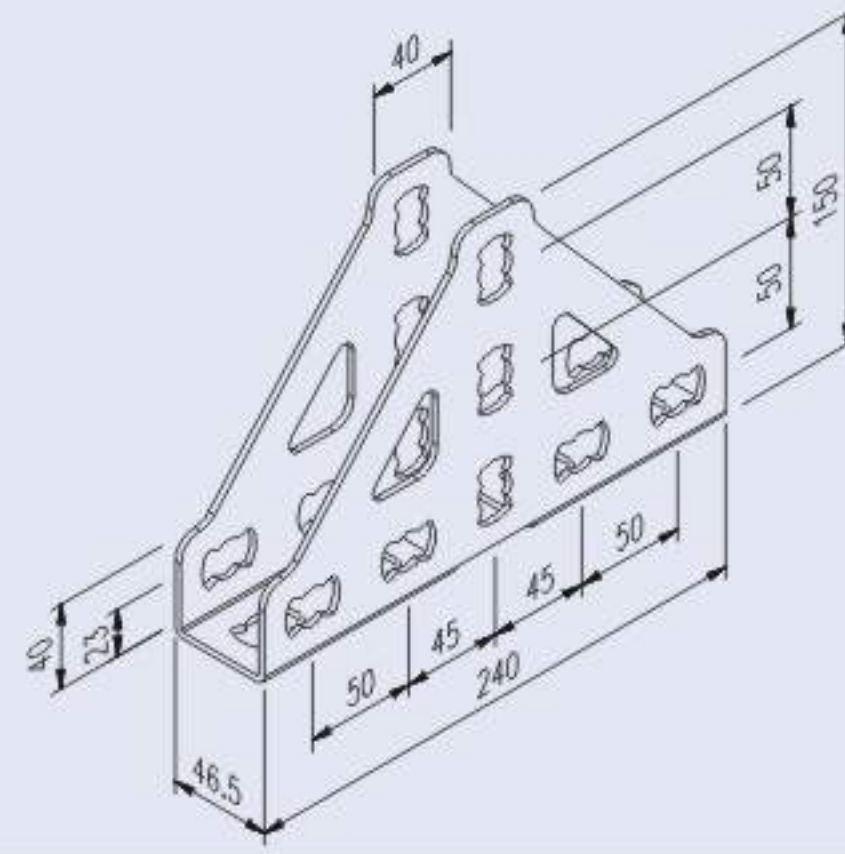
- ▶ T, CROSS 부위 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x40 사용
- ▶ FLG-BOLT M10x60L / T-BOLT M10x28L 사용



2. BRACKET

T-BRACKET

TB402

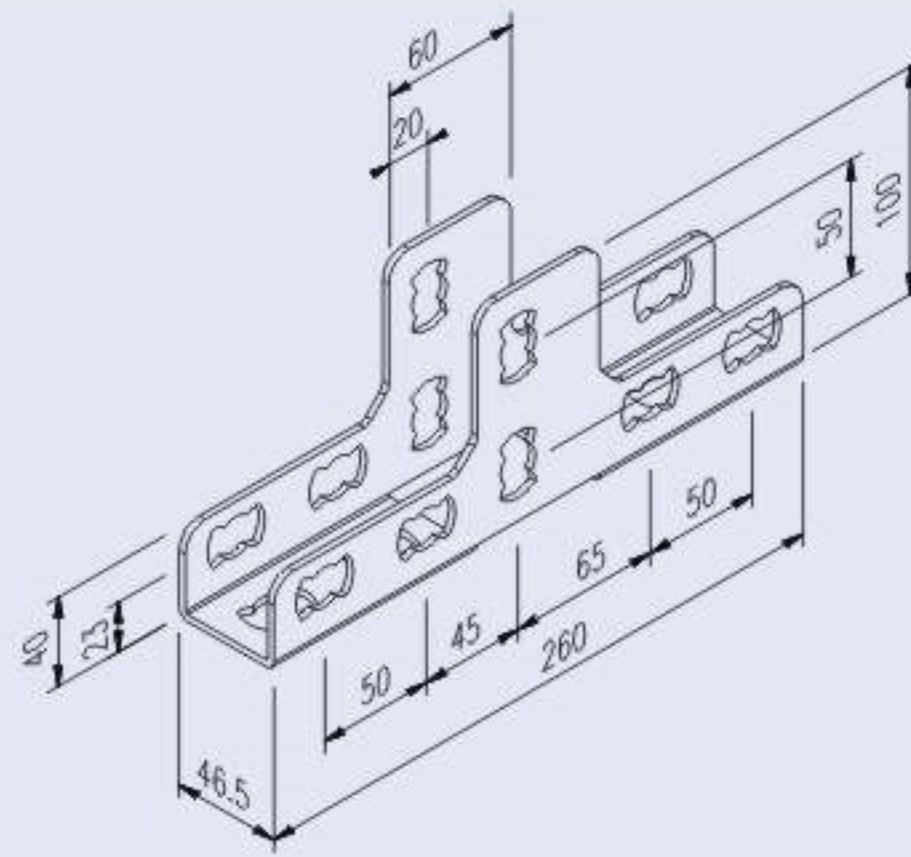
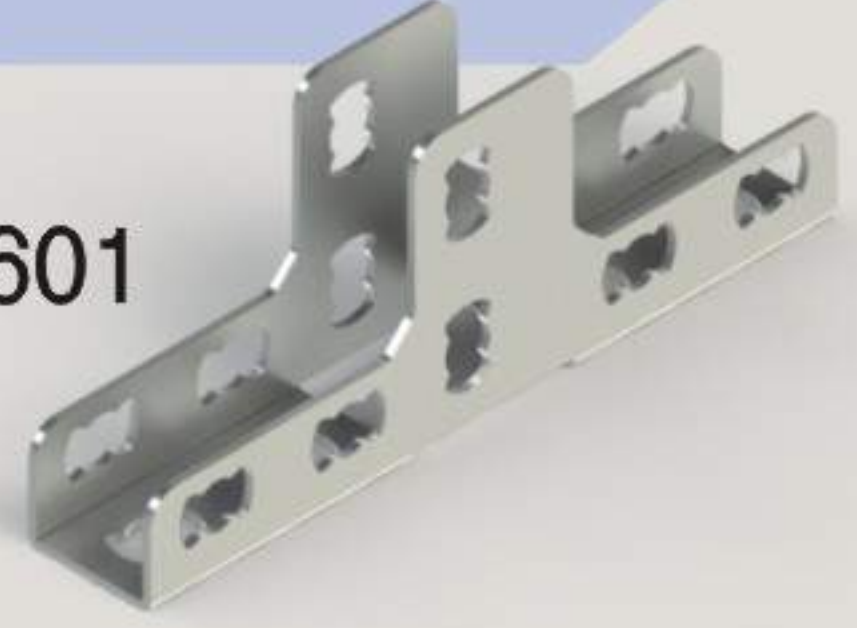


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, CROSS 부위 연결용
▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100, 40x120 사용
▶ FLG-BOLT M10x60L / T-BOLT M10x60L, 80L 사용

T-BRACKET

TB601

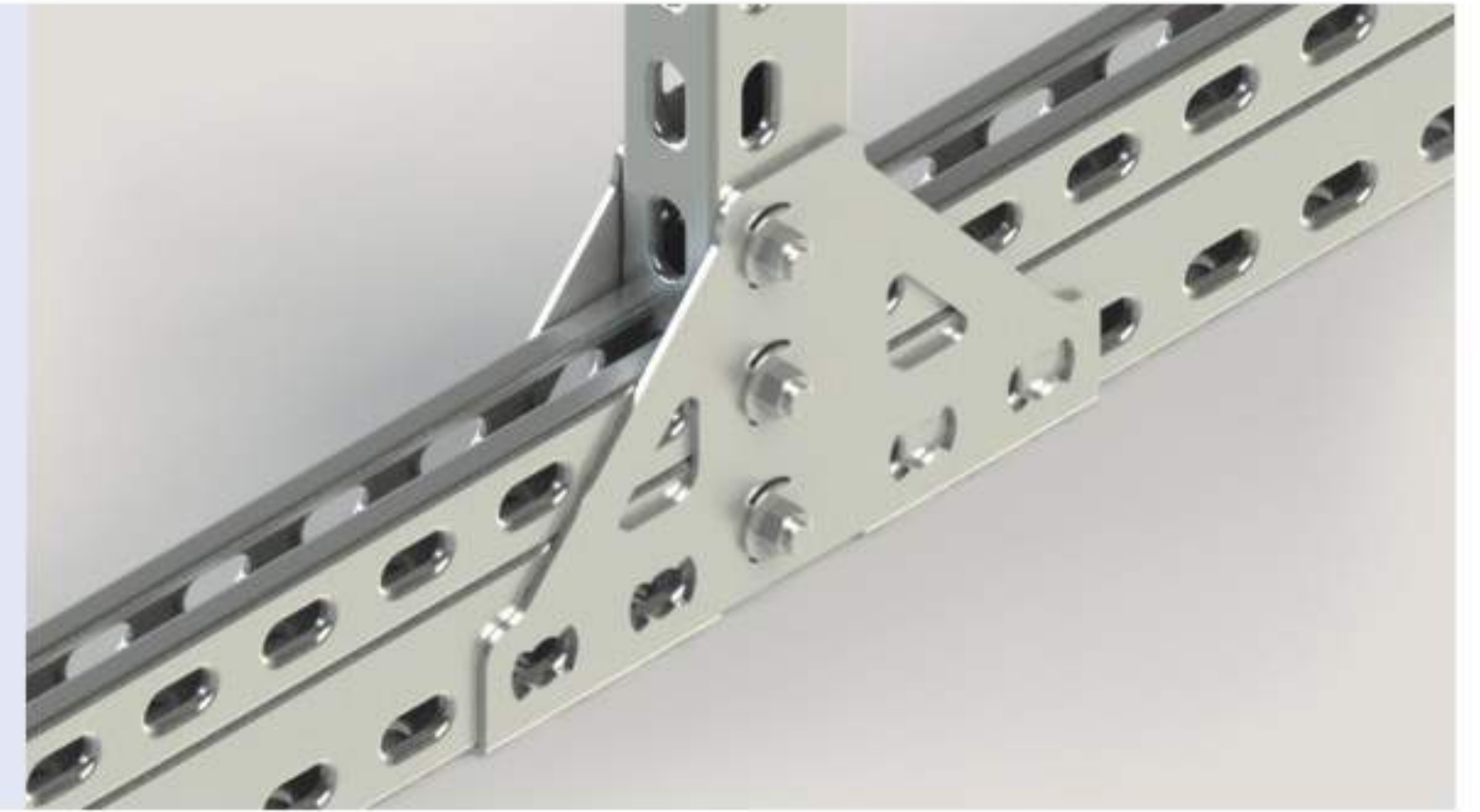
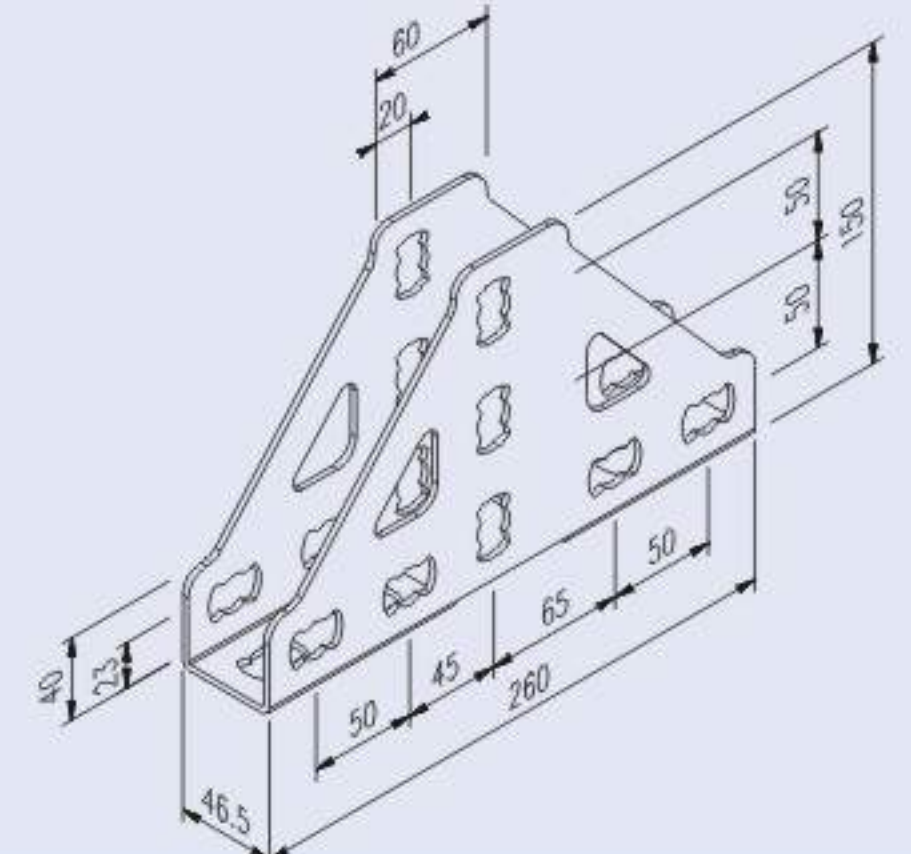
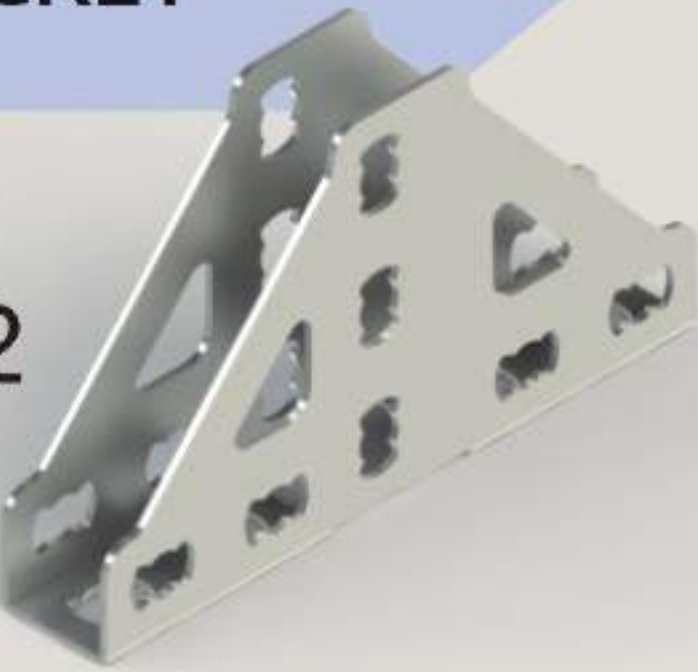


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, CROSS 부위 연결용
▶ 수평 SUPPORT를 CHANNEL 40x60 사용
▶ FLG-BOLT M10x60L / T-BOLT M10x28L 사용

T-BRACKET

TB602

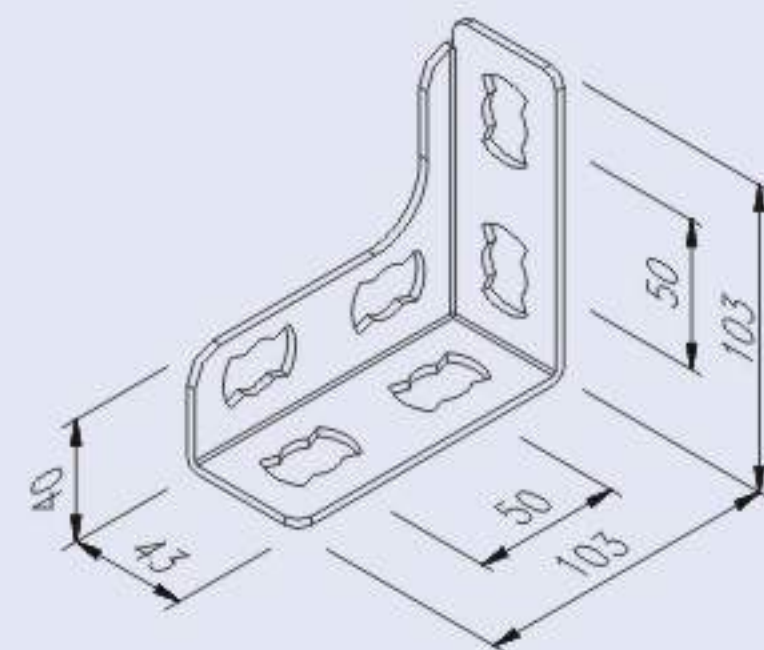


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ T, CROSS 부위 연결용
▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100, 40x120 사용
▶ FLG-BOLT M10x60L / T-BOLT M10x60L, 80L 사용

LC-BRACKET

LCB401

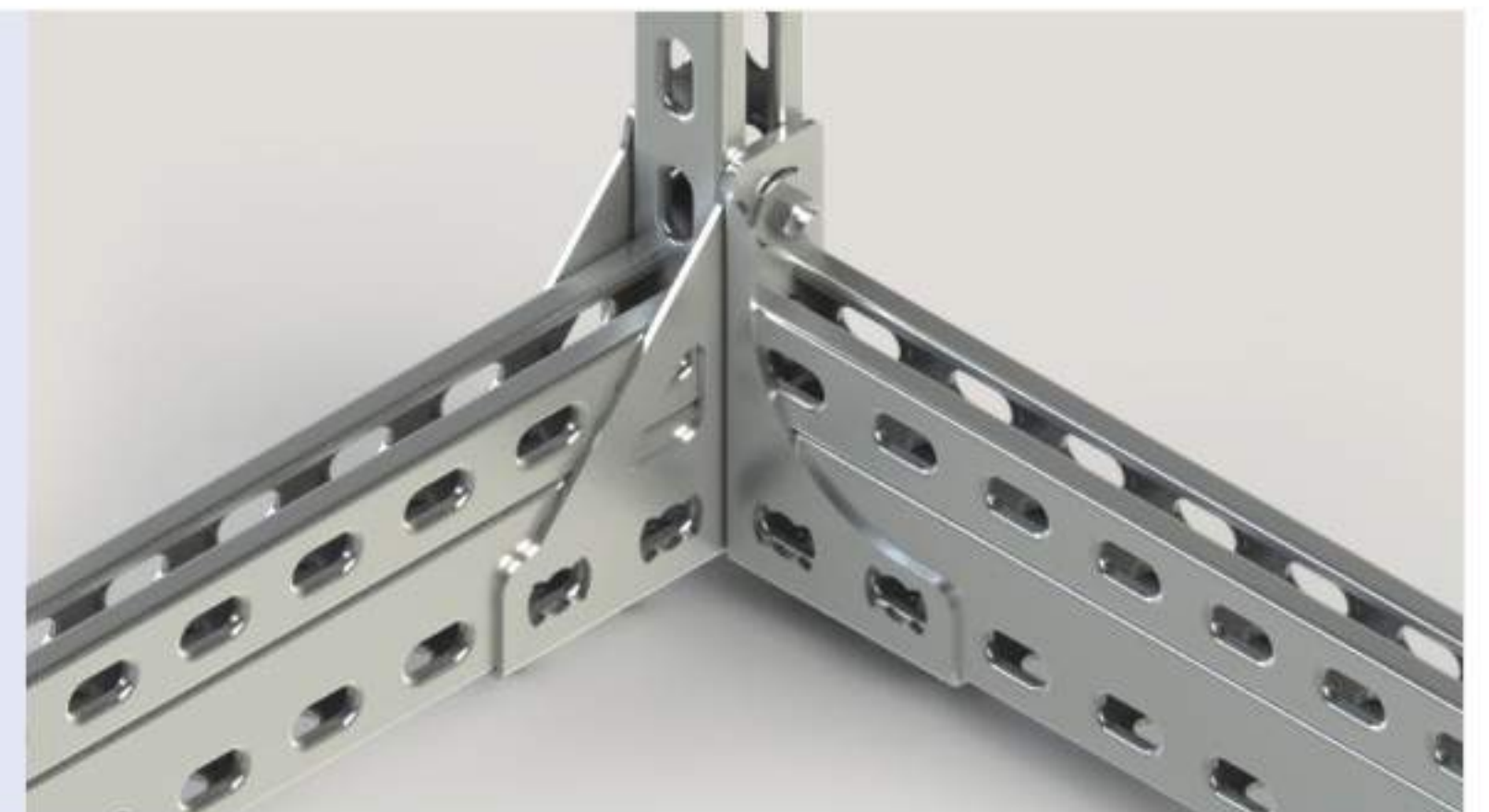
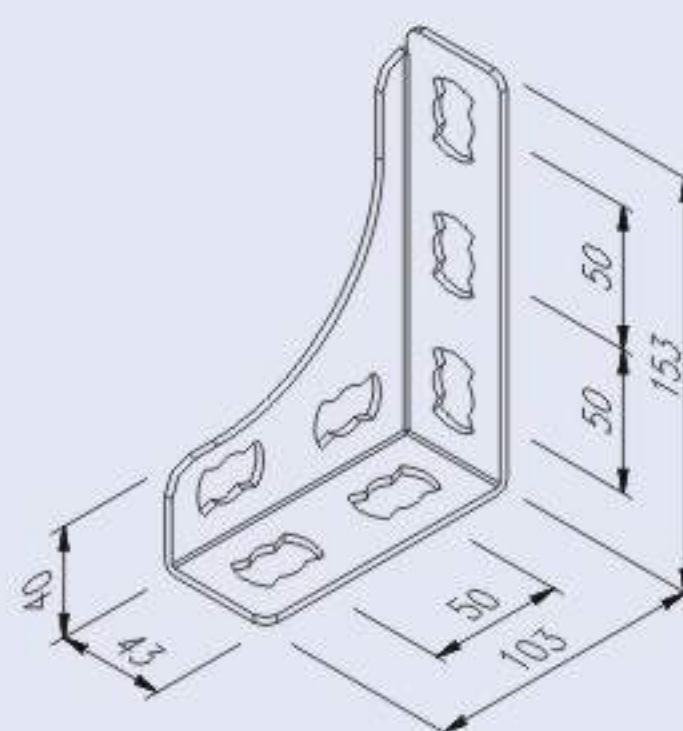


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CORNER 부위 연결용
▶ 수평 SUPPORT를 CHANNEL 40x40 사용
▶ FLG-BOLT M10x65L / T-BOLT M10x28L 사용

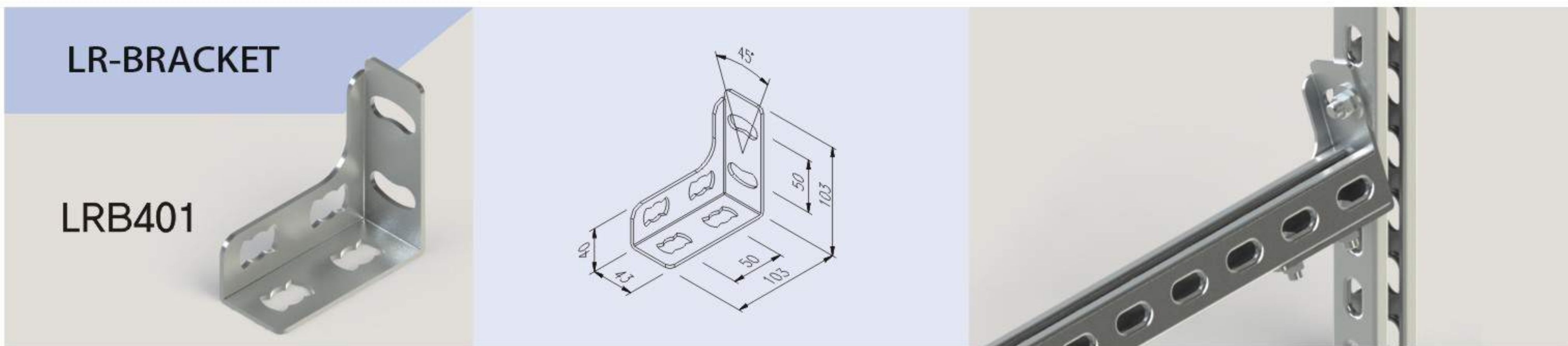
LC-BRACKET

LCB402



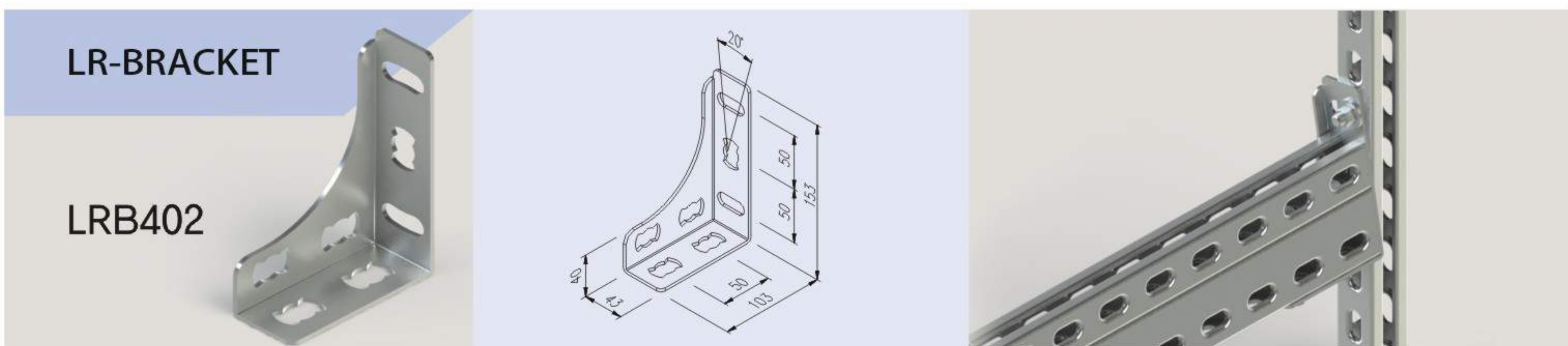
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CORNER 부위 연결용
▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100 사용
▶ FLG-BOLT M10x65L / T-BOLT M10x60L, 80L 사용



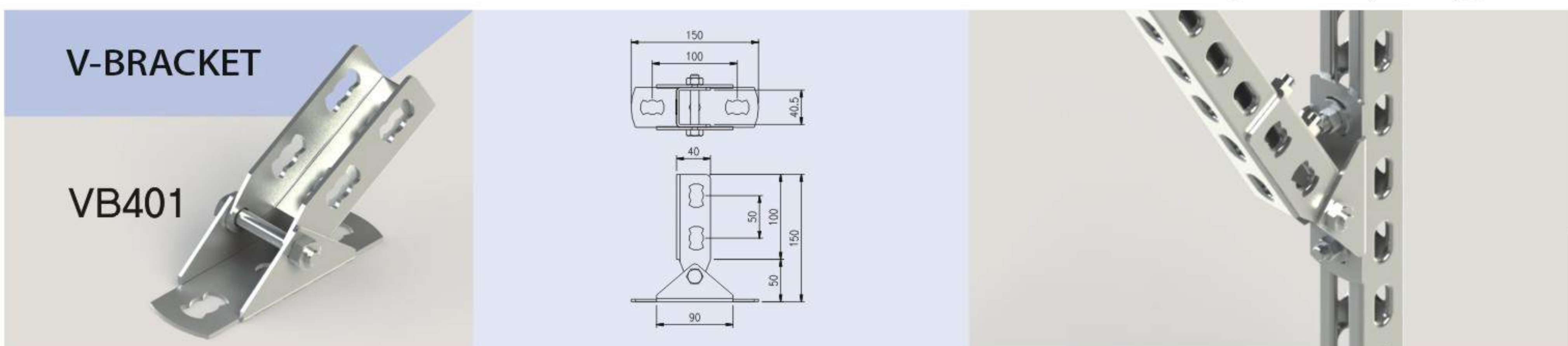
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 수평 SUPPORT 회전 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x40 사용
- ▶ T-BOLT M10x28L / 10x28L 사용



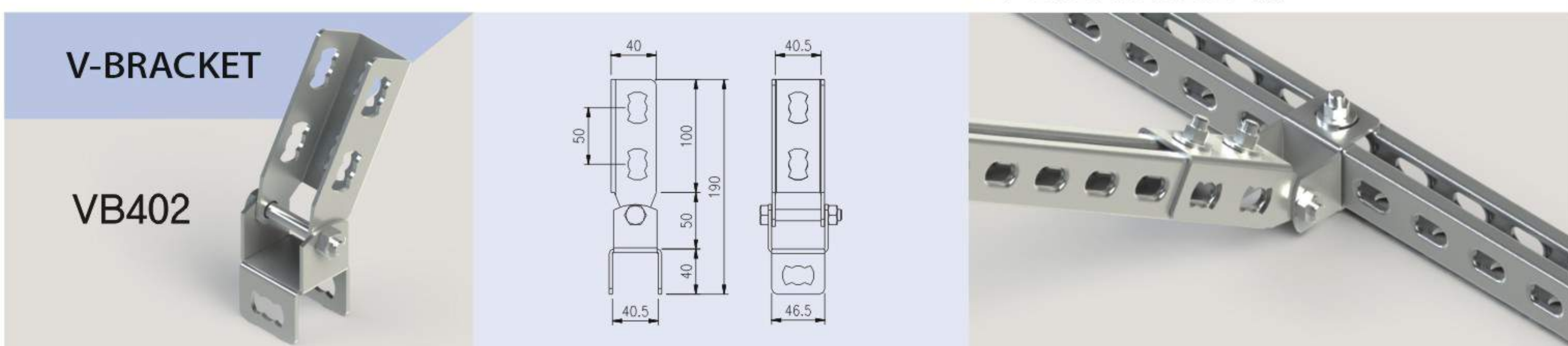
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 수평 SUPPORT 회전 연결용
- ▶ 수평 SUPPORT를 CHANNEL 40x80, 40x100 사용
- ▶ T-BOLT M10x28L / M10x60L, 80L 사용



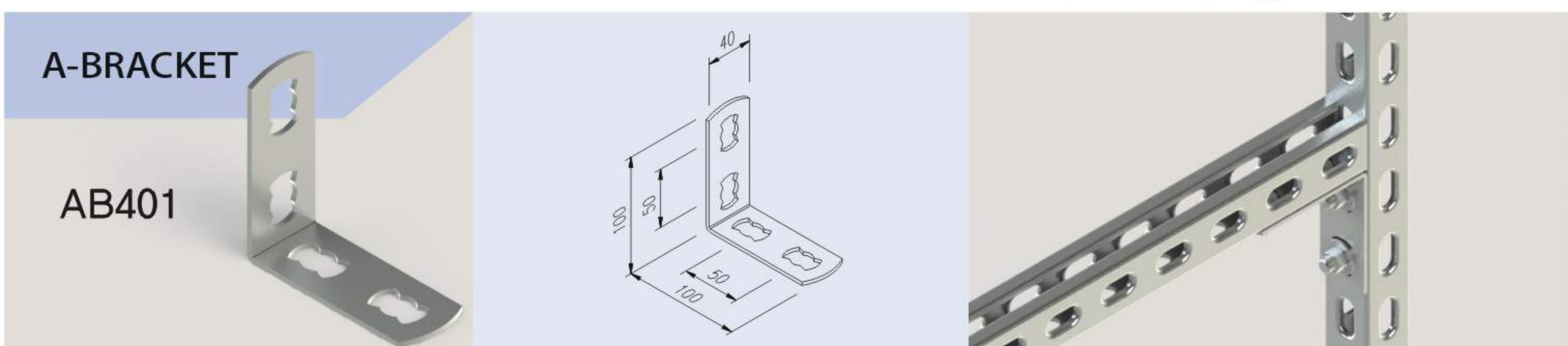
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 각이 있는 SUPPORT 연결용
- ▶ FLG-BOLT M10x60L 사용
- ▶ T-BOLT M10x28L 사용



- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 각이 있는 SUPPORT 연결용
- ▶ FLG-BOLT M10x60L 사용
- ▶ T-BOLT M10x28L 사용



- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

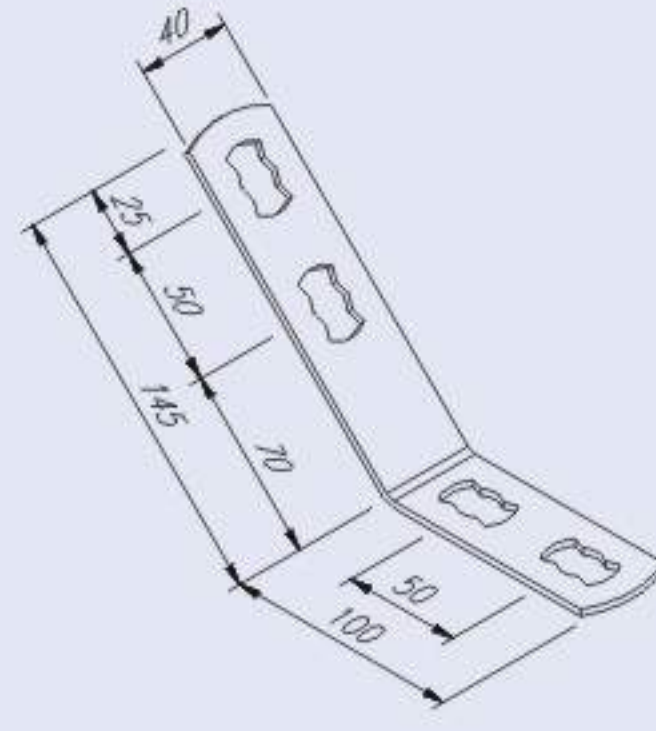
- ▶ 90° 하부 연결용
- ▶ T-BOLT M10x28L, M10x28L 사용



2. BRACKET

A-BRACKET

AB402

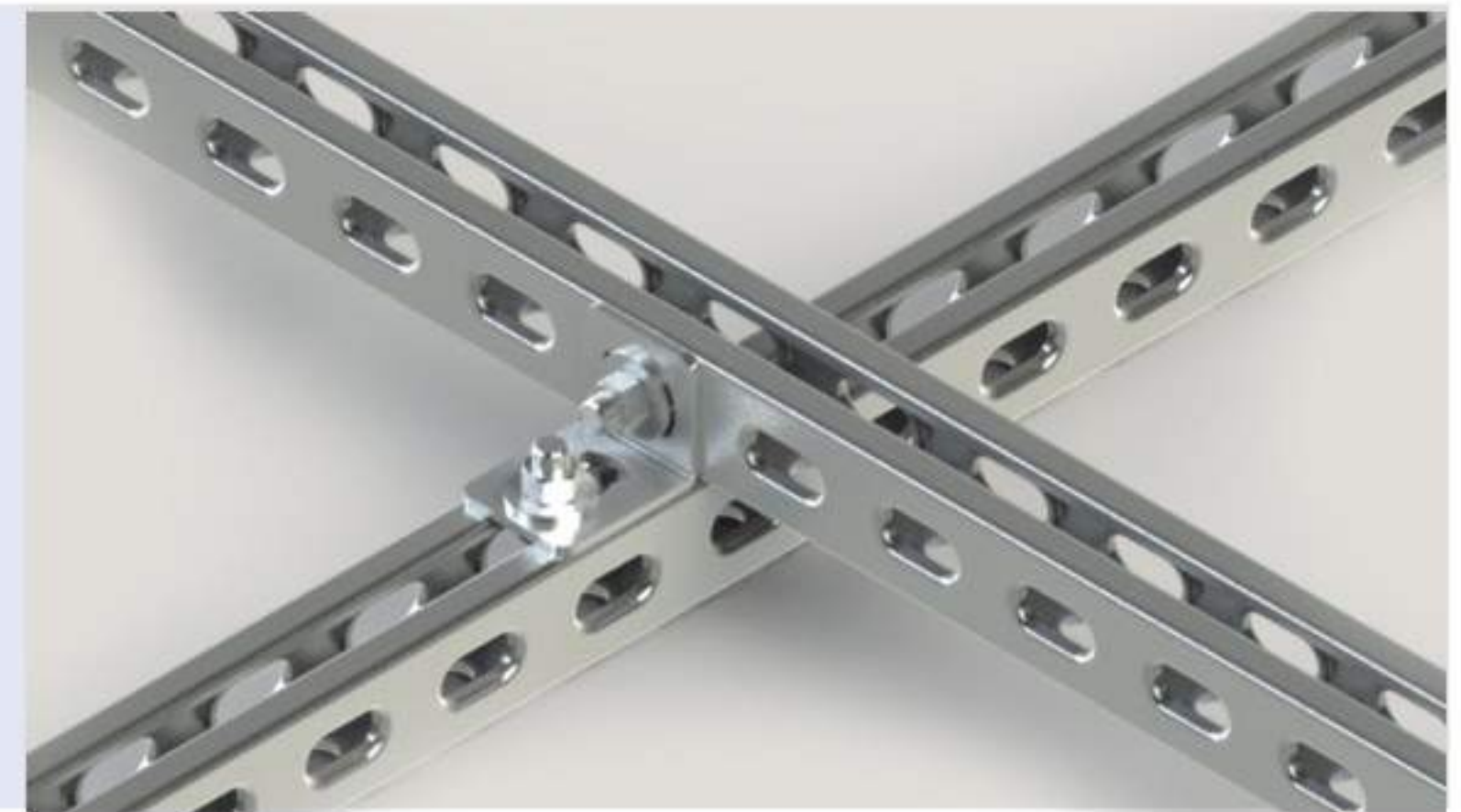
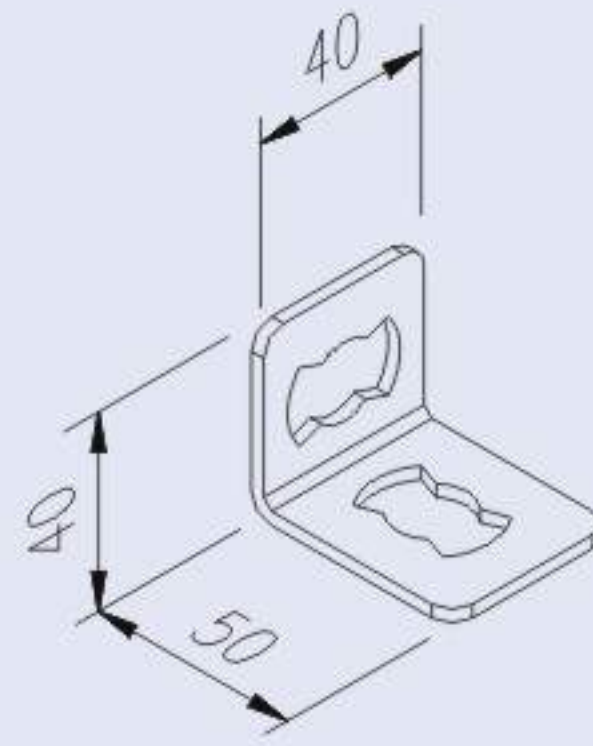


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 45° 하부 연결용
▶ T-BOLT M10x28L, M10x28L 사용

A-BRACKET

AB403

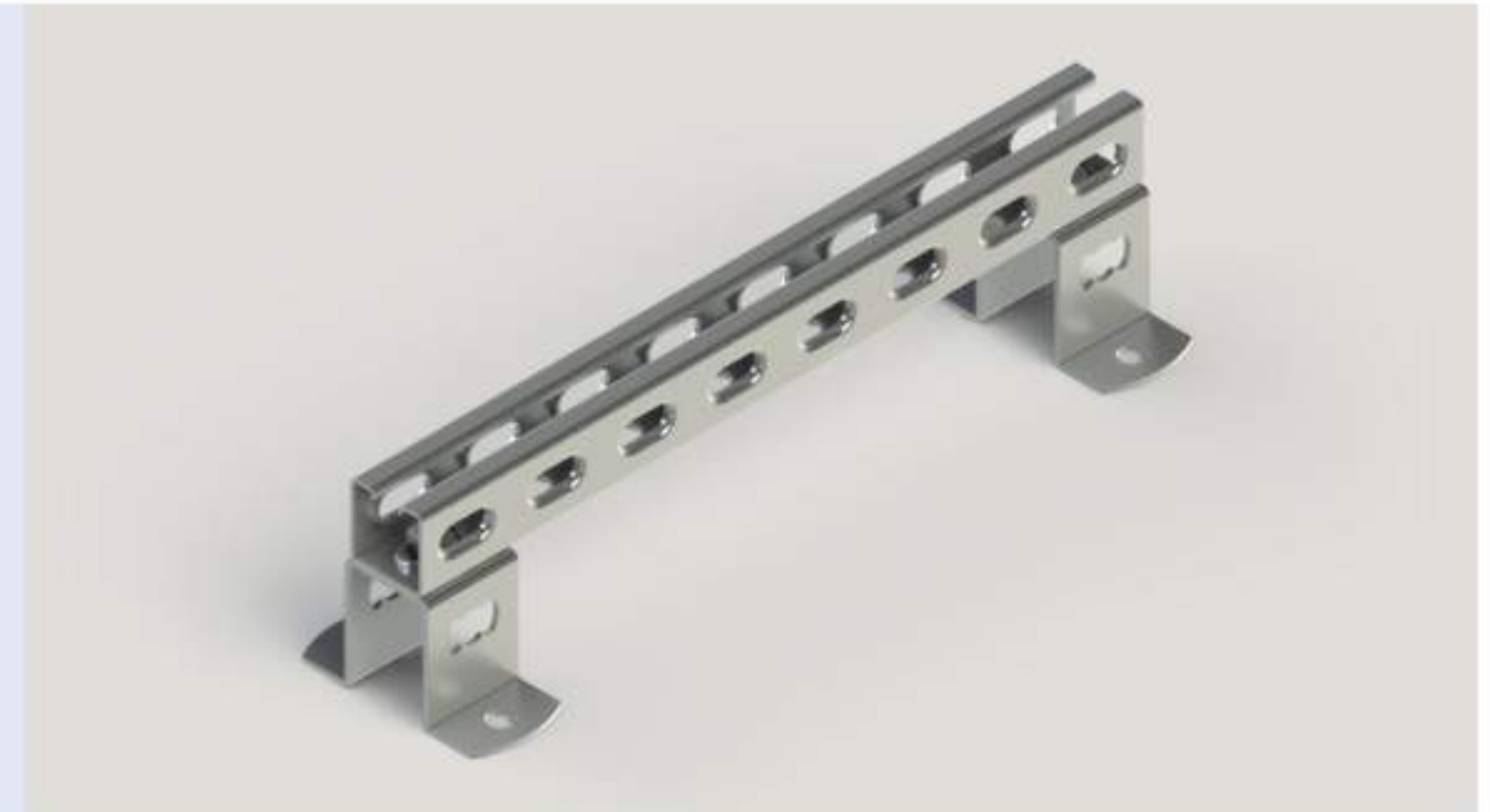
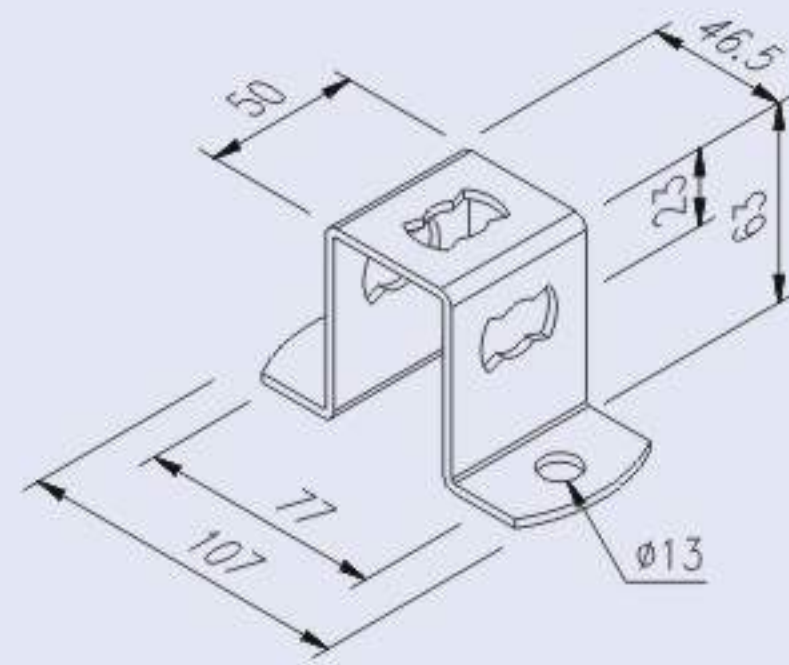


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CROSS 상부 연결용
▶ FLG-BOLT M10x60L 사용
▶ T-BOLT M10x28L 사용

X-BRACKET

XB401

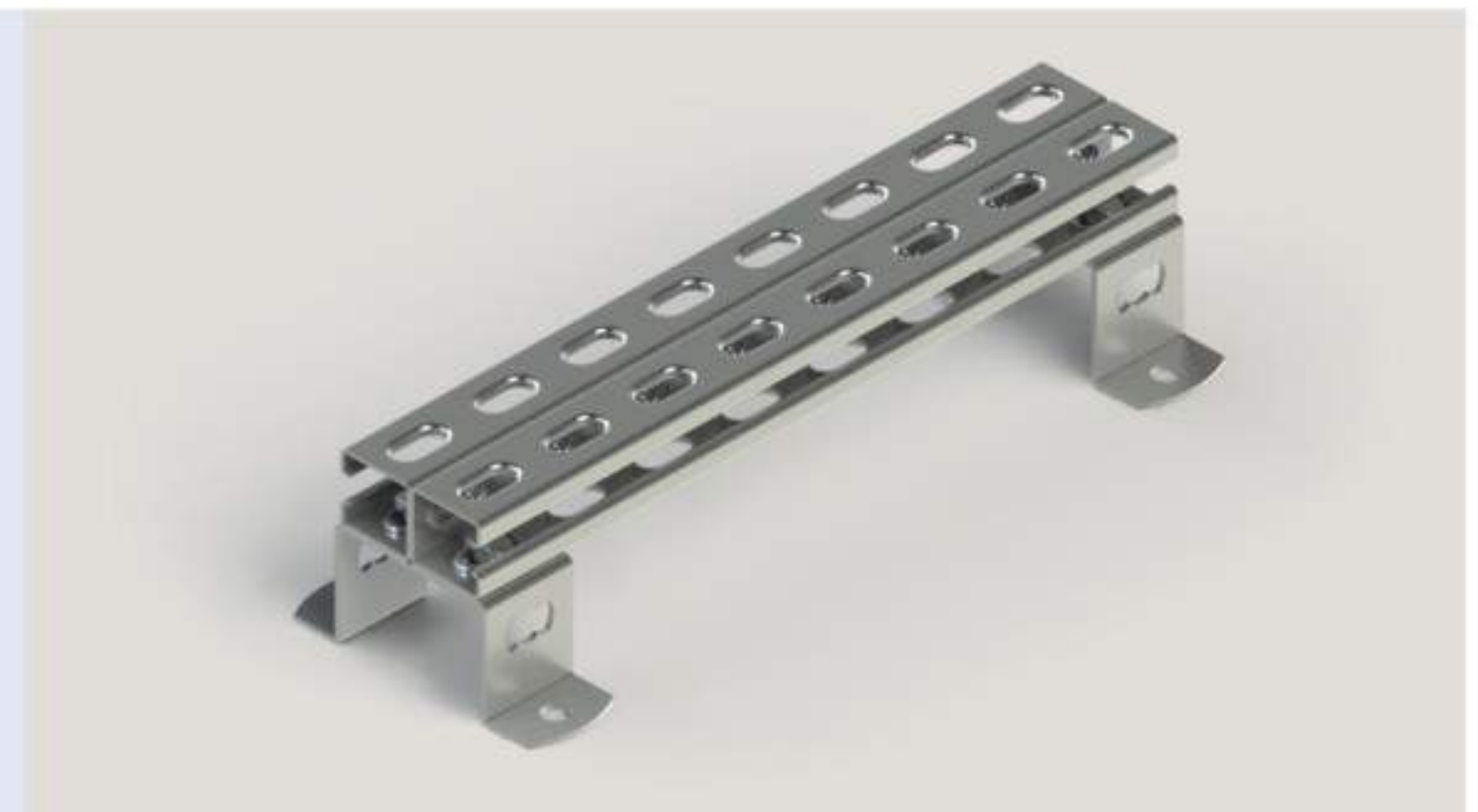
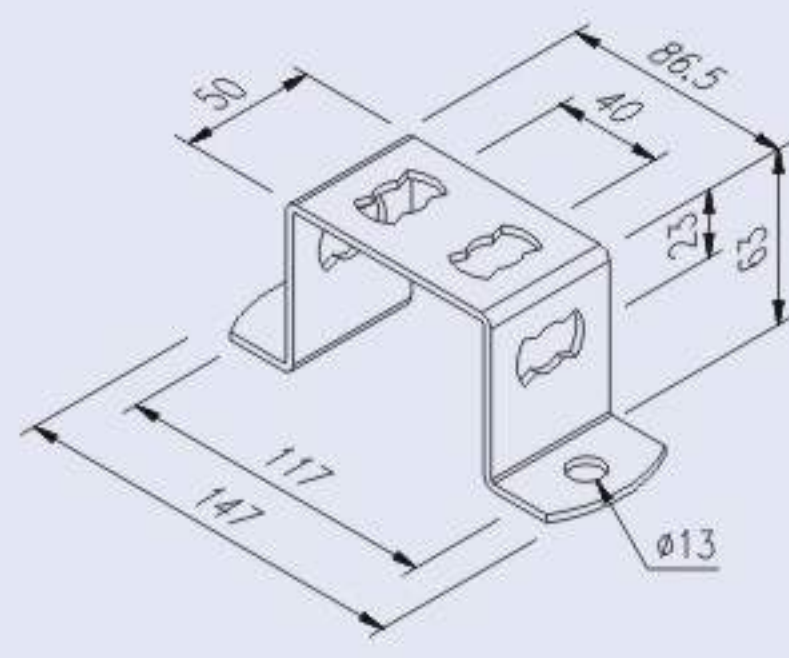


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x40 BASE용
▶ T-BOLT M10x28L 사용

X-BRACKET

XB402

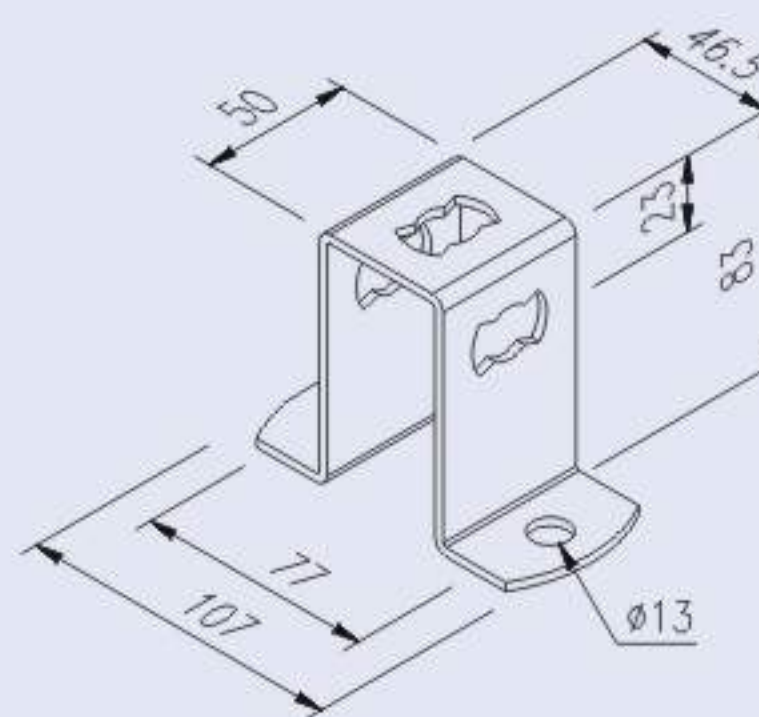


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x80 BASE용
▶ T-BOLT M10x28L 사용

X-BRACKET

XB601

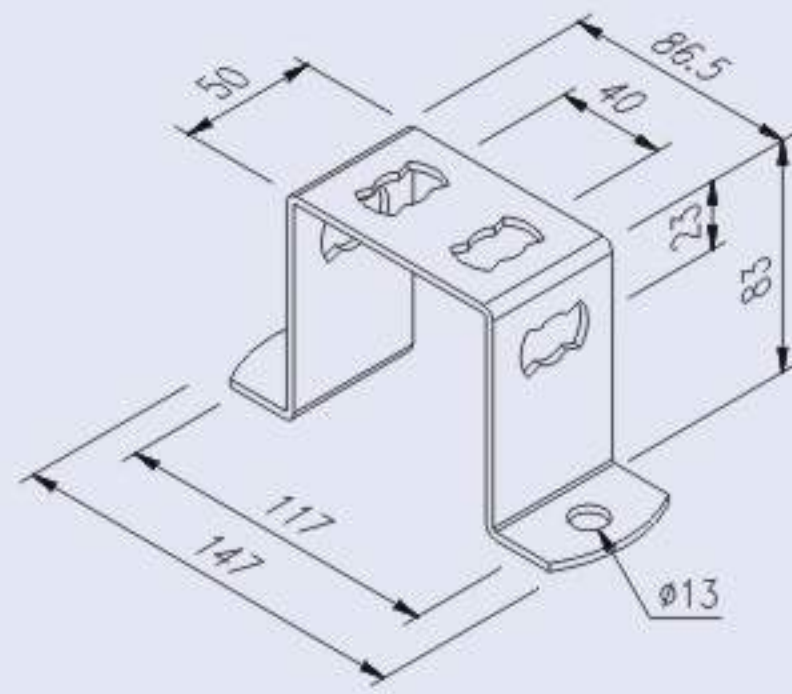
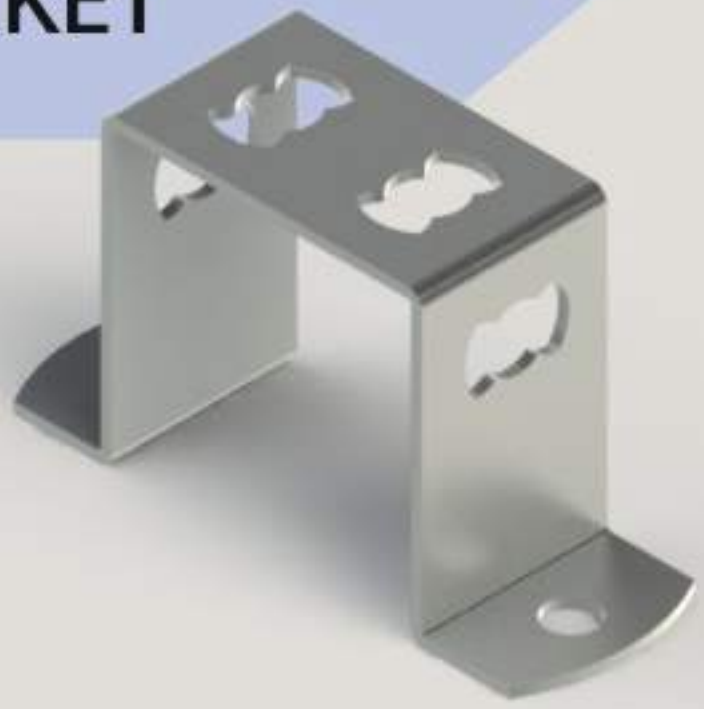


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x60 BASE용
▶ T-BOLT M10x80L 사용

X-BRACKET

XB602

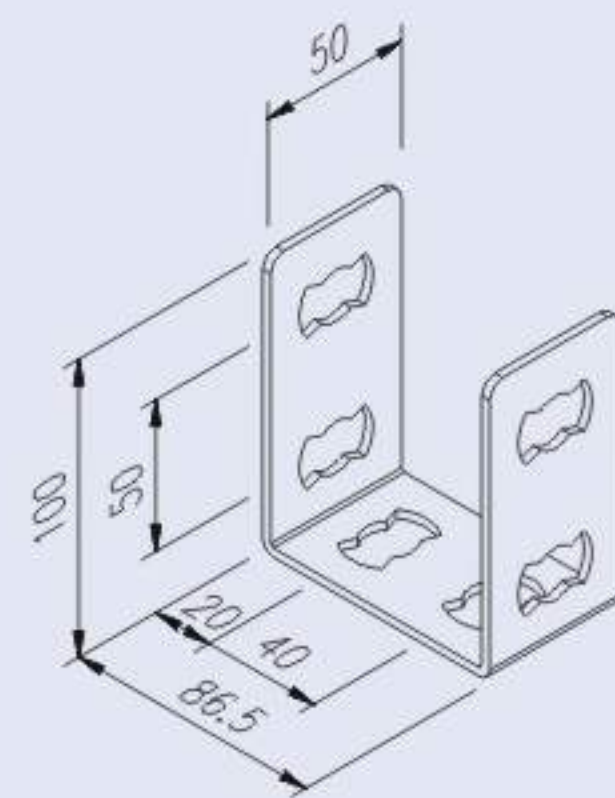


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x60x2 BASE용
- ▶ T-BOLT M10x80L 사용

C-BRACKET

CB401

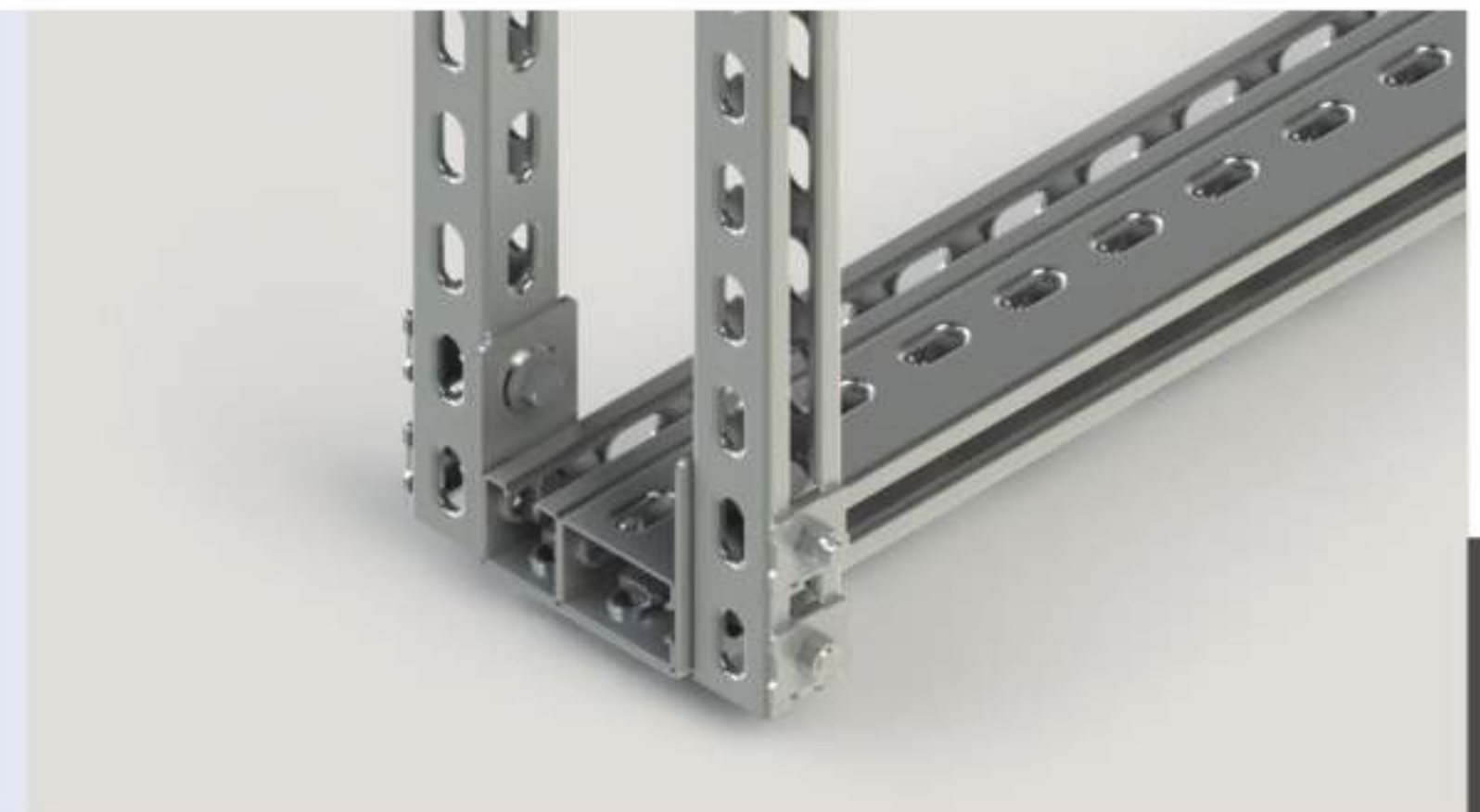
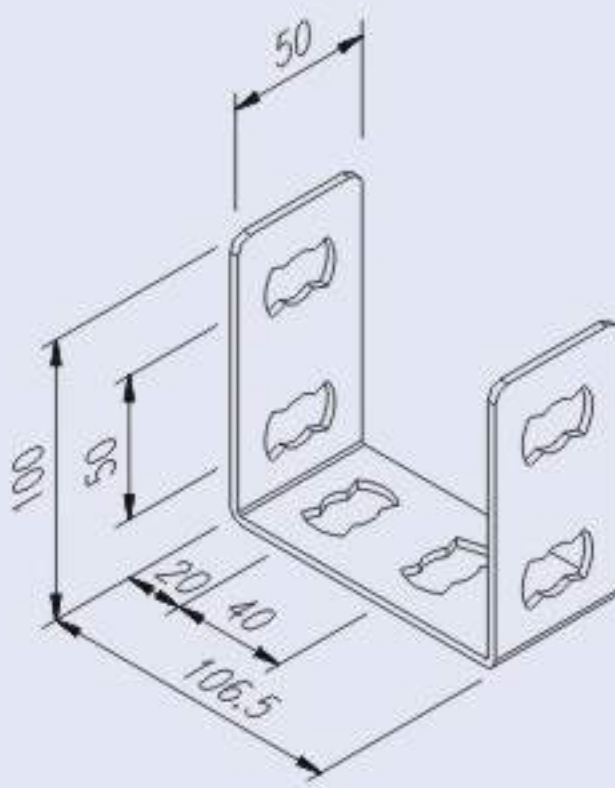
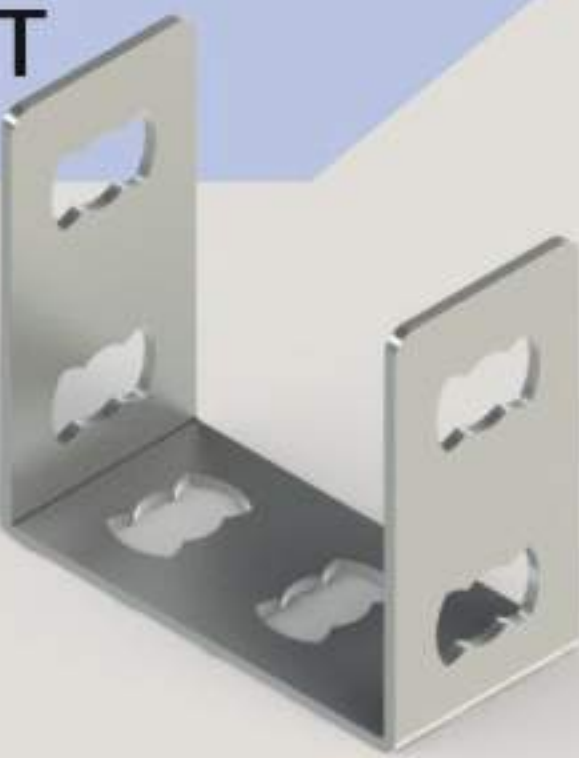


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x40x2 BASE용
- ▶ FLG-BOLT M10x60L, T-BOLT M10x60L 사용
- ▶ T-BOLT M10x28L 사용

C-BRACKET

CB402

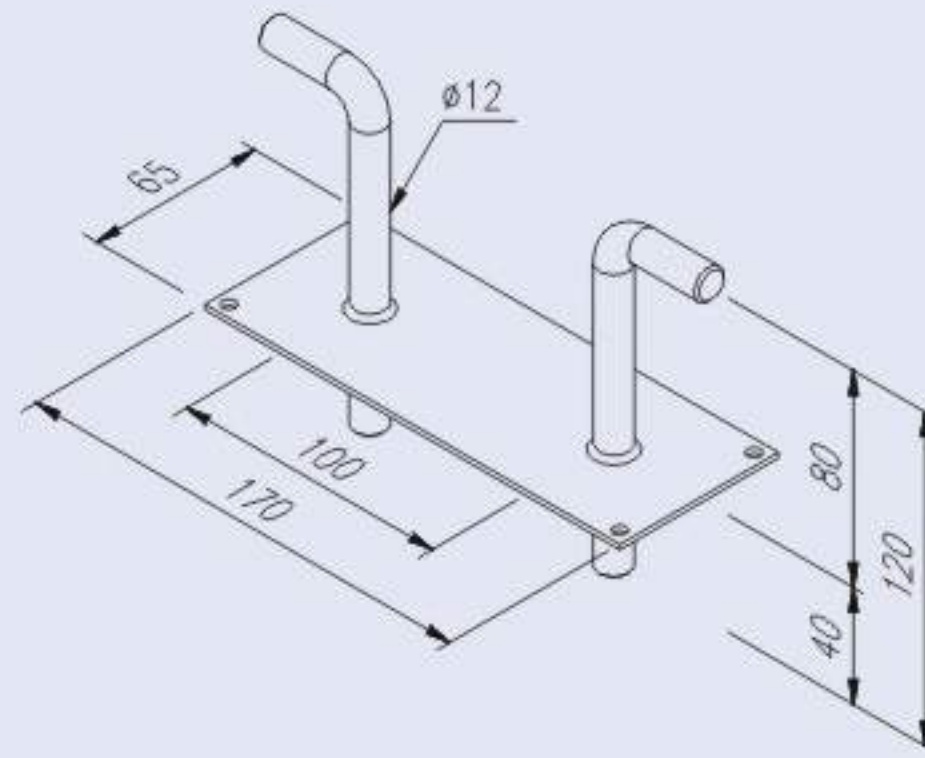


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ CHANNEL 40x100 BASE용
- ▶ FLG-BOLT M10x60L, T-BOLT M10x60L 사용
- ▶ T-BOLT M10x28L 사용

INSERT PLATE

IP401

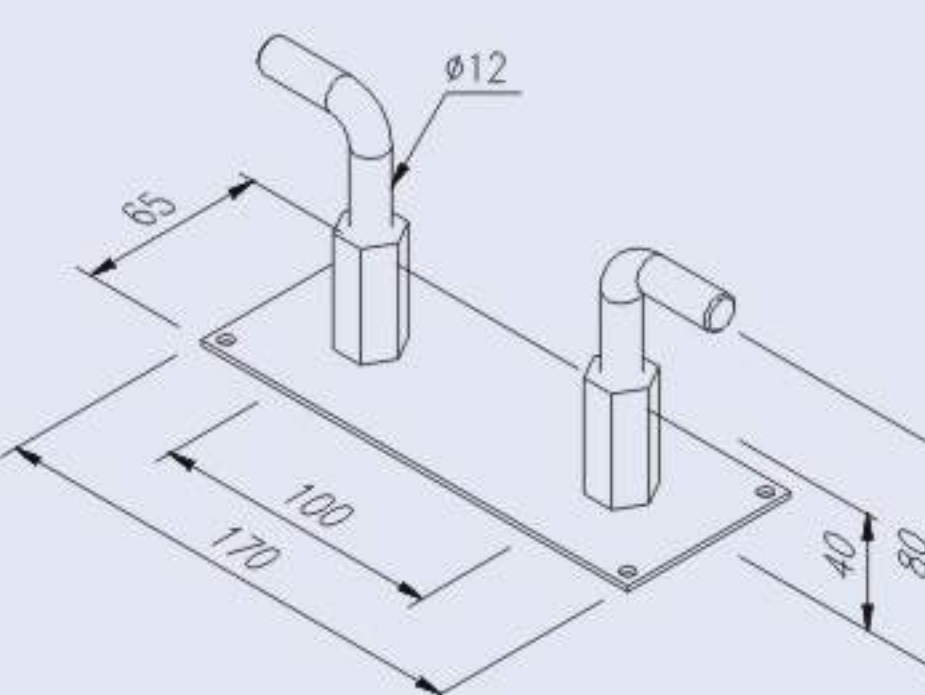


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 거푸집용 ANCHOR BASE

INSERT PLATE

IP402



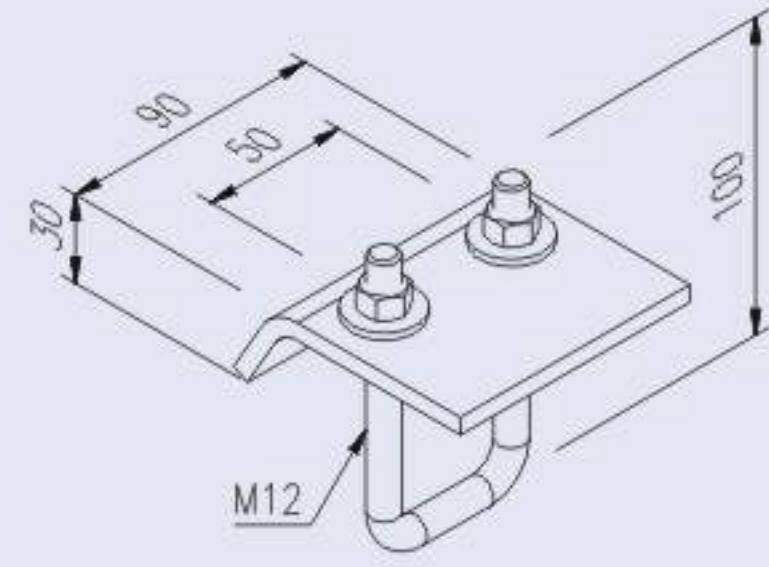
- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ 거푸집용 ANCHOR BASE
- ▶ HEX. BOLT M10x25L 사용

2. BRACKET

B-CLAMP

BC401

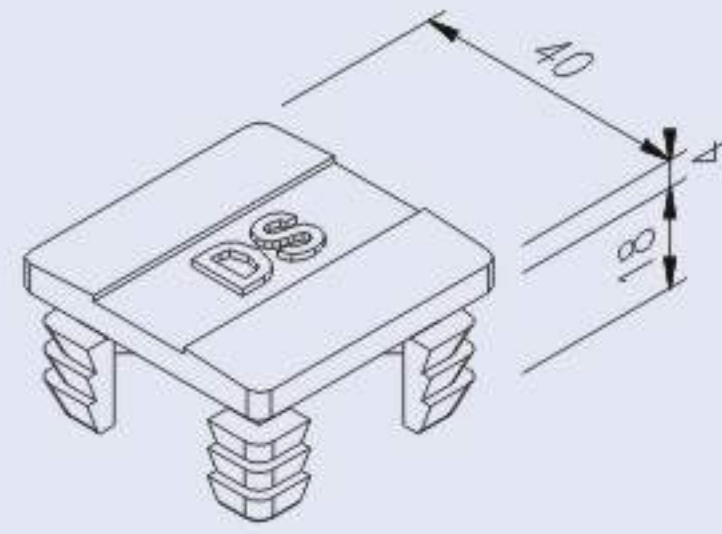


- ▶ 1. 아연도금 2. 압연판재+용융도금 3. 압연판재+분체도장

- ▶ H-BEAM의 SUPPORT 장착용

R-CAP

RC401

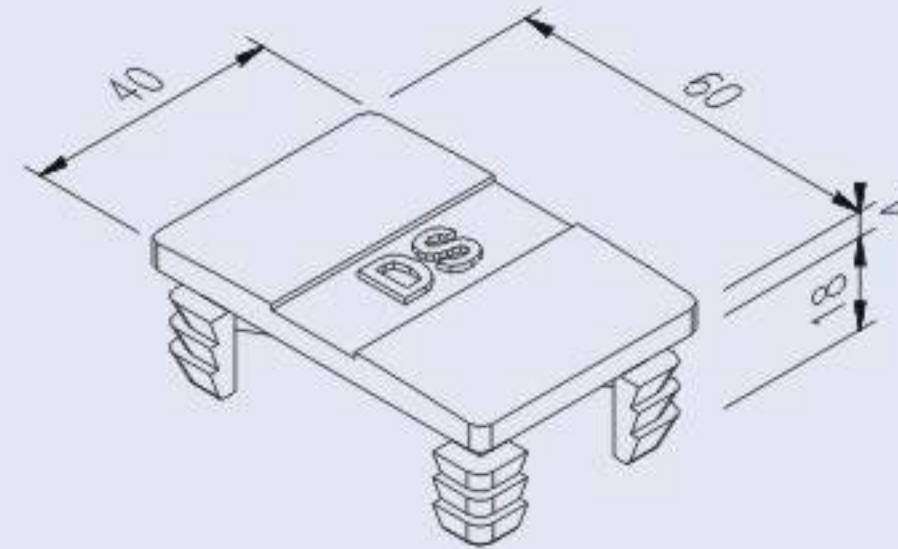
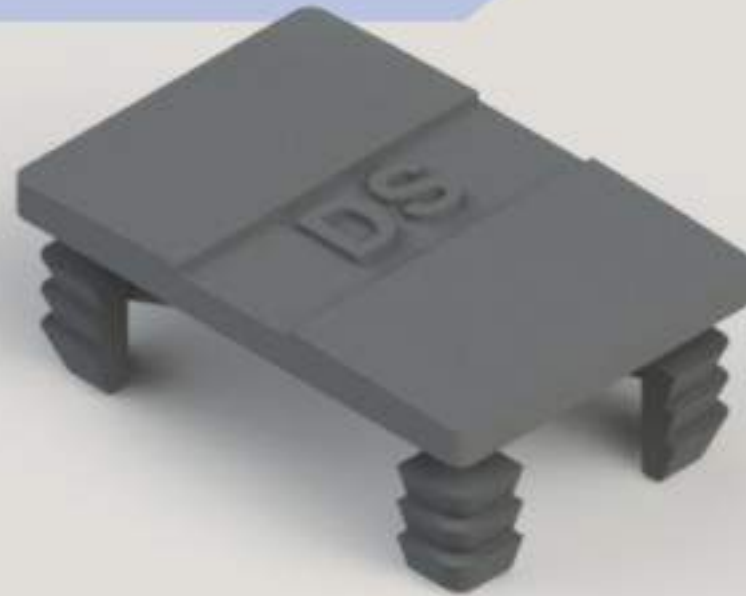


- ▶ PP 제작

- ▶ CHANNEL 절단면 끝단 보호캡

R-CAP

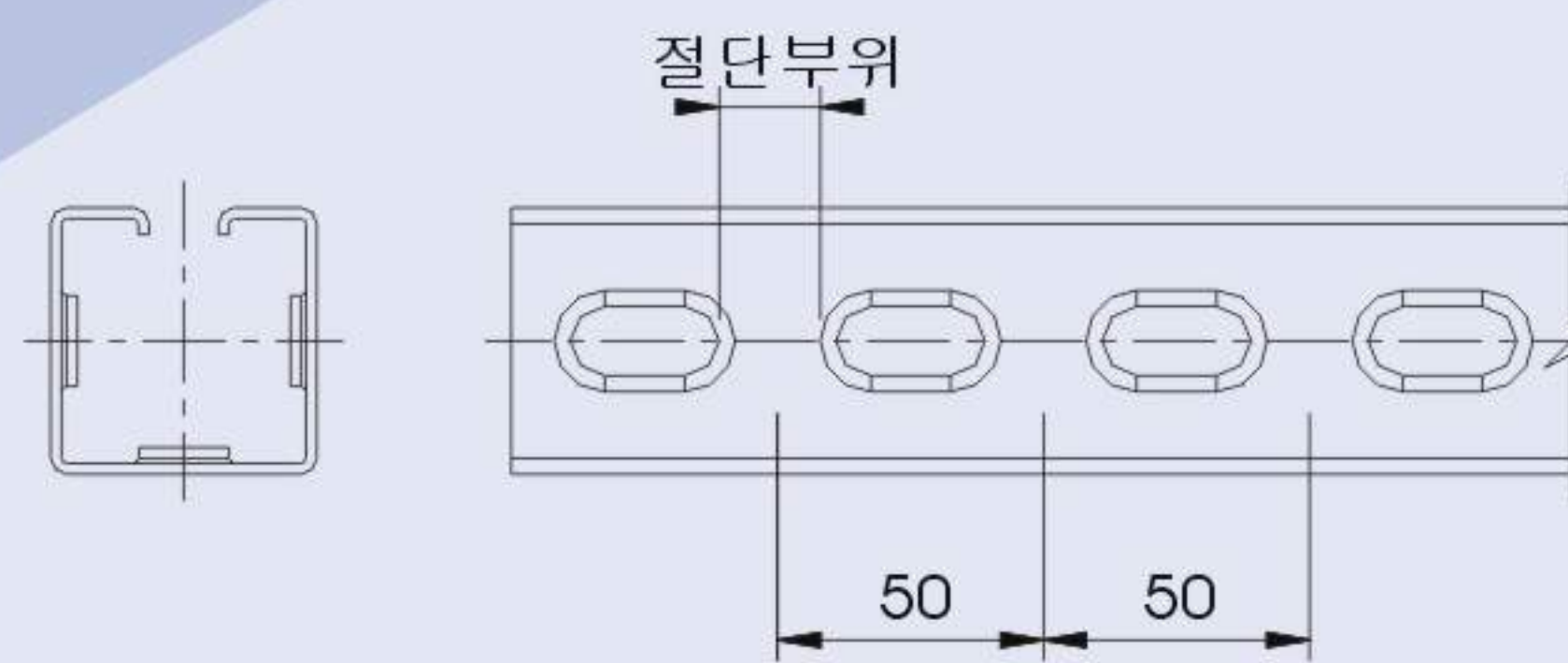
RC601



- ▶ PP 제작

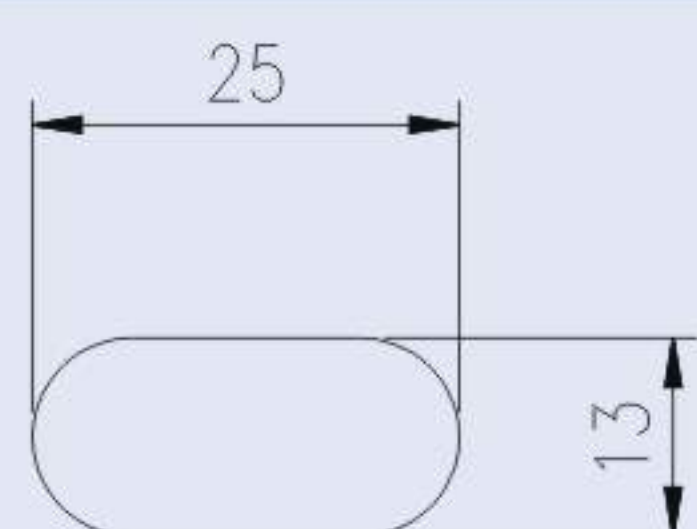
- ▶ CHANNEL 절단면 끝단 보호캡

CHANNEL 절단 방법

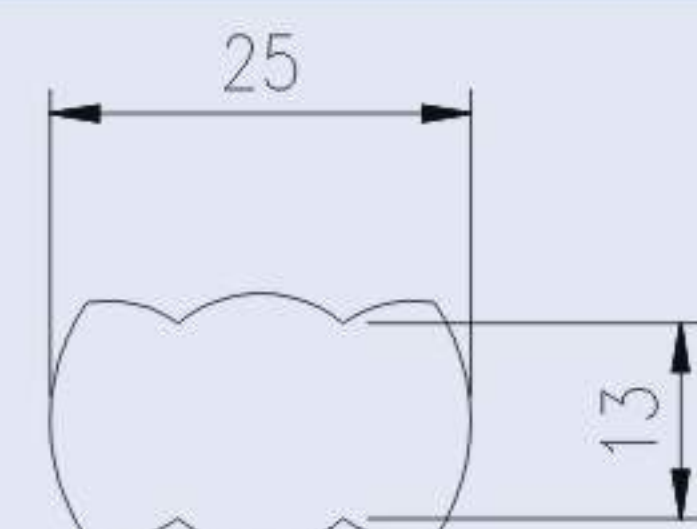


- ▶ 절단 위치 : 절단 부위
- ▶ 절단 노출 부위는 페인팅 후 마감캡 처리
- ▶ 절단간격은 50의 배수로 절단

CHANNEL BOLT HOEL

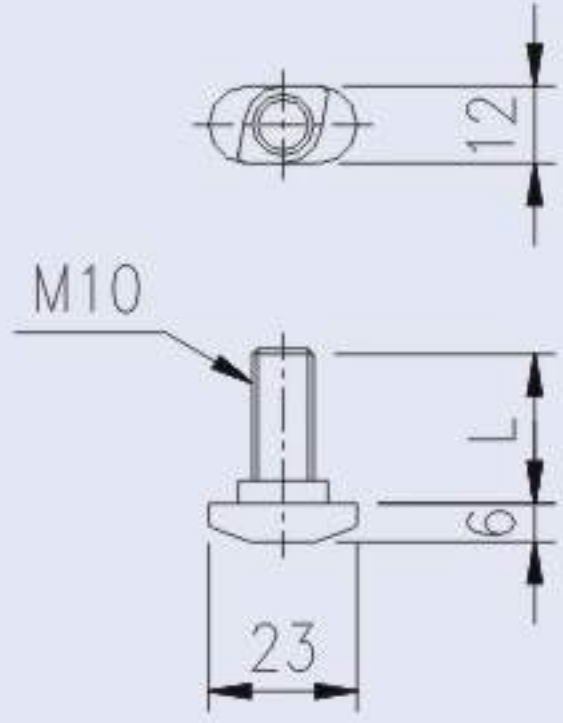
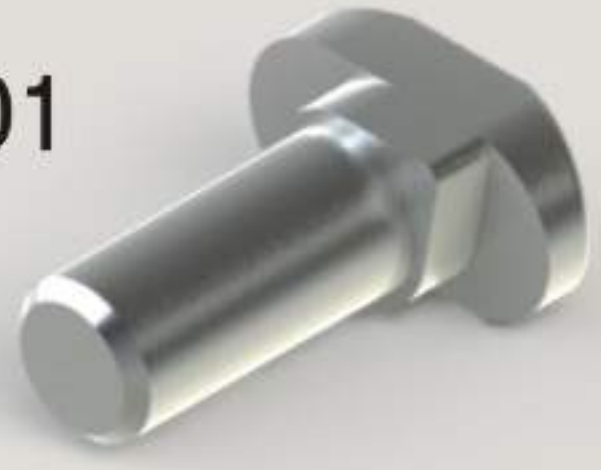


BRACKET BOLT HOEL



T-BOLT

TB701

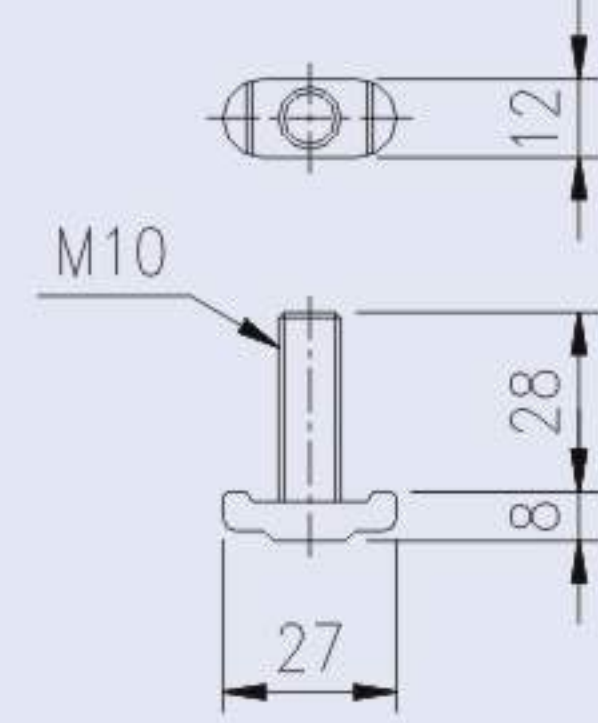
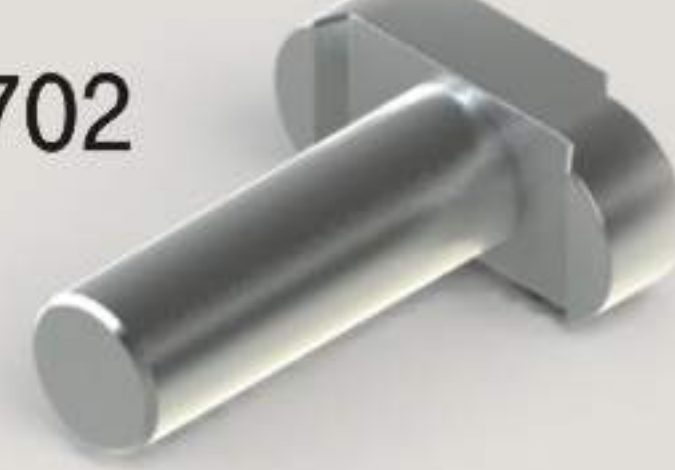


CHANNEL	SIZE	LENGTH
STD	M10 / M12	28L
40 x 40	M10 / M12	60L
40 x 60	M10 / M12	80L

- ▶ 1. 아연도금 2. 용융도금
- ▶ CHANNEL, BRACKET, U-BAND 조립용 BOLT

T-BOLT

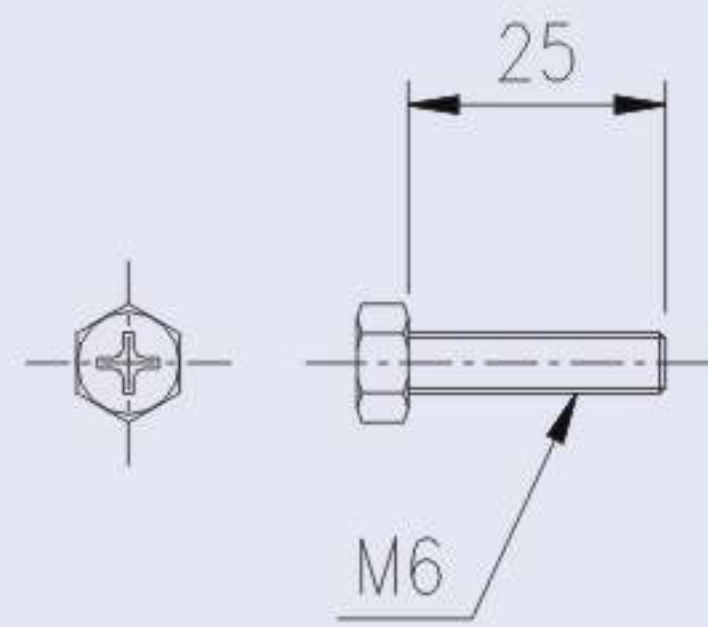
TB702



- ▶ 아연도금 / 용융도금
- ▶ U-BAND 조립용 BOLT

T-BOLT

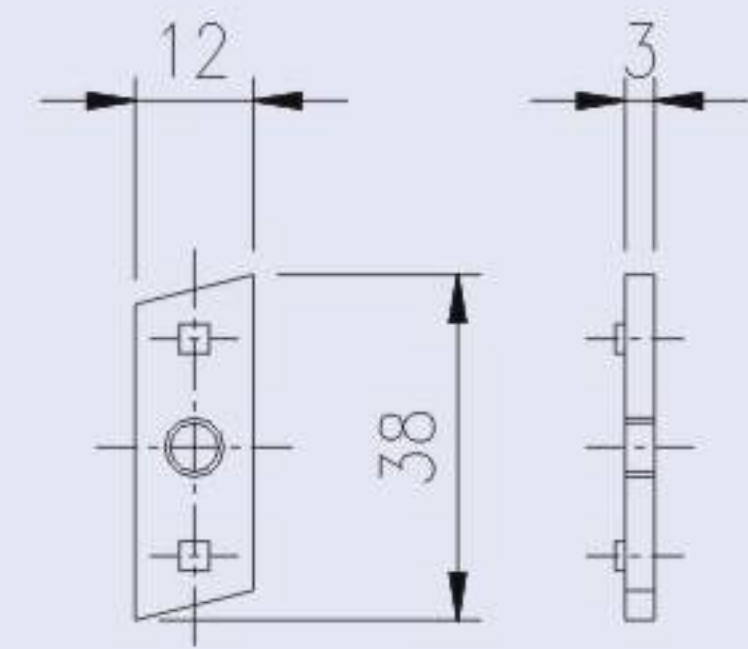
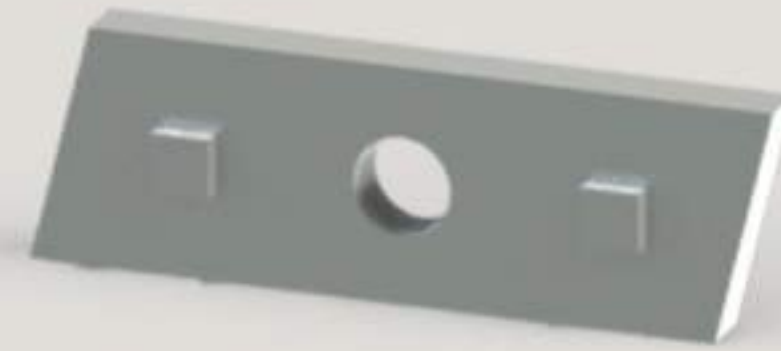
TB703



- ▶ 1. 아연도금 2. 용융도금
- ▶ 소구경 U-BAND 조립용 BOLT

T-NUT

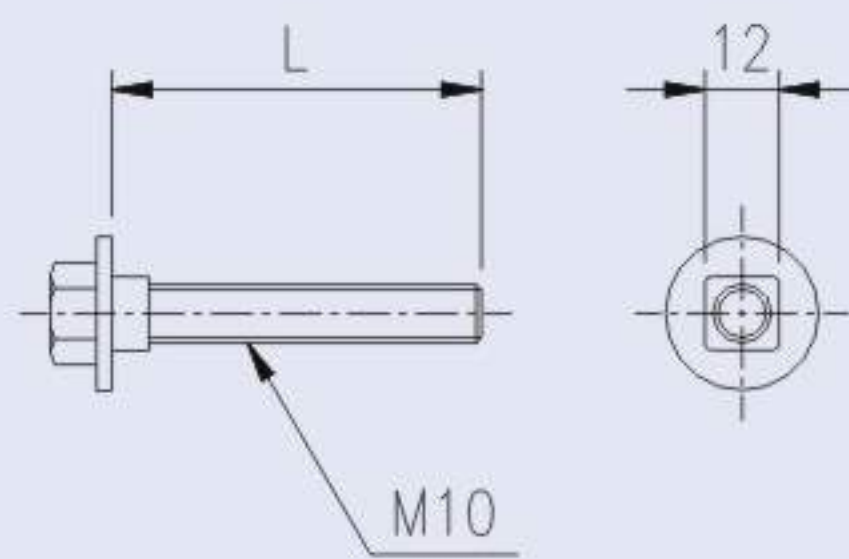
TN701



- ▶ 1. 아연도금 2. 용융도금
- ▶ 소구경 U-BAND 조립용 BOLT

FLG-BOLT

FB701

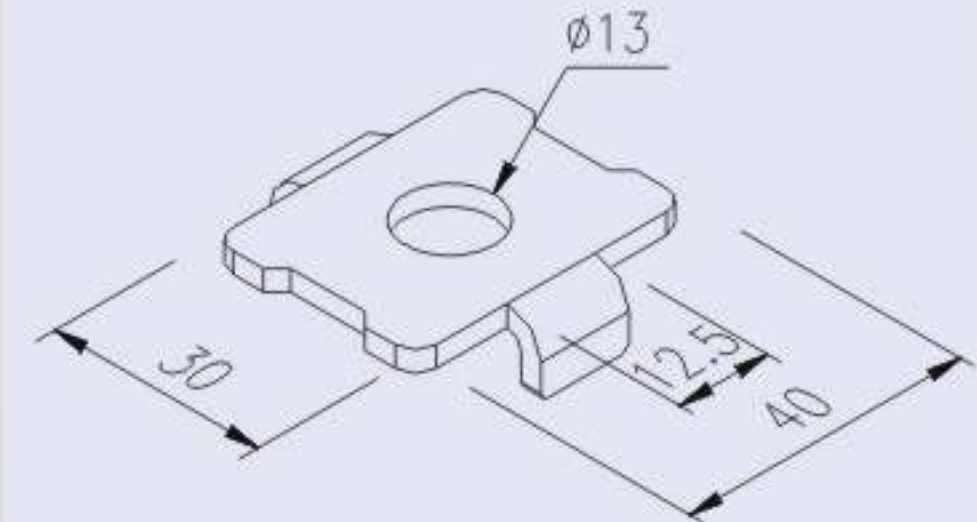


CHANNEL	SIZE	LENGTH
40 x 40	M10 / M12	60L
40 x 60	M10 / M12	80L

- ▶ 1. 아연도금 2. 용융도금
- ▶ CHANNEL, BRACKET, U-BAND 조립용 BOLT

C-WASHER

CW701



- ▶ 1. 아연도금 강판 2. 압연판재+용융도금
- ▶ CHANNEL STRAIGHT HOLE 부위의 체결용 NUT

T-BOLT 설치



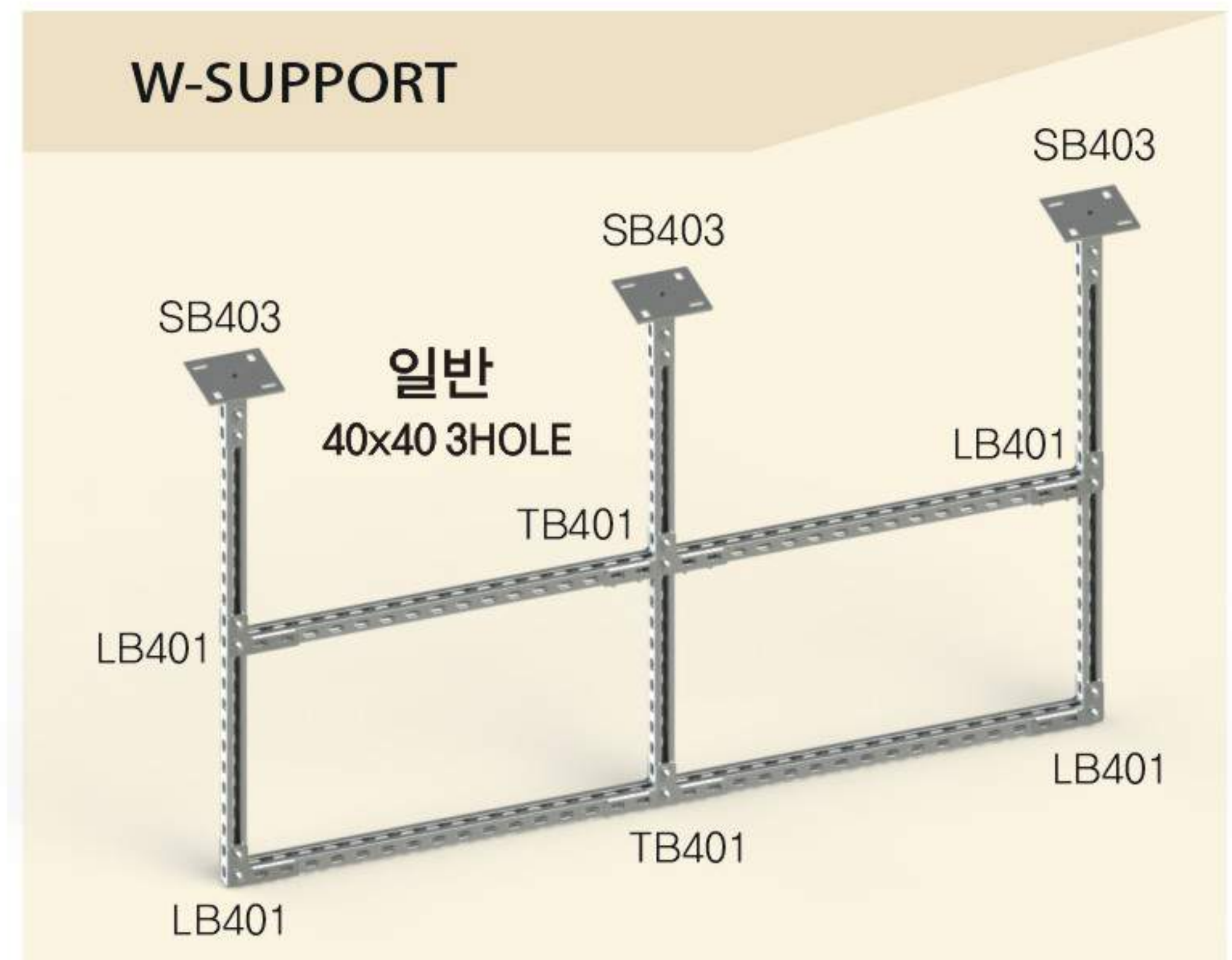
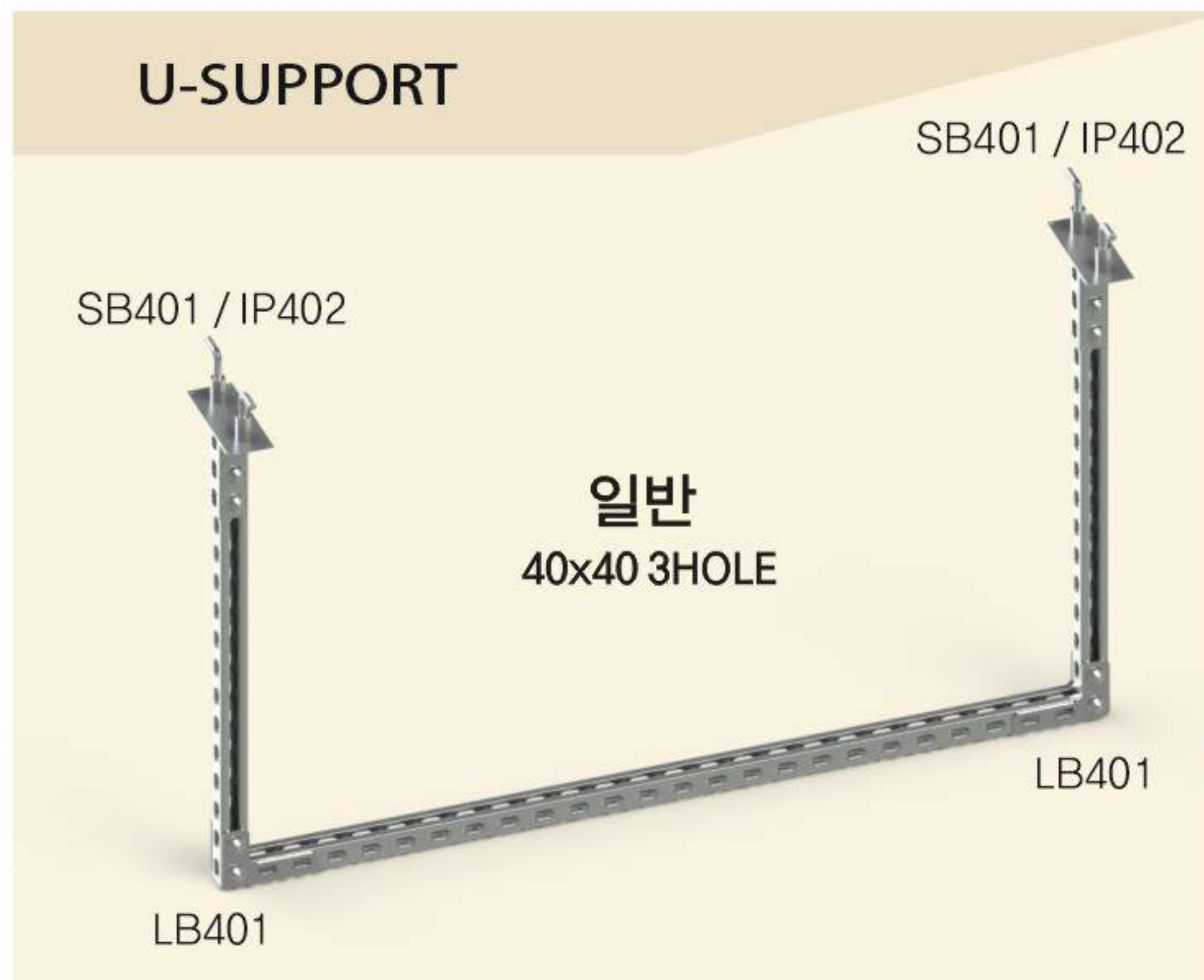
FLG-BOLT, C-WASHER 설치



syner

BRACKET

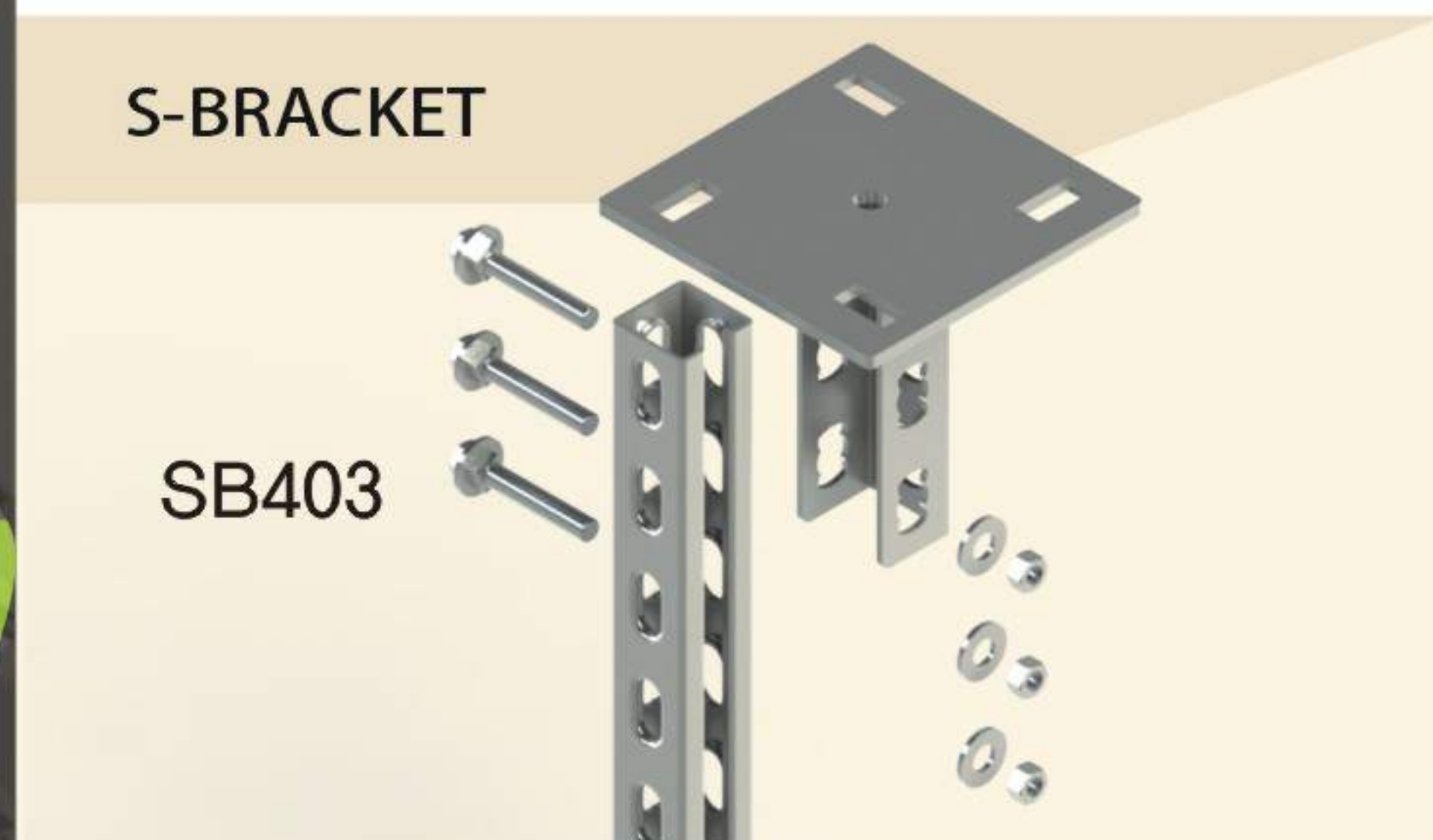
3.SUPPORT 및 BRACKET 조립



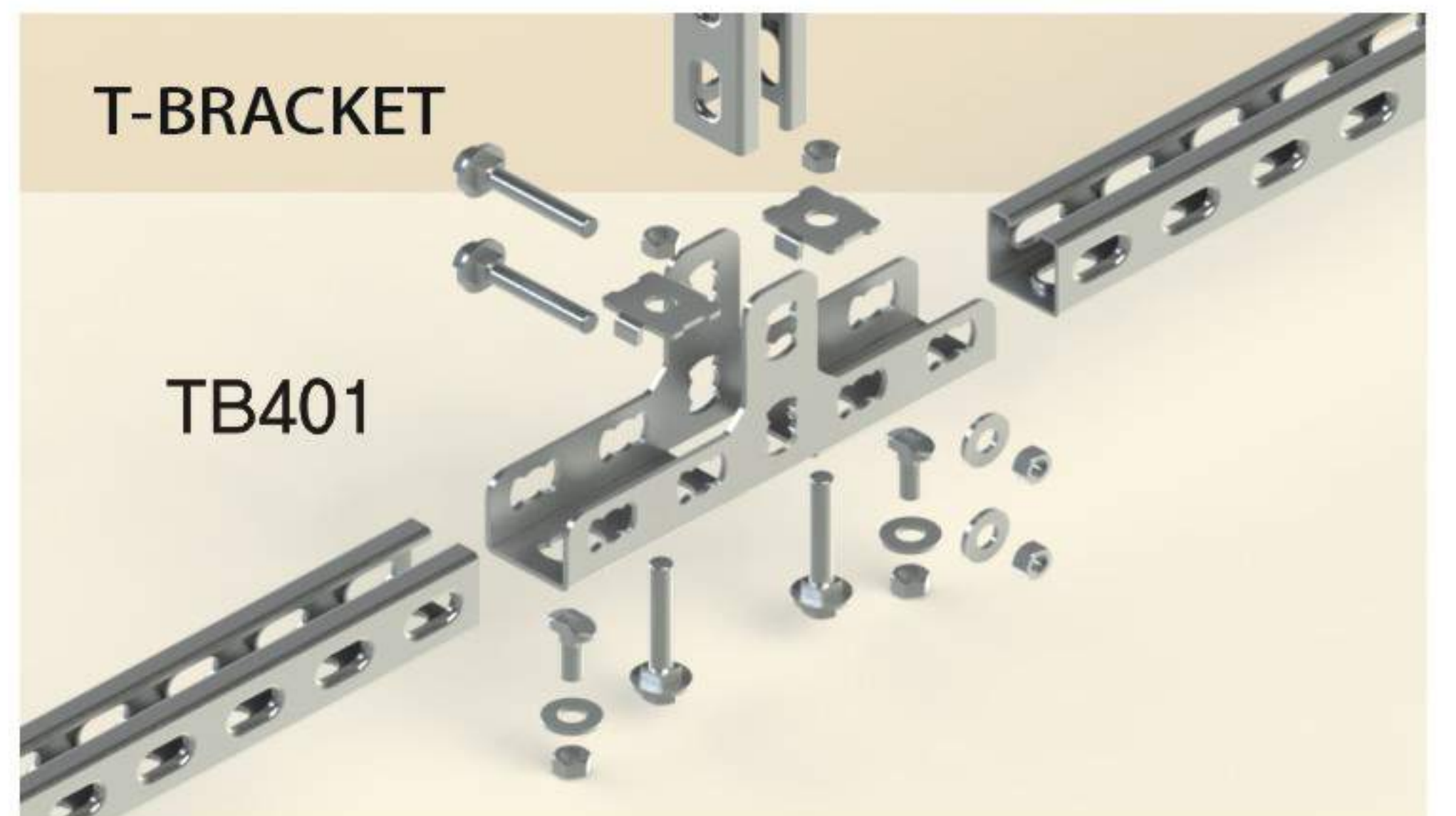
▶ 수평 : FLG-BOLT M10X60L



▶ 수평 : FLG-BOLT M10X60L
▶ 수직 : T-BOLT M10x25L or FLG-BOLT M10X60L



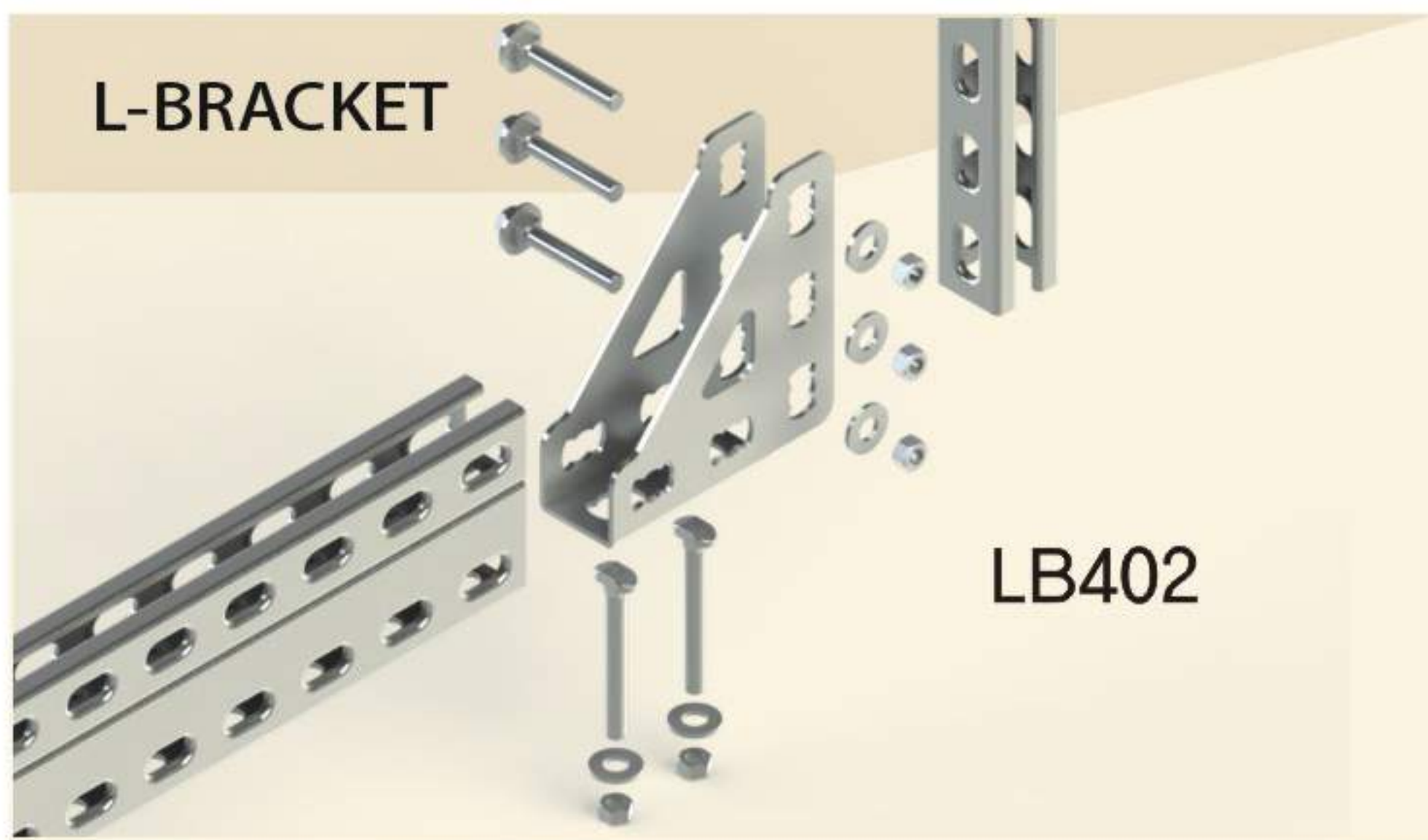
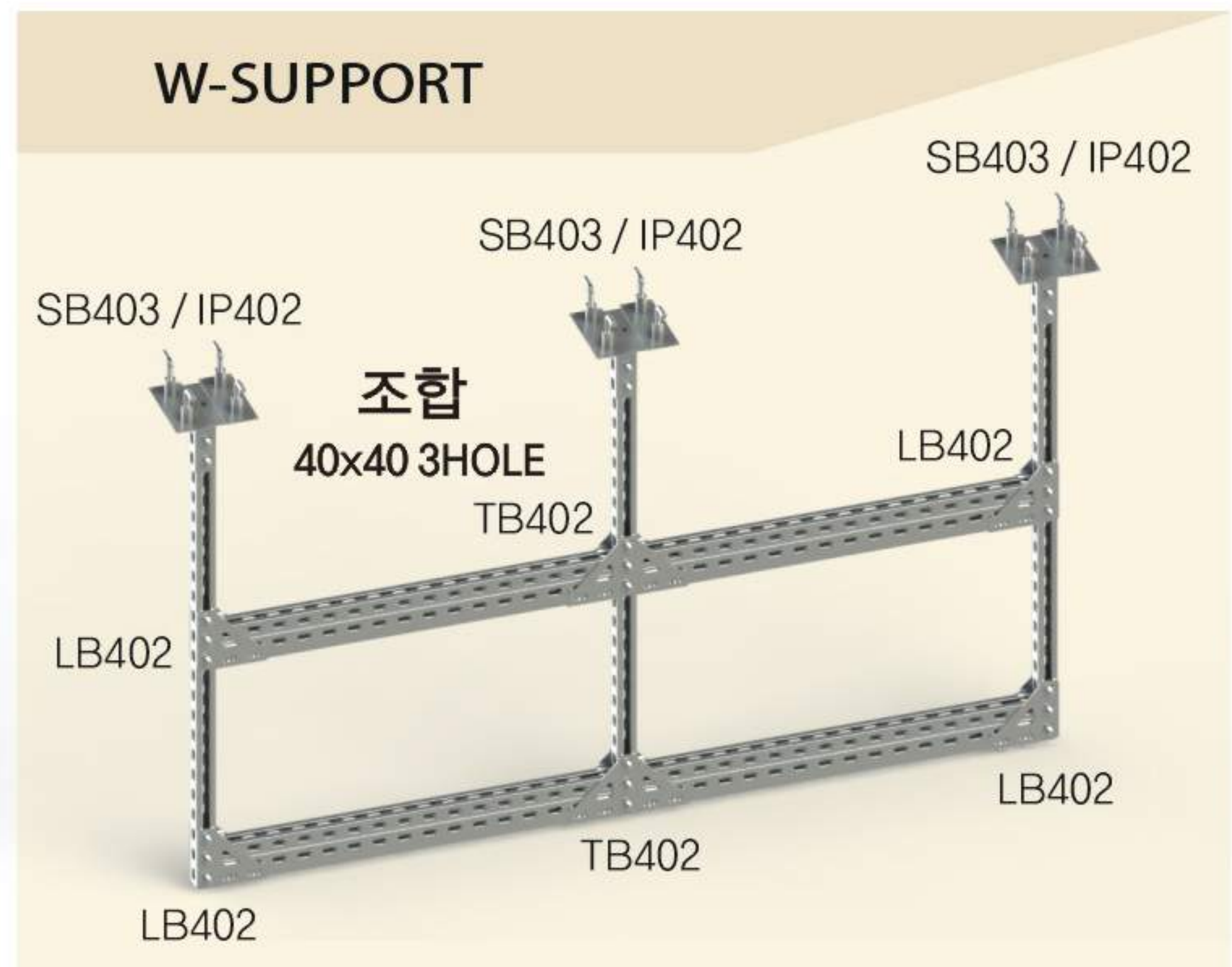
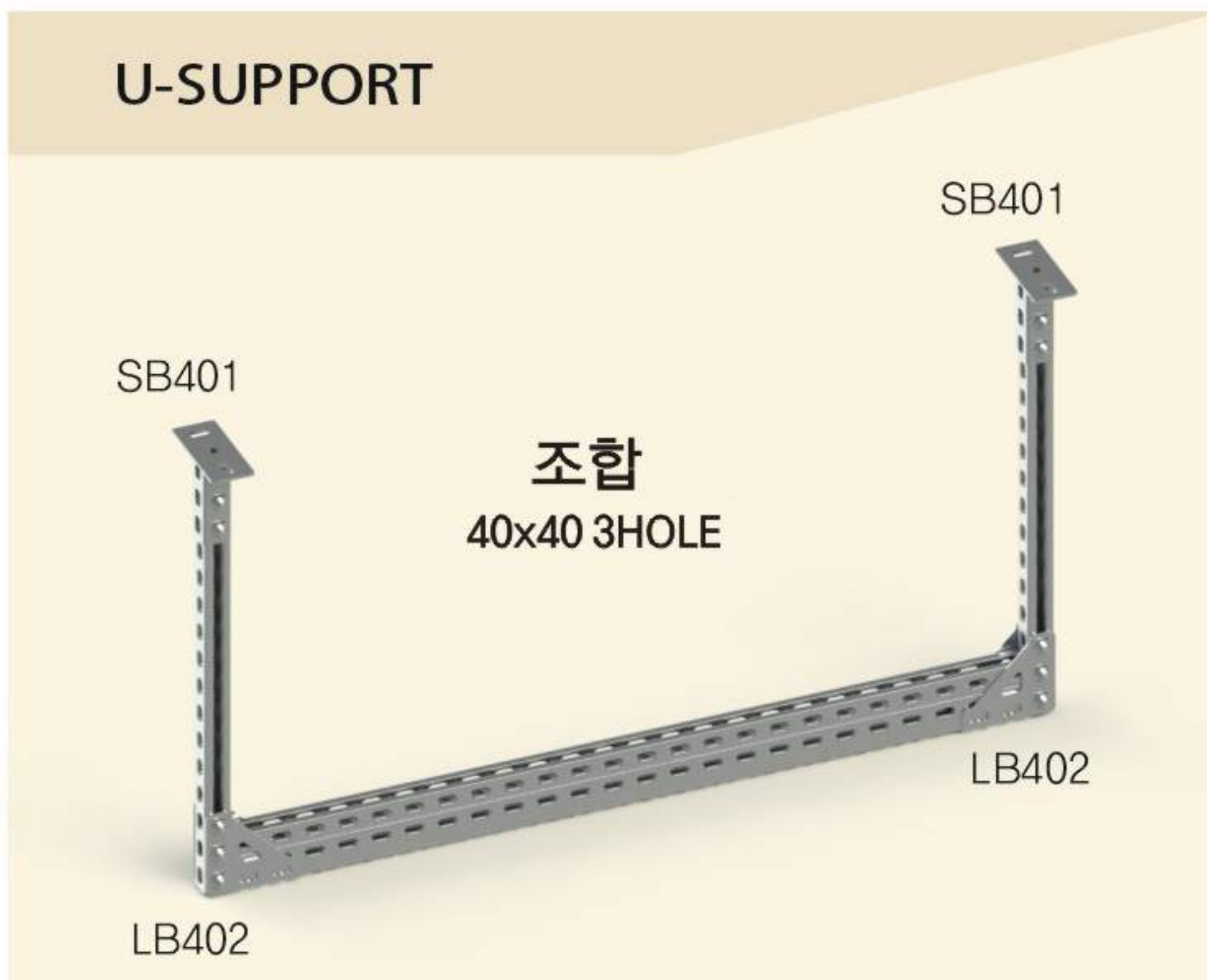
▶ 수평 : FLG-BOLT M10X60L



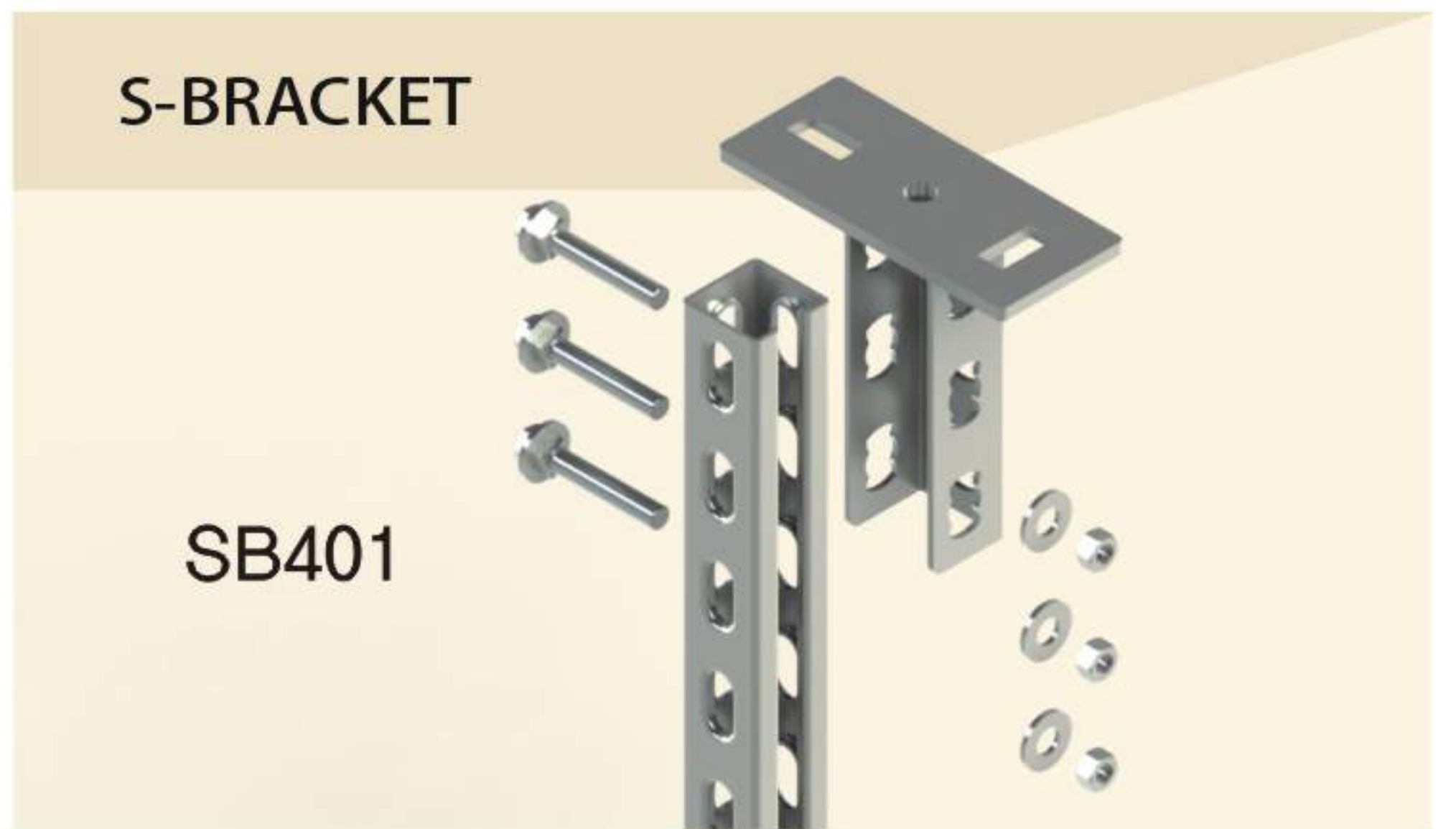
▶ 수평 : FLG-BOLT M10X60L
▶ 수직 : T-BOLT M10x25L or FLG-BOLT M10X60L



▶ 수직 : HEX. BOLT M10x25L



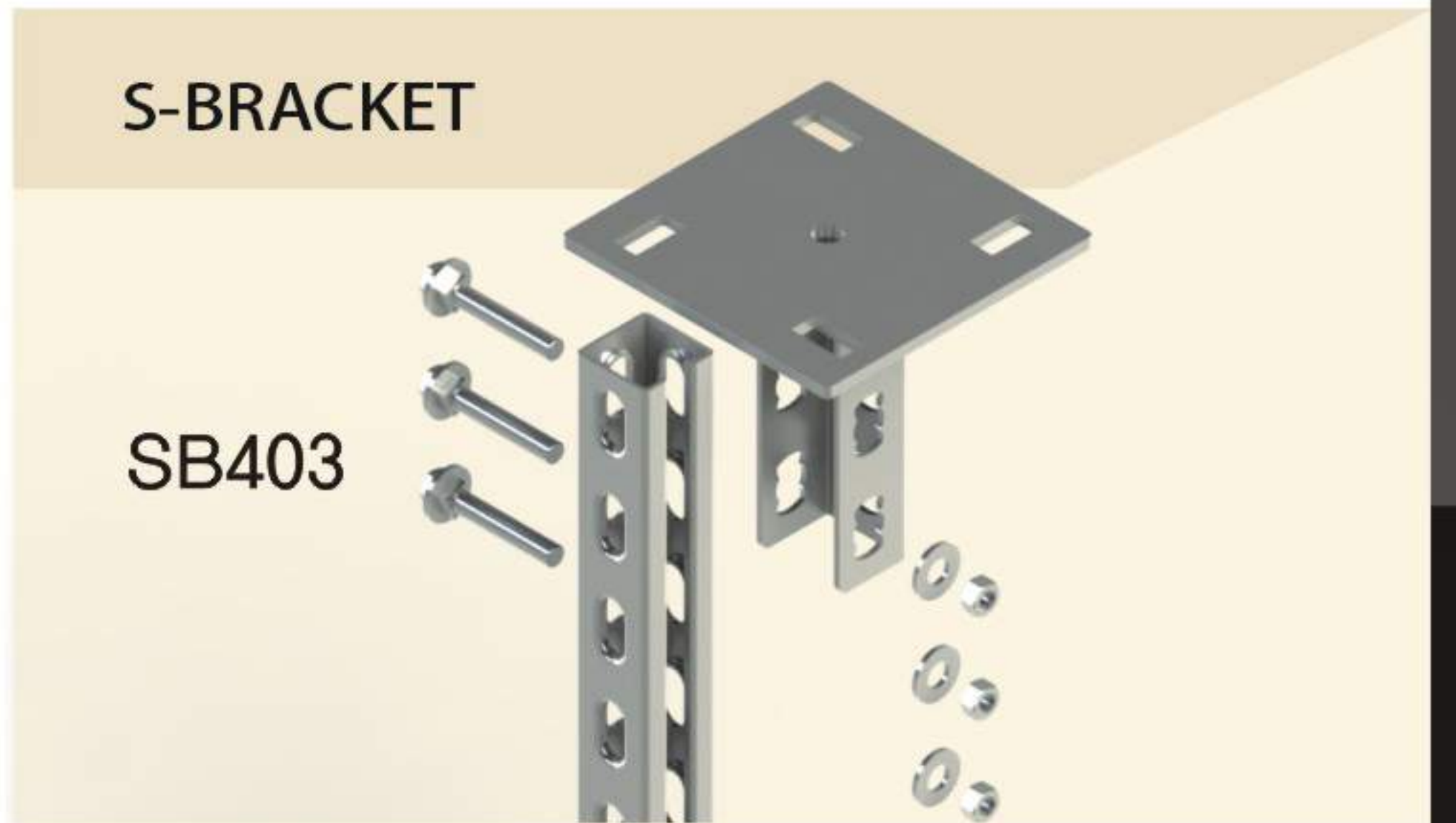
- ▶ 수평 : FLG-BOLT M10X60L
- ▶ 수직 : T-BOLT M10x80L



- ▶ 수평 : FLG-BOLT M10X60L



- ▶ 수평 : FLG-BOLT M10X60L
- ▶ 수직 : T-BOLT M10x80L



- ▶ 수평 : FLG-BOLT M10X60L

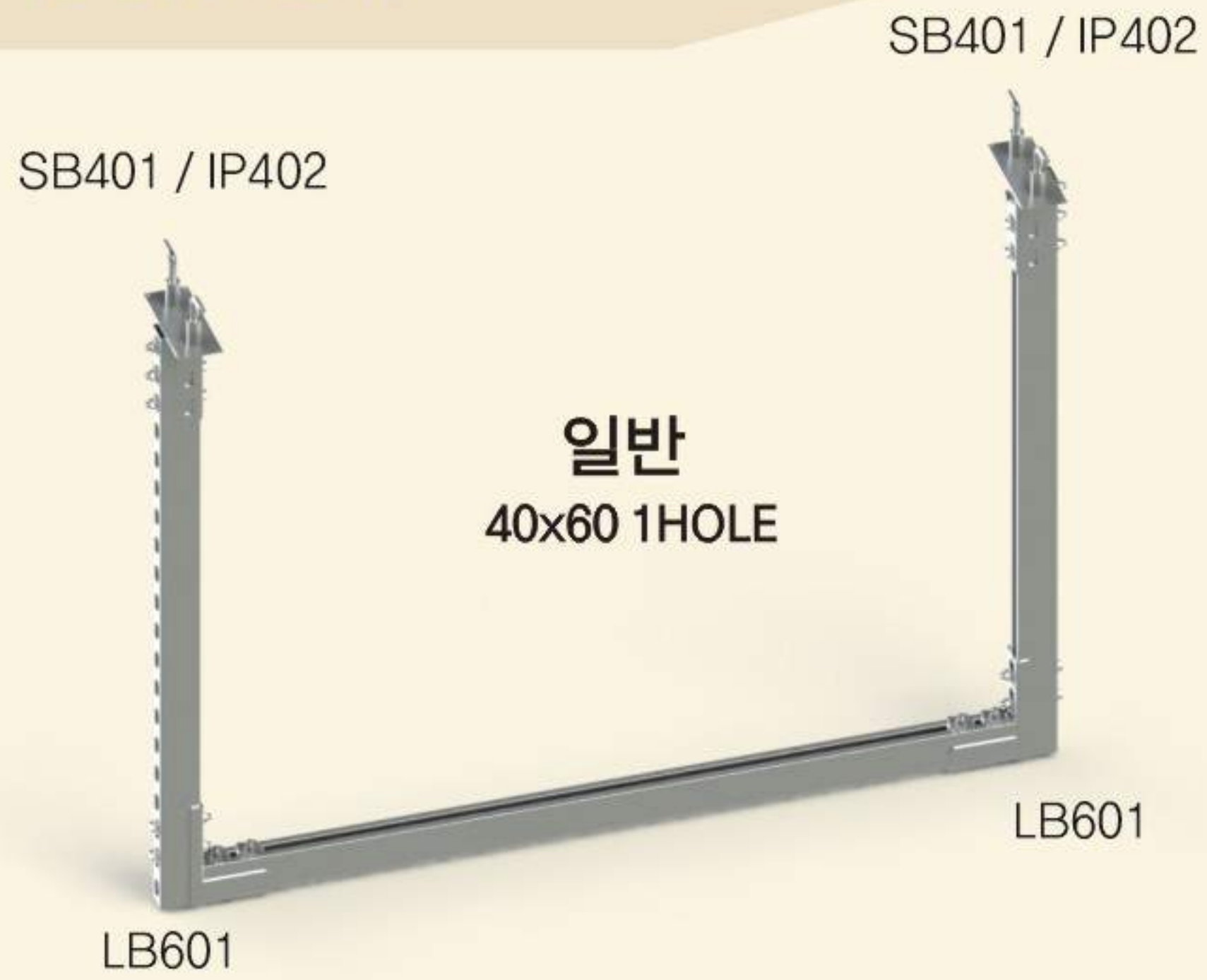


- ▶ 수직 : HEX. BOLT M10x25L

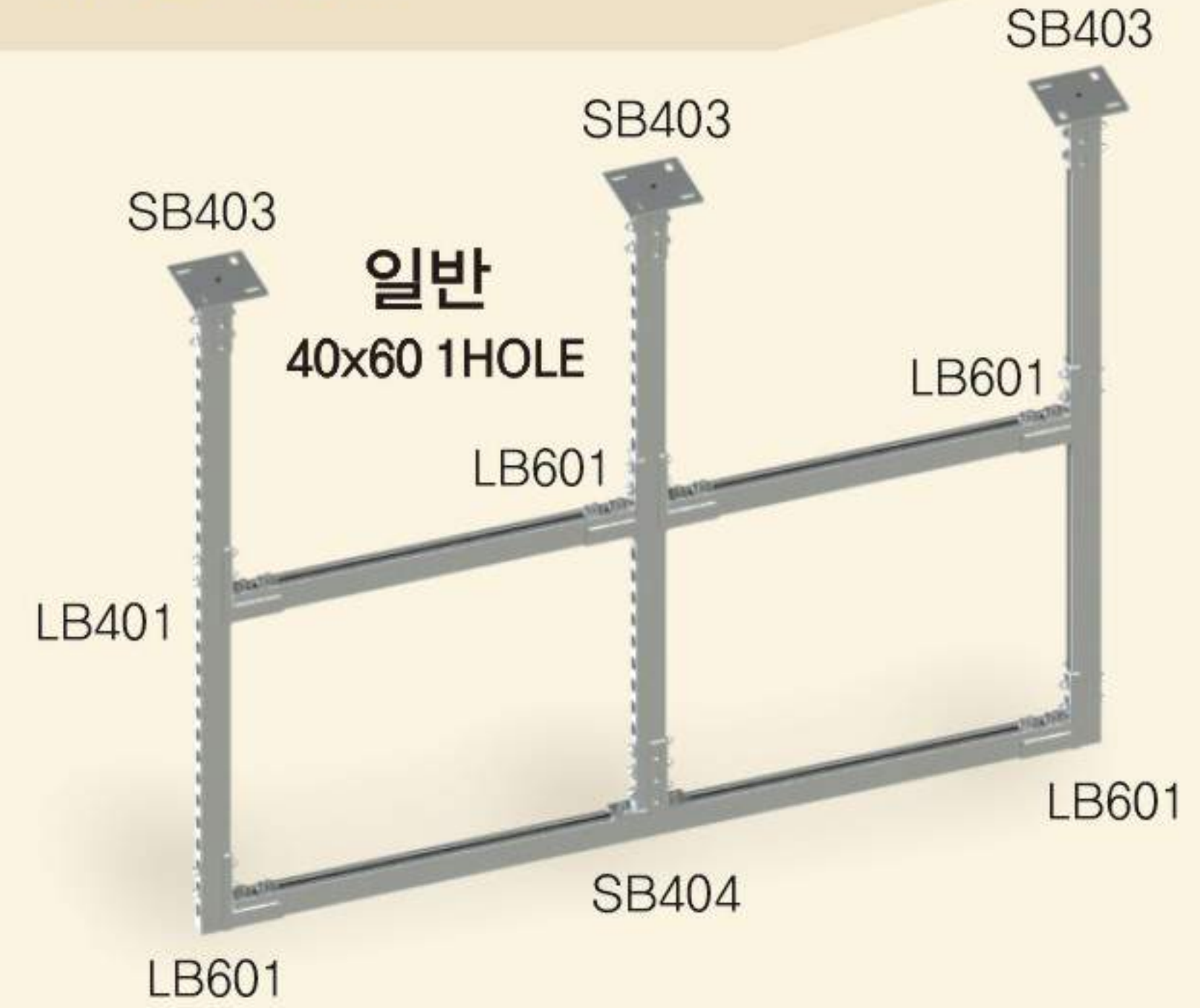


3.SUPPORT 및 BRACKET 조립

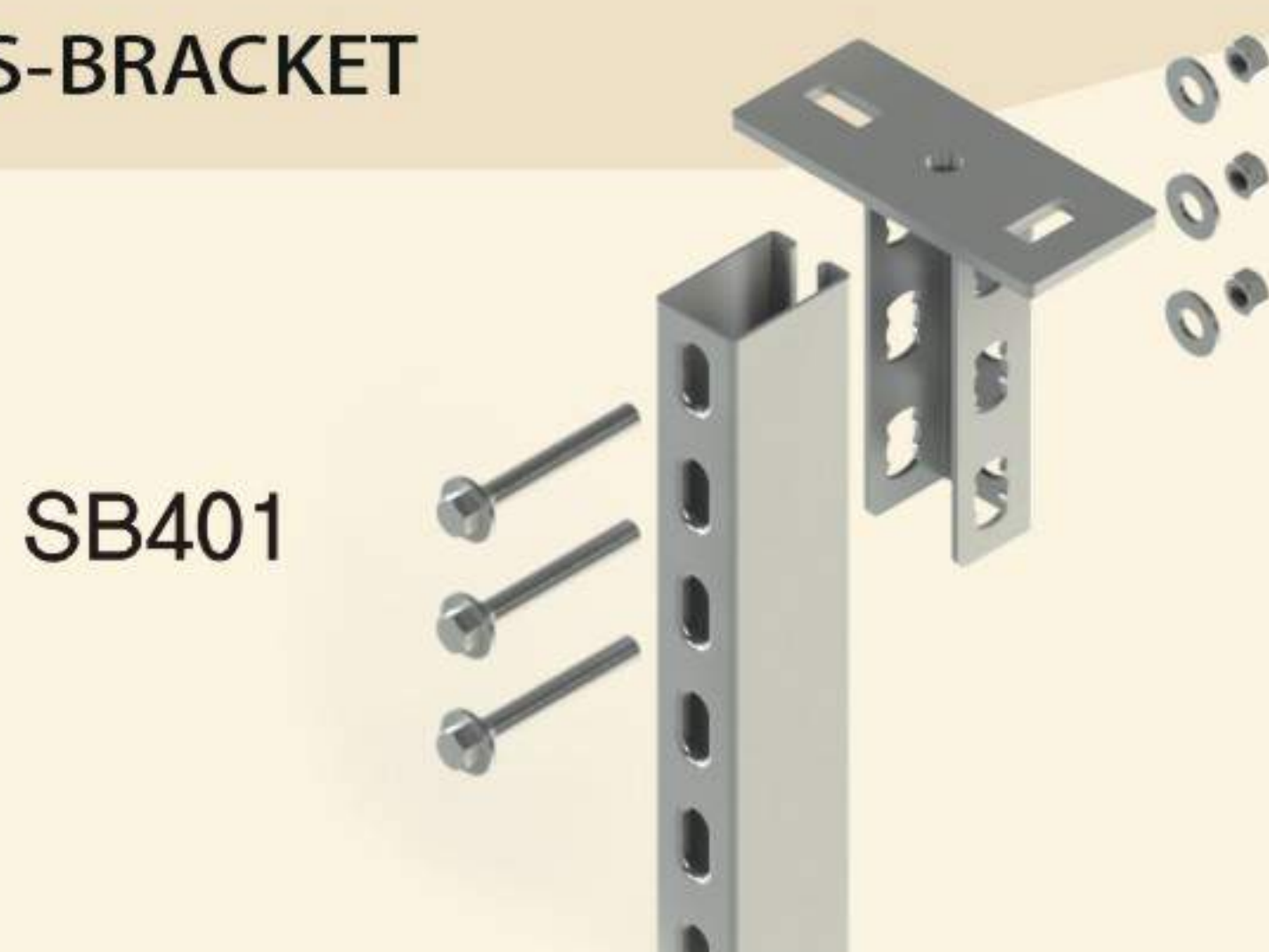
U-SUPPORT



W-SUPPORT

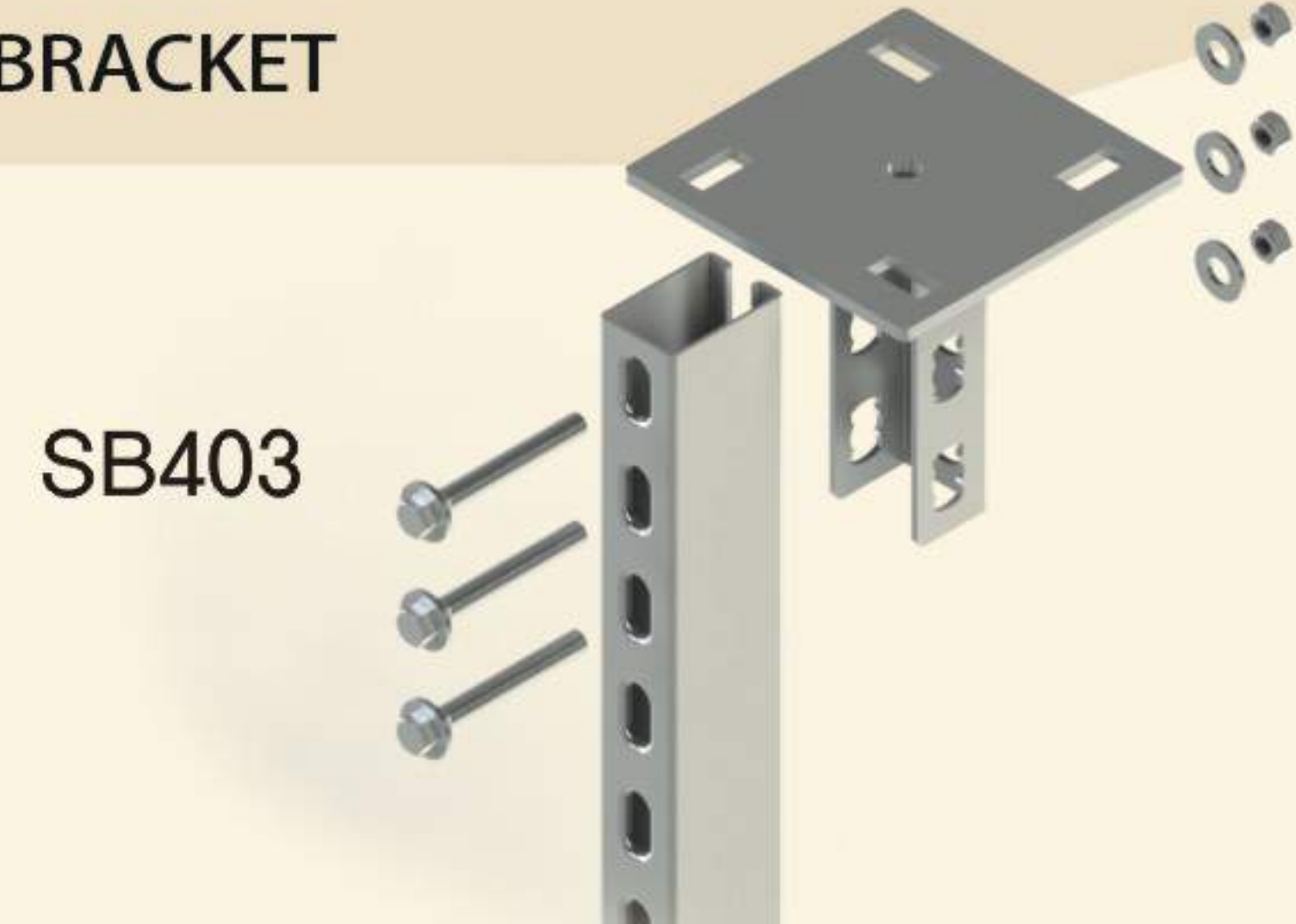


S-BRACKET



▶ 수평 : FLG-BOLT M10X80L

S-BRACKET



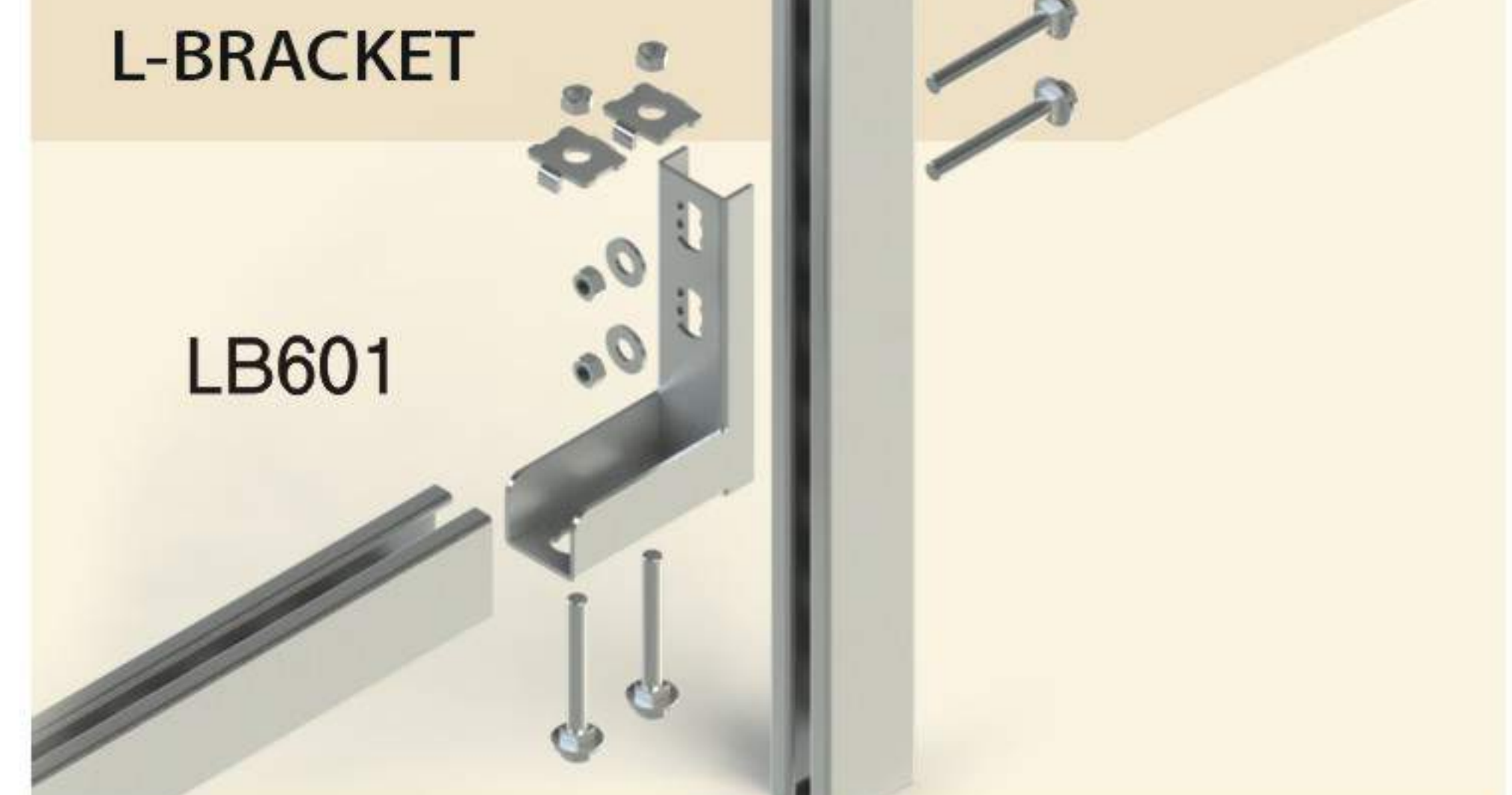
▶ 수평 : FLG-BOLT M10X80L

INSERT PLATE



▶ 수직 : HEX. BOLT M10X25L

L-BRACKET



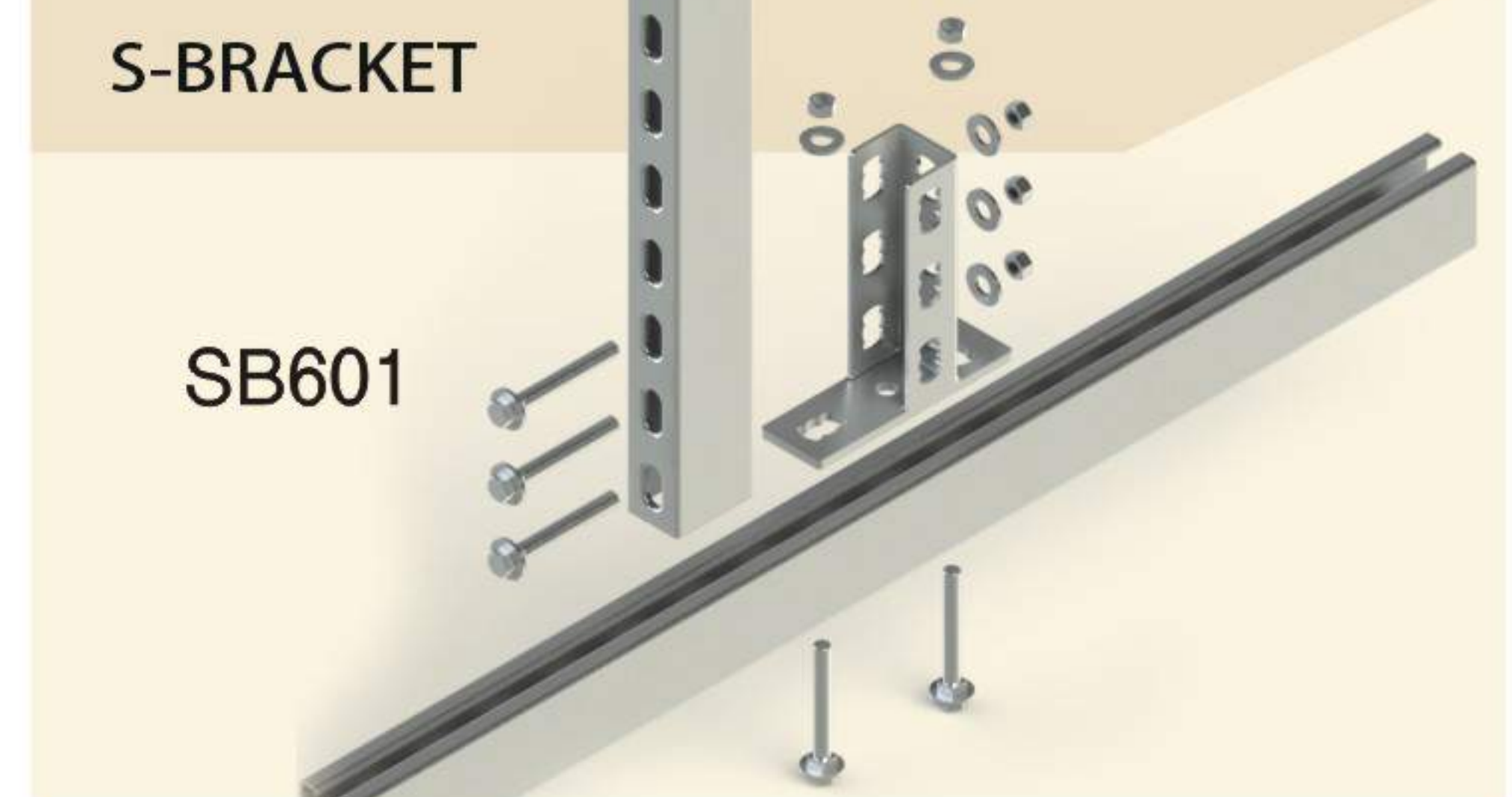
▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : FLG-BOLT M10X80L

L-BRACKET

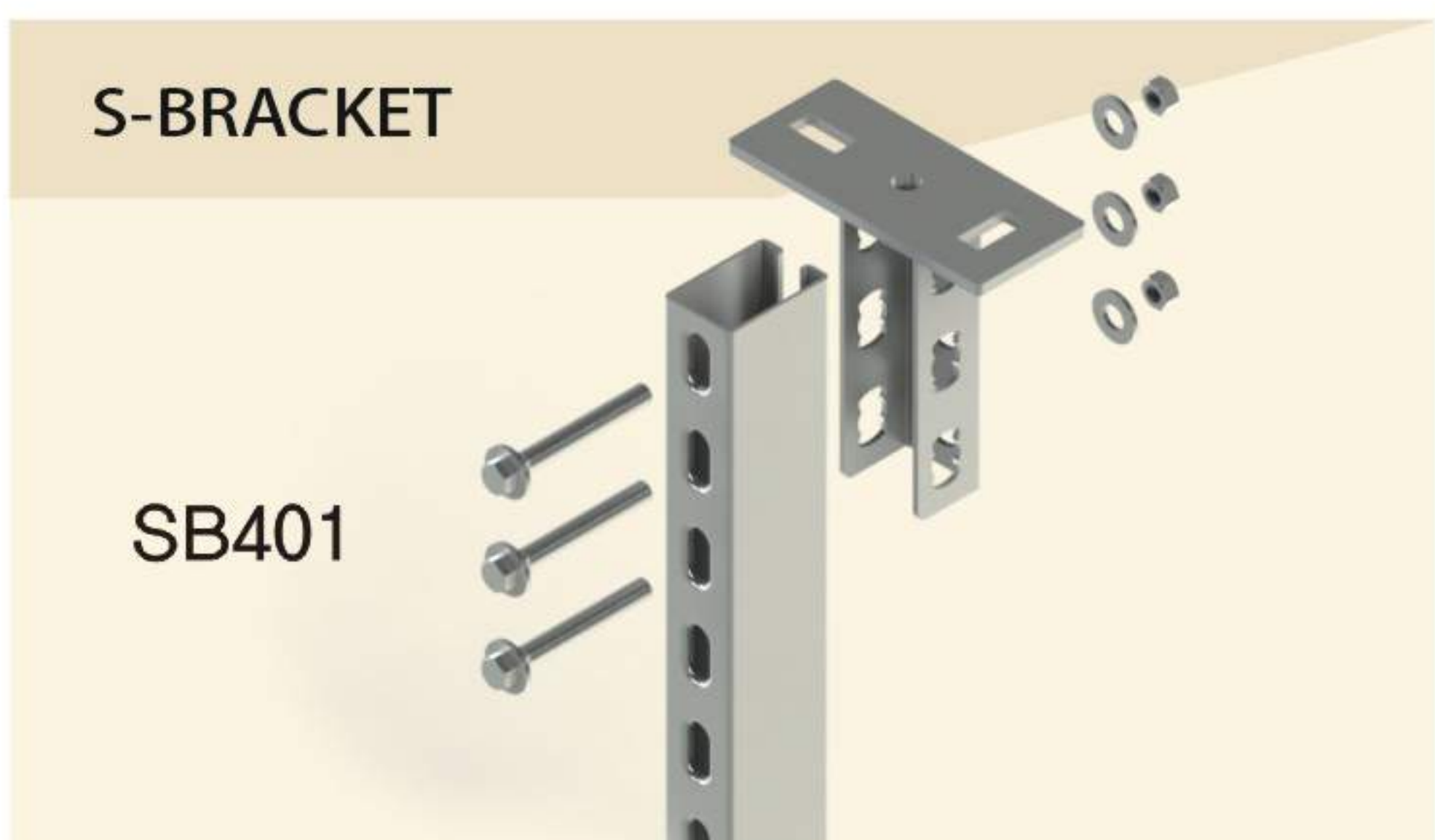
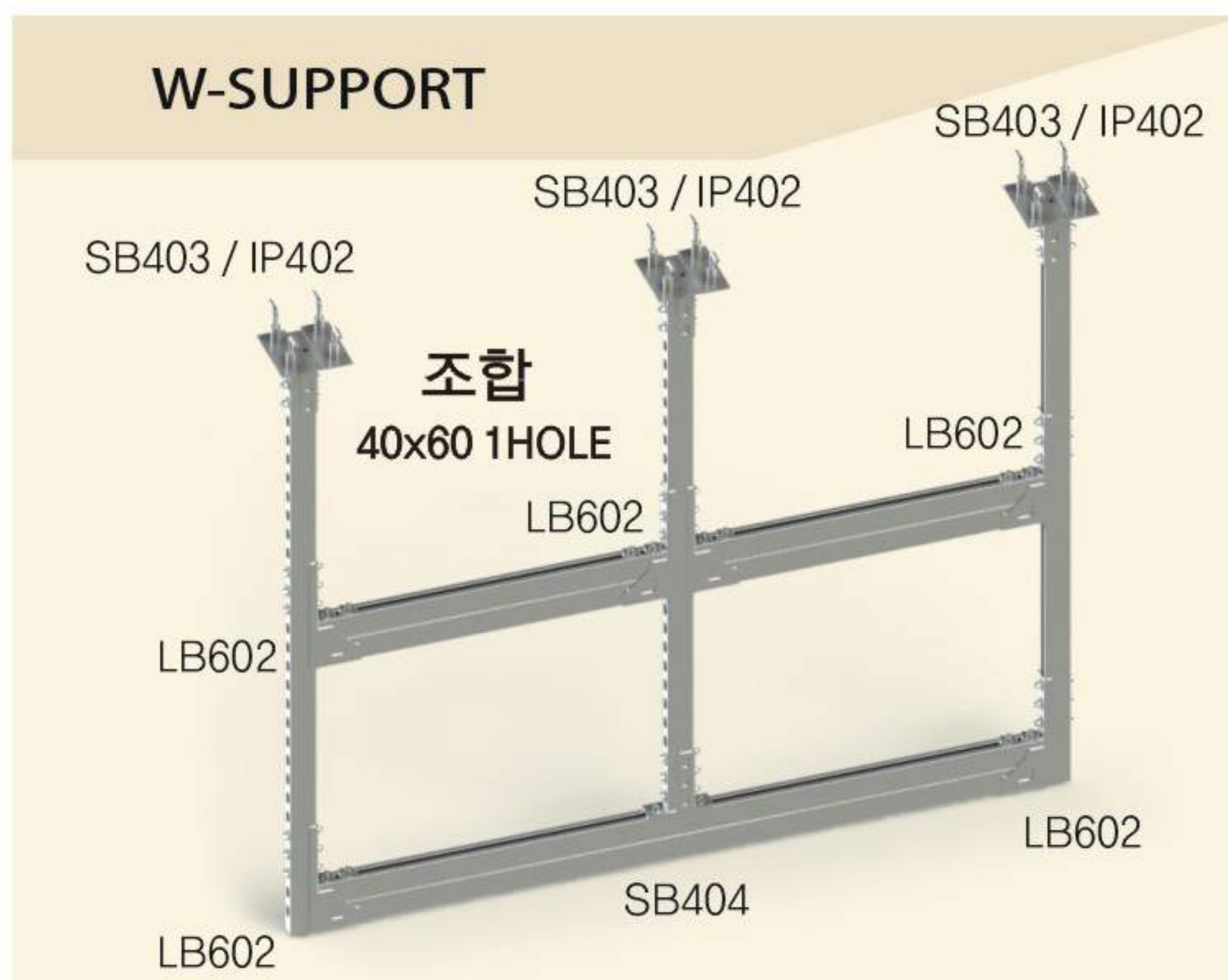
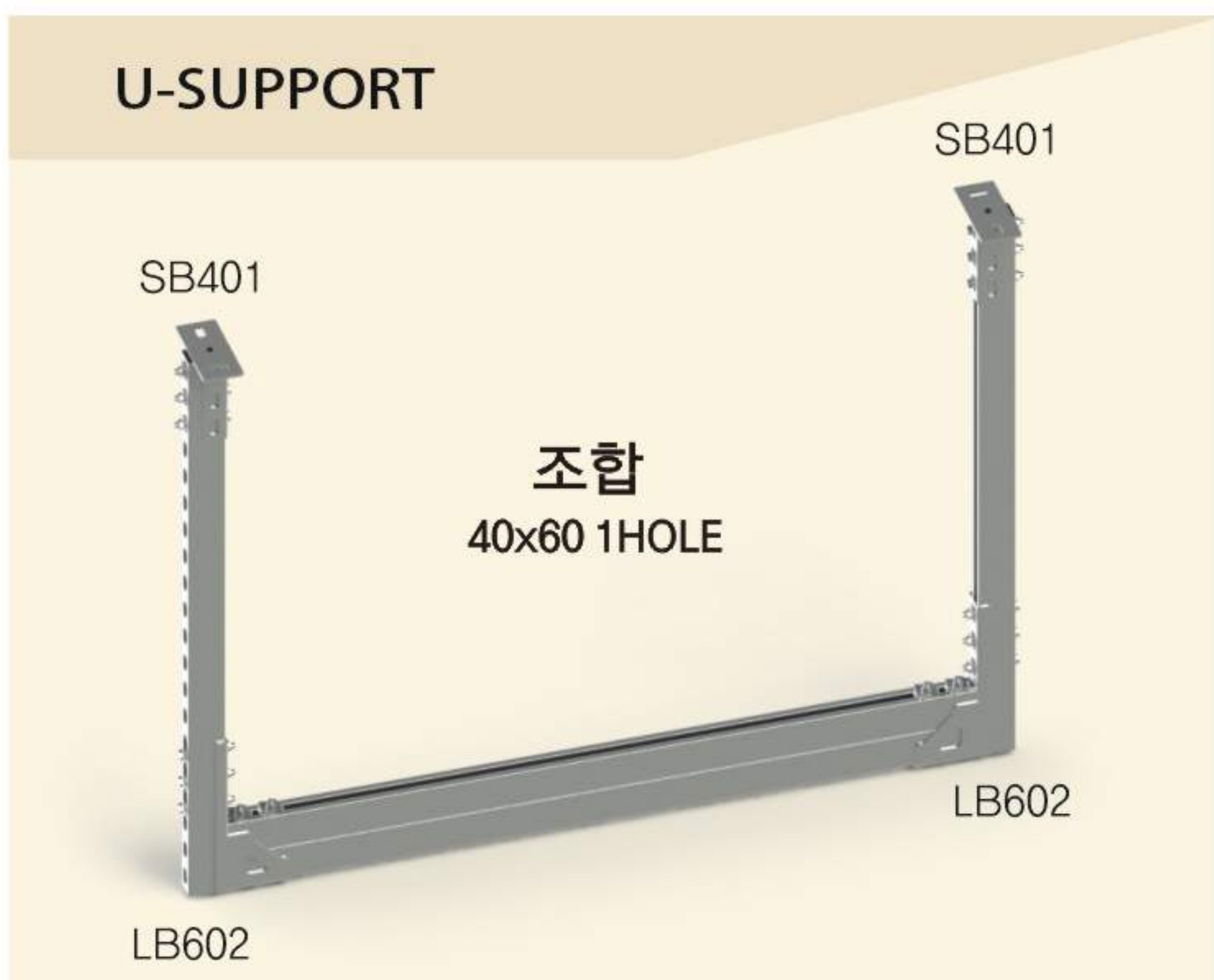


▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : FLG-BOLT M10X80L

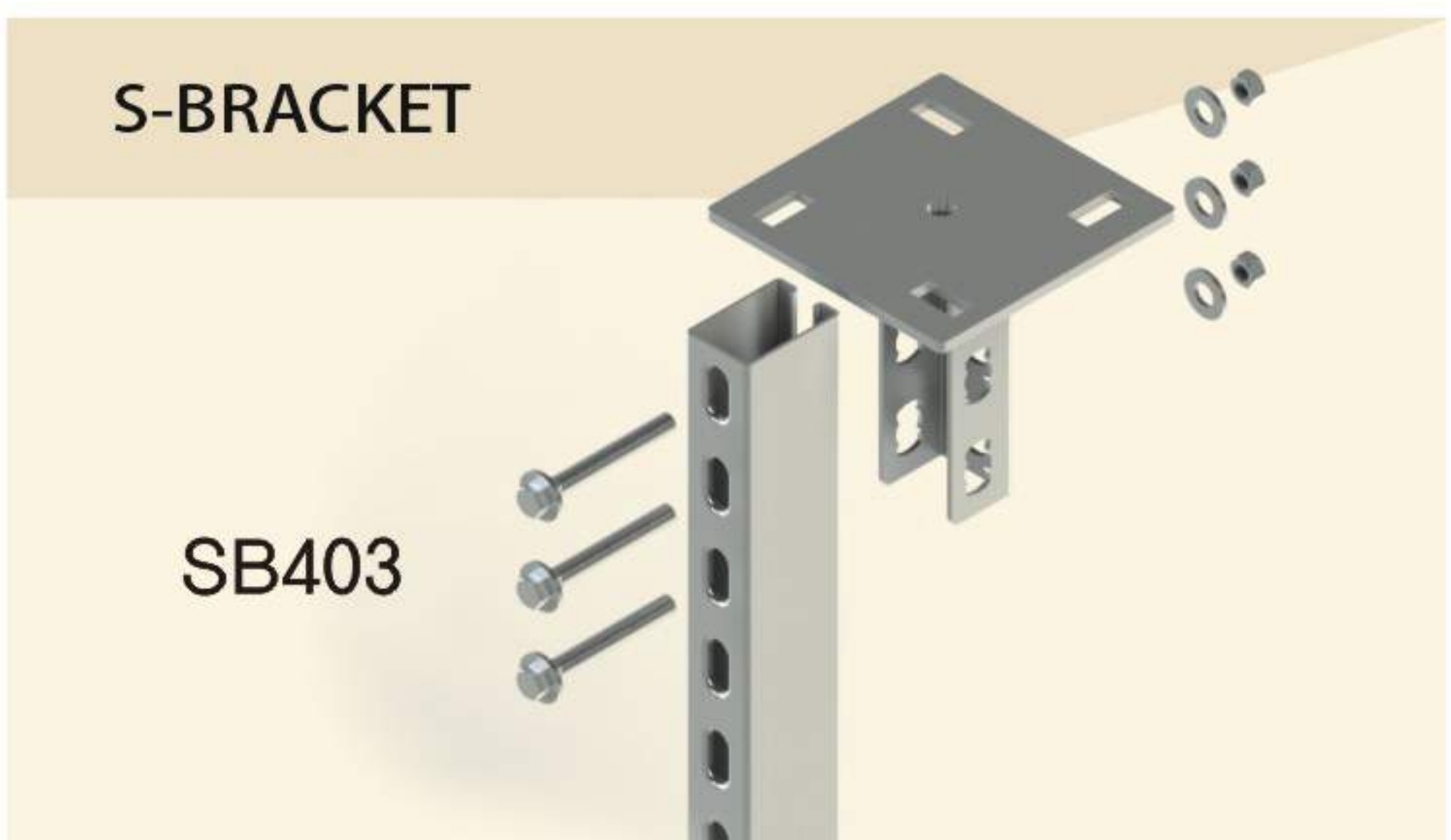
S-BRACKET



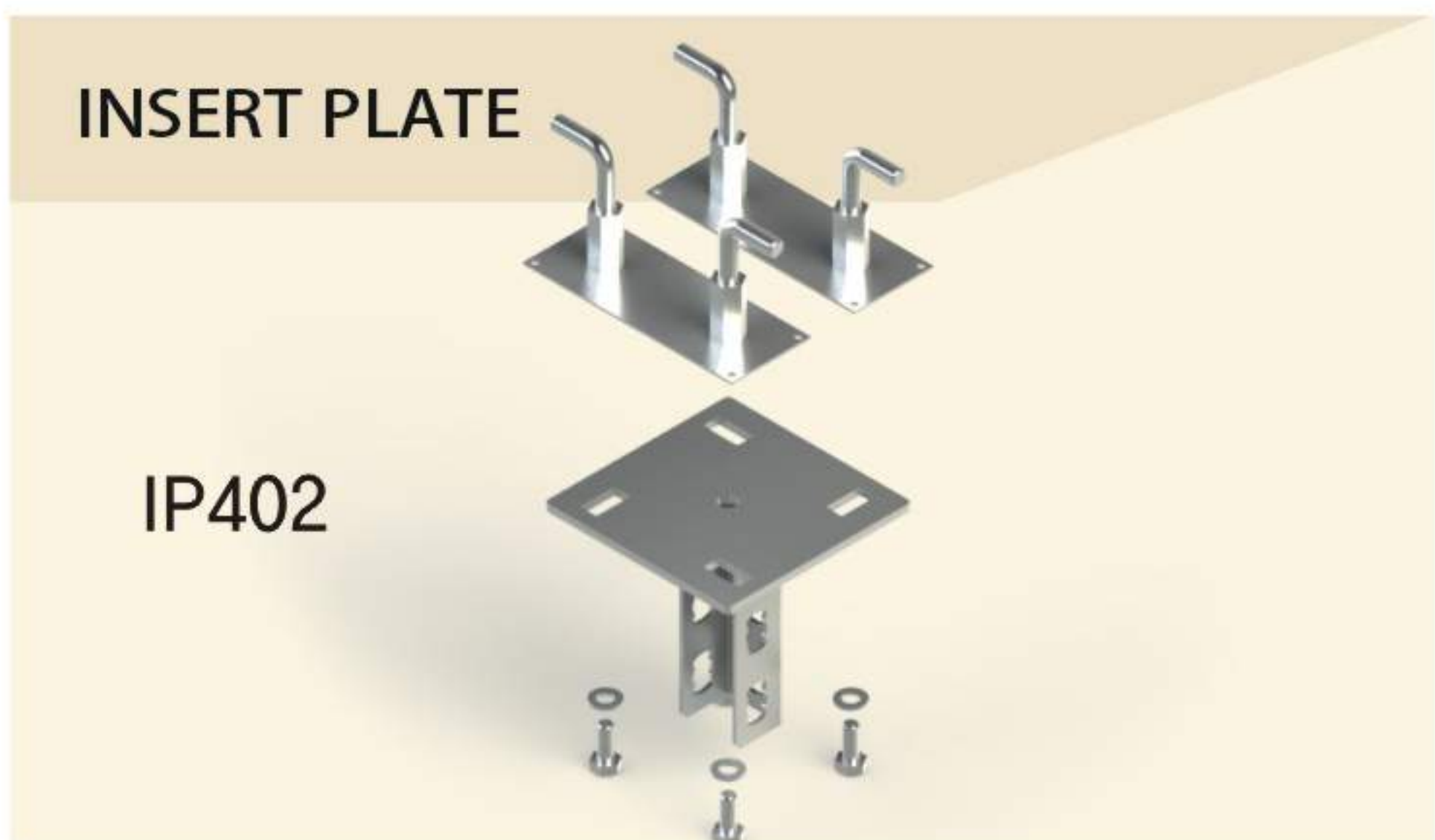
▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : FLG-BOLT M10X80L



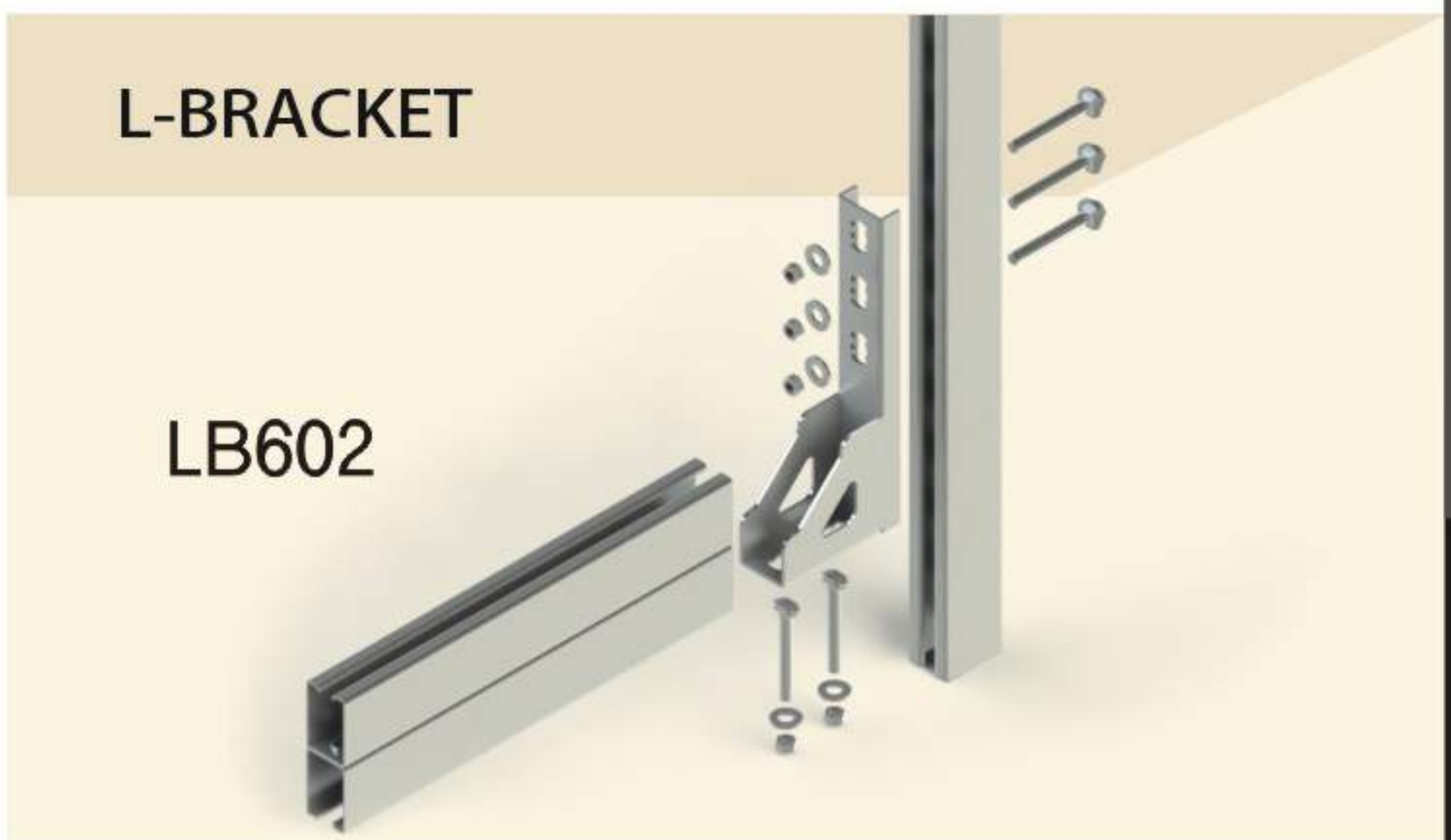
▶ 수평 : FLG-BOLT M10X80L



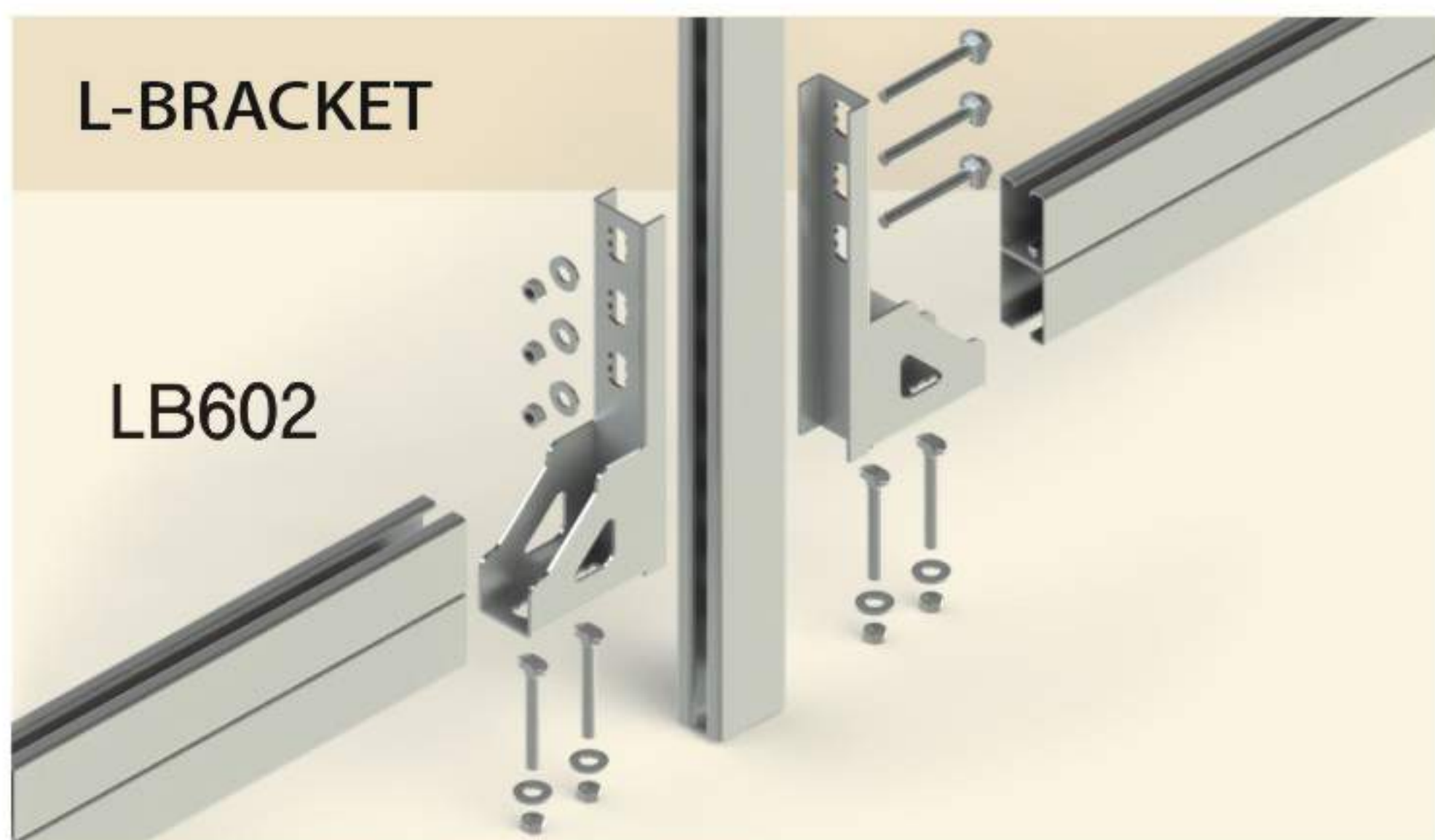
▶ 수평 : FLG-BOLT M10X80L



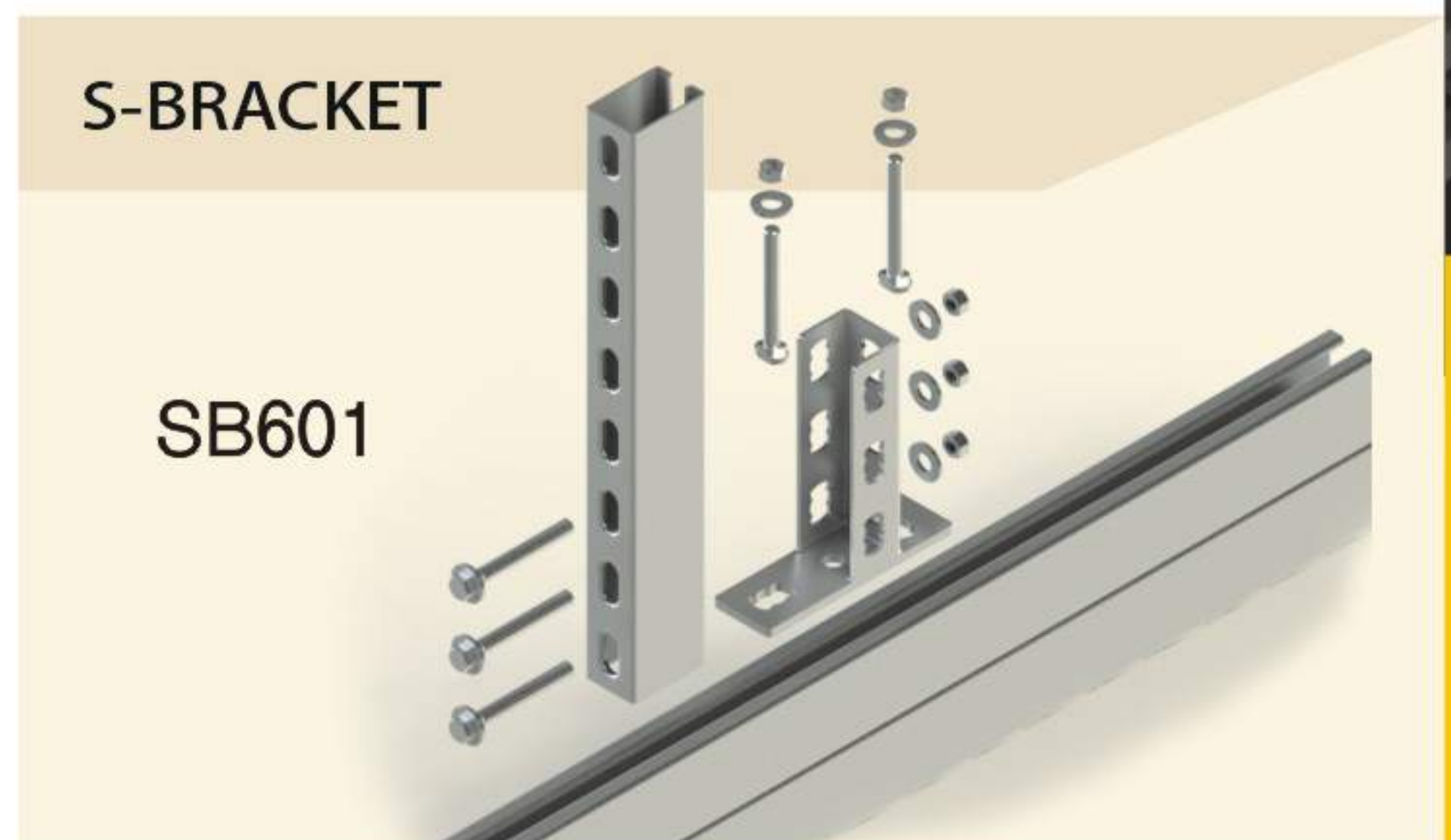
▶ 수직 : HEX. BOLT M10x25L



▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : T-BOLT M10X80L



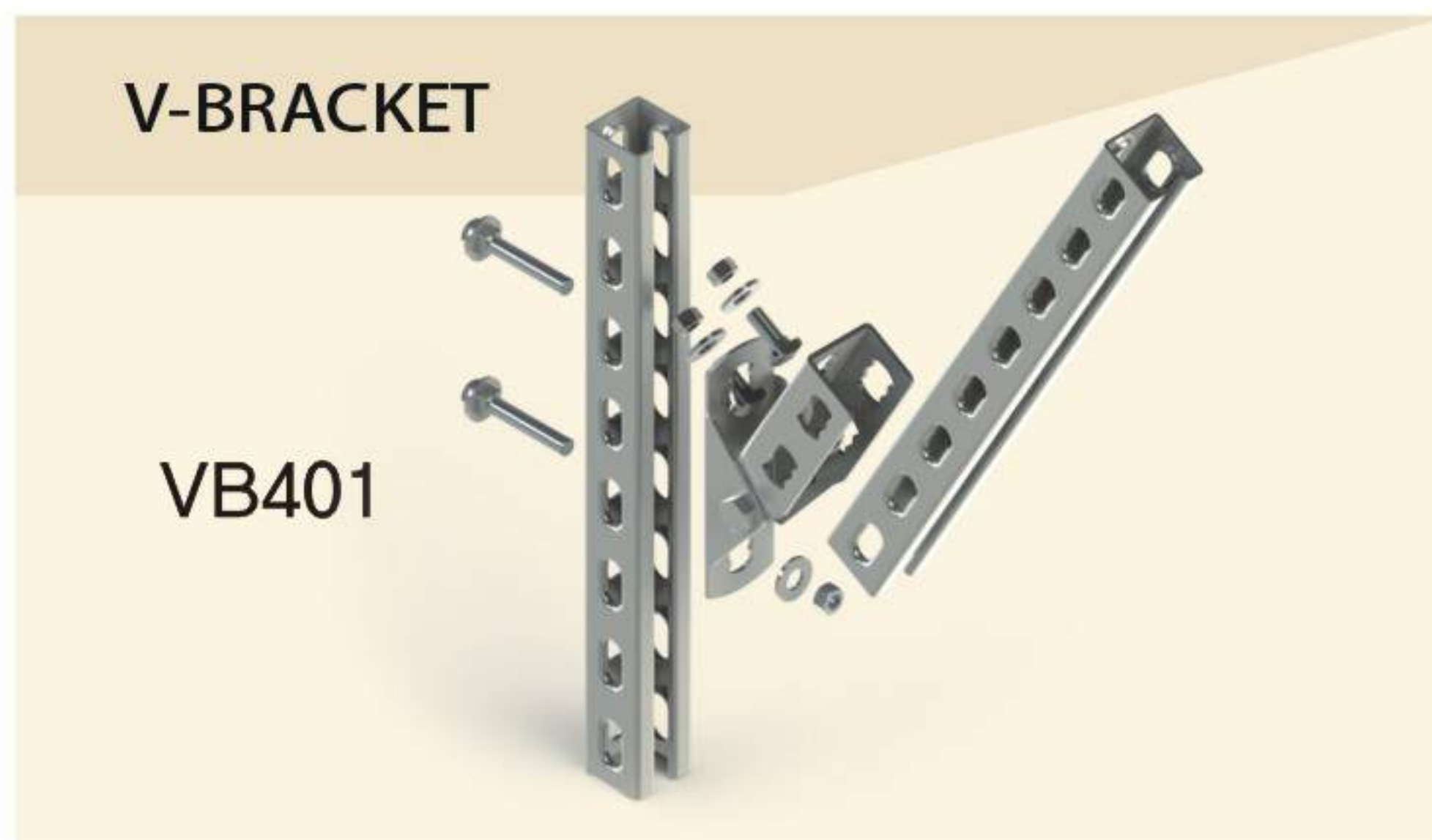
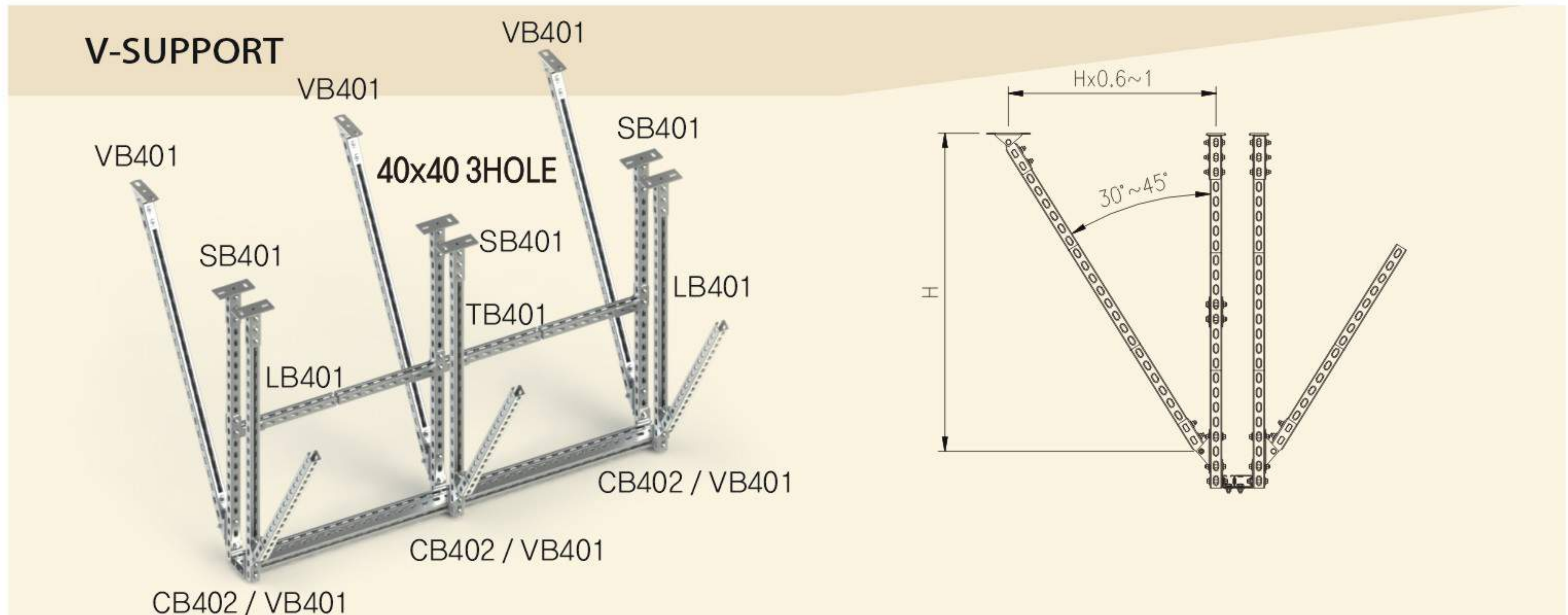
▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : T-BOLT M10X80L



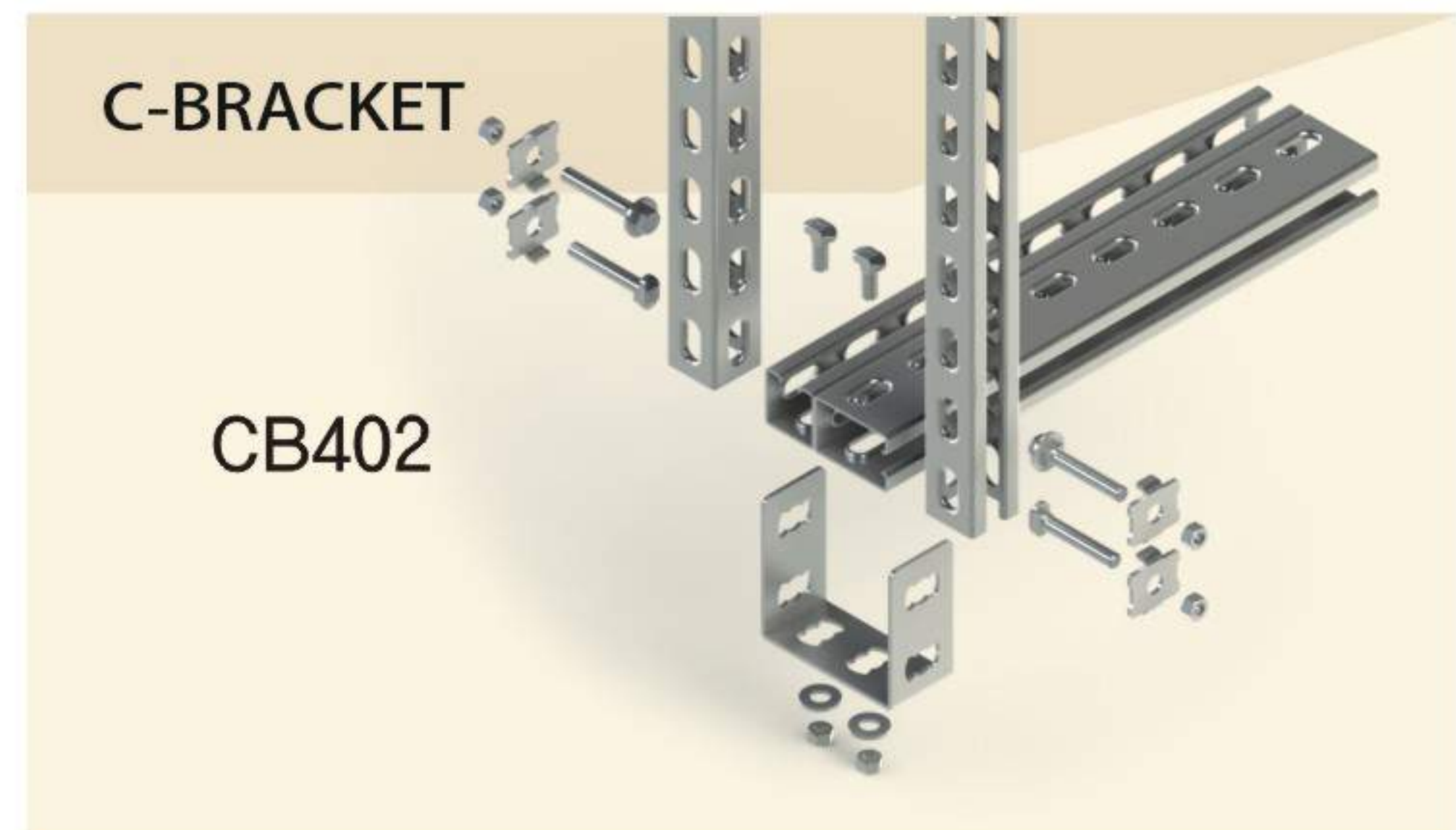
▶ 수평 : FLG-BOLT M10X80L
▶ 수직 : T-BOLT M10X80L



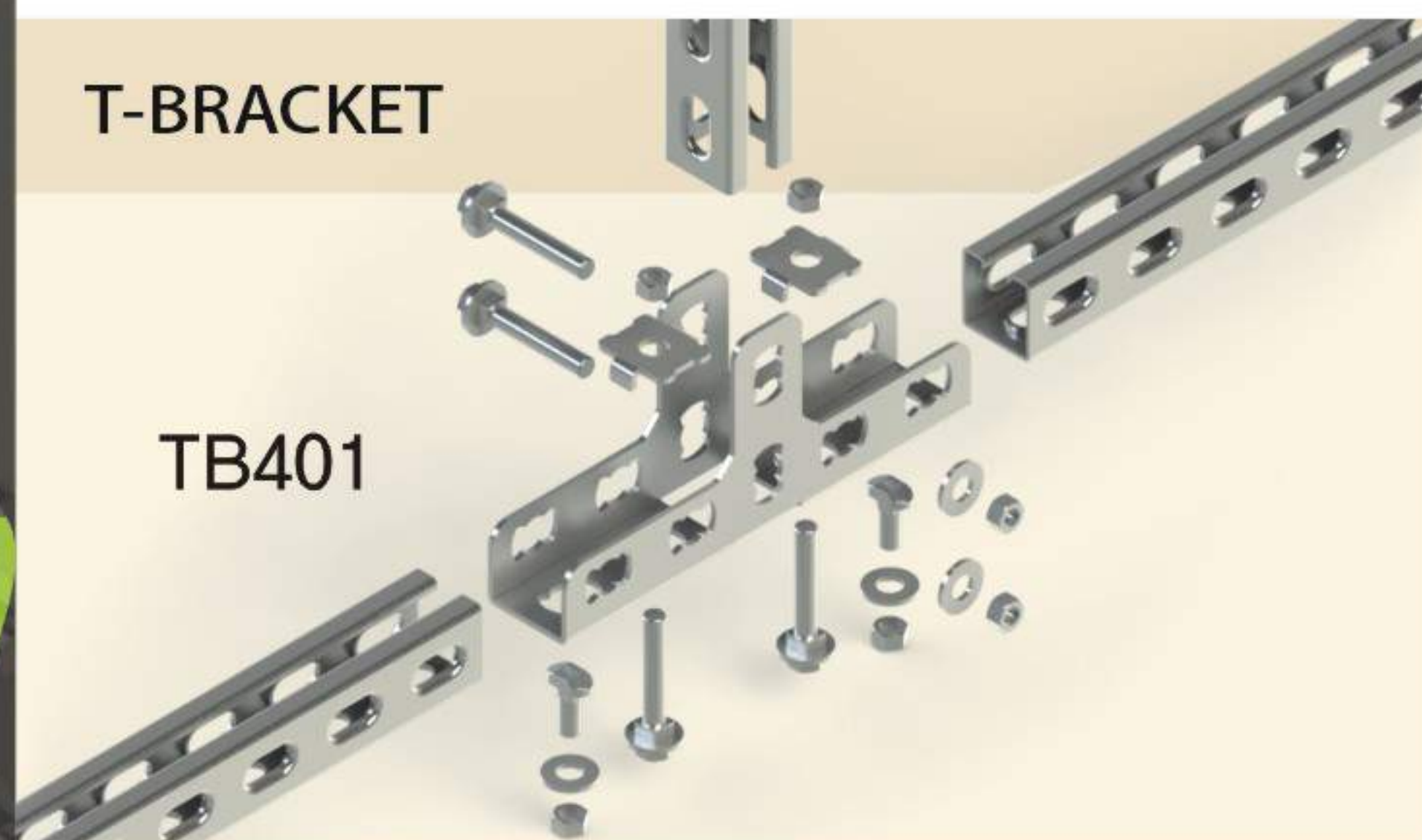
3.SUPPORT 및 BRACKET 조립



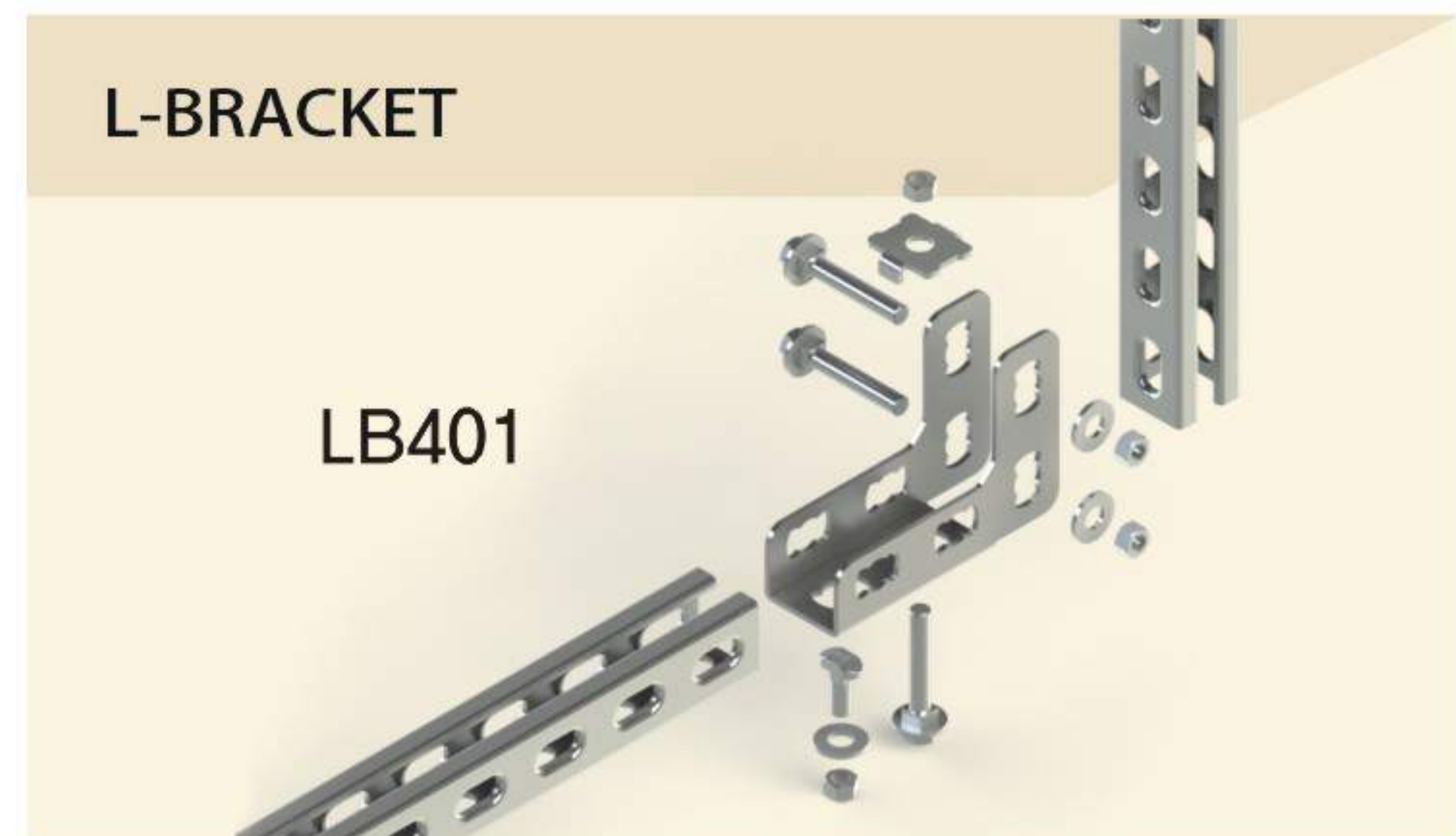
- ▶ 수평 : FLG-BOLT M10X60L
- ▶ 각도 : T-BOLT M10X28L



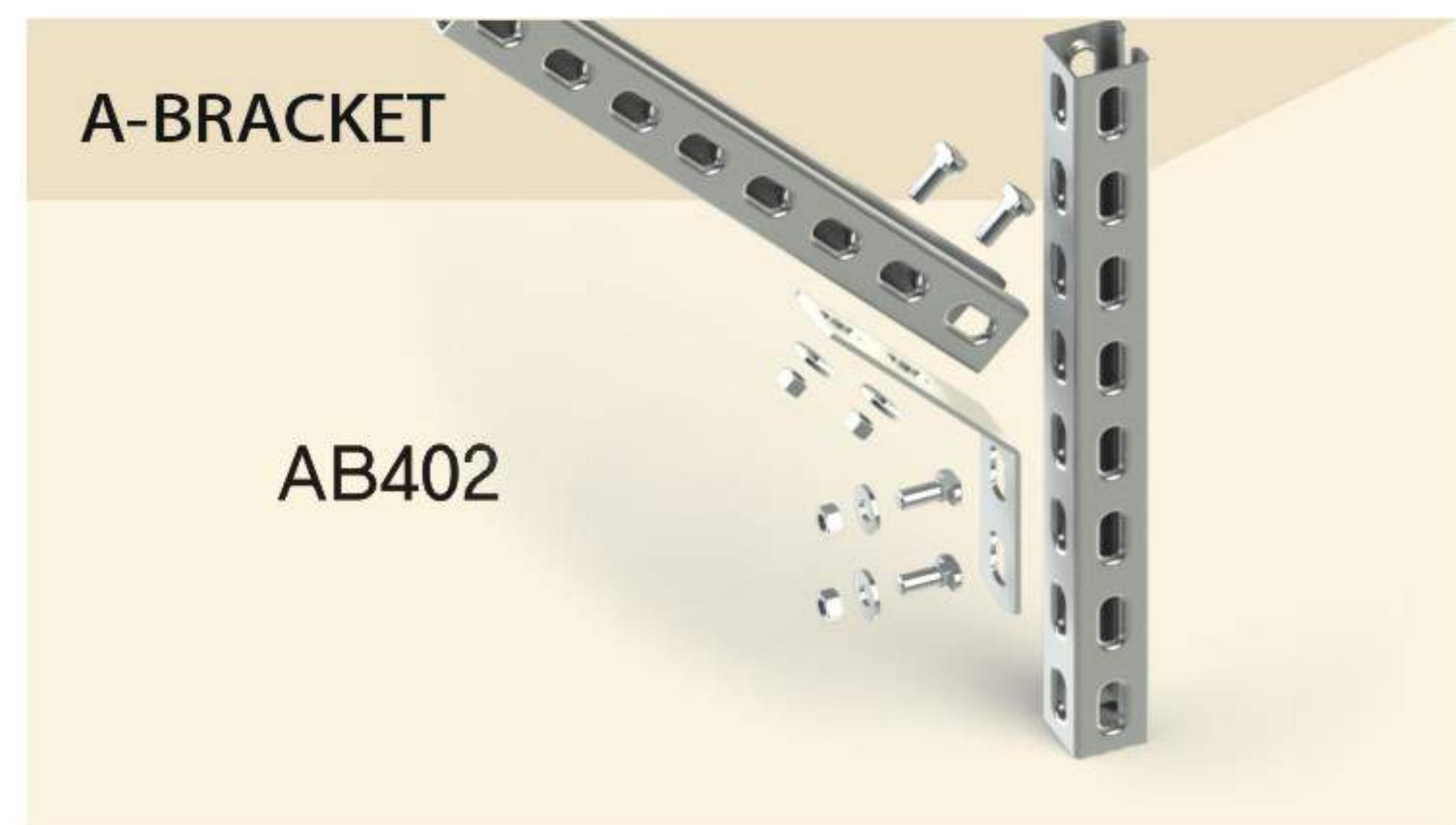
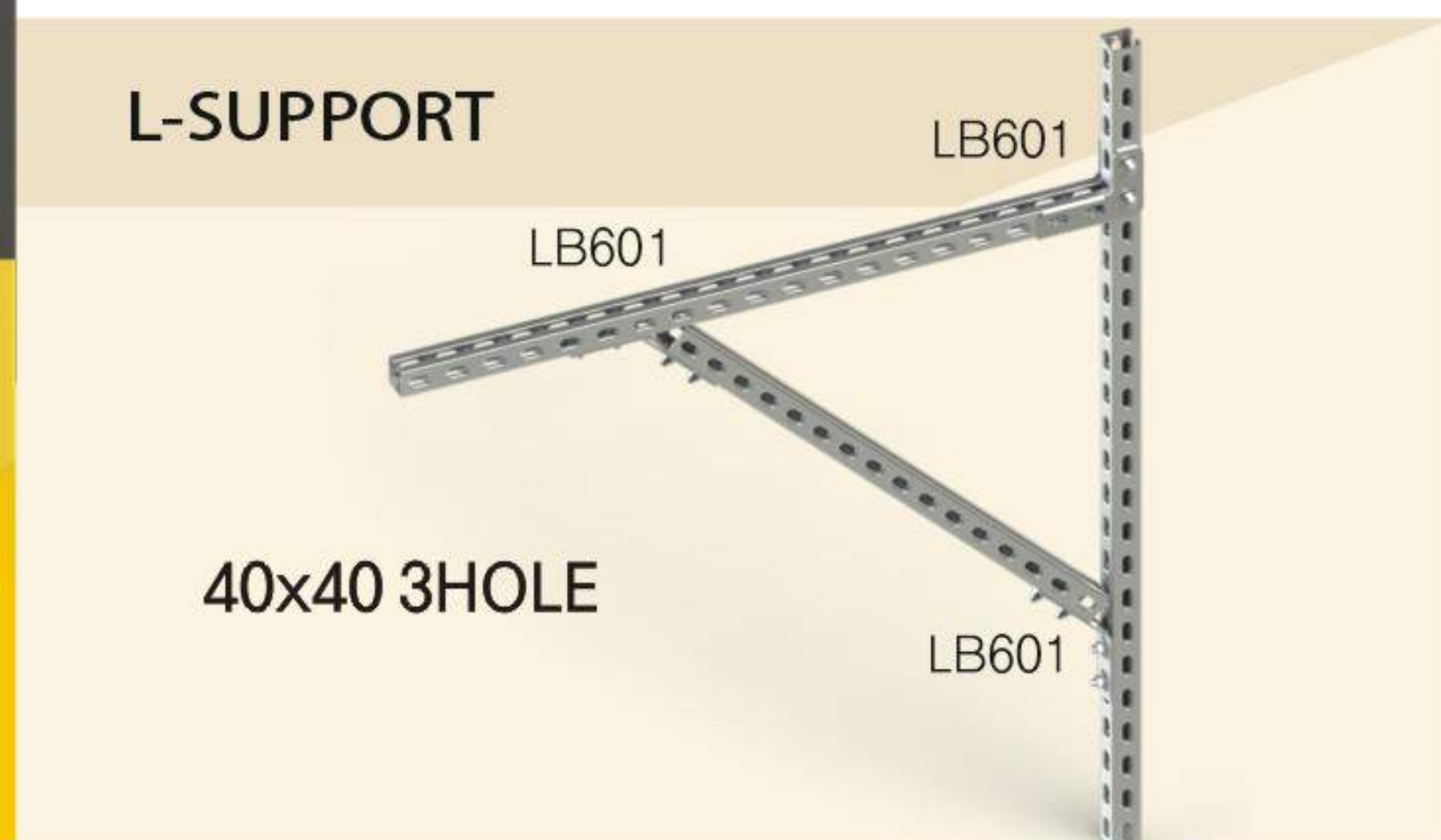
- ▶ 수평 : FLG-BOLT M10X60L, T-BOLT M10x60L
- ▶ 수직 : T-BOLT M10x28L



- ▶ 수평 : FLG-BOLT M10X60L
- ▶ 수직 : T-BOLT M10x28L or FLG-BOLT M10X60L

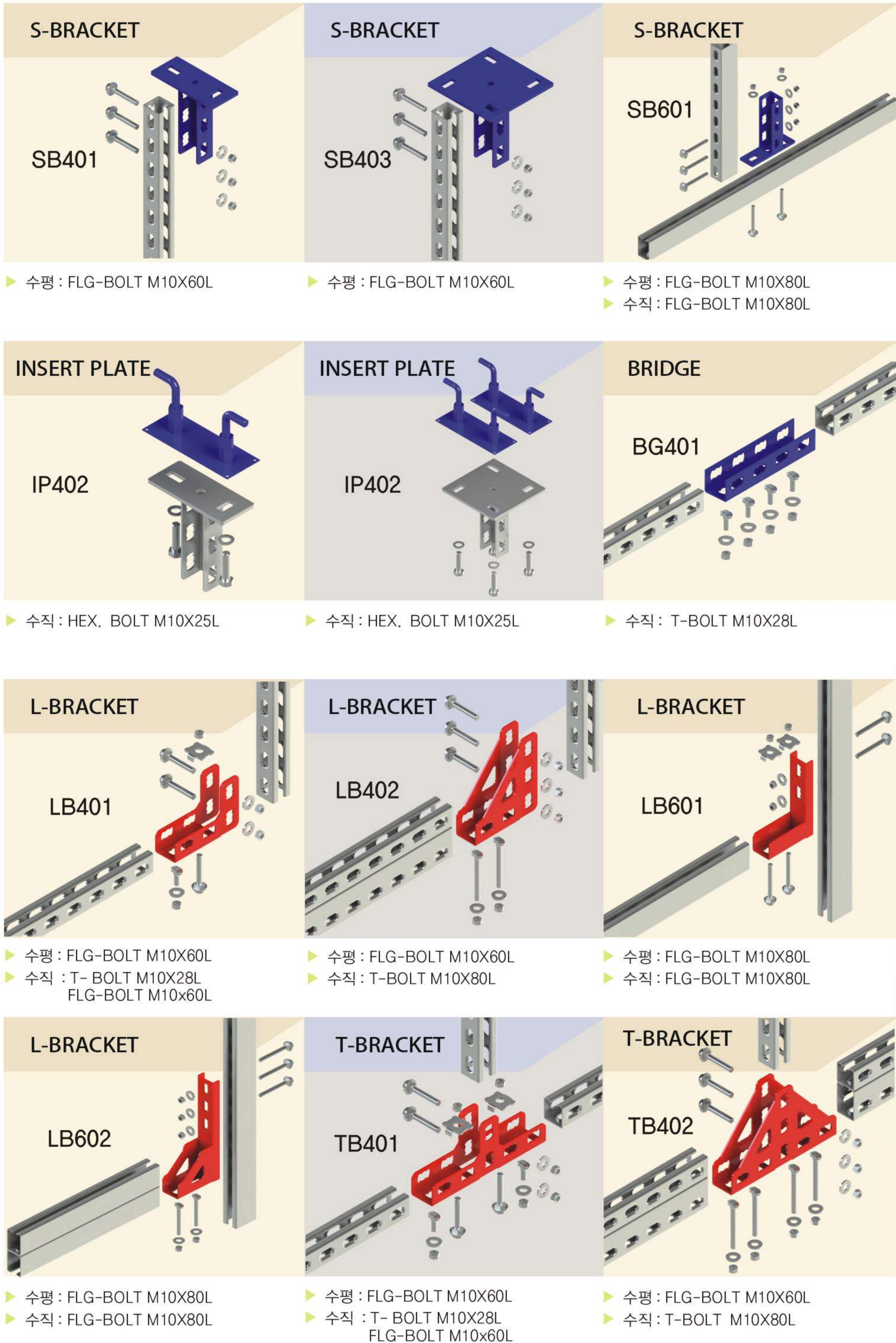


- ▶ 수평 : FLG-BOLT M10X60L
- ▶ 수직 : T-BOLT M10x28L or FLG-BOLT M10X60L

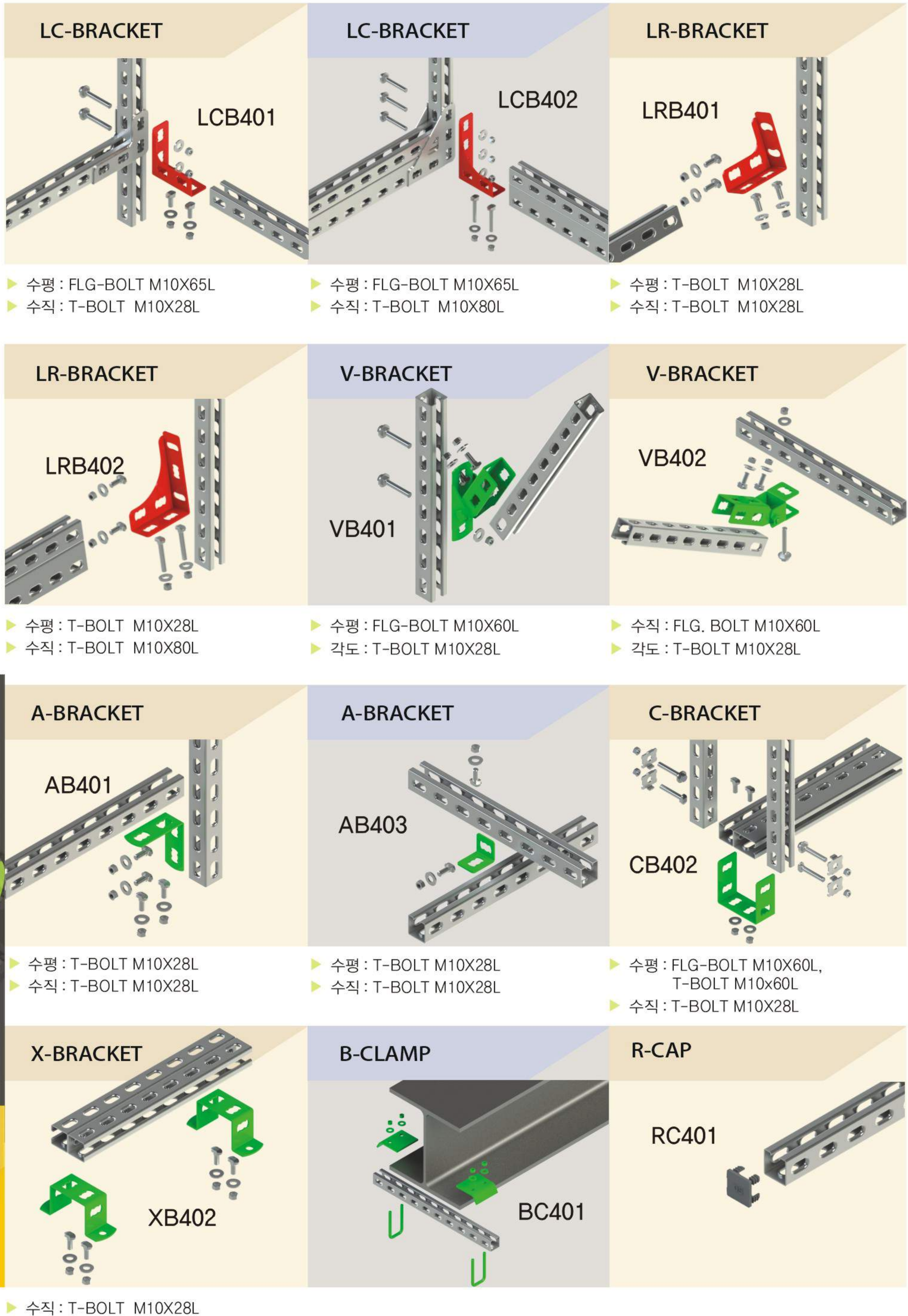


- ▶ 수평 : T-BOLT M10X28L
- ▶ 각도 : T-BOLT M10x28L

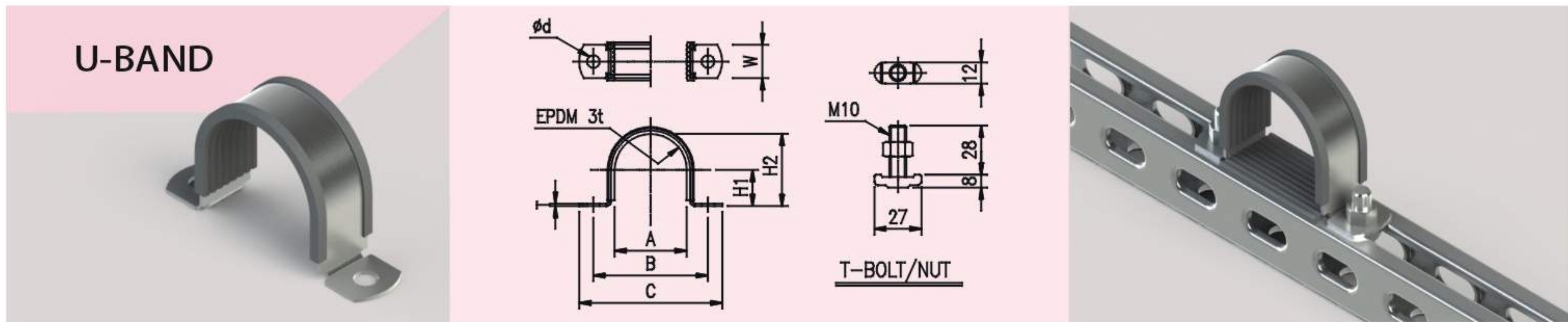
BRACKET 조립



BRACKET 조립



4. 방진 / 절연 U-BAND



U-BAND - 방진 / A-TYPE (UBA101)

품번	A	B	C	H1	H2	W	T	d
A-15	24	68	92	10.5	22.5	28	2	11
A-20	29	73	97	13	27.5	28	2	11
A-25	36	80	104	16.5	34.5	28	2	11
A-32	45	89	113	21	41.5	28	2	11
A-40	51	95	119	24	49.5	28	2	11
A-50	63	107	131	30	61.5	28	2	11
A-65	78	122	146	37.5	76.5	28	2	11
A-80	91	135	159	44	89.5	28	2	11
A-100	116	160	184	56.5	114.5	28	2	11
A-125	142	186	210	69.5	140.5	28	2	11
A-150	168	216	242	82	166	40	3	11
A-200	219	267	293	107.5	217	40	3	11
A-250	270	318	344	133	268	40	3	11
A-300	322	370	396	159	320	40	3	11

▶ 일반 강관 배관용 ▶ 1. 아연도금, EPDM 2. 압연 판재 + 용융도금, EPDM 3. 압연판재+분체도장, EPDM 단위(mm)

U-BAND - 방진 / B-TYPE (UBA102)

품번	A	B	C	H1	H2	W	T	d
B-15	22	66	90	9.5	20.5	28	2	11
B-20	27	71	95	12	25.5	28	2	11
B-25	34	78	102	15.5	32.5	28	2	11
B-32	42	86	110	19.5	40.5	28	2	11
B-40	52	96	120	24.5	50.5	28	2	11
B-50	65	109	133	31	63.5	28	2	11
B-65	77	121	145	37	75.5	28	2	11
B-80	92	136	160	44.5	90.5	28	2	11
B-100	112	156	180	54.5	110.5	28	2	11
B-125	142	186	210	69.5	140.5	28	2	11
B-150	163	211	237	79.5	160	40	3	11
B-200	228	276	302	112	225	40	3	11
B-250	253	301	327	124.5	250	40	3	11
B-300	318	366	392	157	315	40	3	11

▶ PLASTIC(DIN) 배관용 ▶ 1. 아연도금, EPDM 2. 압연 판재 + 용융도금, EPDM 3. 압연판재+분체도장, EPDM 단위(mm)

U-BAND - 방진 / C-TYPE (UBA103)

품번	A	B	C	H1	H2	W	T	d
C-80	82	126	150	39.5	80.5	28	2	11
C-100	102	146	170	49.5	100.5	28	2	11
C-125	127	171	195	62	125.5	28	2	11
C-150	163	211	237	79.5	161	40	3	11
C-200	203	251	277	99.5	201	40	3	11
C-250	253	301	327	124.5	251	40	3	11
C-300	318	366	392	157	316	40	3	11

▶ SPIRAL DUCT용 ▶ 1. 아연도금, EPDM 2. 압연 판재 + 용융도금, EPDM 3. 압연판재+분체도장, EPDM 단위(mm)

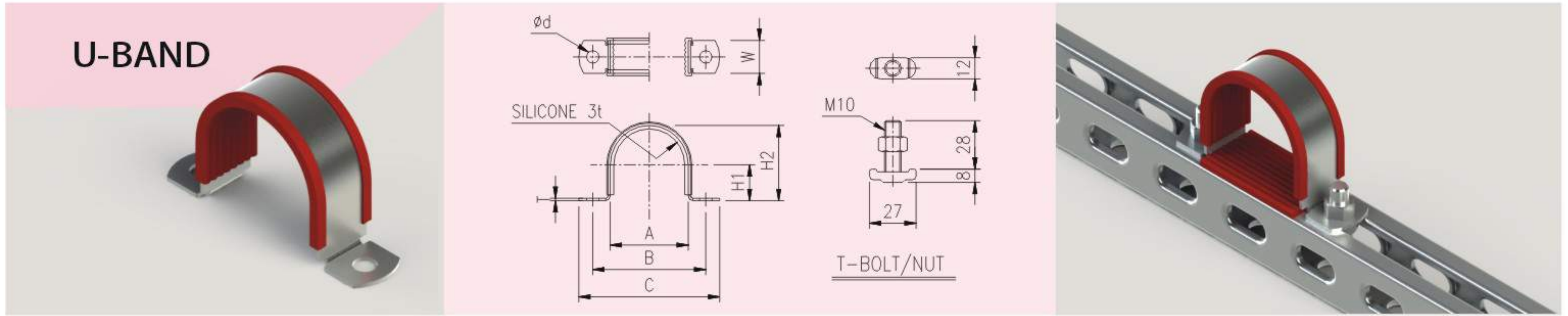
U-BAND - 방진 / D-TYPE (UBA104)

품번	A	B	C	H1	H2	W	T	d
D-15	24	68	92	10.5	22.5	28	2	11
D-20	28	73	96	12.5	26.5	28	2	11
D-25	34	78	102	15.5	32.5	28	2	11
D-32	40	84	109	18.5	38.5	28	2	11
D-40	50	94	118	23.5	48.5	28	2	11
D-50	62	106	130	29.5	60.5	28	2	11
D-65	78	122	146	37.5	76.5	28	2	11
D-80	91	135	159	44	89.5	28	2	11

▶ C-PVC 배관용 ▶ 1. 아연도금, EPDM 2. 압연 판재 + 용융도금, EPDM 3. 압연판재+분체도장, EPDM 단위(mm)



4. 방진 / 절연 U-BAND



U-BAND - 방진 / E-TYPE (UBA105)

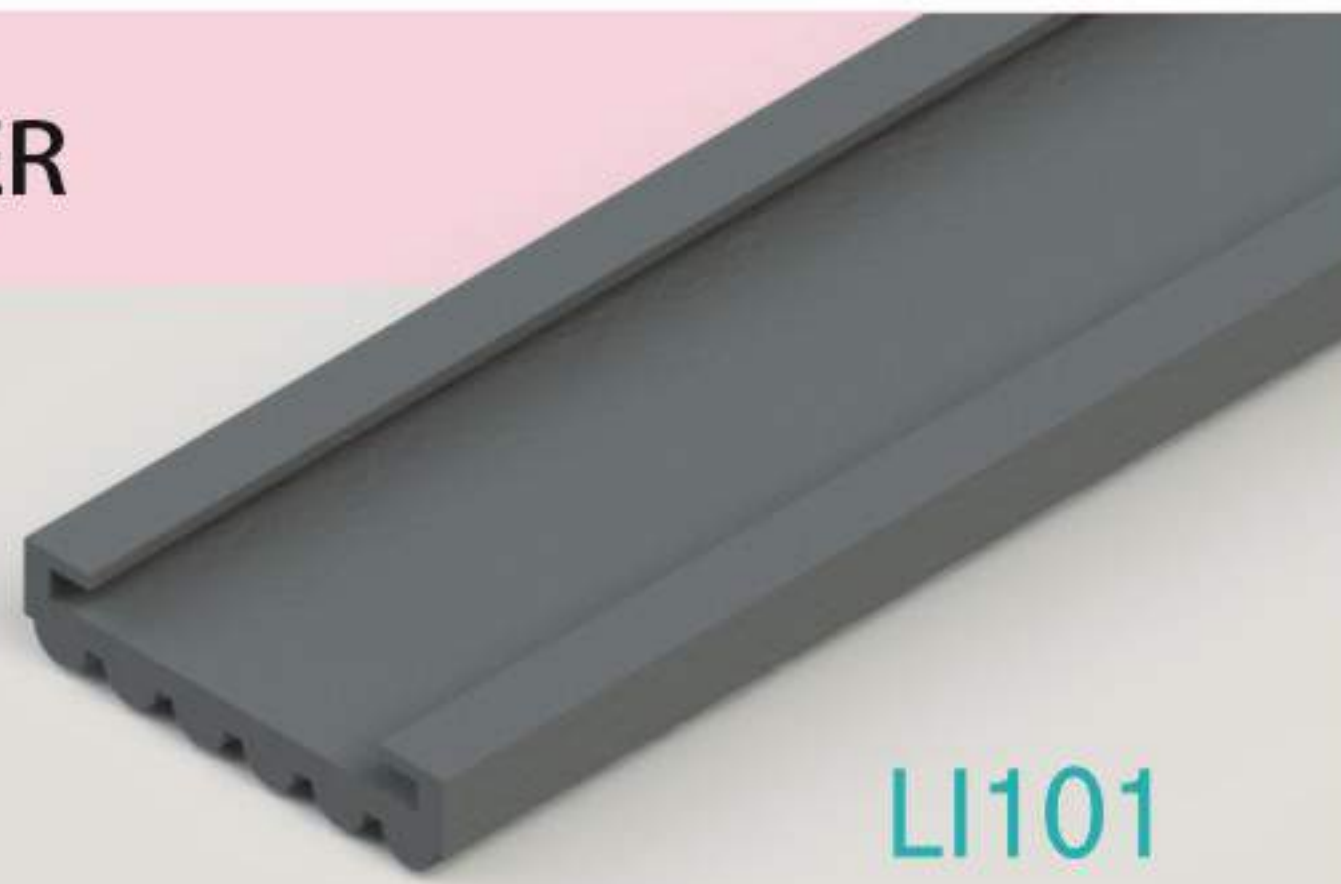
품번	A	B	C	H1	H2	W	T	d
E-20	24	68	92	10.5	22.5	28	2	11
E-25	31	75	99	14	29.5	28	2	11
E-32	37	81	105	17	35.5	28	2	11
E-40	43	87	111	20	41.5	28	2	11
E-50	55	99	103	26	53.5	28	2	11
E-65	69	113	137	33	67.5	28	2	11
E-80	81	125	149	39	79.5	28	2	11
E-100	107	151	175	52	105.5	28	2	11
E-125	132	176	200	64.5	130.5	28	2	11
E-150	159	107	233	77.5	157	40	3	11
E-200	209	257	283	107.5	207	40	3	11

▶ SUS TUBE 및 동관용

단위(mm)

▶ 1. 아연도금, SILICONE 2. 압연 판재 + 용융도금, SILICONE 3. 압연판재+분체도장, SILICONE

제진 LINER



LI101



U-BAND 내부 LINER
MAT'L : EPDM

제진 LINER

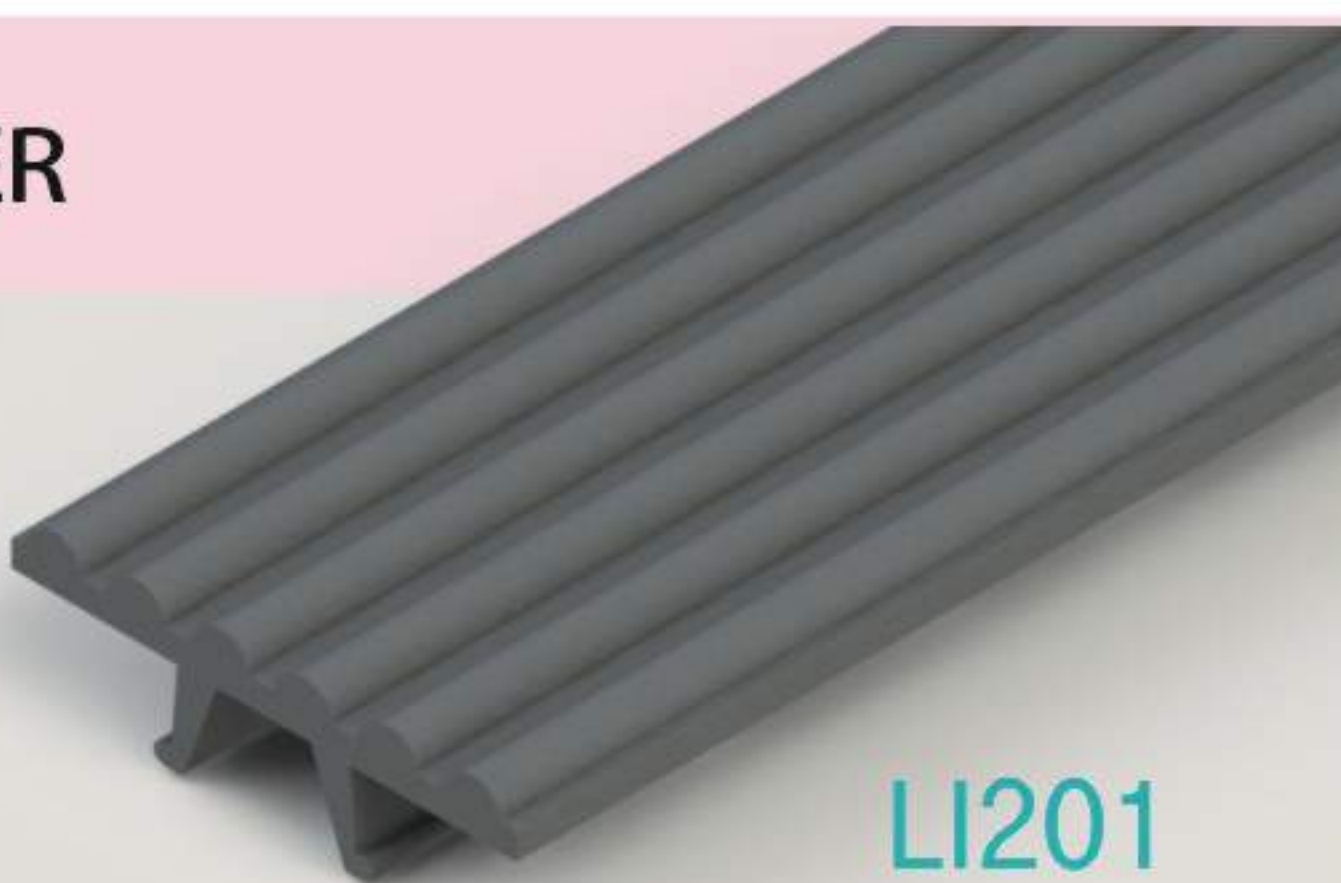


LI102



▶ U-BAND 내부 LINER
▶ MAT'L : SILICONE

제진 LINER

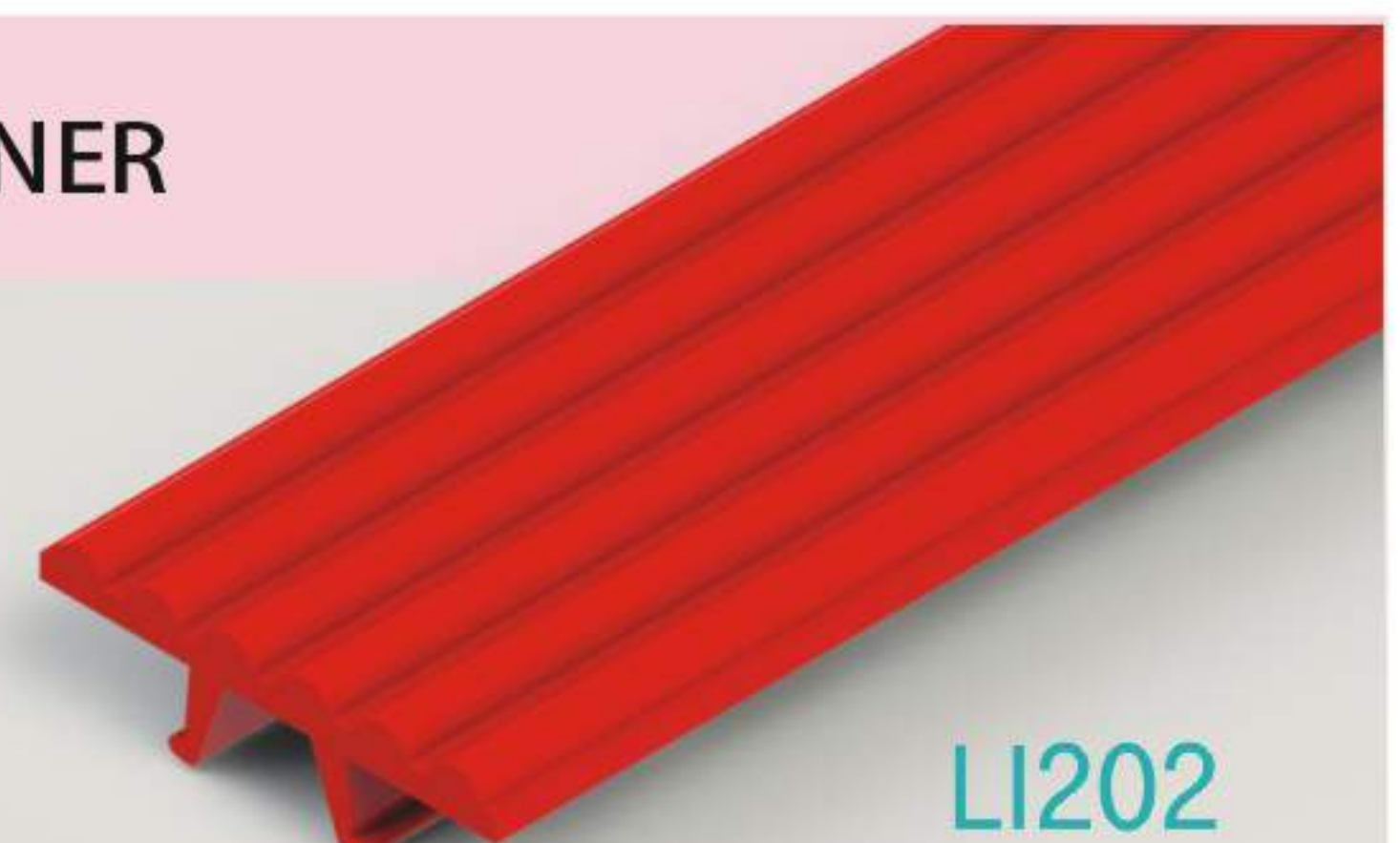


LI201



▶ U-BAND 하부 BASE LINER
▶ MAT'L : EPDM

제진 LINER

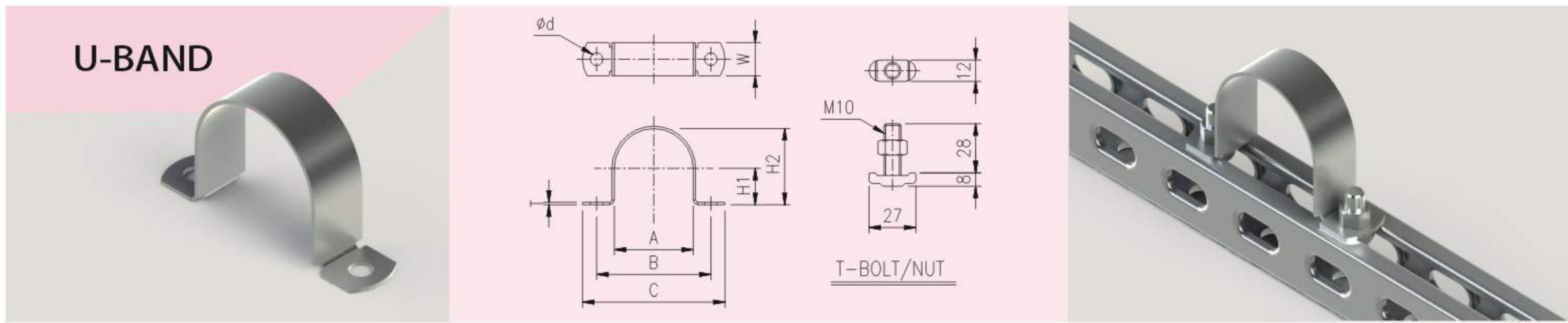


LI202



▶ U-BAND 하부 BASE LINER
▶ MAT'L : SILICONE

4. 일반 U-BAND



U-BAND - 일반 / A-TYPE (UBA201)

품번	A	B	C	H1	H2	W	T	d
A-15	24	60	84	10	22	28	2	11
A-20	29	65	89	12.5	27	28	2	11
A-25	36	72	96	16	34	28	2	11
A-32	45	81	105	20.5	41	28	2	11
A-40	51	87	111	23.5	49	28	2	11
A-50	63	99	123	29.5	61	28	2	11
A-65	78	114	138	37	76	28	2	11
A-80	91	127	151	43.5	89	28	2	11
A-100	116	152	176	56	114	28	2	11
A-125	142	178	202	69	140	28	2	11
A-150	168	208	234	81.5	165.5	40	3	11
A-200	219	259	285	107	216.5	40	3	11
A-250	270	310	336	132.5	267.5	40	3	11
A-300	322	362	388	158.5	319.5	40	3	11

▶ 일반 강관 배관용 ▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재+분체도장 단위(mm)

U-BAND - 일반 / B-TYPE (UBA202)

품번	A	B	C	H1	H2	W	T	d
B-15	22	58	82	9	20	28	2	11
B-20	27	63	87	11.5	25	28	2	11
B-25	34	70	94	15	32	28	2	11
B-32	42	78	102	19	40	28	2	11
B-40	52	88	112	24	50	28	2	11
B-50	65	101	125	30.5	63	28	2	11
B-65	77	113	137	36.5	75	28	2	11
B-80	92	128	152	44	90	28	2	11
B-100	112	148	172	54	110	28	2	11
B-125	142	178	202	69	140	28	2	11
B-150	163	203	229	79	159.5	40	3	11
B-200	228	268	294	111.5	224.5	40	3	11
B-250	253	293	319	124	249.5	40	3	11
B-300	318	358	384	156.5	314.5	40	3	11

▶ PLASTIC(DIN) 배관용 ▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재+분체도장 단위(mm)

U-BAND - 일반 / C-TYPE (UBA203)

품번	A	B	C	H1	H2	W	T	d
C-80	82	118	142	39	80	28	2	11
C-100	102	138	162	49	100	28	2	11
C-125	127	163	187	61.5	125	28	2	11
C-150	163	203	229	79	160.5	40	3	11
C-200	203	243	269	99	200.5	40	3	11
C-250	253	293	319	124	250.5	40	3	11
C-300	318	358	384	156.5	315.5	40	3	11

▶ SPIRAL DUCT용 ▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재+분체도장 단위(mm)

U-BAND - 일반 / D-TYPE (UBA204)

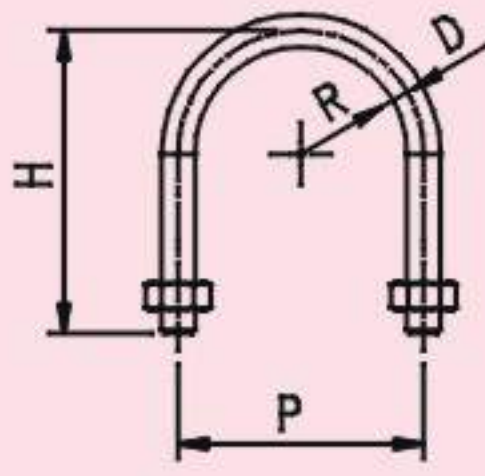
품번	A	B	C	H1	H2	W	T	d
D-15	24	60	84	10	22	28	2	11
D-20	28	65	88	12	26	28	2	11
D-25	34	70	94	15	32	28	2	11
D-32	40	76	101	18	38	28	2	11
D-40	50	86	110	23	48	28	2	11
D-50	62	98	122	29	60	28	2	11
D-65	78	114	138	37	76	28	2	11
D-80	91	127	151	43.5	89	28	2	11
D-100	116	152	176	56	114	28	2	11
D-125	142	178	202	69	140	28	2	11
D-150	168	208	234	81.5	165.5	40	3	11

▶ C-PVC 배관용 ▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재+분체도장 단위(mm)



4. U-BOLT

UBO101



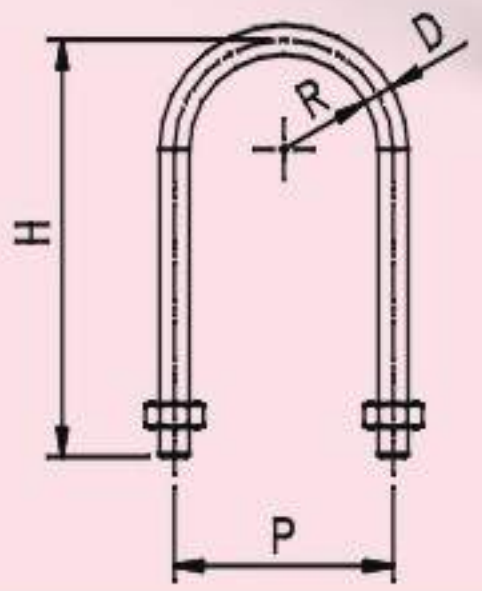
U-BOLT- 일반 SHORT (UBO101)

품번	R	D	H	P
15A	12	10	39	34
20A	15	10	45	40
25A	18	10	52	46
32A	23	10	60	56
40A	26	10	66	62
50A	32	10	78	74
65A	40	10	98	92
80A	46	10	110	102
100A	59	12	141	130
125A	72	12	167	156
150A	85	12	192	182
200A	111	12	249	234
250A	137	12	300	286
300A	163	12	357	338

▶ 1. 아연도금 2. 용융도금

단위(mm)

UBO102



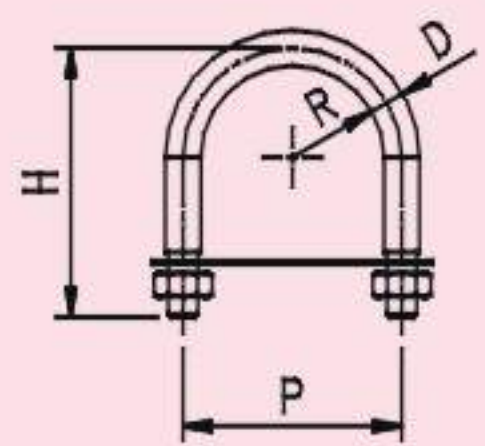
U-BOLT- 일반 LONG (UBO102)

품번	R	D	H		P
			SC-40x40	SC-40x60	
15A	12	10	79	99	34
20A	15	10	85	105	40
25A	18	10	92	112	46
32A	23	10	100	120	56
40A	26	10	106	126	62
50A	32	10	118	138	74
65A	40	10	138	158	92
80A	46	10	150	170	102
100A	59	12	181	201	130
125A	72	12	207	227	156
150A	85	12	232	252	182
200A	111	12	289	300	234
250A	137	12	340	360	286
300A	163	12	397	417	338

▶ 1. 아연도금 2. 용융도금

단위(mm)

UBO201



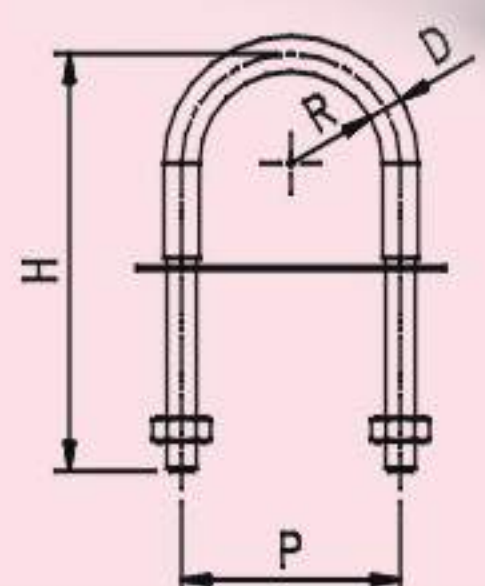
U-BOLT- 절연 SHORT (UBO201)

품번	R	D	H	P
15A	12	10	39	34
20A	15	10	45	40
25A	18	10	52	46
32A	23	10	60	56
40A	26	10	66	62
50A	32	10	78	74
65A	40	10	98	92
80A	46	10	110	102
100A	59	12	141	130
125A	72	12	167	156
150A	85	12	192	182
200A	111	12	249	234
250A	137	12	300	286
300A	163	12	357	338

▶ 1. 아연도금 2. 용융도금

단위(mm)

UBO202



U-BOLT- 절연 LONG (UBO202)

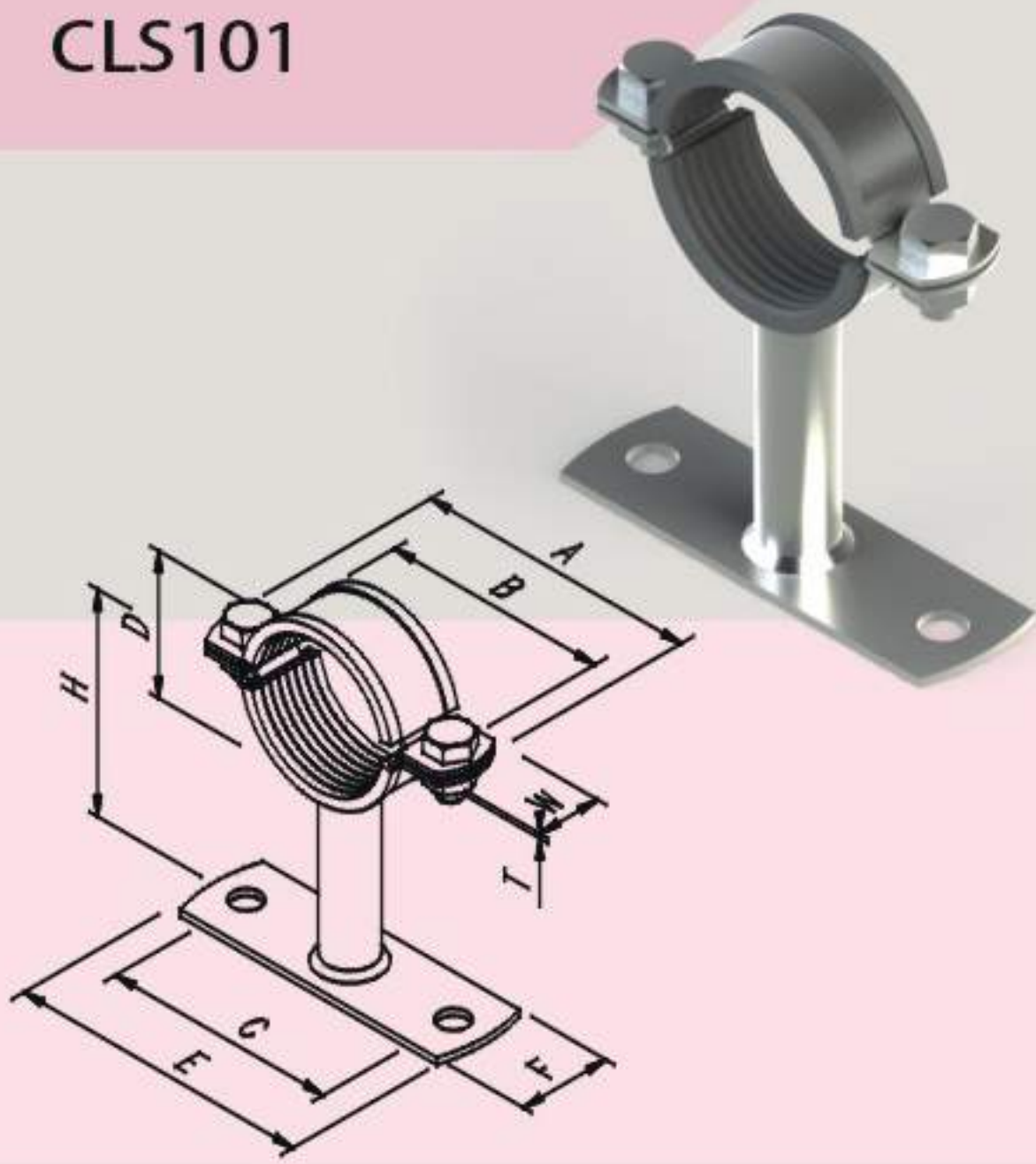
품번	R	D	H		P
			SC-40x40	SC-40x60	
15A	12	10	79	99	34
20A	15	10	85	105	40
25A	18	10	92	112	46
32A	23	10	100	120	56
40A	26	10	106	126	62
50A	32	10	118	138	74
65A	40	10	138	158	92
80A	46	10	150	170	102
100A	59	12	181	201	130
125A	72	12	207	227	156
150A	85	12	232	252	182
200A	111	12	289	300	234
250A	137	12	340	360	286
300A	163	12	397	417	338

▶ 1. 아연도금 2. 용융도금

단위(mm)

5. CLAMP SHOE

CLS101

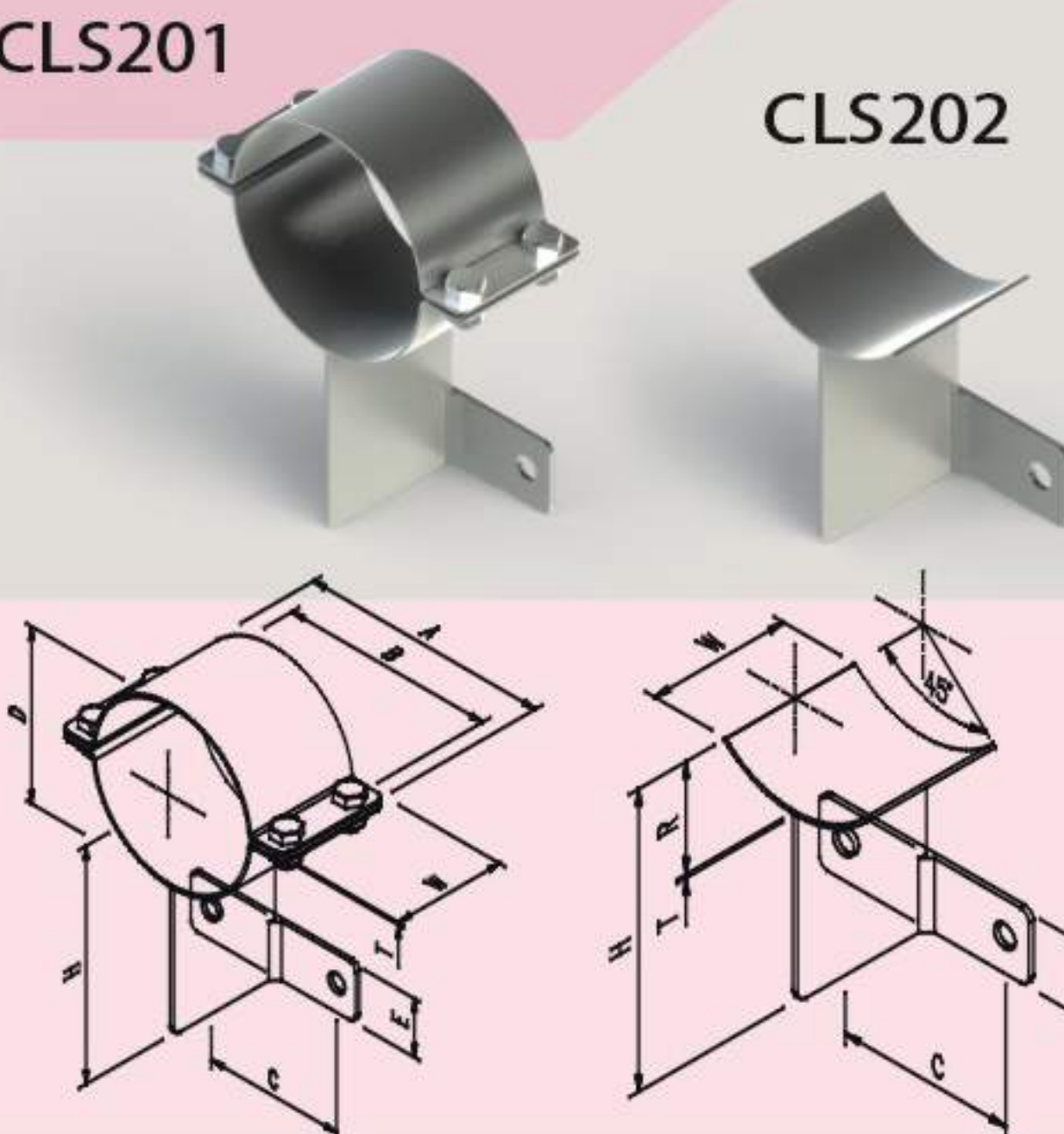


CLAMP SHOE - 일반 (CLS101)

품번	A	B	C	D	E	F	H	W	T
15A	92	68	70	24	100	40	70	28	2
20A	97	73	70	29	100	40	75	28	2
25A	104	80	70	36	100	40	80	28	2
32A	113	89	70	45	100	40	85	28	2
40A	119	95	70	51	100	40	85	28	2
50A	131	107	70	63	100	40	90	28	2
65A	146	122	70	78	100	40	100	28	2
80A	159	135	70	91	100	40	105	28	2
100A	184	160	70	116	100	40	120	28	2
125A	210	186	70	142	100	40	130	28	2
150A	242	216	120	168	150	40	145	40	3
200A	293	267	120	219	150	40	170	40	3
250A	344	318	120	270	150	40	195	40	3
300A	396	370	120	322	150	40	220	40	3

▶ 1. 아연도금, EPDM 2. 압연판재 + 용융도금, EPDM 3. 압연판재 + 분체도장, EPDM 단위(mm)

CLS201

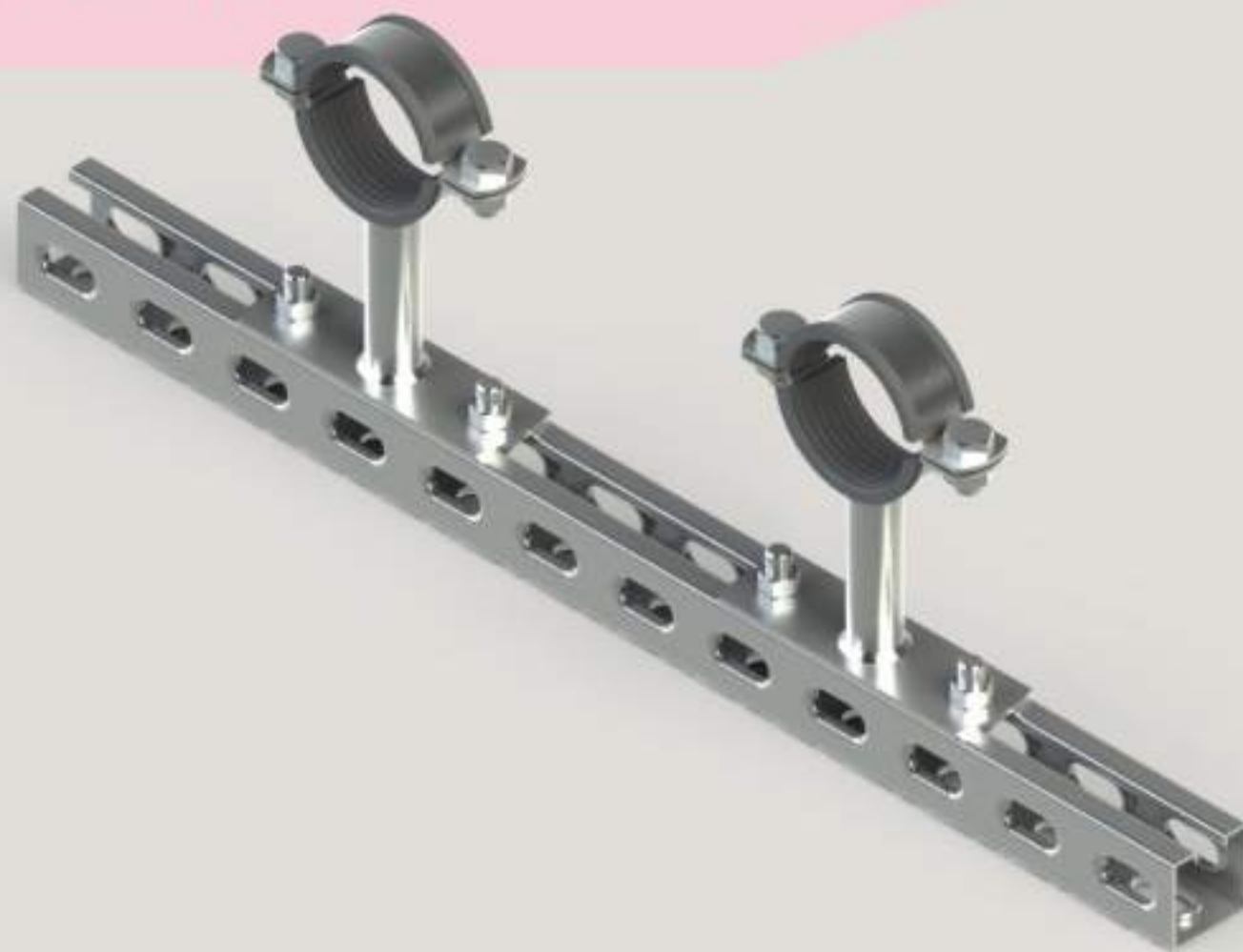


CLAMP SHOE - ANCHOR (CLS201 / CLS202)

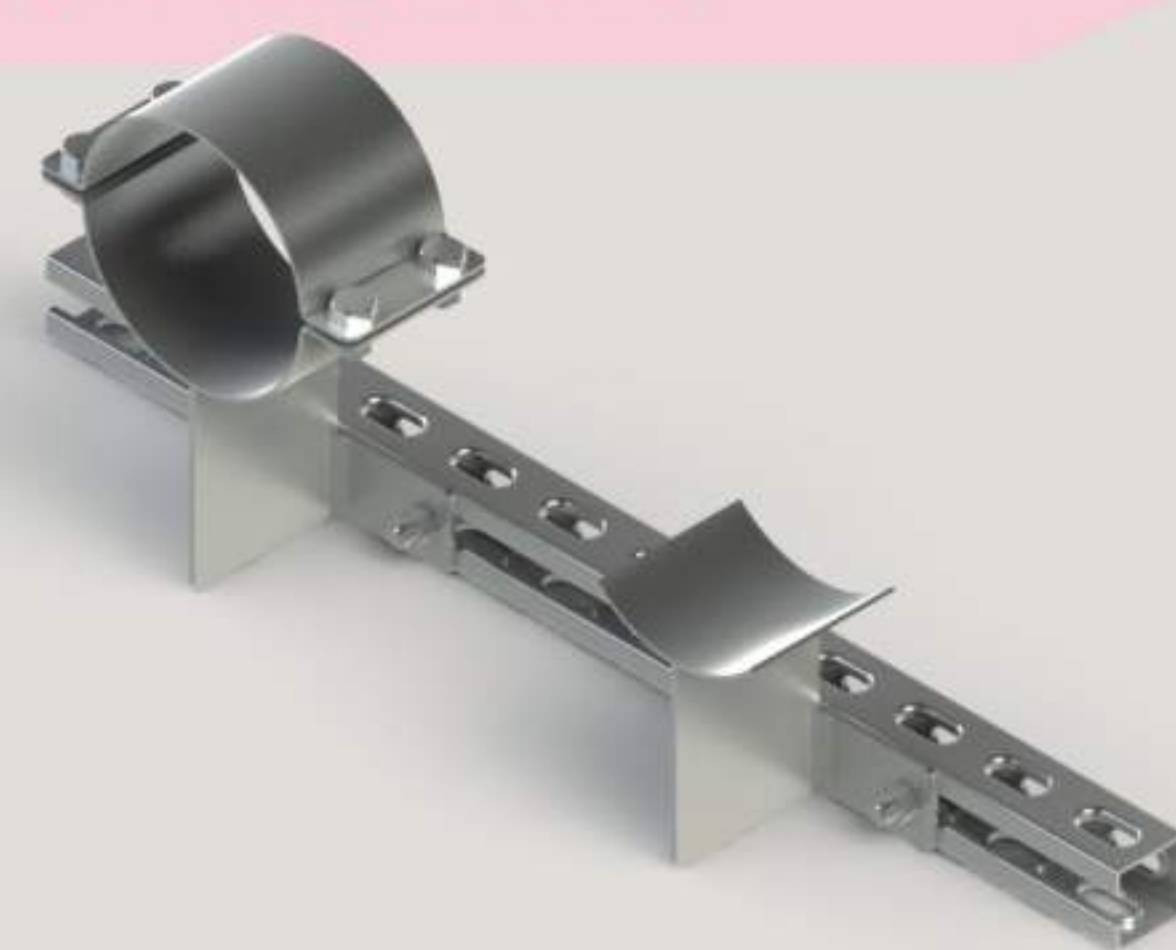
품번	A	B	C	D	E	H	R	W	T
15A	84	60	100	24	40	70	14	80	2
20A	89	65	100	29	40	75	17	80	2
25A	96	72	100	36	40	80	20	80	2
32A	105	81	100	45	40	85	22.5	80	2
40A	111	87	100	51	40	85	27.5	80	2
50A	123	99	100	63	40	90	33.5	80	2
65A	138	114	100	78	40	100	41.5	80	2
80A	151	127	100	91	40	105	48	80	2
100A	176	152	100	116	40	120	60.5	80	2
125A	202	178	100	142	40	130	73	80	2
150A	234	208	150	168	40	145	86	120	3
200A	285	259	150	219	40	170	111.5	120	3
250A	336	310	150	270	40	195	137	120	3
300A	388	362	150	322	40	220	162.5	120	3

▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재 + 분체도장 단위(mm)

CLAMP SHOE 일반 설치



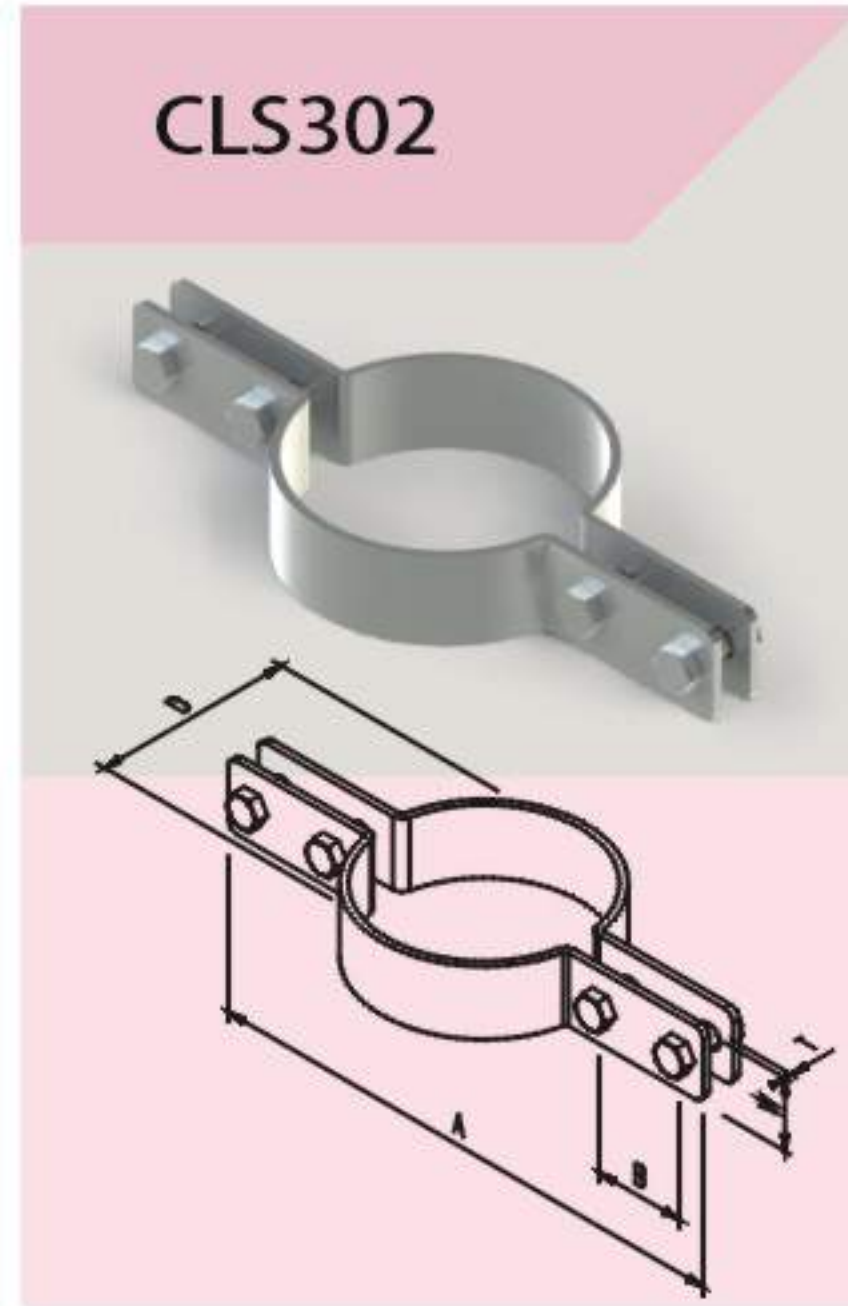
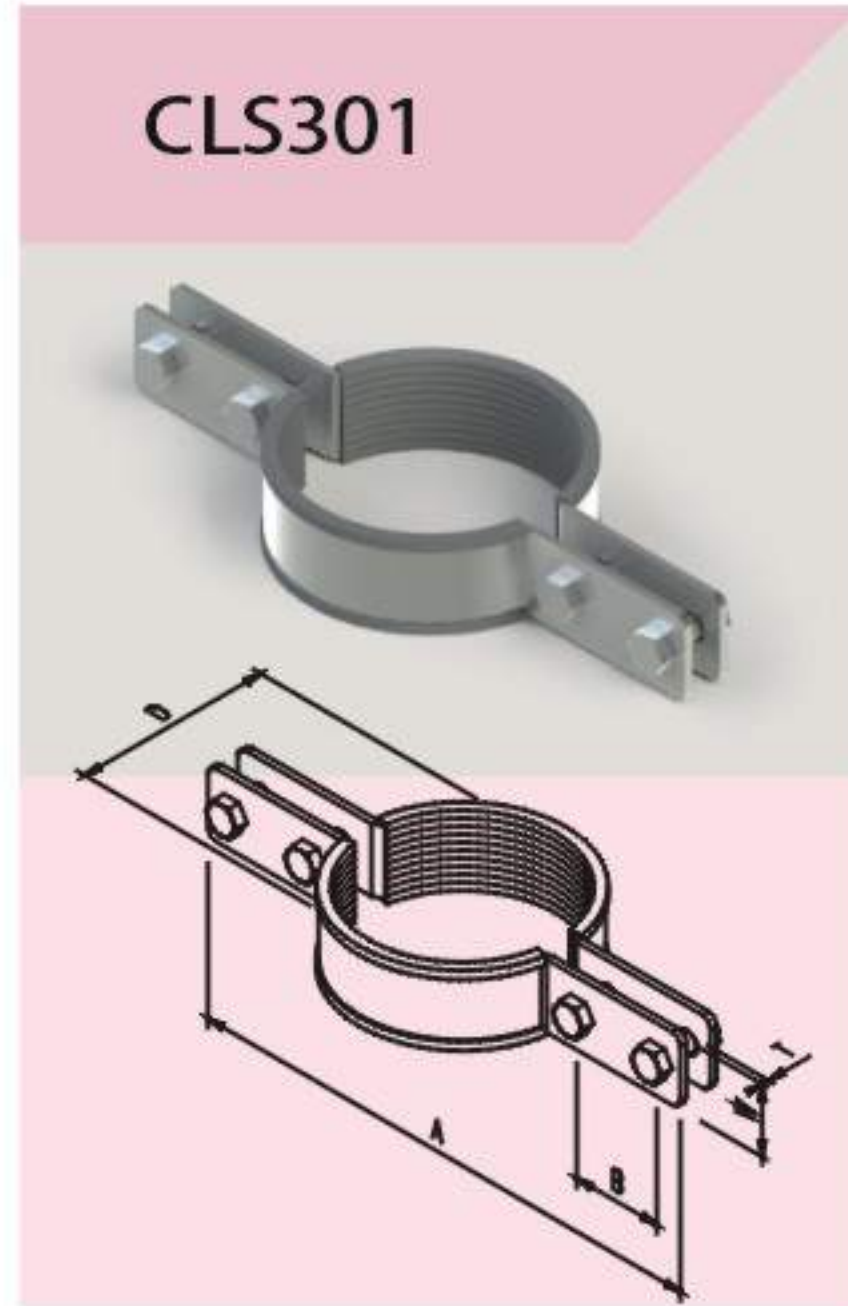
CLAMP SHOE ANCHOR 설치



syners

CLAMP SHOE

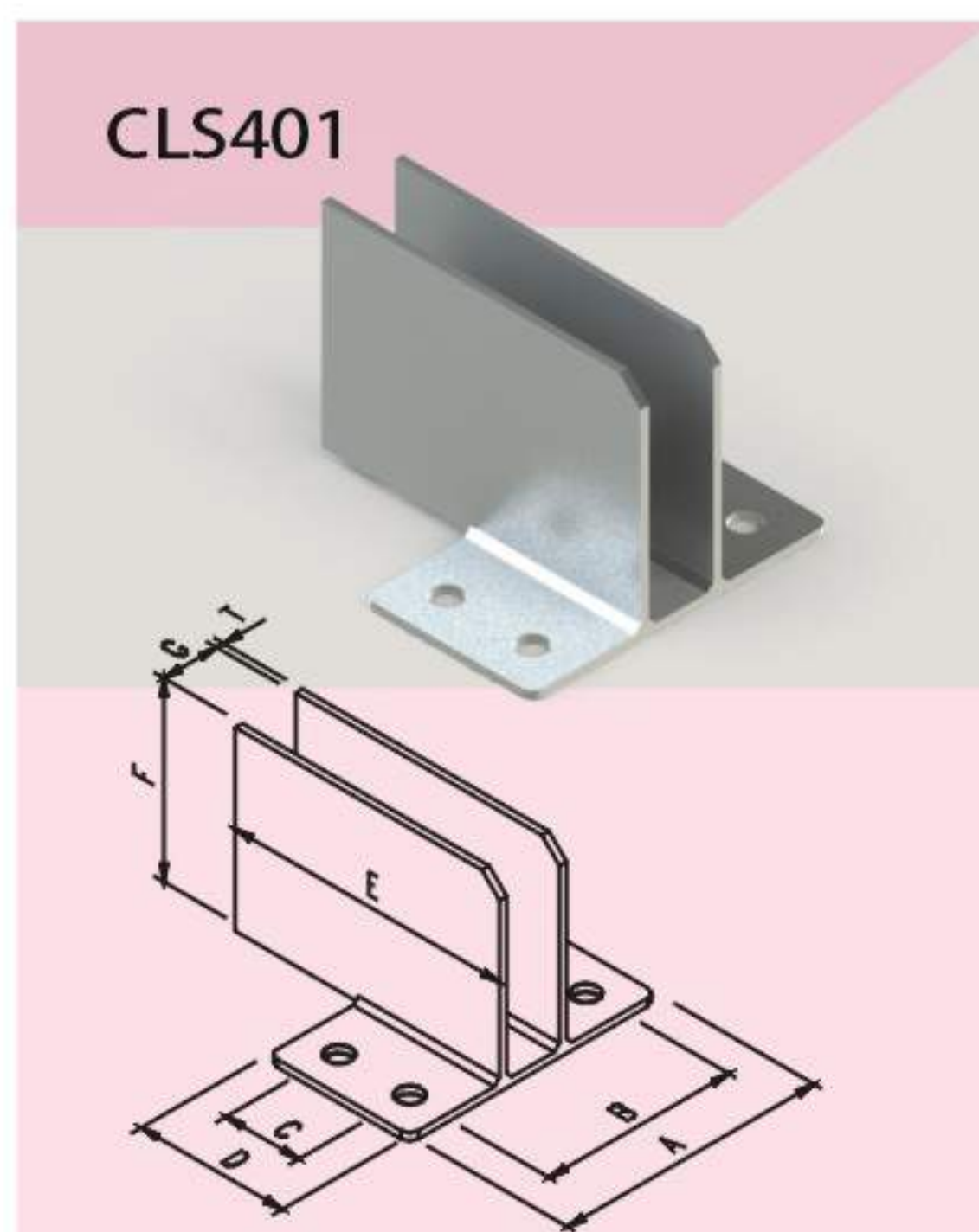
5. CLAMP SHOE



CLAMP SHOE - 임상 (CLS301 / CLS302)

품번	A	B	D	W	T
15A	170	40	24	40	2
20A	175	40	29	40	2
25A	180	40	36	40	2
32A	190	40	45	40	2
40A	195	40	51	40	2
50A	210	40	63	40	2
65A	225	40	78	40	2
80A	240	40	91	40	2
100A	260	40	116	40	2
125A	290	40	142	40	2
150A	310	60	168	60	3
200A	365	60	219	60	3
250A	415	60	270	60	3
300A	465	60	322	60	3

- ▶ 1. 아연도금, SILICONE 2. 압연판재 + 용융도금, SILICONE 3. 압연판재 + 분체도장, SILICONE 단위(mm)

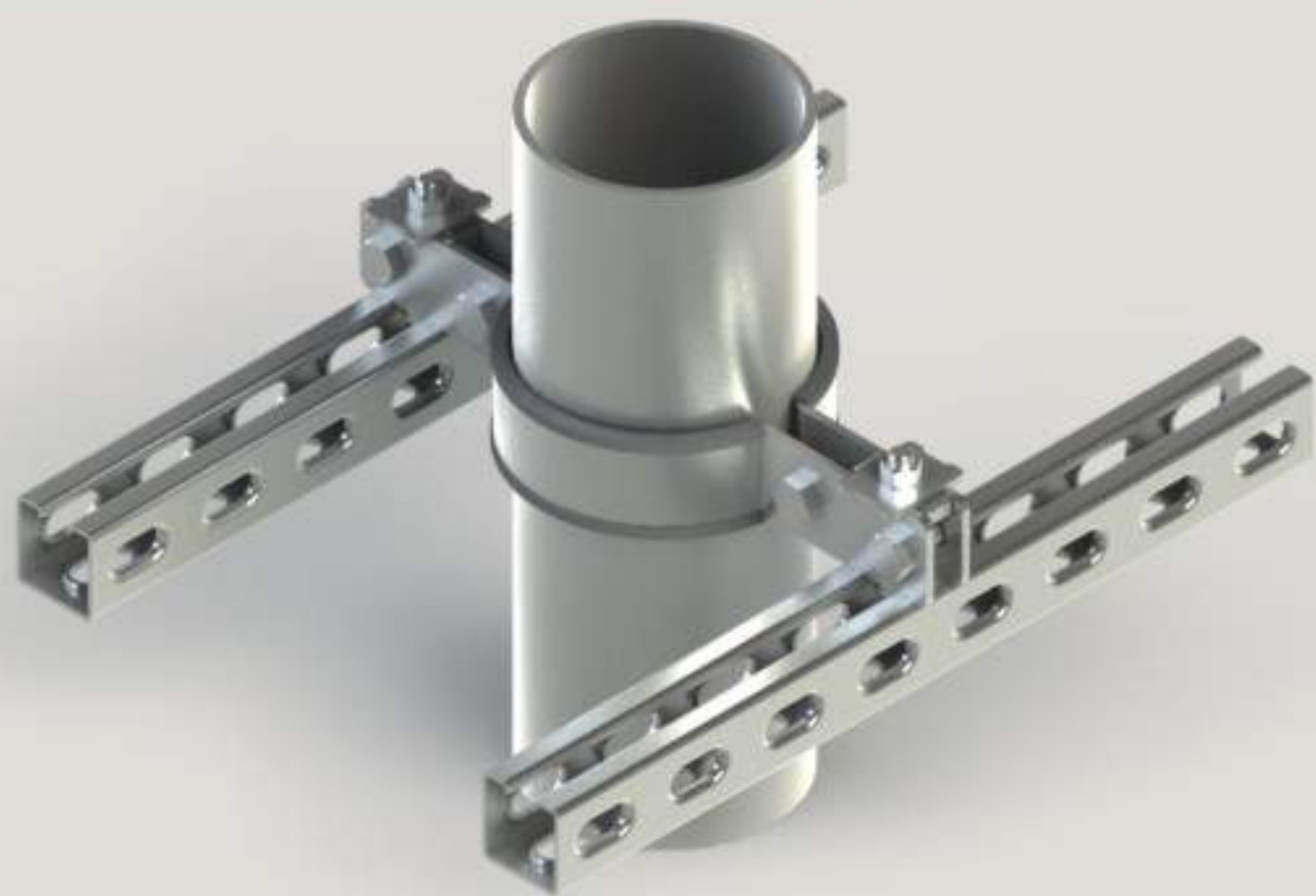


CLAMP SHOE - 임상 대구경용 (CLS401)

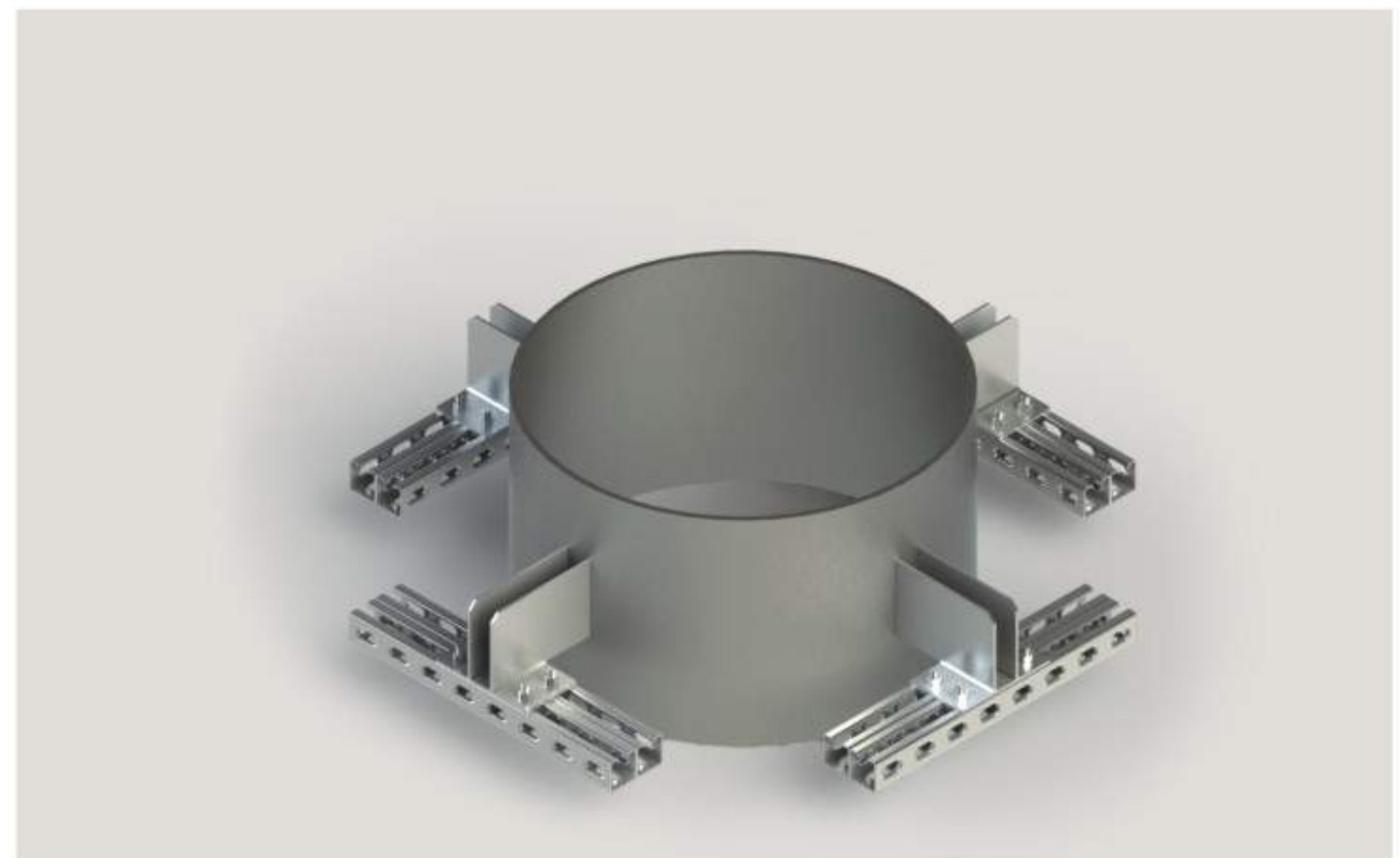
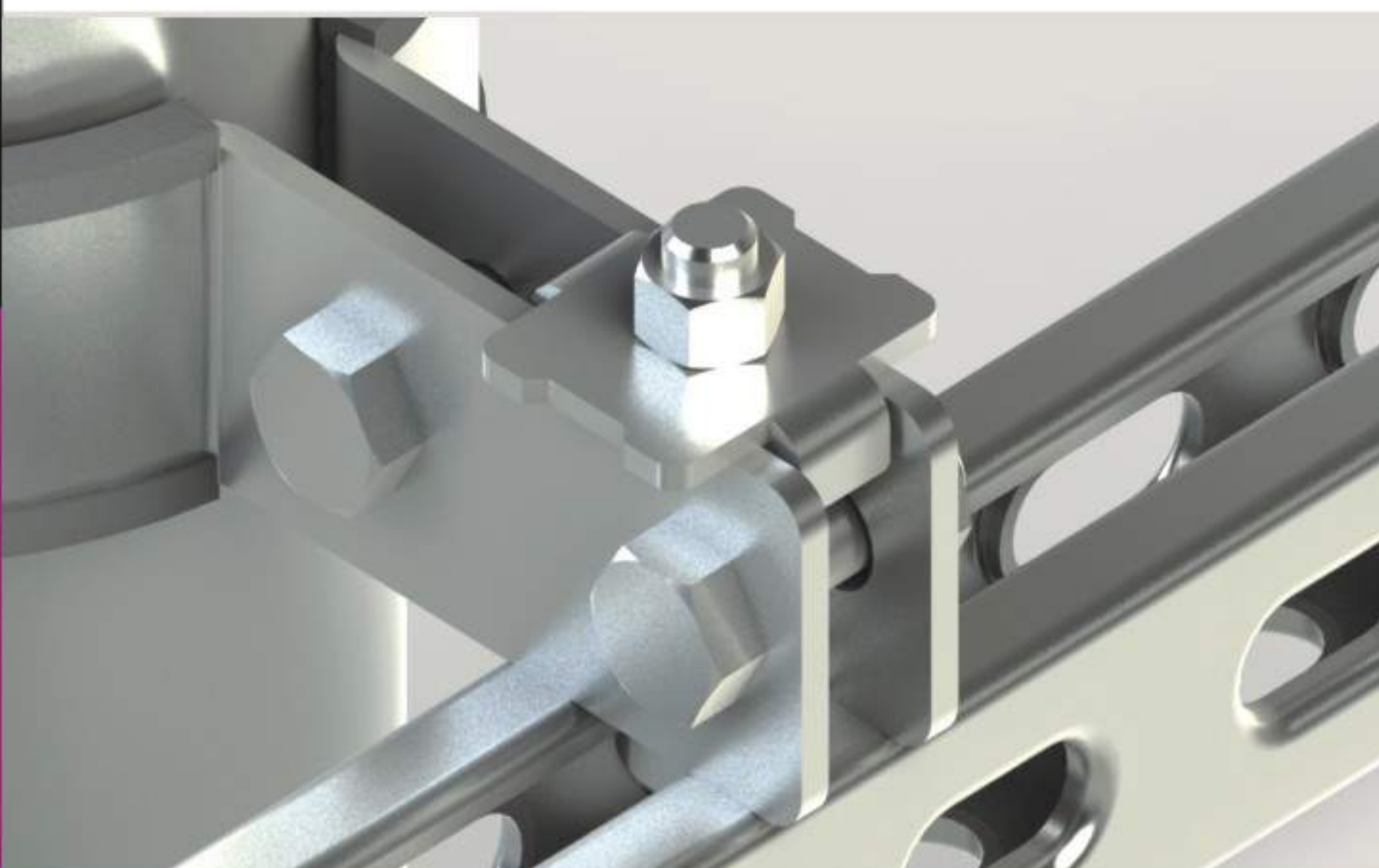
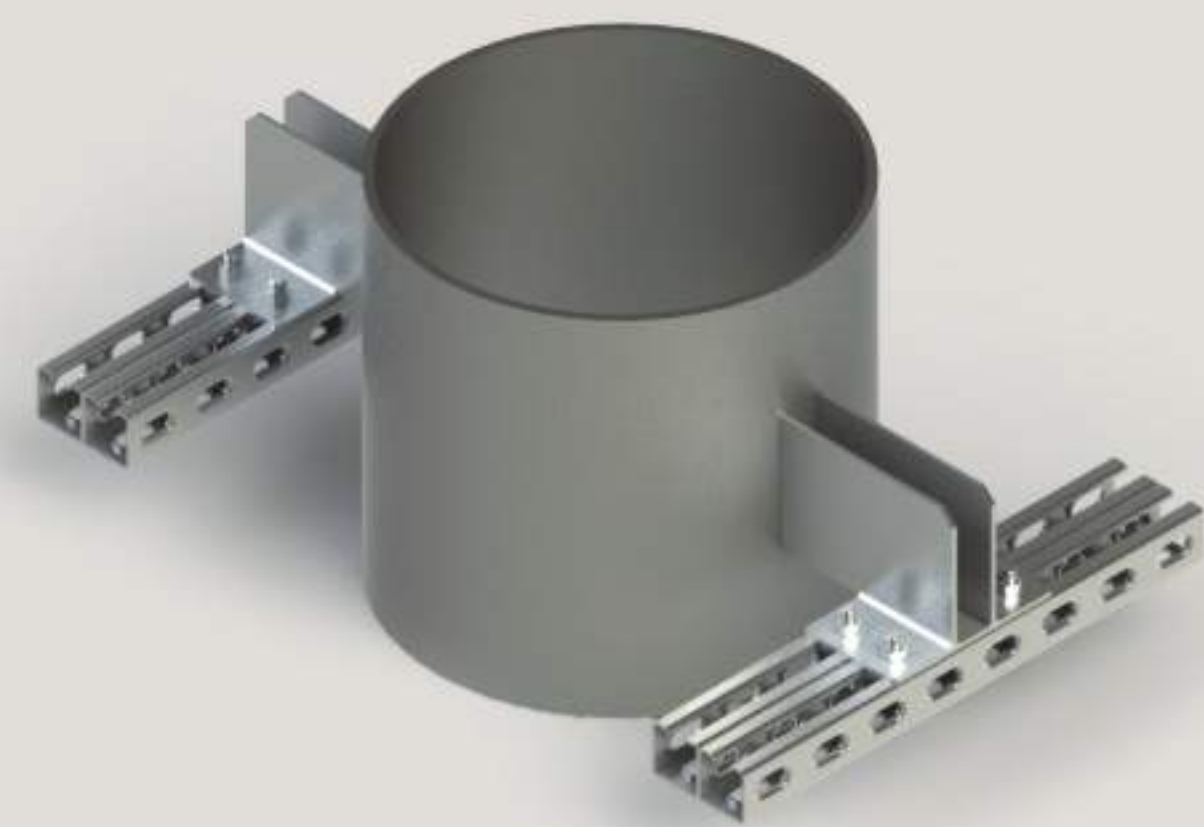
품번	A	B	C	D	E	F	G	T
300A	100	140	40	80	150	80	40	4
350A	100	140	40	80	150	80	40	4
400A	100	140	40	80	150	80	40	4

- ▶ 1. 아연도금 2. 압연판재 + 용융도금 3. 압연판재 + 분체도장 단위(mm)

CLAMP SHOE 임상 설치

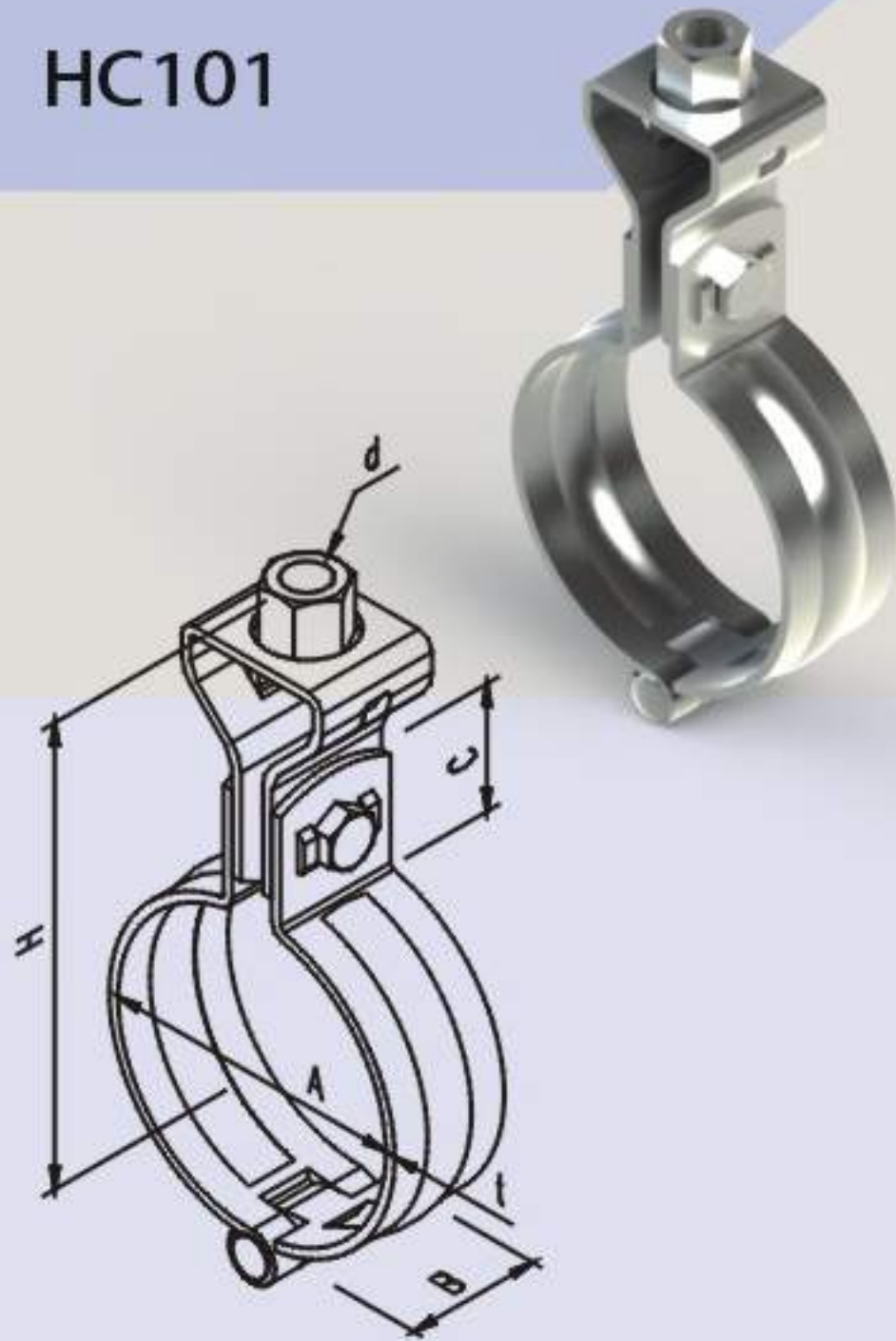


CLAMP SHOE 임상 대구경용 설치



6. HANGER CLAMP

HC101



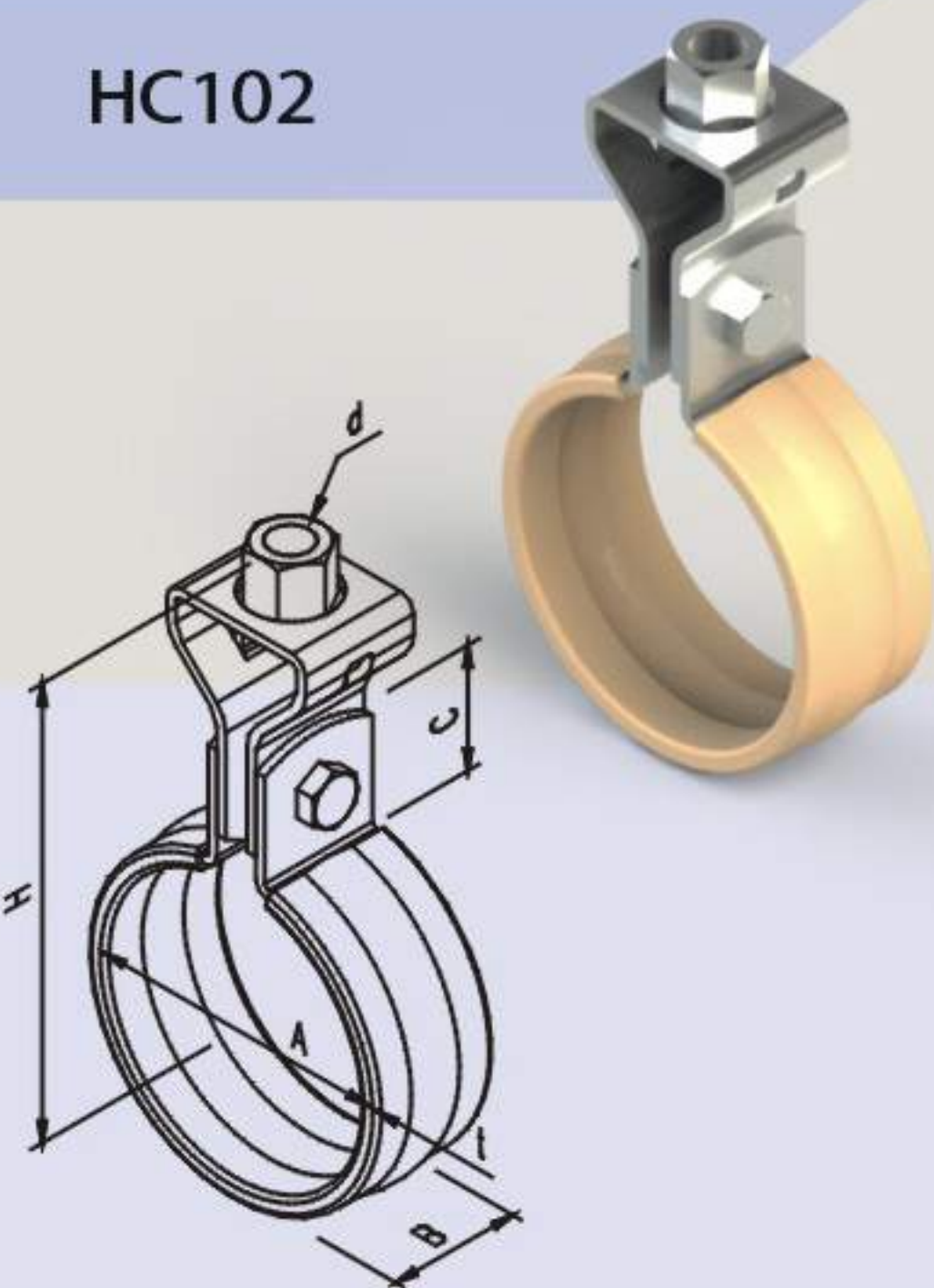
HANGER CLAMP (HC101)

품번	배관	A	txB	d	BOLT	C	H
15	15A	21.7	2.0x25	3/8	M6x20	24	77
20	20A	27.2	2.0x25	3/8	M6x20	24	79
25	25A	34.0	2.0x25	3/8	M6x20	24	82
32	32A	42.7	2.0x25	3/8	M6x25	24	88
40	40A	48.6	2.0x25	3/8	M6x25	24	90
50	50A	60.5	2.0x25	3/8	M6x25	24	95
65	65A	76.3	2.0x25	3/8	M8x25	28	102
80	80A	89.1	2.0x25	3/8	M8x25	28	108
100	100A	114.3	2.0x25	3/8	M8x25	28	121
125	125A	139.8	3.0x32	1/2	M10x35	32	152
150	150A	165.2	3.0x32	1/2	M12x35	32	165
200	200A	216.3	3.0x32	1/2	M12x40	32	190
250	250A	267.4	4.0x50	5/8	M16x50	50	293
300	300A	318.5	6.0x50	5/8	M16x50	50	285
350	350A	355.6	6.0x50	5/8	M16x50	50	304
400	400A	406.4	6.0x50	5/8	M16x50	50	329

▶ 일반 강관 배관용 ▶ 아연도금

단위(mm)

HC102



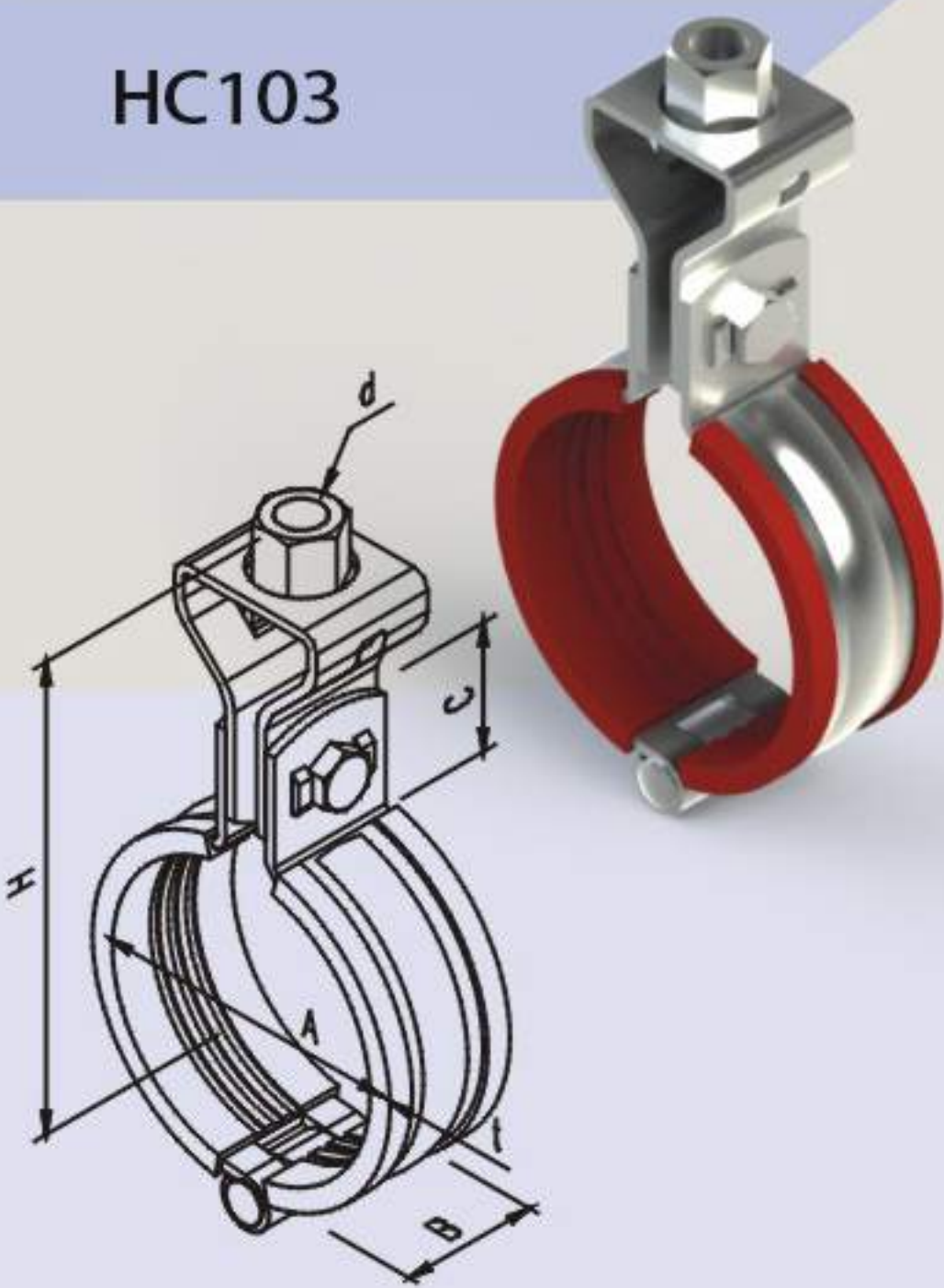
HANGER CLAMP (HC102)

품번	배관	A	txB	d	BOLT	C	H
15	15A	21.7	0.8x25	3/8	M6x25	27	72
20	20A	27.2	0.8x25	3/8	M6x25	27	76
25	25A	34.0	0.8x25	3/8	M6x25	25	79
32	32A	42.7	0.8x25	3/8	M6x25	25	83
40	40A	48.6	0.8x25	3/8	M6x25	25	88
50	50A	60.5	0.8x25	3/8	M6x25	25	92
65	65A	76.3	1.0x32	3/8	M8x25	25	98
80	80A	89.1	1.0x32	3/8	M8x25	25	105
100	100A	114.3	1.0x32	3/8	M8x25	25	117

▶ 일반 강관 배관용
▶ 아연도금, EPDM

단위(mm)

HC103



HANGER CLAMP (HC103)

품번	배관	A	txB	d	BOLT	C	H
15	15A	21.7	2.0x25	3/8	M6x20	25	77
20	20A	27.2	2.0x25	3/8	M6x20	25	80
25	25A	34.0	2.0x25	3/8	M6x20	25	83
32	32A	42.7	2.0x25	3/8	M6x25	25	85
40	40A	48.6	2.0x25	3/8	M6x25	25	88
50	50A	60.5	2.0x25	3/8	M6x25	25	94
65	65A	76.3	2.0x25	3/8	M8x25	25	102
80	80A	89.1	2.0x25	3/8	M8x25	25	108
100	100A	114.3	2.0x25	3/8	M8x25	25	121
125	125A	139.8	3.0x32	1/2	M10x30	30	153
150	150A	165.2	3.0x32	1/2	M10x30	30	161

▶ 고온용
▶ 아연도금, SILICONE

단위(mm)

HANGER CLAMP 설치

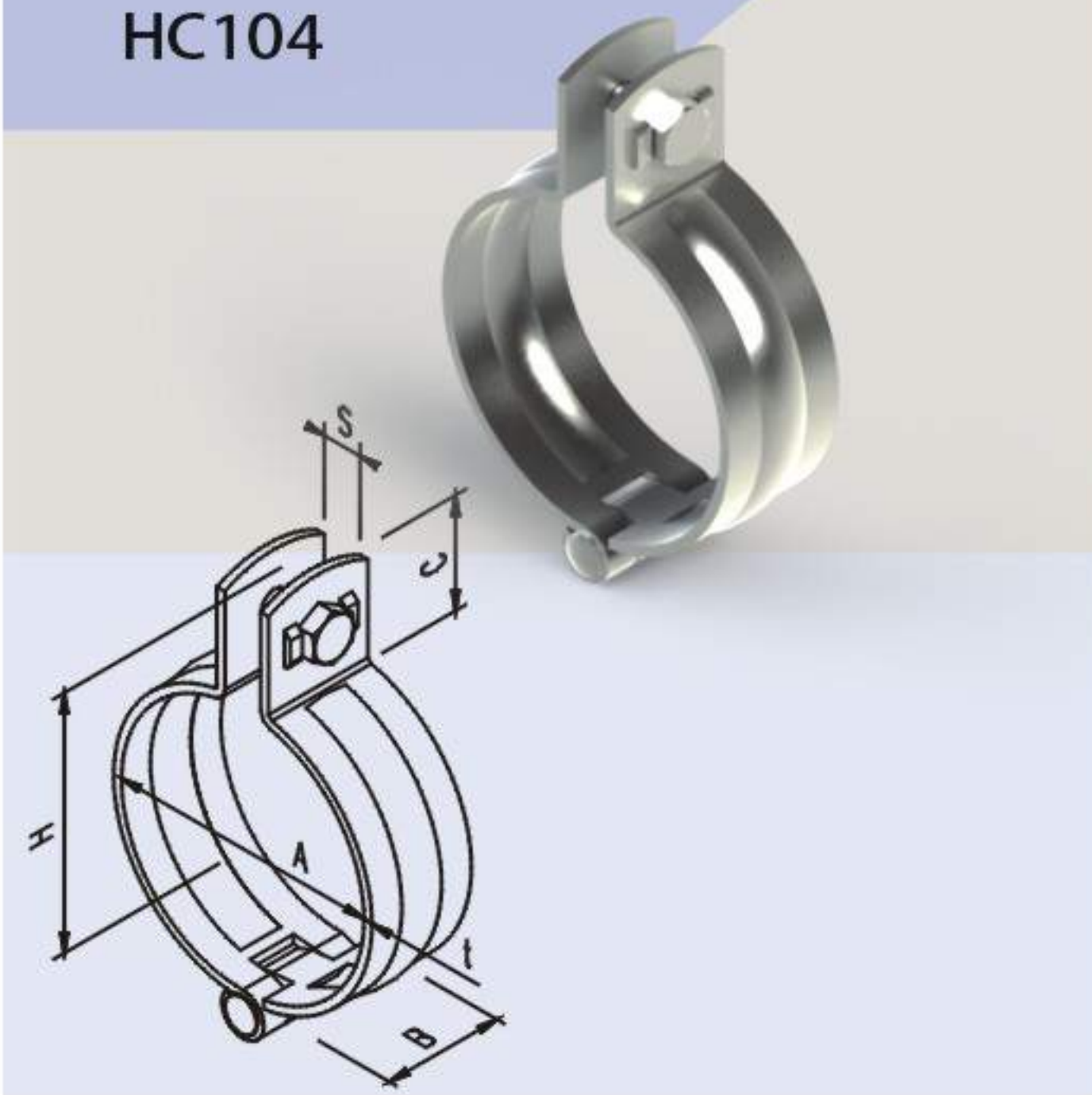


HANGER CLAMP 설치



6. HANGER CLAMP

HC104



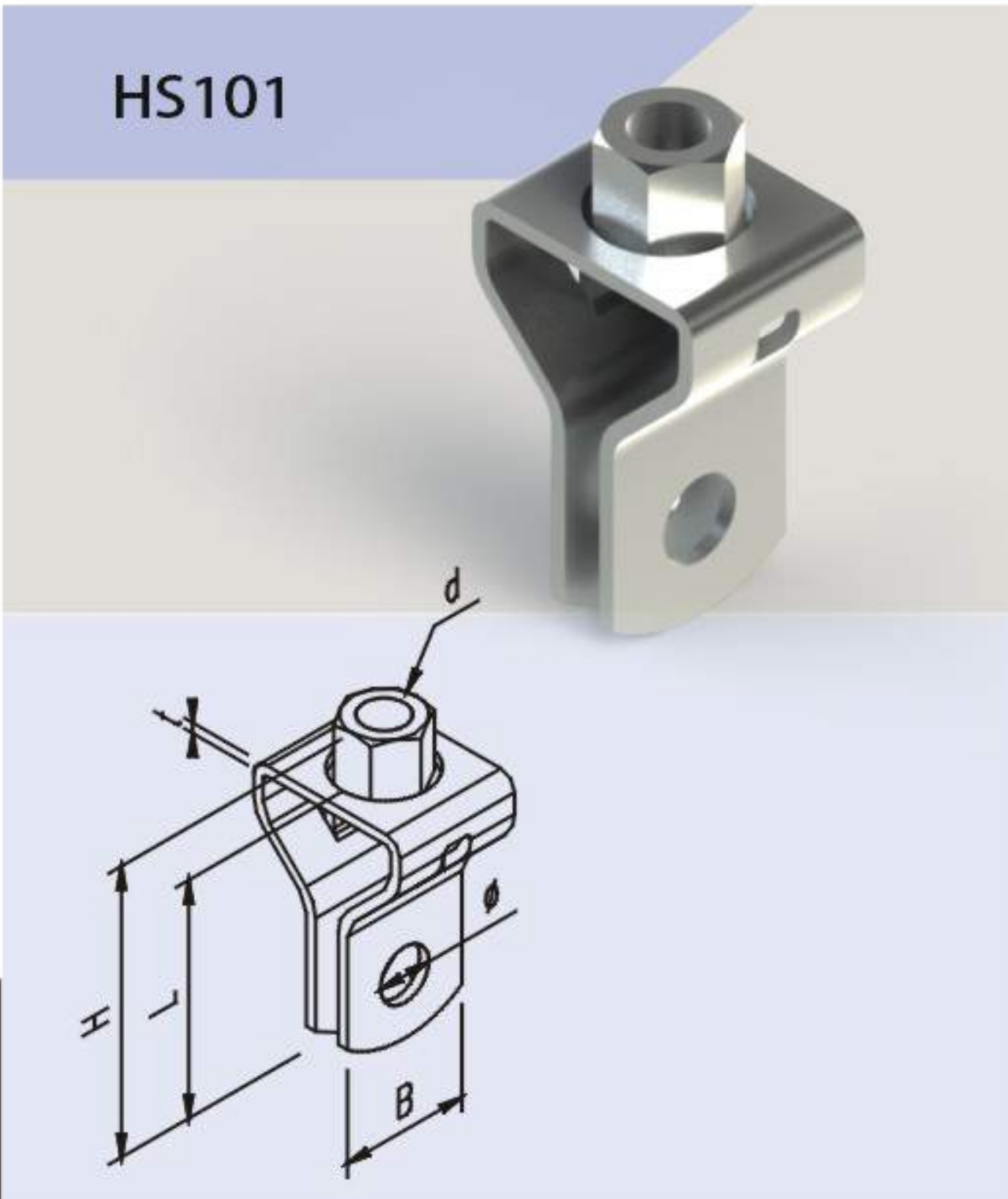
HANGER CLAMP (HC104)

품번	배관	A	txB	S	BOLT	C	H
15	15A	21.7	2.0x25	7	M6x20	24	37
20	20A	27.2	2.0x25	7	M6x20	24	39
25	25A	34.0	2.0x25	7	M6x20	24	43
32	32A	42.7	2.0x25	7	M6x25	24	47
40	40A	48.6	2.0x25	7	M6x25	24	50
50	50A	60.5	2.0x25	7	M6x25	24	56
65	65A	76.3	2.0x25	7	M8x25	28	64
80	80A	89.1	2.0x25	7	M8x25	28	71
100	100A	114.3	2.0x25	7	M8x25	28	83
125	125A	139.8	3.0x32	7	M10x35	32	103
150	150A	165.2	3.0x32	7	M12x35	32	116
200	200A	216.3	3.0x32	8	M12x40	32	143
250	250A	267.4	4.0x50	9	M16x50	50	187
300	300A	318.5	6.0x50	10	M16x50	50	215
350	350A	355.6	6.0x50	10	M16x50	50	233
400	400A	406.4	6.0x50	10	M16x50	50	259

▶ 일반 강관 배관용 ▶ 아연도금

단위(mm)

HS101



HANGER SUPPORT (HS101)

품번	BOLT	txB	d	Ø	L	H
01	3/8x25	2.0x25	3/8	10.5	49	61
02	1/2x25	2.3x25	1/2	13	62	81
03	1/2x32	2.3x32	1/2	13	62	81
04	1/2x38	2.3x38	1/2	15	80	99
05	1/2x50	2.3x50	1/2	15	80	99
06	5/8x50	3.2x50	5/8	19	87	107

▶ 아연도금

단위(mm)

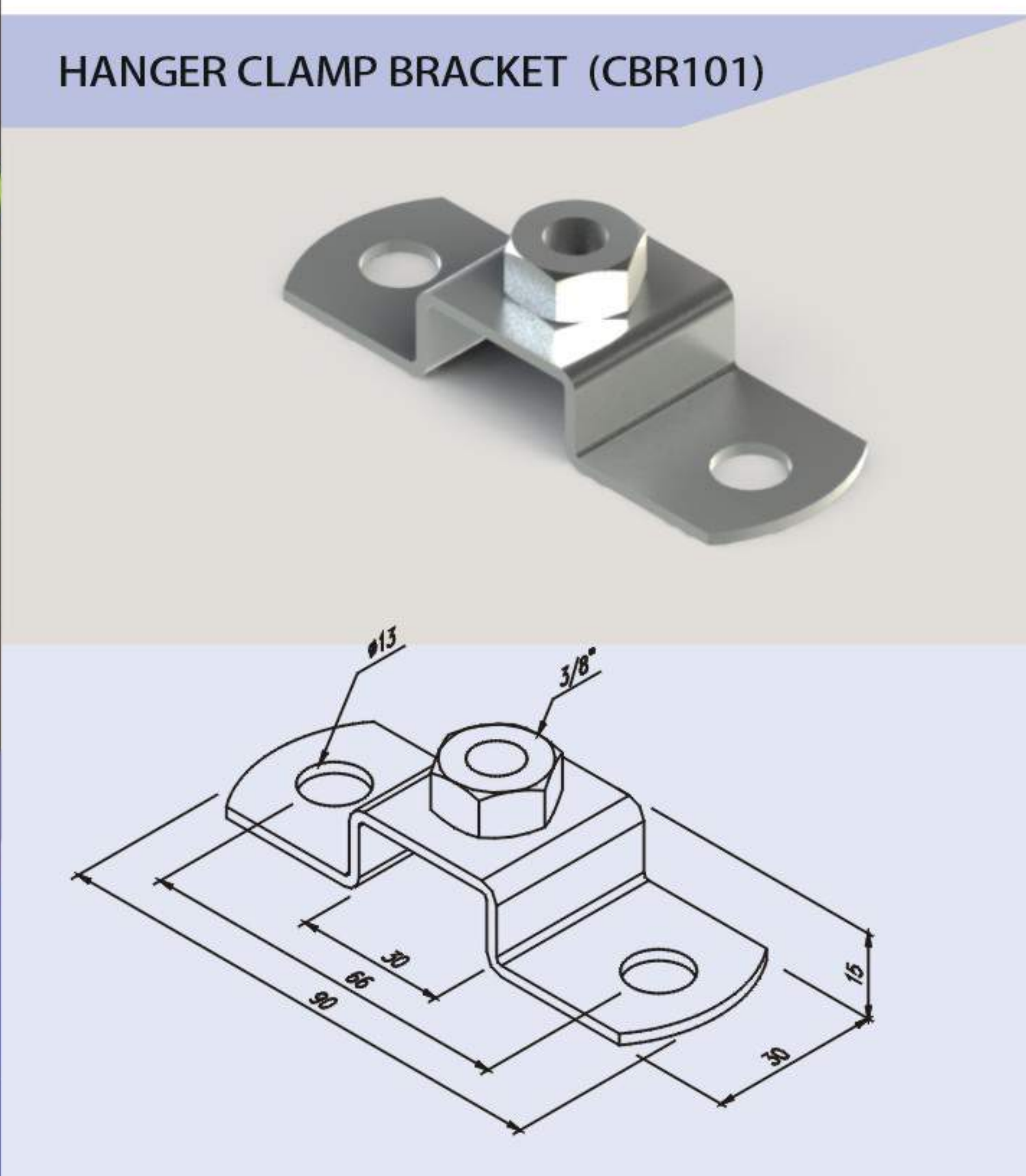
HANGER SUPPORT (HS102)

품번	BOLT	txB	d	Ø	L	H
01	M10x25	1.6x25	M10	10.5	49	61
02	M10x32	1.6x32	M10	10.5	49	61
03	M12x25	2.3x25	M12	13	62	81
04	M12x32	2.3x32	M12	13	62	81
05	M12x38	2.3x38	M12	15	80	99
06	M12x50	2.3x50	M12	15	80	99
07	M16x50	3.2x50	M16	19	87	107

▶ 아연도금

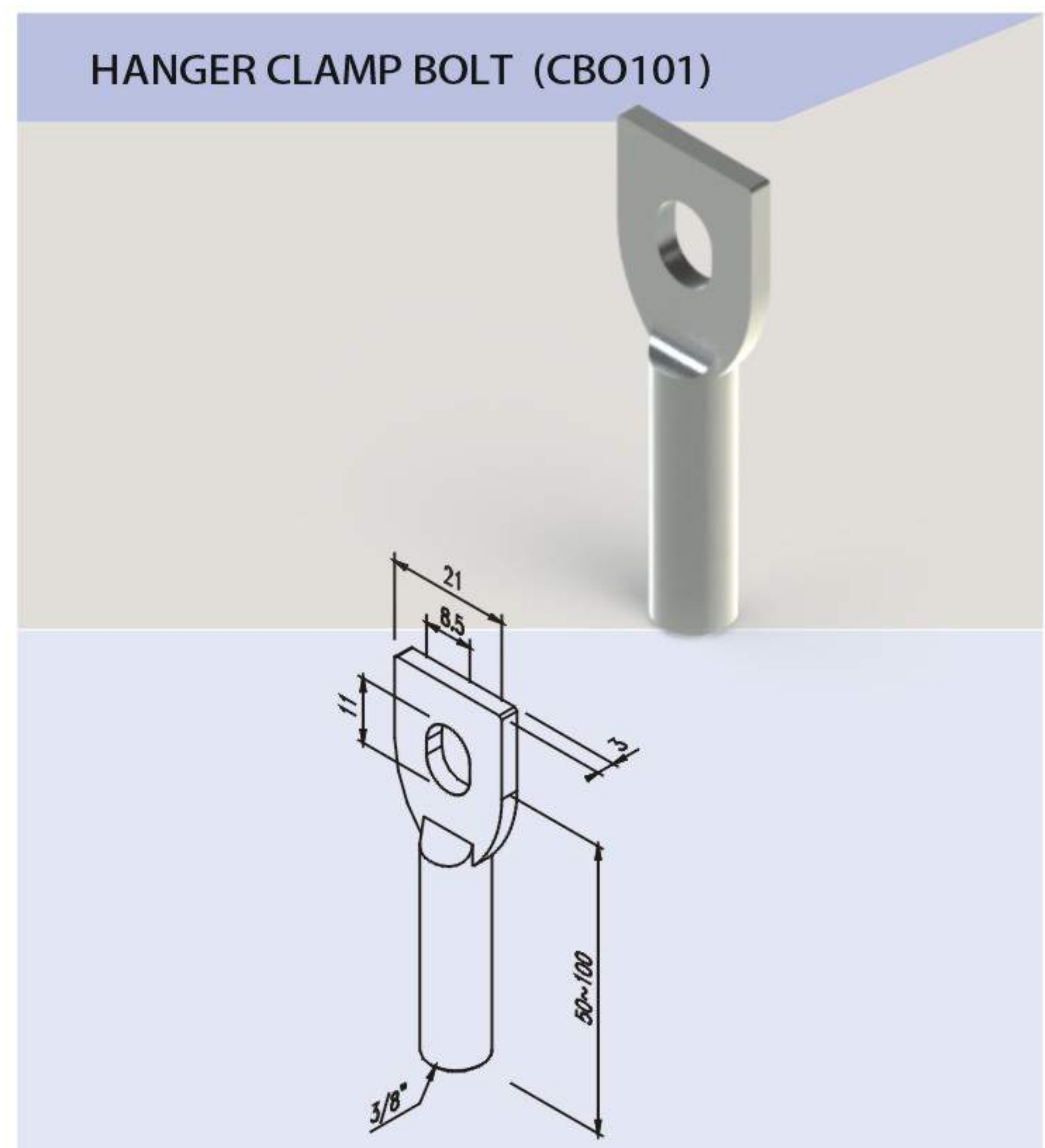
단위(mm)

HANGER CLAMP BRACKET (CBR101)



▶ 아연도금

HANGER CLAMP BOLT (CBO101)

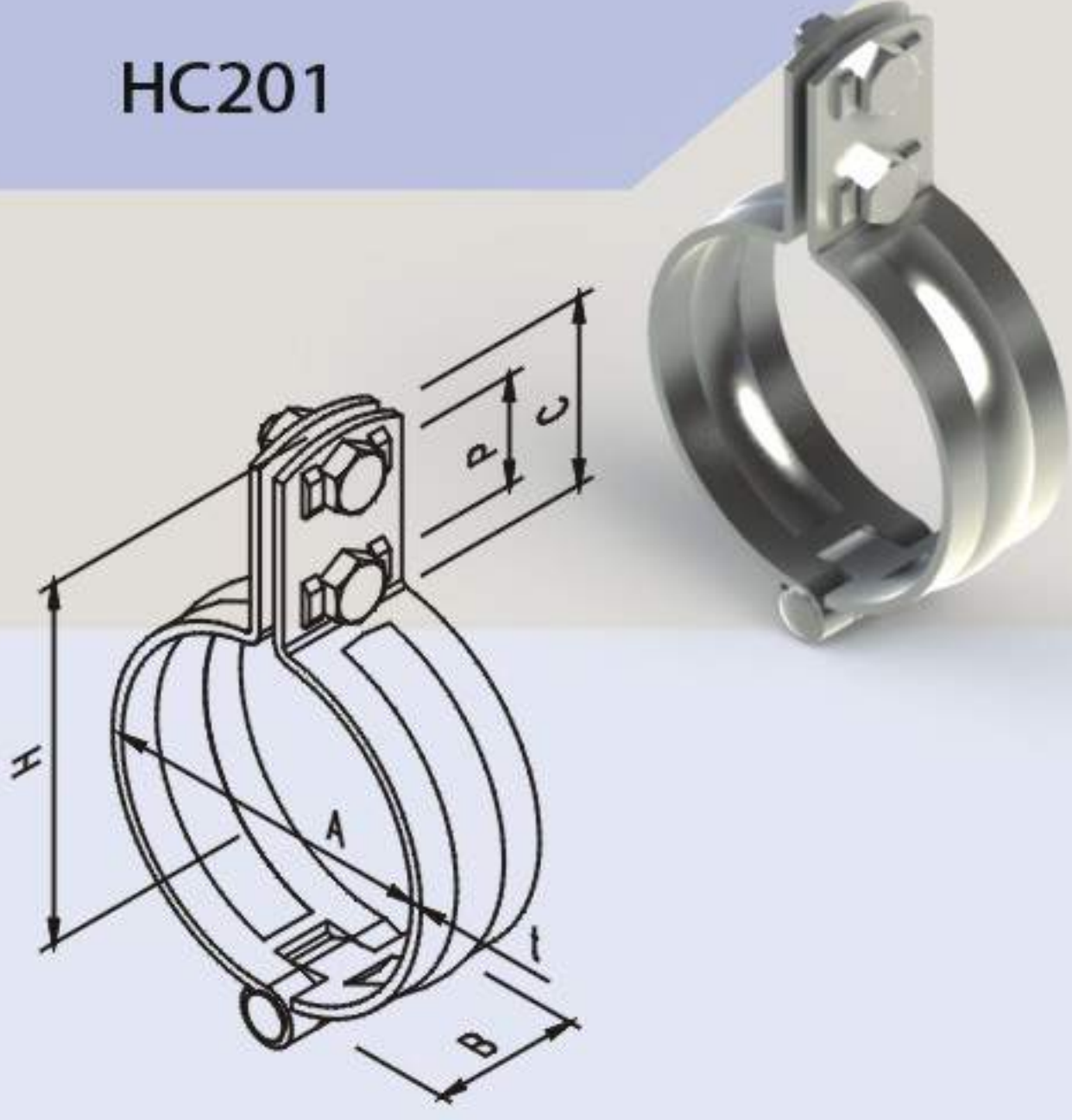


▶ 아연도금

syners

HANGER CLAMP

HC201



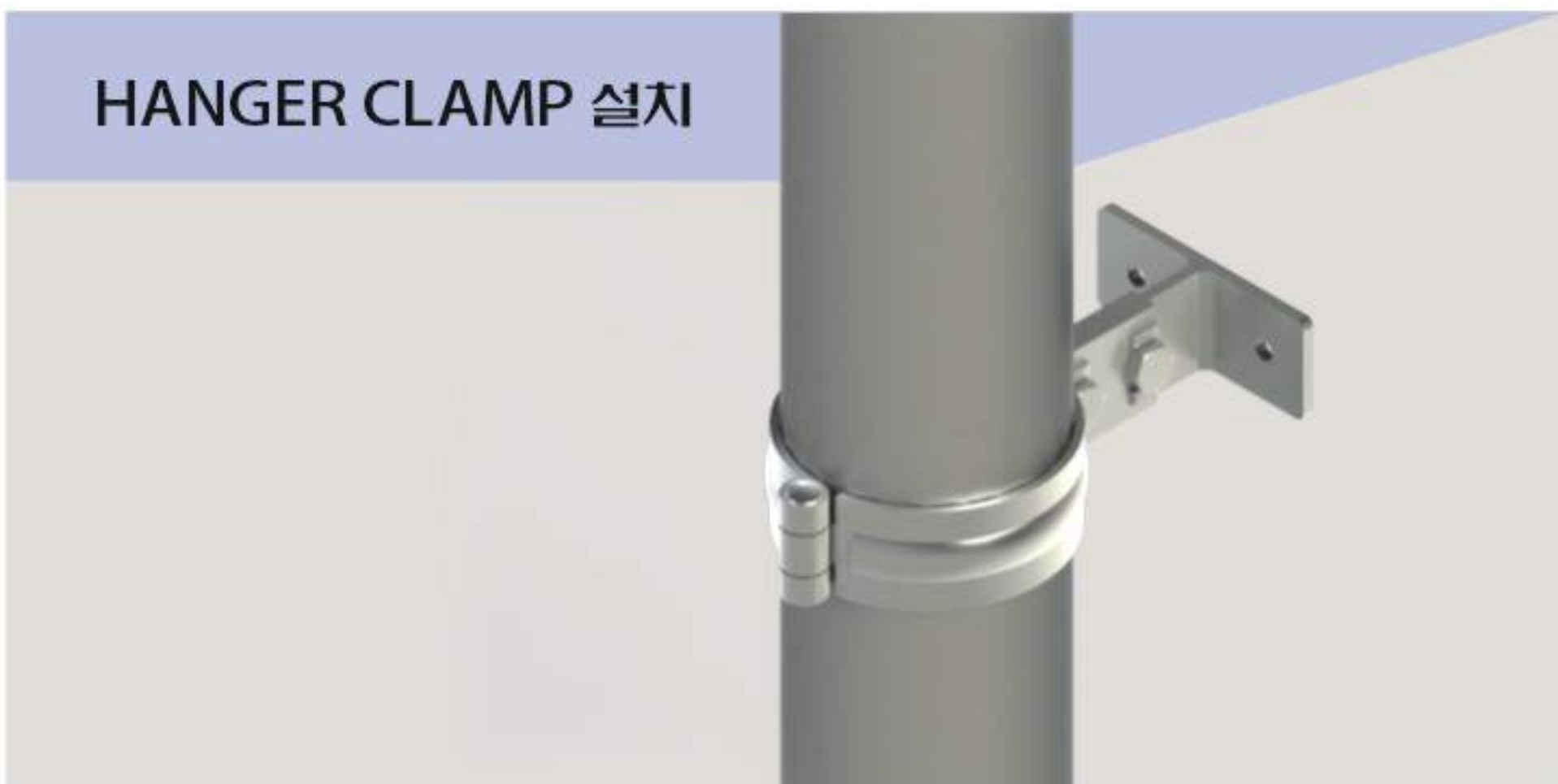
HANGER CLAMP (HC201)

품번	배관	A	txB	C	BOLT	P	H
15	15A	21.7	2.0x25	44	M6x20	24	55
20	20A	27.2	2.0x25	44	M6x20	24	58
25	25A	34.0	2.0x25	44	M6x20	24	62
32	32A	42.7	2.0x25	44	M6x20	24	66
40	40A	48.6	2.0x25	44	M6x20	24	69
50	50A	60.5	2.0x25	44	M6x20	24	75
65	65A	76.3	2.0x25	47	M6x20	28	90
80	80A	89.1	2.0x25	47	M6x20	28	97
100	100A	114.3	2.0x25	47	M6x20	28	109
125	125A	139.8	3.0x32	55	M10x30	32	131
150	150A	165.2	3.0x32	55	M10x30	32	144
200	200A	216.3	3.0x32	65	M10x30	32	182
250	250A	267.4	4.0x50	65	M10x30	50	209

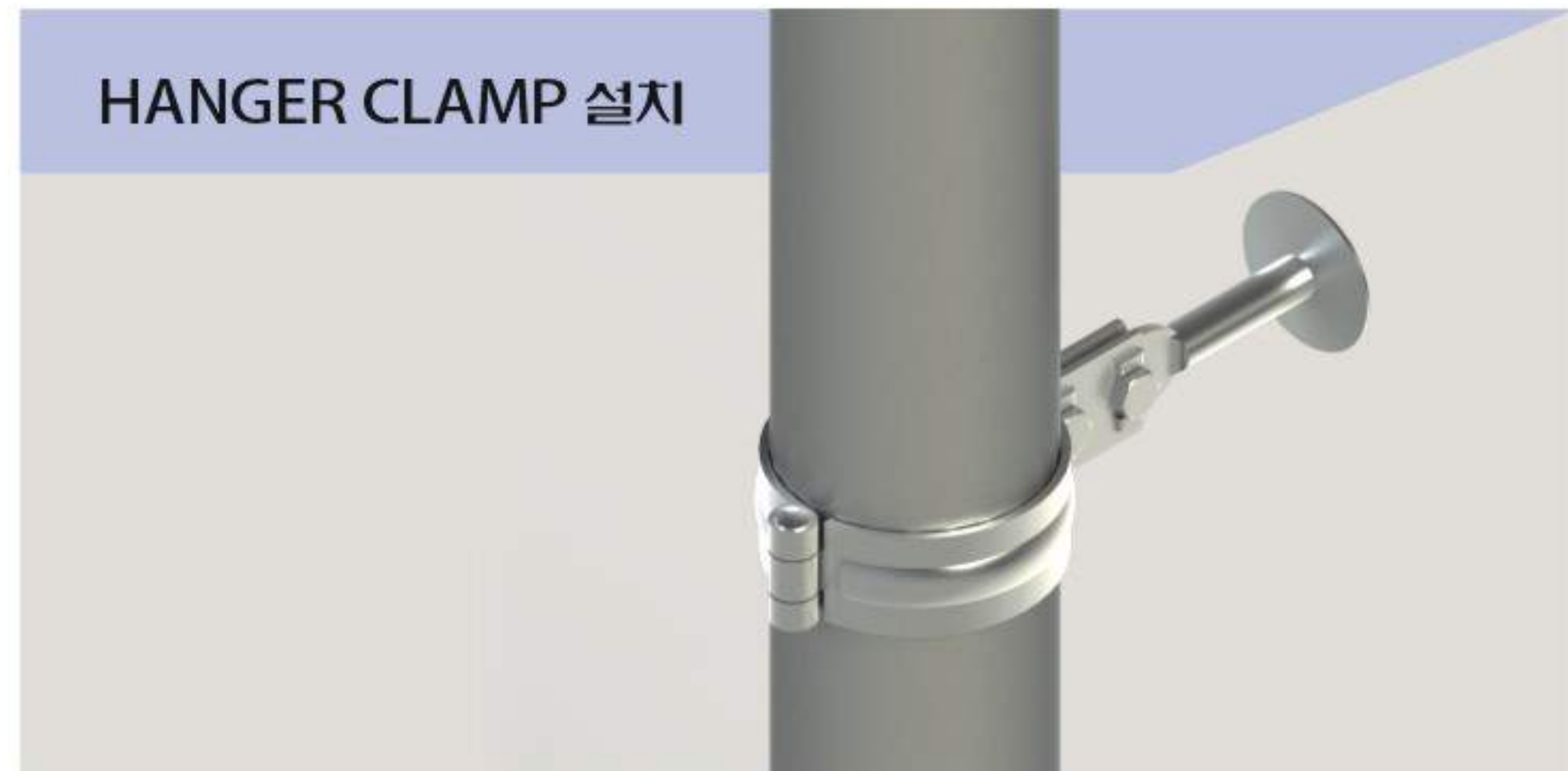
▶ 일반 강관 배관용 ▶ 아연도금

단위(mm)

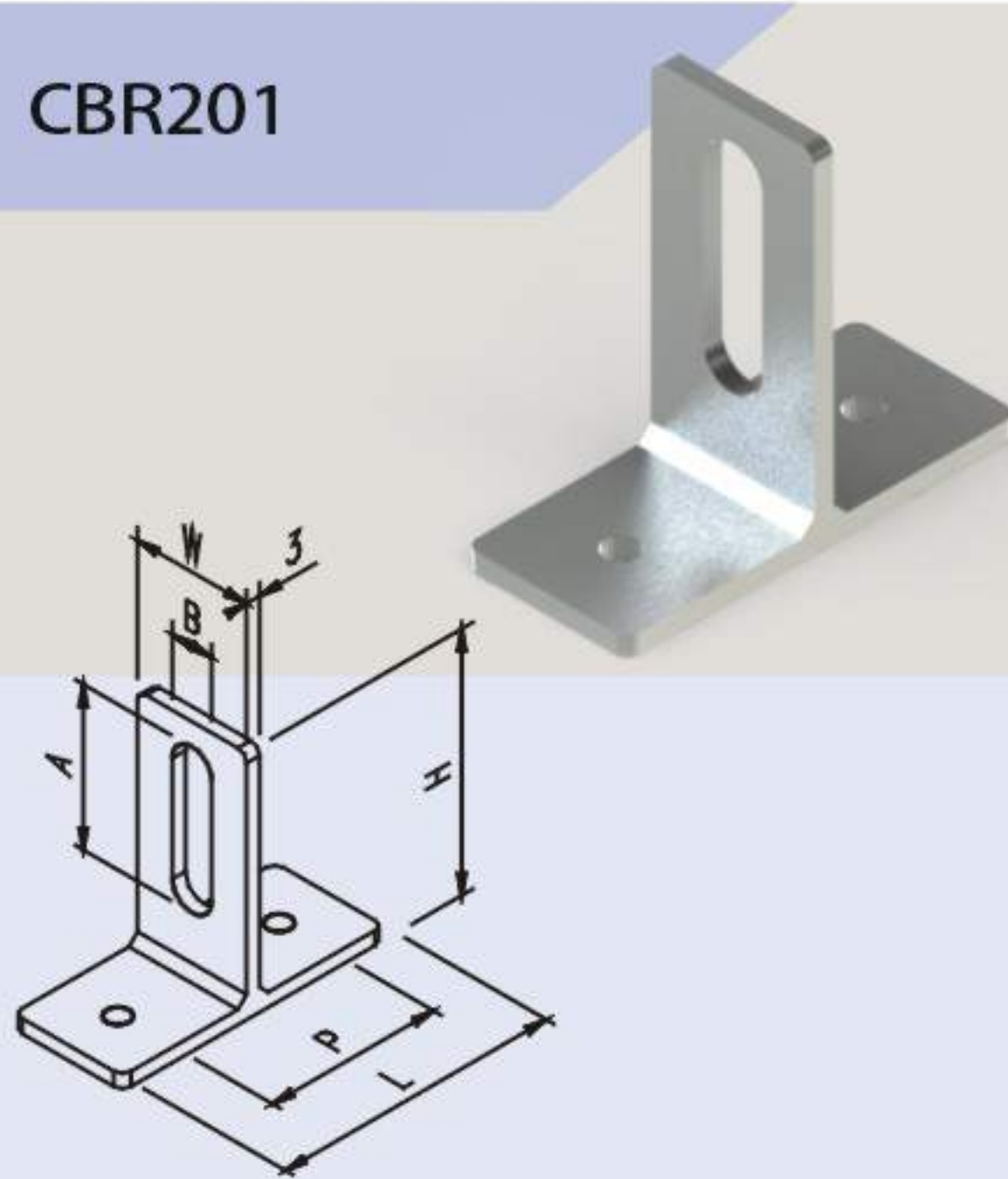
HANGER CLAMP 설치



HANGER CLAMP 설치



CBR201



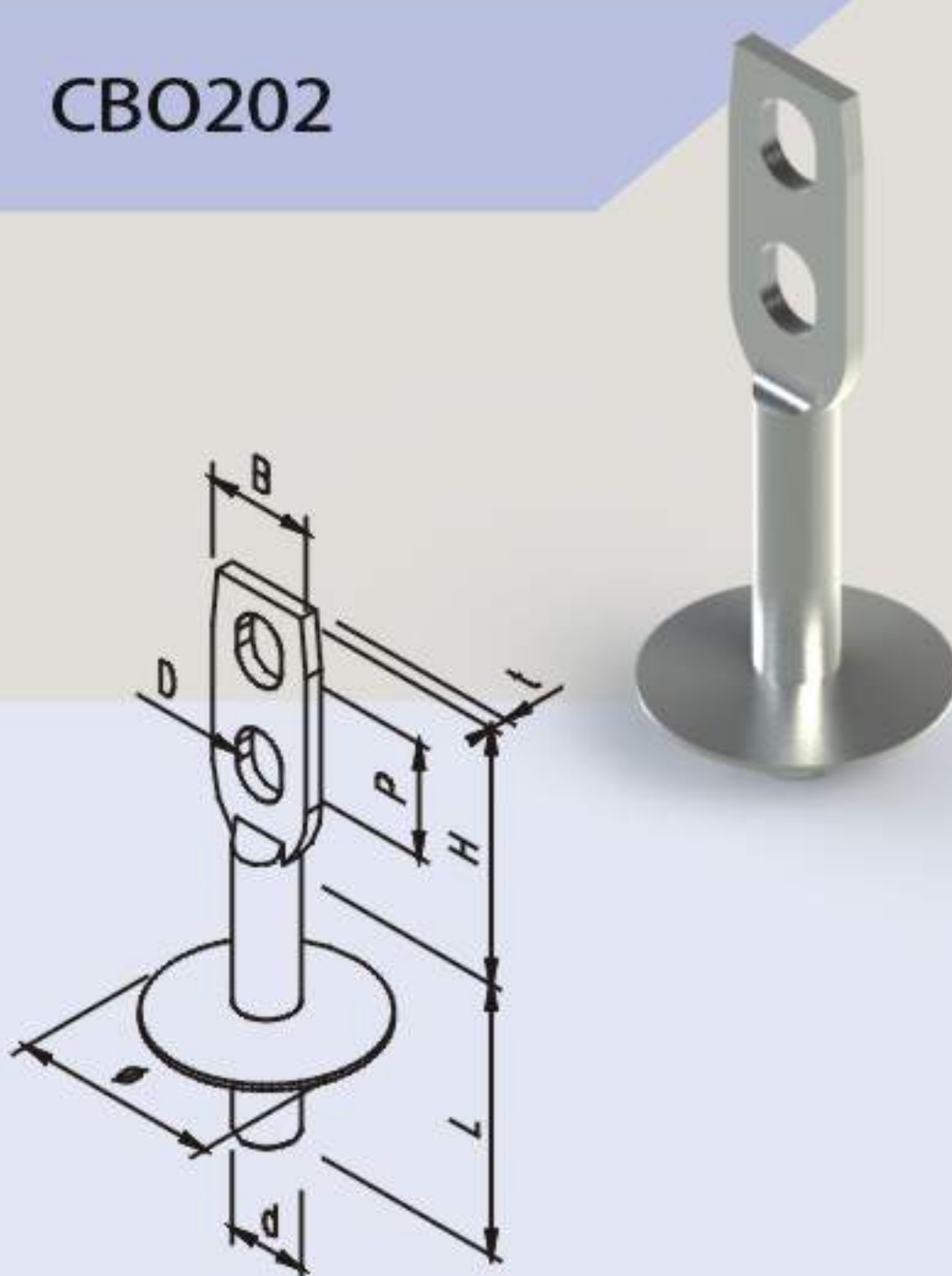
HANGER CLAMP BRACKET (CBR201)

품번	H	W	AxB	L	P
01	50	25	35x9	60	37
02	60	25	35x9	60	37
03	80	25	35x9	60	37
04	100	25	35x9	60	37
05	120	25	35x9	60	37
06	150	25	35x9	60	37
07	200	25	35x9	60	37
08	60	32	43x11	72	49
09	80	32	43x11	72	49
10	100	32	43x11	72	49
11	120	32	43x11	72	49
12	150	32	43x11	72	49
13	200	32	43x11	72	49

▶ 아연도금

단위(mm)

CBO202



HANGER CLAMP BOLT (CBO201)

품번	L	d	txB	D	P	H	∅
01	50	3/8	2.8x19	9x12	20	45	37
02	65	3/8	2.8x19	9x12	20	45	37
03	75	3/8	2.8x19	9x12	20	45	37
04	100	3/8	2.8x19	9x12	20	45	37
05	125	3/8	2.8x19	9x12	20	45	37
06	150	3/8	2.8x19	9x12	20	45	37
07	200	3/8	2.8x19	9x12	20	45	37
08	250	3/8	2.8x19	9x12	20	45	37
09	300	3/8	2.8x19	9x12	20	45	37
10	350	3/8	2.8x19	9x12	20	45	37
11	400	3/8	2.8x19	9x12	20	45	37
12	100	1/2	4.2x22.5	11x18	27	45	39
13	100	1/2	4.2x22.5	11x18	27	45	39
14	200	1/2	4.2x22.5	11x18	27	45	39

▶ 아연도금

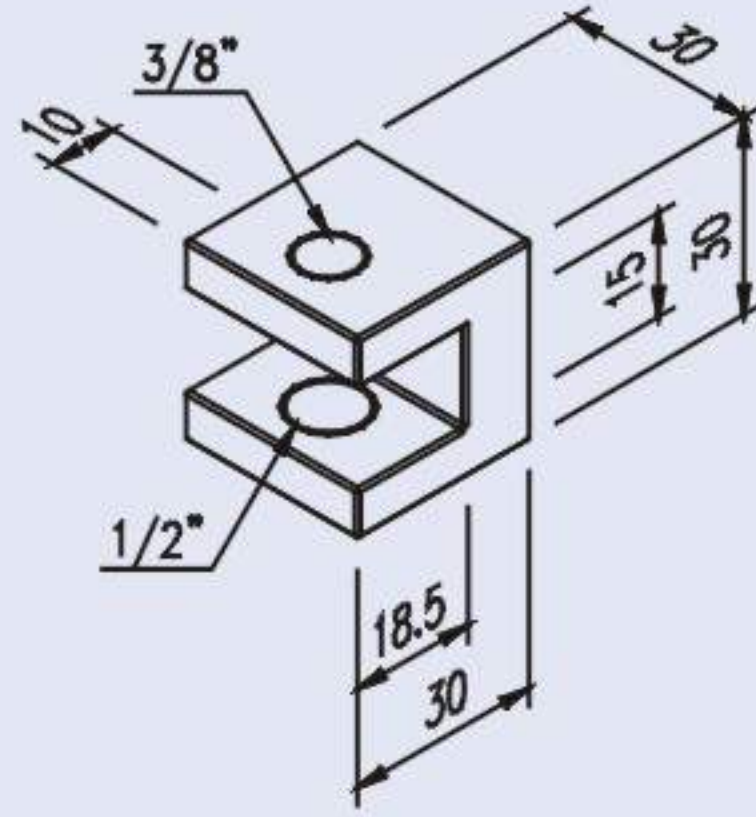
단위(mm)



6. BEAM CLAMP

BEAM CLAMP

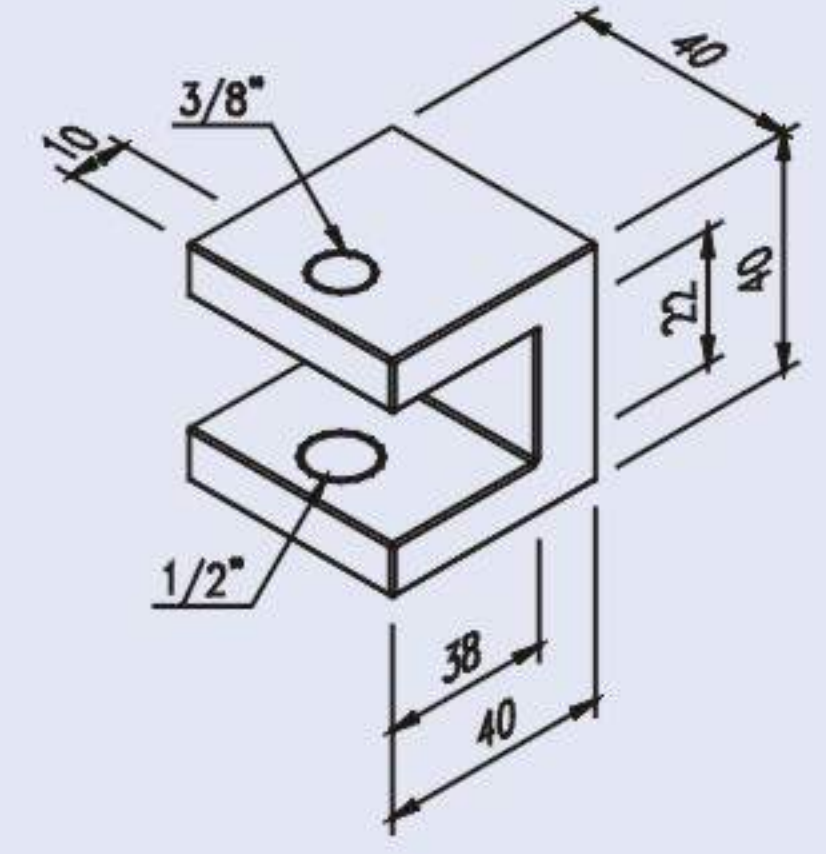
BCL101



▶ 1. 아연도금 2. 용융도금

BEAM CLAMP

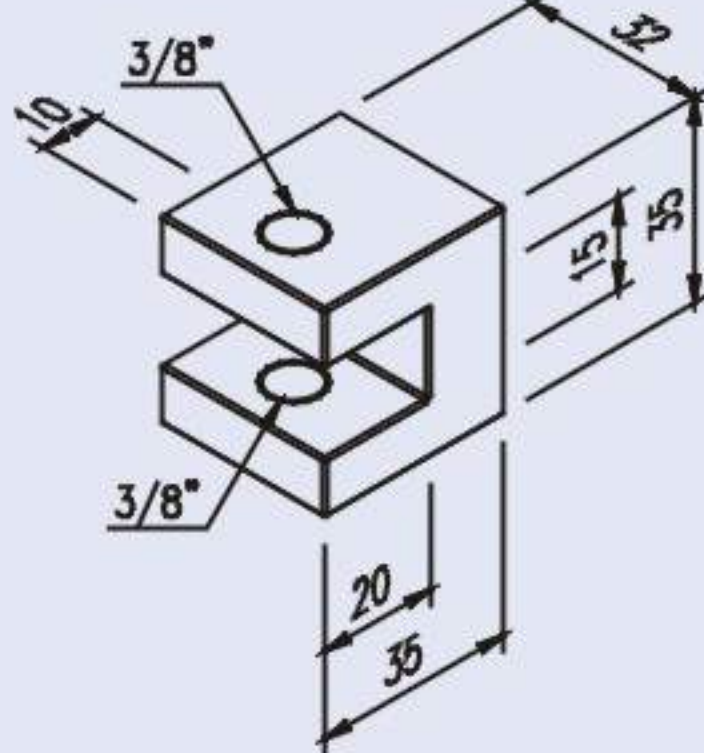
BCL102



▶ 1. 아연도금 2. 용융도금

BEAM CLAMP

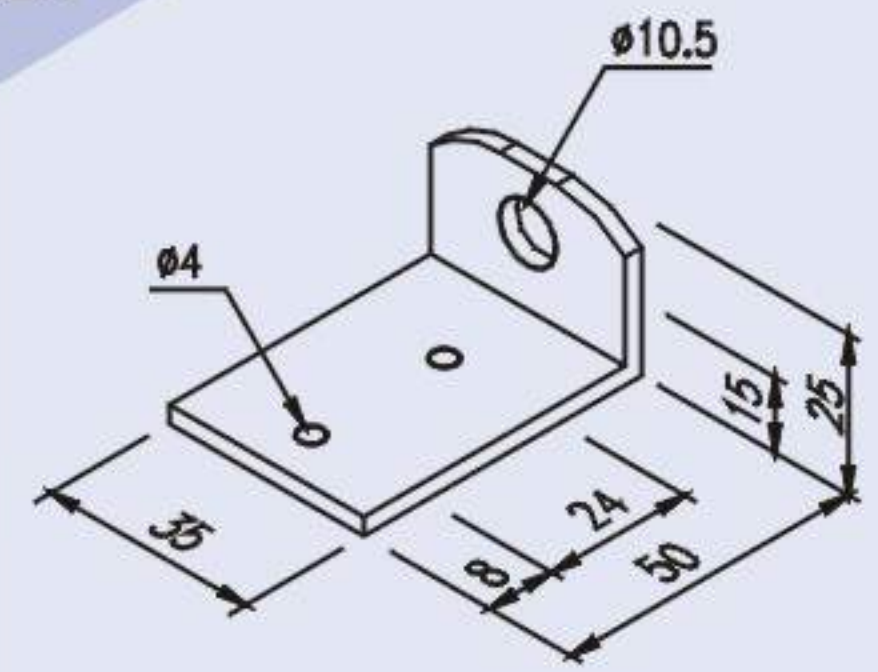
BCL103



▶ ALUMINIUM

BEAM CLAMP BRACKET

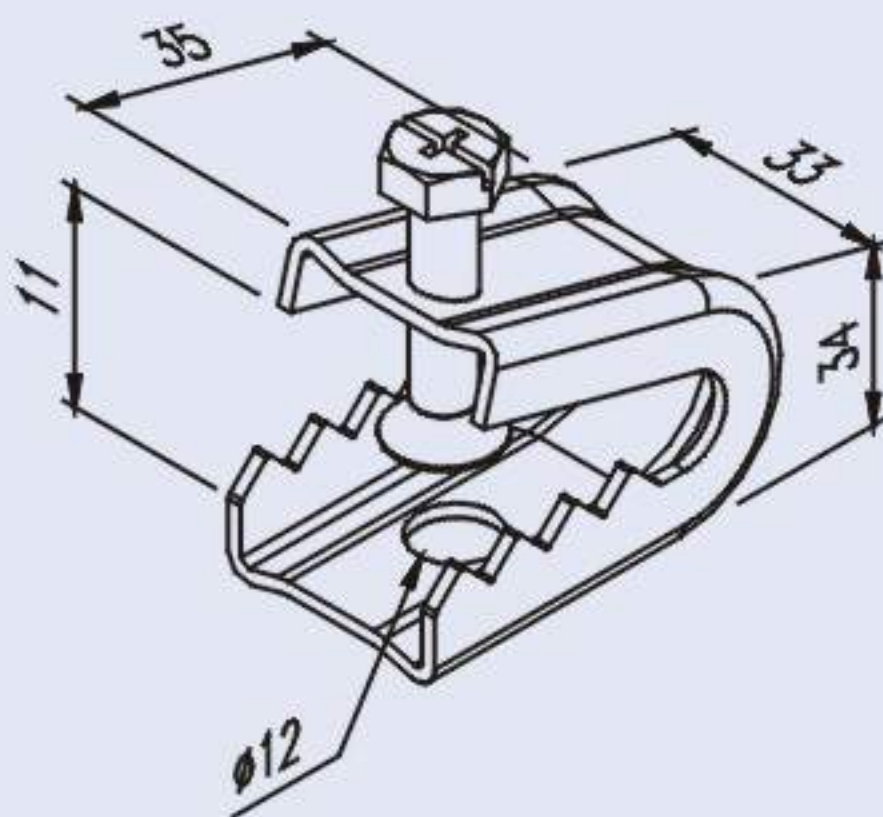
BCL201



▶ ALUMINIUM

BEAM CLAMP

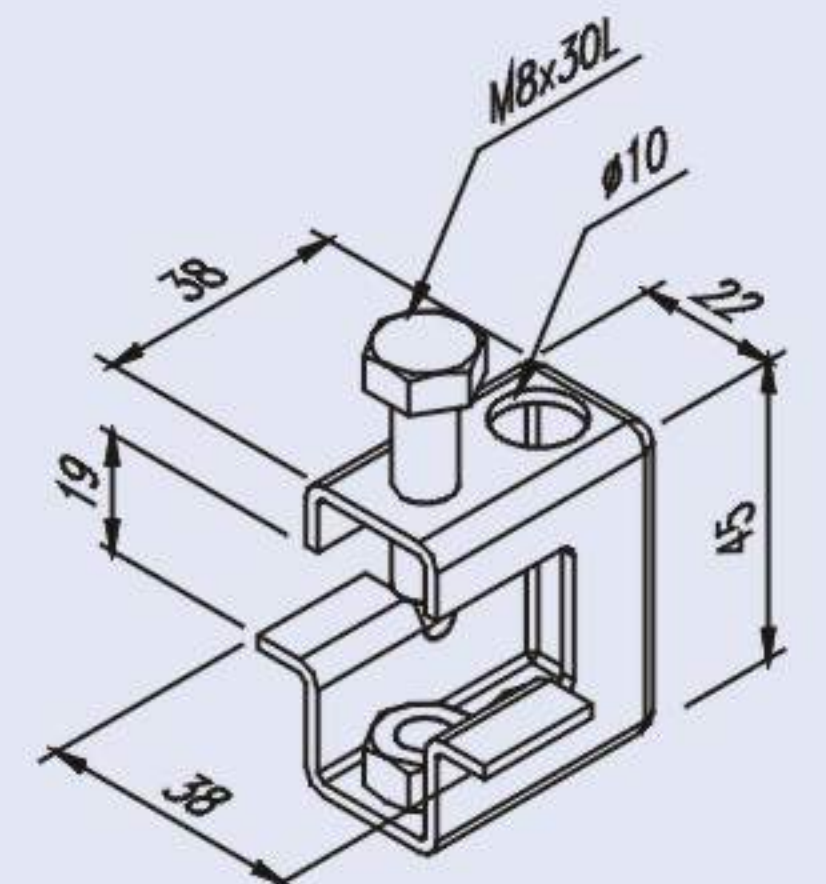
BCL301



▶ 1. 아연도금 2. 용융도금

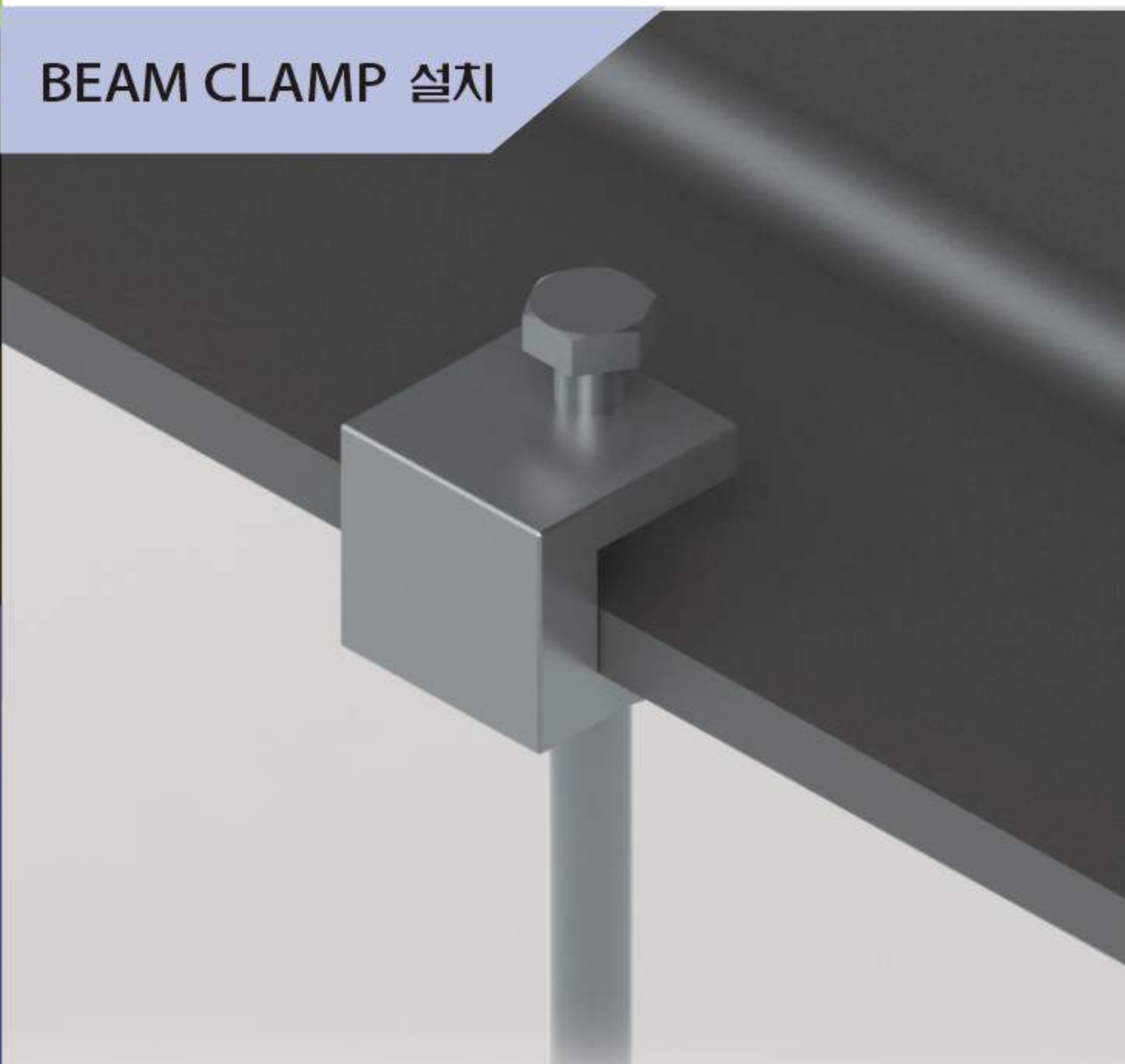
BEAM CLAMP

BCL302

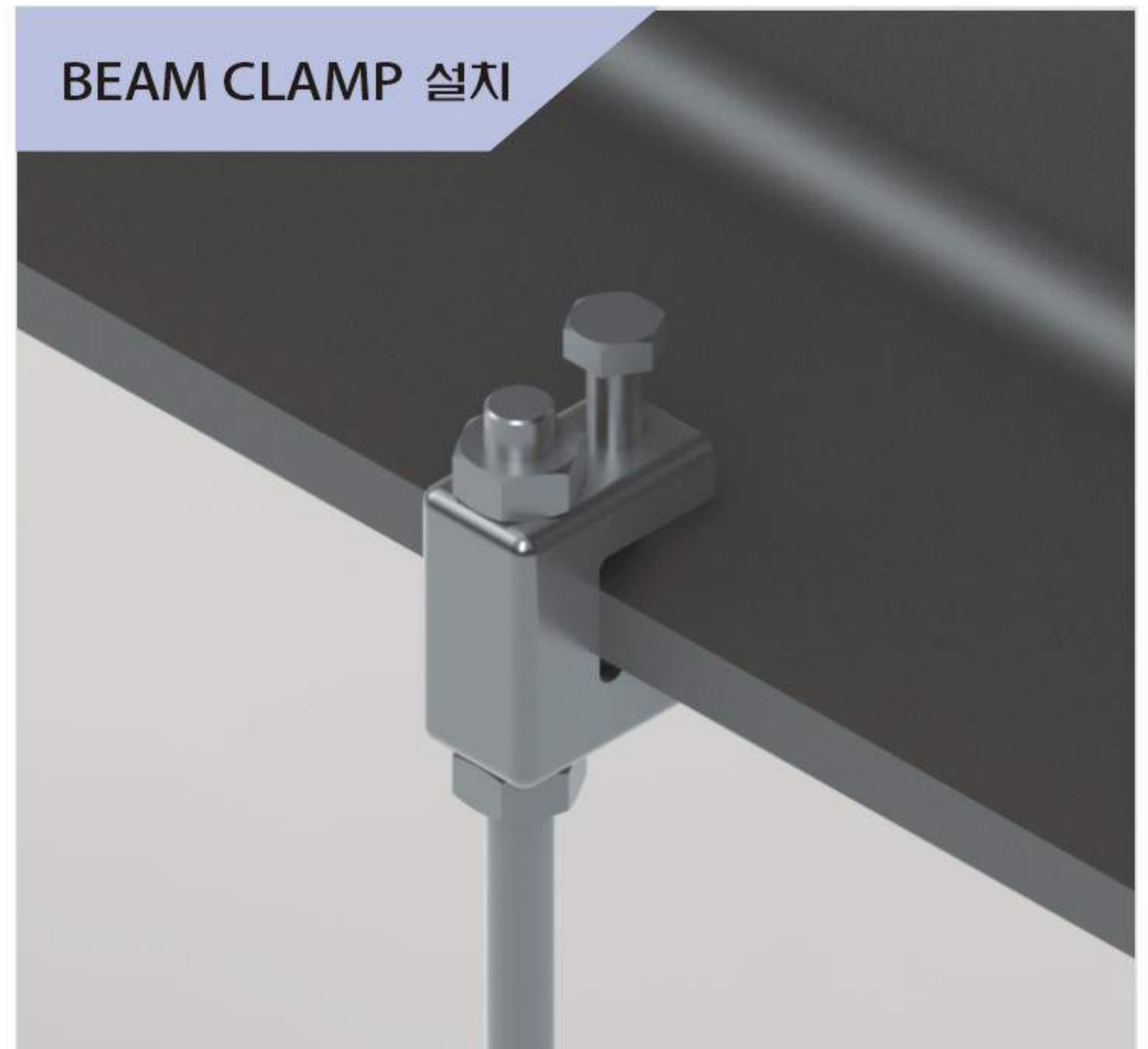


▶ 1. 아연도금 2. 용융도금

BEAM CLAMP 설치



BEAM CLAMP 설치



7. 기술자료

SYSTEM CHANNEL 기술자료

규격	중량 (kg/m)	단면적 (cm ²)	단면 2차 모우먼트		단면 계수	
			ly (cm ⁴)	lz (cm ⁴)	Wy (cm ³)	Wz (cm ³)
40x40	1.87	2.10	5.20	5.20	2.62	2.62
40x60	4.16	4.80	21.25	14.25	7.11	7.12
40x80	5.54	6.32	57.86	18.88	11.59	9.46
40x100	6.81	7.89	93.90	23.25	16.05	11.80
40x120	8.24	9.67	131.68	28.49	21.59	14.31

SYSTEM CHANNEL 최대 허용 하중표

규격	L/2				L/3				L/4				L/5			
	L(m)				L(m)				L(m)				L(m)			
	0.5	1	1.5	2	0.5	1	1.5	2	0.5	1	1.5	2	0.5	1	1.5	2
40x40	337	170	110	84	255	125	84	52	170	85	56	35	140	69	45	31
40x60	908	450	300	222	682	337	226	165	451	228	150	110	376	187	125	91
40x80	1426	715	470	345	1070	530	358	267	713	355	233	176	602	297	192	141
40x100	2106	1053	719	526	1504	782	537	397	1015	541	371	231	773	459	202	238
40x120	2804	1398	928	695	2102	1050	695	521	1401	702	470	345	1170	581	385	290

강관 / 스텐레스관 하중표

규격		강관 #20				강관 #40				스텐레스관 #10			
호칭경(A)	O.D(mm)	관중량	유체중량	운전율	총중량	관중량	유체중량	운전율	총중량	관중량	유체중량	운전율	총중량
15	21.7	1.3	0.2	0.4	1.9	1.3	0.2	0.4	1.9	1.0	0.3	0.3	1.6
20	27.2	1.7	0.4	0.5	2.6	1.7	0.4	0.5	2.6	1.3	0.4	0.5	2.2
25	34.0	2.4	0.6	0.8	3.8	2.6	0.6	0.8	4.0	2.2	0.6	0.7	3.5
32	42.7	3.4	1.0	1.1	5.5	3.5	1.0	1.1	5.6	2.8	1.1	1.0	4.9
40	48.6	3.9	1.4	1.3	6.6	4.1	1.3	1.4	6.8	3.2	1.5	1.2	5.9
50	60.5	5.3	2.2	1.9	9.4	5.4	2.2	1.9	9.5	4.0	2.4	1.6	8.0
65	76.3	7.5	3.7	2.8	14	9.1	3.4	3.2	15.7	5.5	3.9	2.3	11.7
80	89.1	8.8	5.2	3.5	17.5	11.3	4.8	4.0	20.1	6.4	5.4	3.0	14.8
100	114.3	12.2	8.7	5.2	26.1	16.0	8.2	6.1	30.3	8.3	9.2	4.4	21.9
125	139.8	15	13.3	7.1	35.4	21.7	12.6	8.6	42.9	11.6	13.9	6.4	31.9
150	165.2	19.8	19	9.7	48.5	27.7	17.9	11.4	57.0	13.7	19.7	8.3	41.7
200	216.5	30.1	32.9	15.8	78.8	42.1	31.4	18.4	91.9	21.2	34.1	13.9	69.2
250	267.4	42.4	50.9	23.3	116.6	59.2	48.6	26.9	134.7	26.2	52.8	19.8	98.8

동관 / 주철관 하중표

규격		동관 L-형				동관 K-형				규격		주철관(NO-HUB / HUB1종)			
호칭경(A)	O.D(mm)	관중량	유체중량	운전율	총중량	관중량	유체중량	운전율	총중량	호칭경(A)	O.D(mm)	관중량	유체중량	운전율	총중량
15	15.9	0.4	0.2	0.1	0.7	0.5	0.1	0.2	0.8	50	60	5.3	2.2	1.9	9.4
20	22.2	0.7	0.3	0.2	1.2	1.0	0.3	0.3	1.6	70	80	7.1	3.2	2.6	12.9
25	28.6	1.0	0.5	0.4	1.9	1.3	0.5	0.4	2.2	100	112	10.3	8.4	4.7	23.4
32	34.9	1.3	0.8	0.6	2.7	1.5	0.8	0.6	2.9	125	137	13.7	13.0	6.7	33.4
40	41.3	1.7	1.2	0.7	3.6	2.0	1.1	0.8	3.9	150	162	17.3	18.1	8.9	44.3
50	53	2.6	2.0	1.2	5.8	3.1	1.9	1.3	6.3	200	215	32.7	31.4	16.0	80.1
65	66.7	3.7	3.1	1.7	8.5	4.4	3.0	1.8	9.2						
80	79.4	5.0	4.4	2.3	11.7	6.0	4.3	2.6	12.9						
100	104.8	8.0	7.7	3.9	19.6	9.7	7.5	4.3	21.5						
125	130.2	11.3	12.0	5.9	29.2	14.4	11.8	6.5	32.7						
150	155.6	15.2	17.3	8.1	40.6	20.6	16.7	9.3	46.6						
200	206.4	28.7	30.2	14.8	73.7	-	-	-	-						
250	257.2	44.7	46.9	22.9	114.5	-	-	-	-						

8. 인증서 [특허]



디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0464380 호 (REGISTRATION NUMBER) 출원번호 (APPLICATION NUMBER) 제 2007-0031616 호

출원일 (FILING DATE:YY/MM/DD) 2007년 07월 23일

등록일 (REGISTRATION DATE:YY/MM/DD) 2007년 09월 28일

등록의 구분 (TYPE OF REGISTRATION) 심사 등록 (EXAMINED REGISTRATION)

디자인의 대상이 되는 물품 (ARTICLE THAT IS THE OBJECT OF THE DESIGN)
조립식 형강 연결구

디자인권자 (OWNER OF THE DESIGN RIGHT)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

창작자 (CREATOR)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

위의 창작은 「디자인보호법」에 의하여 디자인등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 09월 28일



디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0464387 호 (REGISTRATION NUMBER) 출원번호 (APPLICATION NUMBER) 제 2007-0031622 호

출원일 (FILING DATE:YY/MM/DD) 2007년 07월 23일

등록일 (REGISTRATION DATE:YY/MM/DD) 2007년 09월 28일

등록의 구분 (TYPE OF REGISTRATION) 심사 등록 (EXAMINED REGISTRATION)

디자인의 대상이 되는 물품 (ARTICLE THAT IS THE OBJECT OF THE DESIGN)
조립식 형강 연결구

디자인권자 (OWNER OF THE DESIGN RIGHT)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

창작자 (CREATOR)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

위의 창작은 「디자인보호법」에 의하여 디자인등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 09월 28일



디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0464384 호 (REGISTRATION NUMBER) 출원번호 (APPLICATION NUMBER) 제 2007-0031621 호

출원일 (FILING DATE:YY/MM/DD) 2007년 07월 23일

등록일 (REGISTRATION DATE:YY/MM/DD) 2007년 09월 28일

등록의 구분 (TYPE OF REGISTRATION) 심사 등록 (EXAMINED REGISTRATION)

디자인의 대상이 되는 물품 (ARTICLE THAT IS THE OBJECT OF THE DESIGN)
조립식 형강 연결구

디자인권자 (OWNER OF THE DESIGN RIGHT)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

창작자 (CREATOR)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

위의 창작은 「디자인보호법」에 의하여 디자인등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 09월 28일



실용신안등록증

CERTIFICATE OF UTILITY MODEL REGISTRATION

등록 제 20-0437033 호 (REGISTRATION NUMBER) 출원번호 (APPLICATION NUMBER) 제 2007-0014035 호

출원일 (FILING DATE:YY/MM/DD) 2007년 08월 24일

등록일 (REGISTRATION DATE:YY/MM/DD) 2007년 10월 23일

고안의 명칭 (TITLE OF THE DEVICE)
케미컬 관체 고정지지장치

실용신안권자 (OWNER OF THE UTILITY MODEL RIGHT)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

고안자 (DEVISER)
이만순(650613-1*****)
경기 화성시 동탄면 금곡리 189-1

위의 고안은 「실용신안법」에 따라 실용신안등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DEVICE IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 10월 23일





대상시너스 주식회사

syners

경기도 시흥시 정왕동 2091-14 (시화공단 2마 610)
TEL. 031-499-7860 FAX. 031-499-8880
E-mail. dsc3030@naver.com