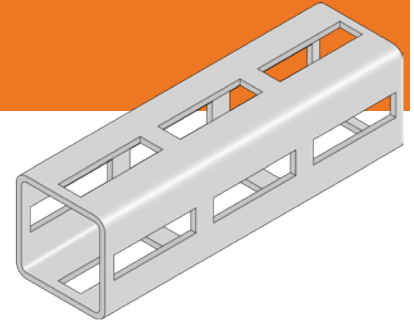


SUPPORT FRAME SYSTEM 50

The Zip-Clip Atlas Support Frame System is a fully adjustable system designed to be an economical and time saving alternative to standard welded construction.



TECHNICAL DATA

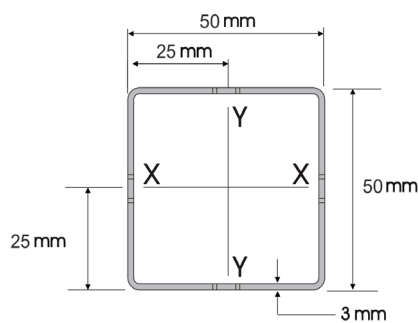
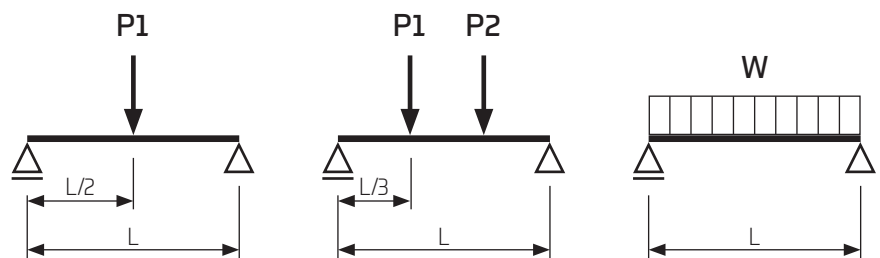
ZCA System No:	SFS50
S&T System No:	P0112044
AON Listing No:	BB031 *refer to the NZS4541 design guide
Material:	Mild Steel
Material Type:	345 MPa
Finish:	Hot-dip galvanised

DATA SUMMARY

Dimensions:	50 × 50 mm
Thickness:	3 mm
Slot Size:	12 × 46 mm
Slot Spacing:	56 mm centres
$f_y =$	345 MPa
$E =$	200 GPa

KEY SYSTEM ADVANTAGES

- Installation time and labour saving.
- Advanced modular bolting system with a maximum load capacity of 7.5 kN per bolt.
- High torsional stiffness.
- Fully dismountable.
- Comprehensive range of integrated fittings and components.
- Widely compatible with leading channel and pipe support systems.



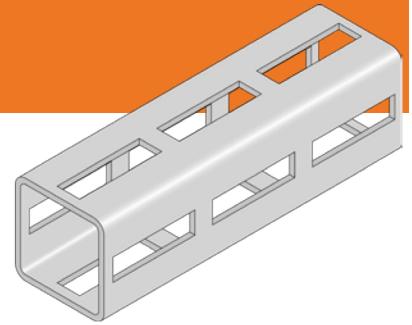
SECTION PROPERTIES	Part No./System	SFS50
	Weight, Kg/m	3.67
	Area of Section, mm ²	397
X-X AXIS	Moment of Inertia, $I 10^6 \text{ mm}^4$	0.154
	Section Modulus, $Z 10^3 \text{ mm}^3$	6.160
	Radius of Gyration, $r \text{ mm}$	19.70
Y-Y AXIS	Moment of Inertia, $I 10^6 \text{ mm}^4$	0.154
	Section Modulus, $Z 10^3 \text{ mm}^3$	6.160
	Radius of Gyration, $r \text{ mm}$	19.70

SPAN (L)	P1 Kg	P2 Kg	W Kg (Uniform)
500	1262	872	2094
750	840	630	1608
1000	629	441*	1202*
1250	480*	281*	767*
1500	332*	195*	531*
1750	242*	142*	388*
2000	184*	108*	295*
2250	144*	85*	230*
2500	115*	68*	184*
2750	94*	55*	150*
3000	77*	45*	124*

Capacity tables to AS4100. The allowable working loads calculated are based on the ultimate capacity of a simply supported beam, divided by a 1.5 factor. The mid-span deflection from working load has been limited to Span/200. The working loads include allowance for beam self-weight.

* Indicates working load governed by deflection.

SUPPORT FRAME SYSTEM 50



TECHNICAL DATA

System No: SFS50

COMPRESSION CAPACITY

Le (m)	ØNc (kN)
0.0	123.2
0.5	119.3
1.0	106.4
1.5	83.6
2.0	57.6
2.5	39.4
3.0	28.1
3.5	21.0
4.0	16.2
4.5	12.9
5.0	10.5
5.5	8.7
6.0	7.4

▲ NOTES:

1. Capacities calculated to AS4100 Steel Structures Standard.
2. The loads listed above are the ultimate compression capacity.
3. Listed capacities are for the effective column length with concentric loading only.
4. Effective length to be calculated in accordance with AS4100.
5. Any other load effects will de-rate these capacities. Compression bending interaction to be considered in accordance with AS4100.

BENDING CAPACITY

ØMs (kNm)	ØVv (kN)
2.32	17.7

▲ NOTES:

1. Capacities calculated to AS4100 Steel Structures Standard.
2. The loads listed above are the ultimate section bending and shearing.
3. Deflection must be checked by others during engineering design.

BEARING CAPACITY

ØRby (kN)
5.6

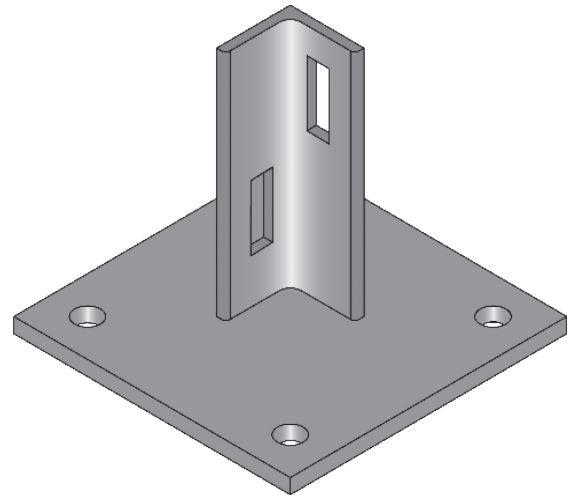
▲ NOTES:

1. Capacities calculated to AS4100 Steel Structures Standard.
2. Capacity based on:
 - 50 mm stiff bearing length
 - Bearing at the end of member
 - Member end is not to be cut through slot (10 mm web length from cut end to slot).

STANDARD BASE PLATE

TECHNICAL DATA

ZCA Part No:	SFS50-STD-BP
S&T Part No:	P0112045
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



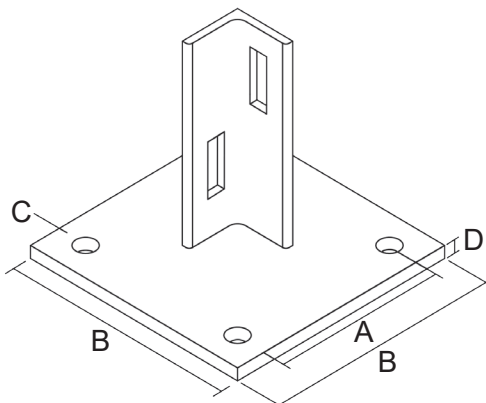
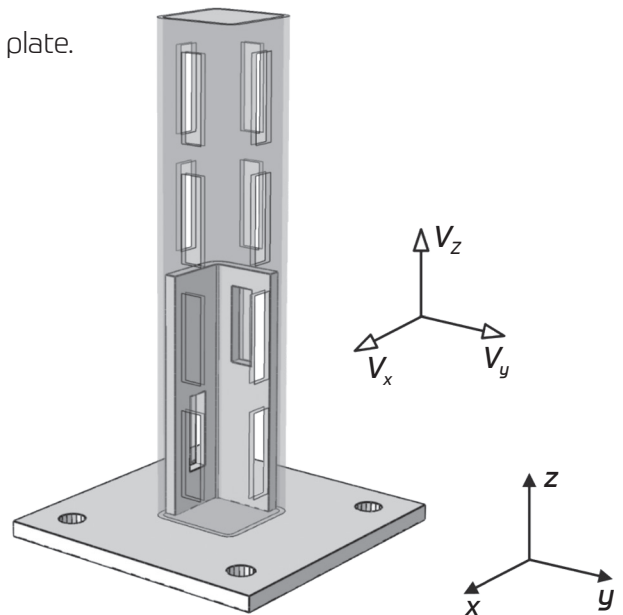
LOADING

NOTES:

1. The anchors and concrete slab must satisfy the ultimate loading requirements.
2. 2 No. SFSBOLT-S45-M12 required to fix the channel to base plate.
3. Channel member to bear on base plate.
4. SFSBOLT-S45-M10 torqued to 80 Nm.

LOAD TYPE ULTIMATE CAPACITY

V_x, V_{-x}	4.8 kN
V_y, V_{-y}	4.8 kN
V_z, V_{-z}	10.5 kN

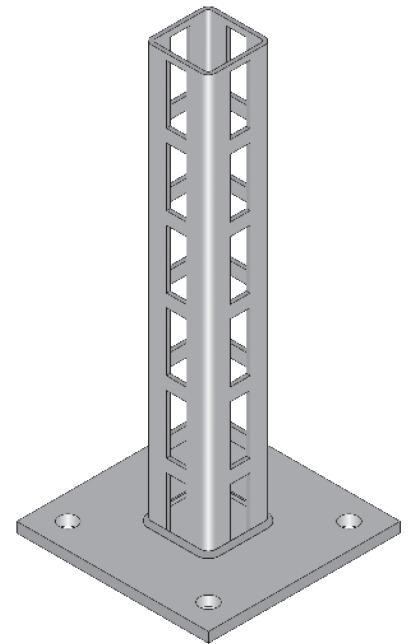


DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SFS50-STD-BP	108	150	14 Ø	6	12 × 40

2 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

WELDED BASE PLATE



TECHNICAL DATA

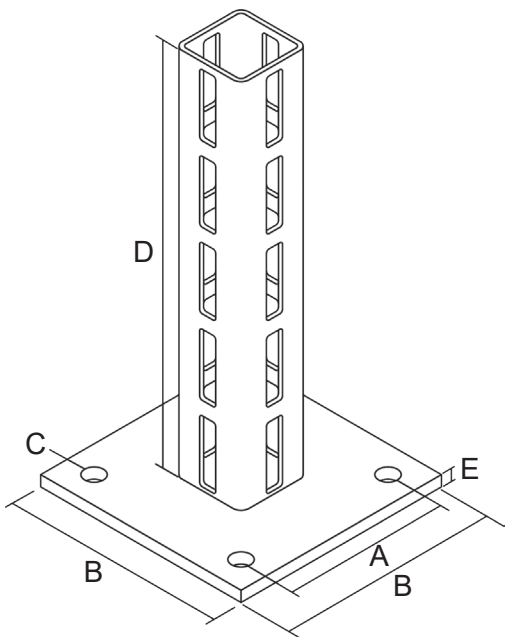
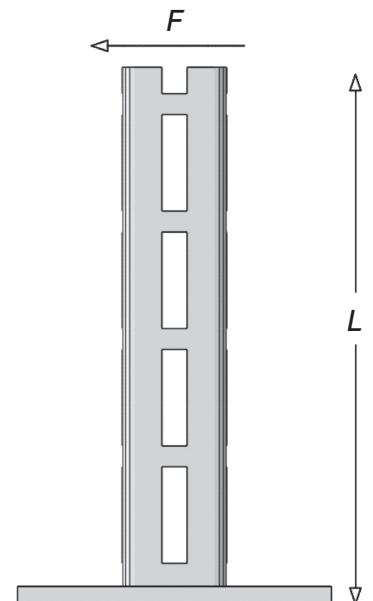
ZCA Part Nos:	SFS50-WBP-750* SFS50-WBP-1000** SFS50-WBP-1500***
S&T Part Nos:	S&T P0112046* P0112047** P0112048***
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

LOADING

NOTES:

1. The M10 concrete anchor to be selected to satisfy the SFS50 welded base plates (WBP) ultimate loading.

PART NUMBER	MEMBER LENGTH, L (mm)	ULTIMATE CAPACITY, F (kN)
SFS50-WBP-750	750	1.7
SFS50-WBP-1000	1000	1.3
SFS50-WBP-1500	15000	0.8

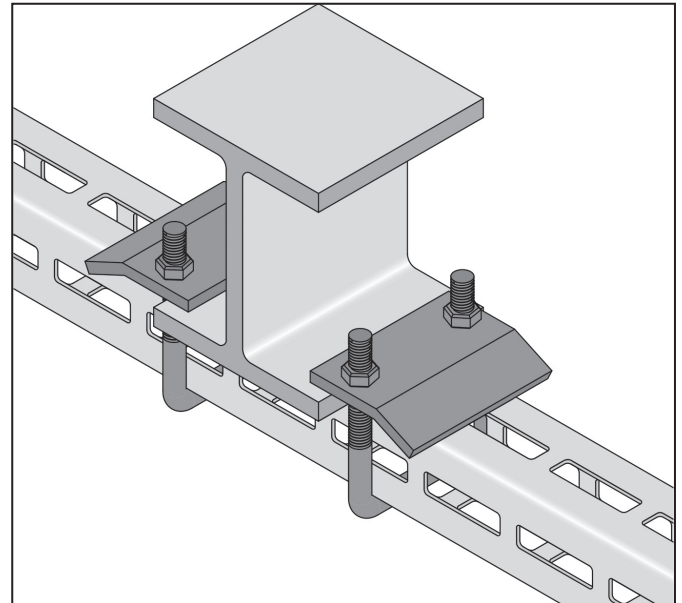


DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
SFS50-WBP-750	108	150	11 Ø	750	10
SFS50-WBP-1000	108	150	11 Ø	1000	10
SFS50-WBP-1500	108	150	11 Ø	1500	10

BEAM CLAMP

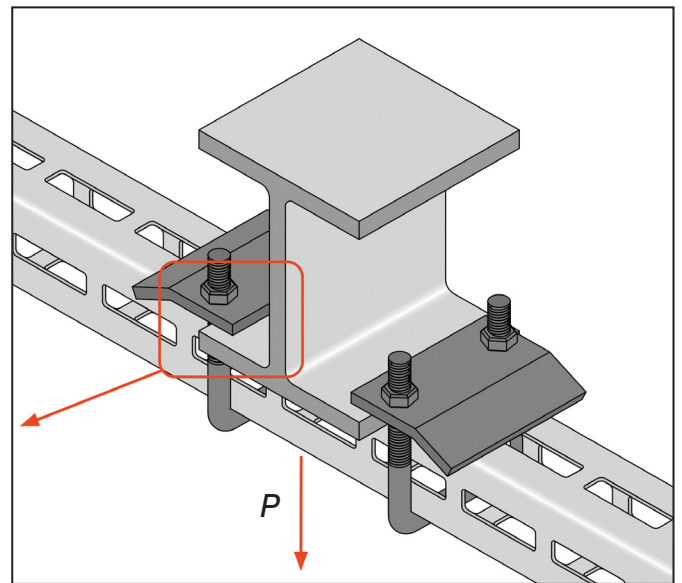
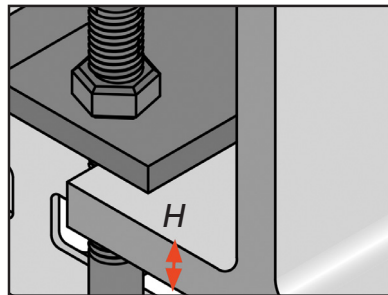
TECHNICAL DATA	
ZCA Part No:	SFS50-BC
S&T Part No:	P0112049
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



LOADING

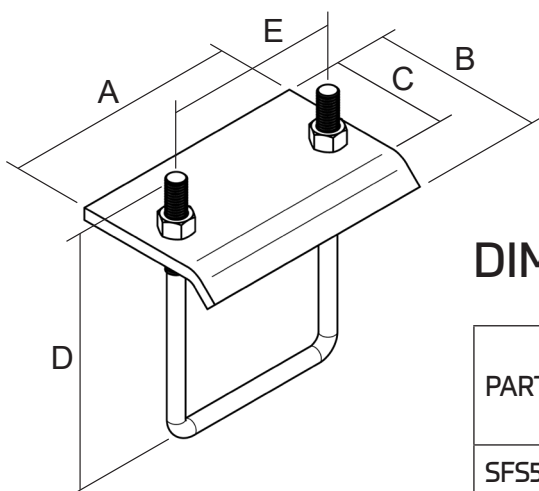
NOTES:

1. SFS50 Beam Clamps must be used as a pair.
2. Connection including bending actions to be confirmed with Zip-Clip Technical Team.
3. For M10 Class 4.6 U-Bolts, nut installation torque 17 Nm.



Beam flange thickness (**H**): 8 - 20 mm.

Working Load (**P**) per pair: 8.93 kN.



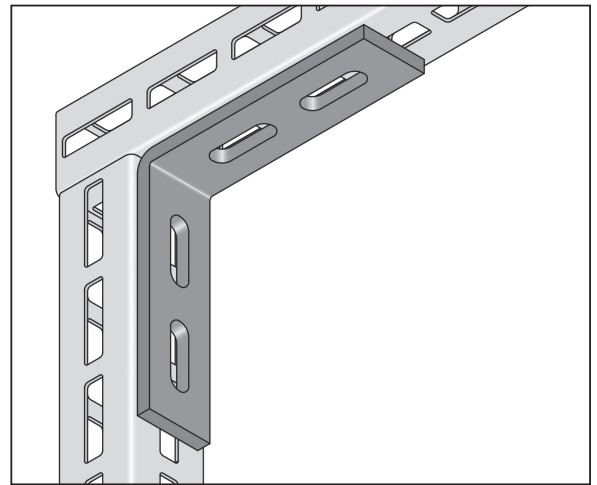
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	CLAMP MATERIAL (mm)	U-BOLT
SFS50-BC	100	98	80	115	63	8	M10 × 1.75

ANGLE BRACKET

TECHNICAL DATA

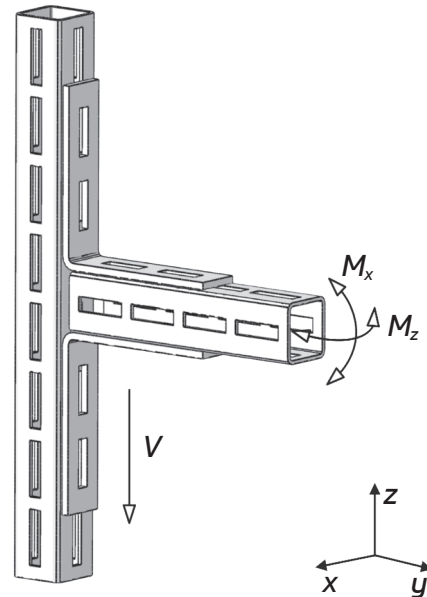
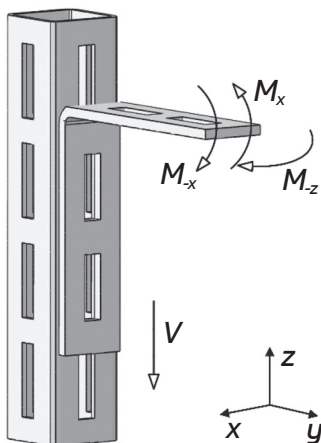
ZCA Part No:	SF550-AB1
S&T Part No:	P0112050
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



LOADING

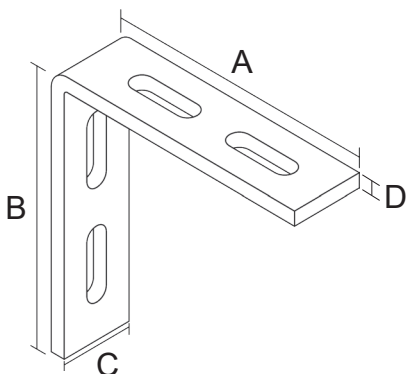
NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.



LOAD TYPE	ULTIMATE CAPACITY
M_x	0.07 kNm
M_{-x}	0.05 kNm
M_z, M_{-z}	0.05 kNm
V	21.0 kN

LOAD TYPE	ULTIMATE CAPACITY
M_x, M_{-x}	0.24 kNm
M_z, M_{-z}	0.11 kNm
V	29.0 kN



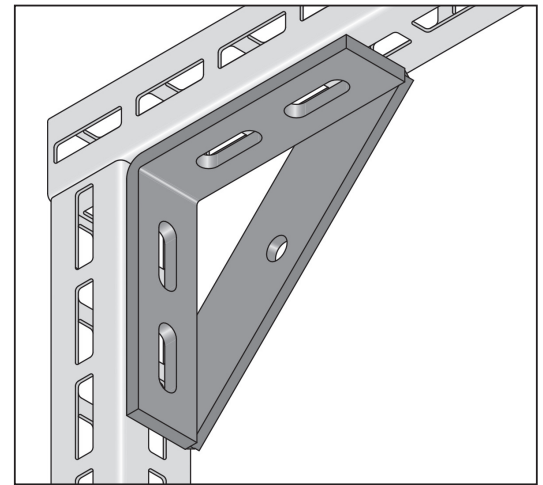
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SF550-AB1	150	150	40	6	12 × 40

4 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

ANGLE BRACKET WITH GUSSET

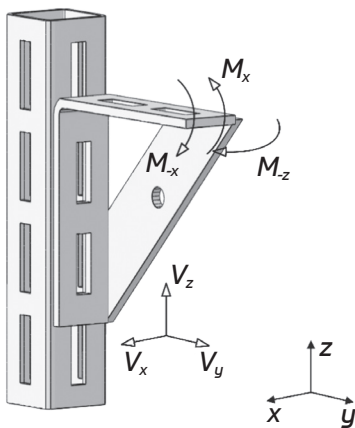
TECHNICAL DATA	
ZCA Part No:	SFS50-AB1G
S&T Part No:	P0112051
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



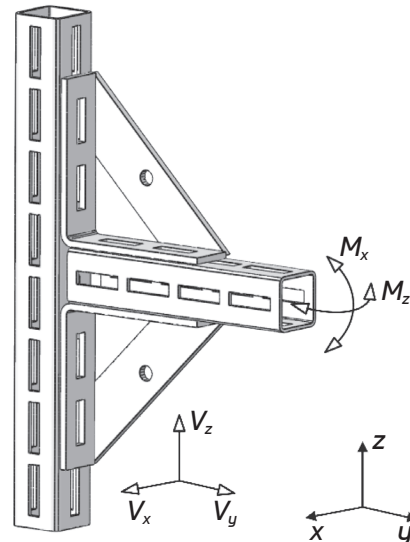
LOADING

NOTES:

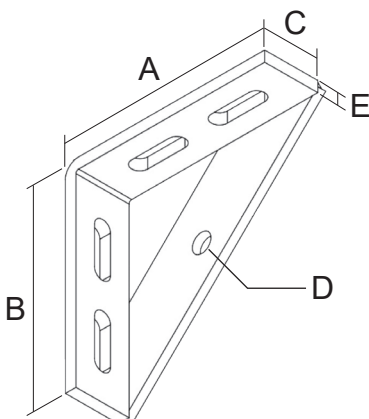
1. SFSBOLT-S45-M10 torqued to 80 Nm.



LOAD TYPE	ULTIMATE CAPACITY
M_x	0.56 kNm
M_y	0.60 kNm
M_z, M_z	0.29 kNm
V_x	21.0 kN
V_y	9.6 kN
V_z	21.0 kN



LOAD TYPE	ULTIMATE CAPACITY
M_x, M_x	1.28 kNm
M_z, M_z	0.35 kNm
V_x	42.0 kN
V_y	12.2 kN
V_z	30.6 kN

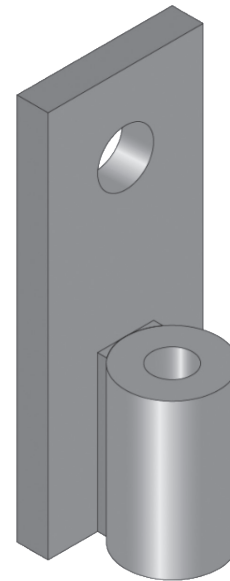


DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	SLOTS (mm)
SFS50-AB1G	150	150	40	14 Ø	6	12 × 40

4 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

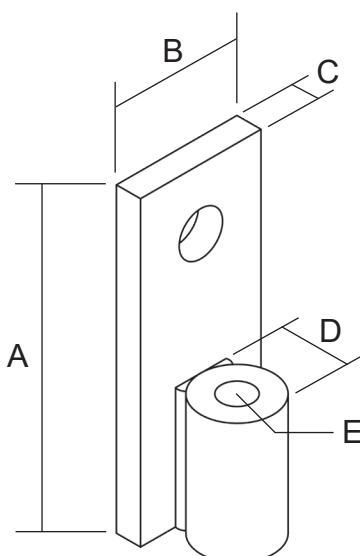
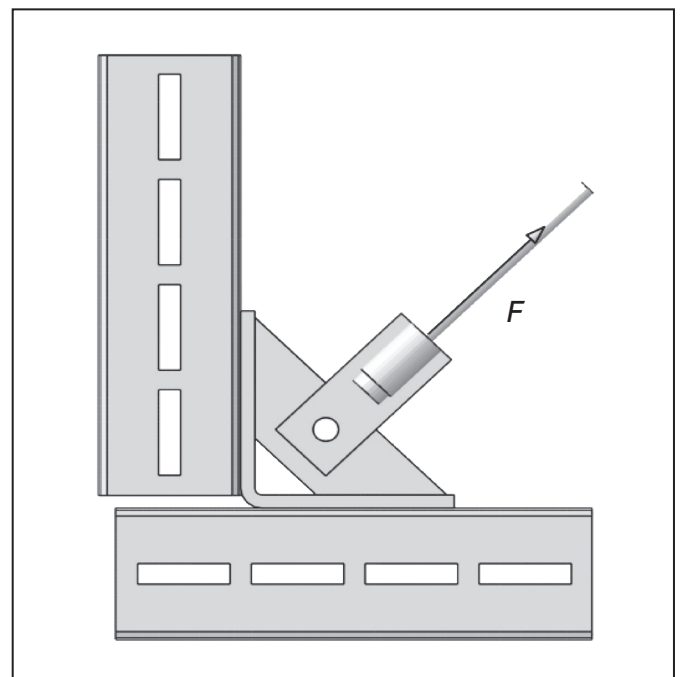
TENSIONING BRACKET



TECHNICAL DATA	
ZCA Part No:	SFS50-TB
S&T Part No:	P0112052
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

LOADING

PART NO.	THREADED ROD	ULTIMATE CAPACITY (F)
SFS50-TB	M10 Class 4.6	11.1 kN



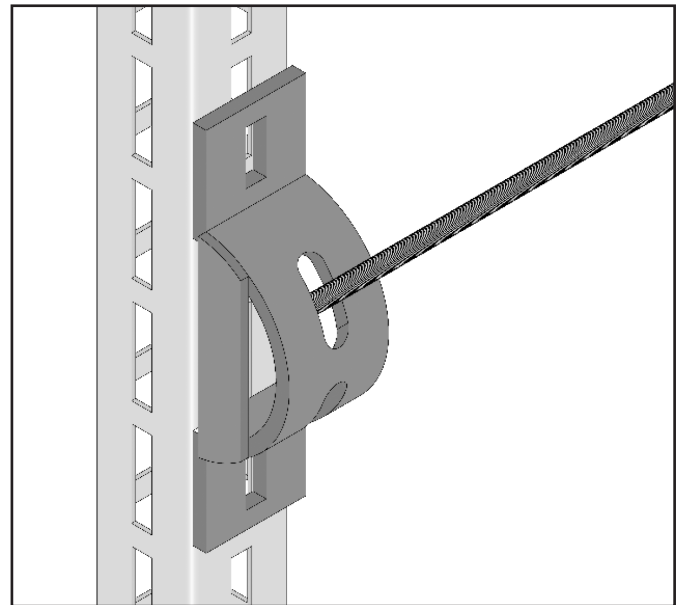
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
SFS50-TB	100	40	6	25 Ø	11 Ø

FLAT BRACE

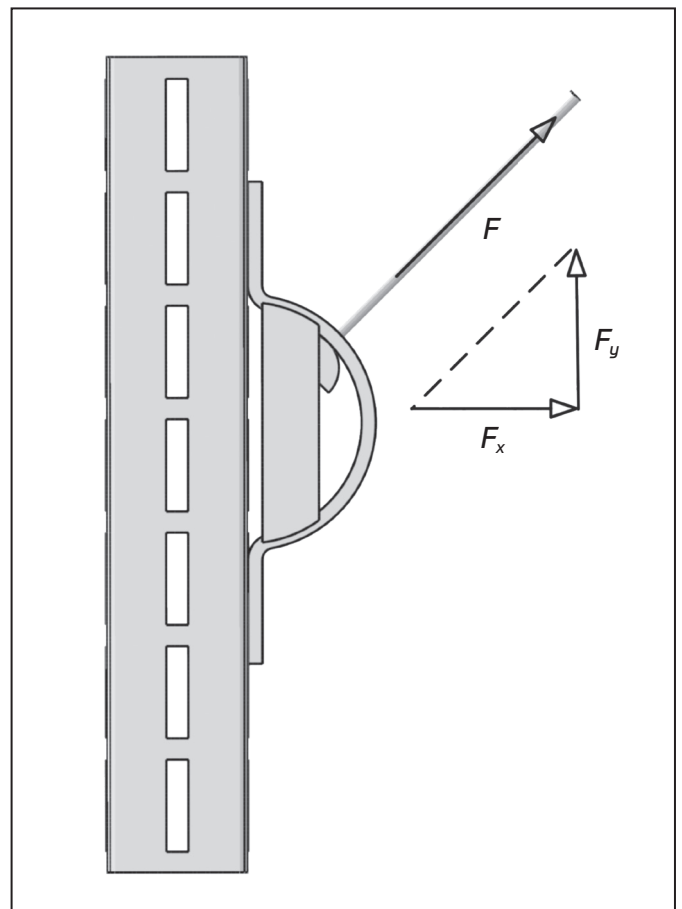
TECHNICAL DATA

ZCA Part No:	SFS50-FB
S&T Part No:	P0112053
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

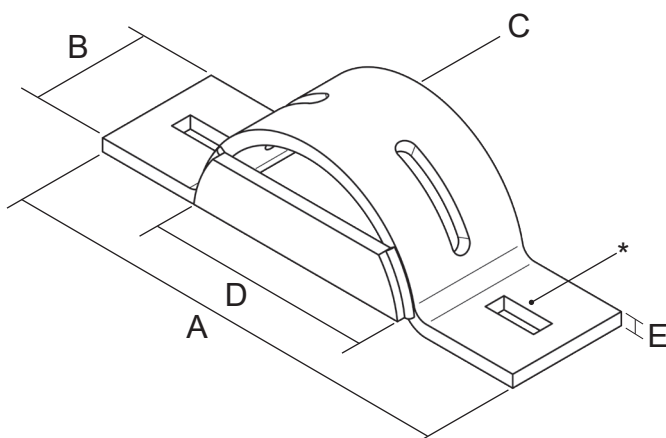


LOADING

PART No	THREADED ROD	ULTIMATE CAPACITY (F)
SFS50-FB	M10 Class 4.6	11.1 kN

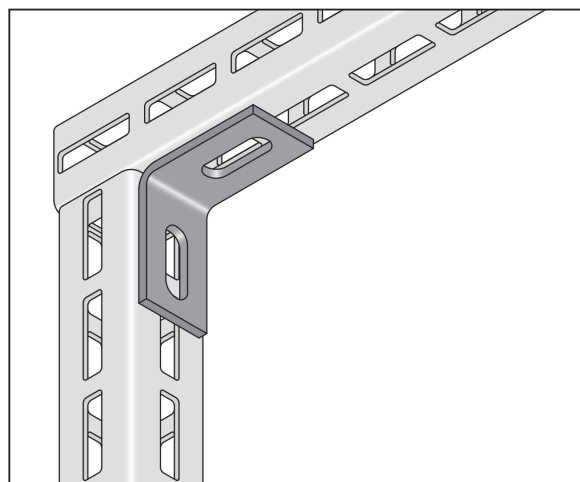


DIMENSIONS



PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	END SLOTS* (mm)
SFS50-FB	280	40	R66 Ø	169	6	12 × 40

ANGLE BRACKET



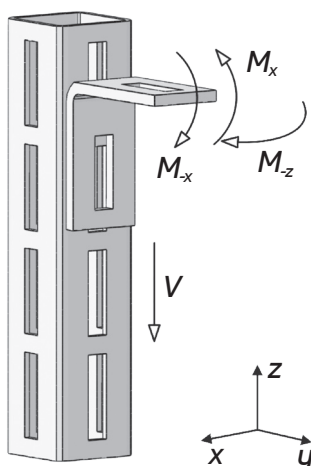
TECHNICAL DATA

ZCA Part No:	SFS50-AB2
S&T Part No:	P0112054
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

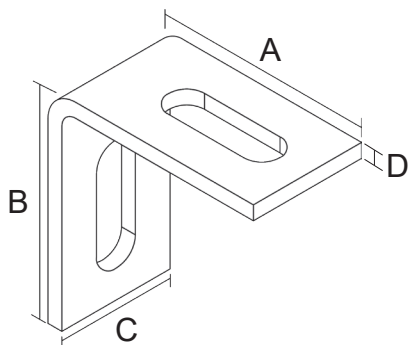
LOADING

NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.



LOAD TYPE	ULTIMATE CAPACITY
M_x	0.07 kNm
M_y	0.04 kNm
M_z, M_z	0.07 kNm
V	10.5 kN



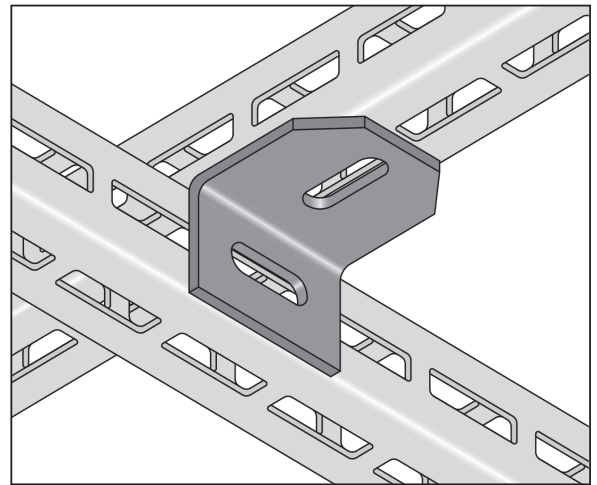
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SFS50-AB2	75	75	40	6	12 × 40

2 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

ANGLE BRACKET

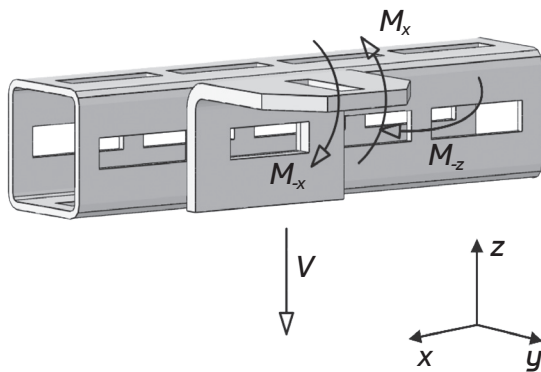
TECHNICAL DATA	
ZCA Part No:	SFS50-AB3
S&T Part No:	P0112055
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



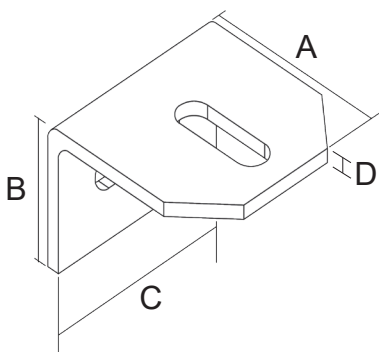
LOADING

NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.



LOAD TYPE	ULTIMATE CAPACITY
M_x	0.14 kNm
M_y	0.06 kNm
M_z, M_z	0.11 kNm
V	10.5 kN

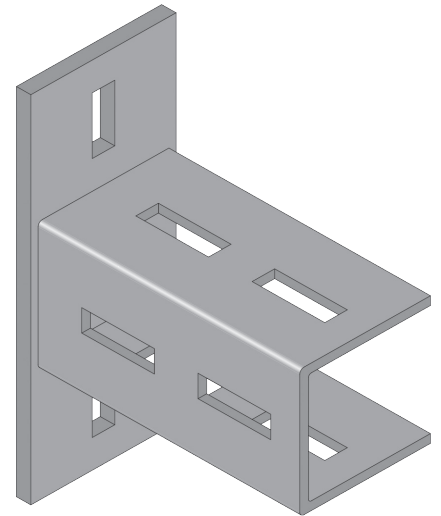


DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SFS50-AB3	75	50	75	6	12 × 40

2 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

2-WAY BRACKET



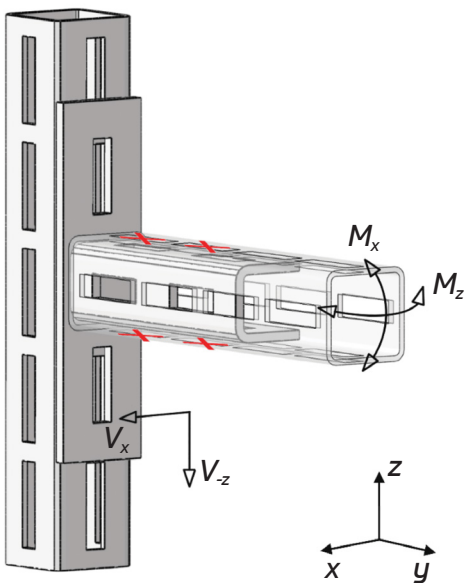
TECHNICAL DATA

ZCA Part No:	SFS50-B2WAY
S&T Part No:	P0112056
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

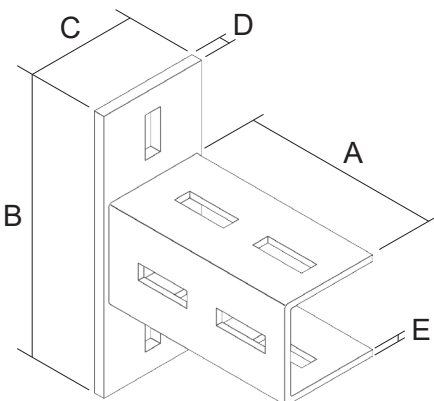
LOADING

NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.



LOAD TYPE	ULTIMATE CAPACITY
M_x, M_y	0.30 kNm
M_z, M_{-z}	0.27 kNm
V_x, V_{-x}	21.0 kN
V_z, V_{-z}	21.0 kN



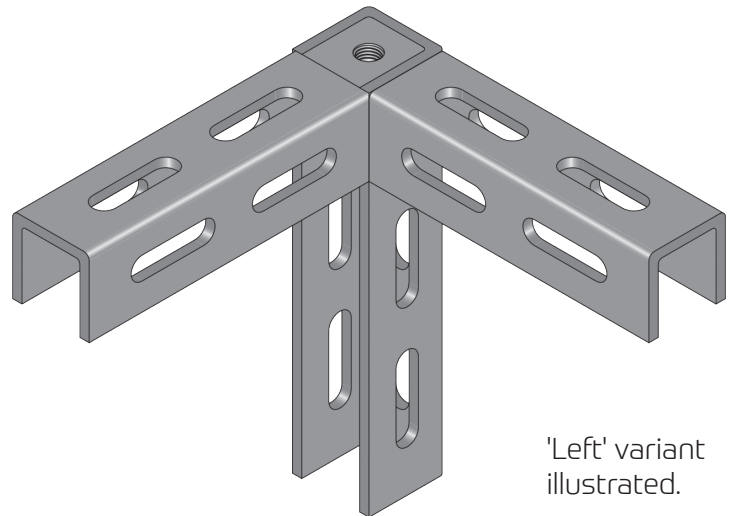
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	SLOTS (mm)
SFS50-B2WAY	150	190	40	6	5	12 × 40

6 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

3-WAY BRACKET

TECHNICAL DATA	
ZCA Part Nos:	SF550-B3WAY R SF550-B3WAY L
S&T Part Nos:	Right - P0112057 Left - P0112059
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised

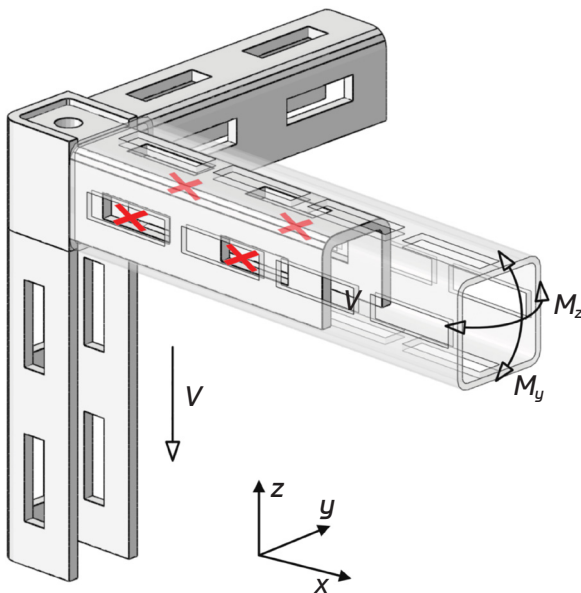


'Left' variant illustrated.

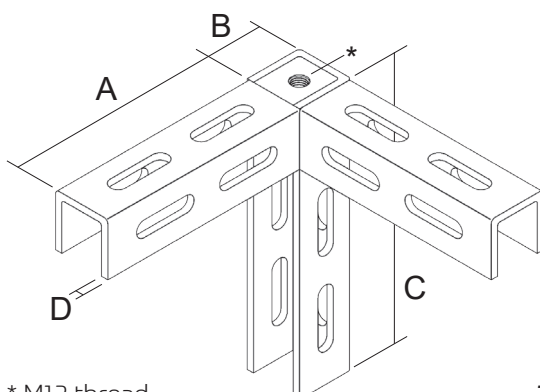
LOADING

NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.
2. 4 No. SFSBOLT-S45-M10 set on opposite sides (✕)
3. Bottom branch is a different direction for Left and Right 3-way brackets.



LOAD TYPE	ULTIMATE CAPACITY
M_y, M_{-y}	1.32 kNm
M_z, M_{-z}	0.86 kNm
V	21.0 kN



* M12 thread

DIMENSIONS

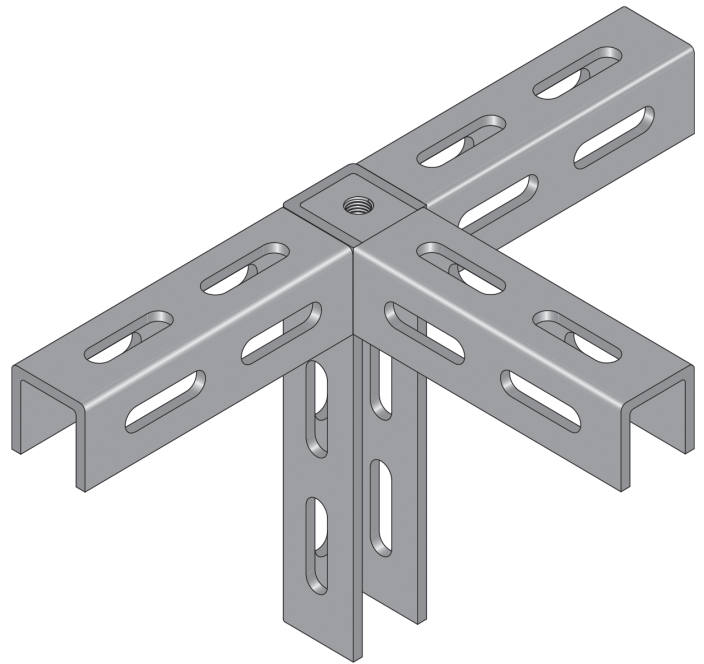
PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SF550-B3WAY	150	50	200	5	12 × 40

18 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

4-WAY BRACKET

TECHNICAL DATA

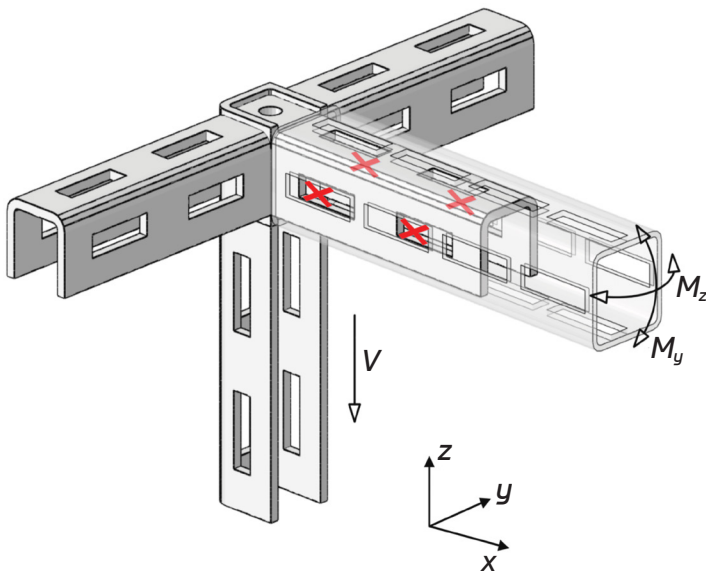
ZCA Part No:	SFS50-B4WAY
S&T Part No:	P0112059
Material:	Mild Steel
Material Type:	235 MPa
Finish:	Hot-dip galvanised



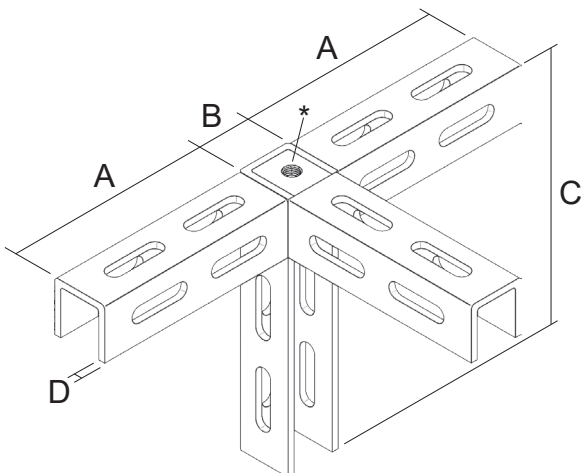
LOADING

NOTES:

1. SFSBOLT-S45-M10 torqued to 80 Nm.
2. 4 No. SFSBOLT-S45-M10 set on opposite sides (✕)



LOAD TYPE	ULTIMATE CAPACITY
M_y, M_y	1.32 kNm
M_z, M_z	0.86 kNm
V	21.0 kN



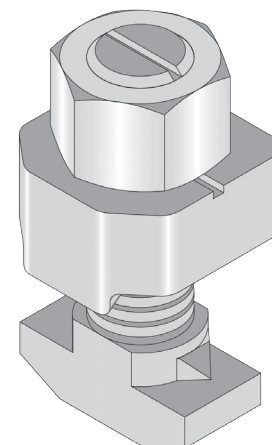
DIMENSIONS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	SLOTS (mm)
SFS50-B4WAY	150	50	200	5	12 × 40

* M12 thread

24 × SFSBOLT-S45-M10 REQUIRED UNLESS SPECIFIED IN DESIGN DRAWING.

BOLTS



TECHNICAL DATA

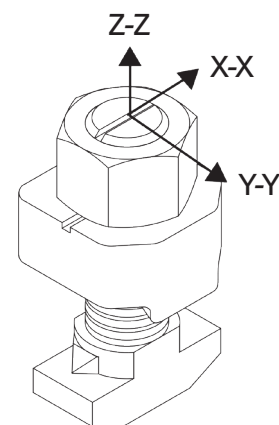
ZCA Part Nos:	SFSBOLT-S45-M10
S&T Part Nos:	P0112061
Material:	Mild Steel
Material Type:	10.9 Grade Steel
Finish:	Zinc-Nickel
For Profile:	SFS50
Features:	Form Locking Connection

LOADING

NOTES:

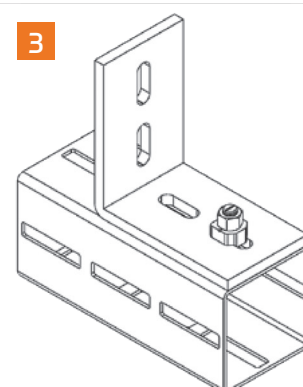
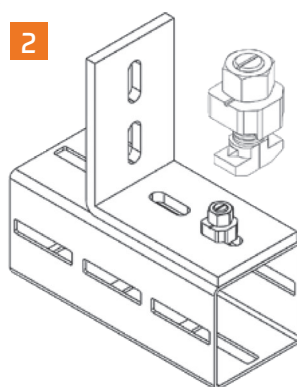
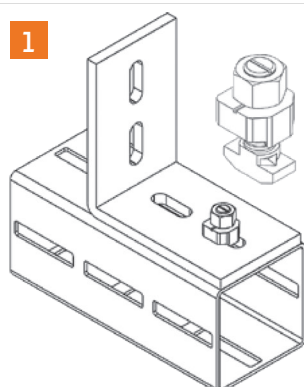
1. SFSBOLT-S45-M10 for use with fixings that come with 12 mm slots to suit Support Frame System 50.
2. SFSBOLT-S45-M10 torqued to 80 Nm.
4. Suitable for both indoor and outdoor applications.
5. Not for use in cases where the bolt is continually subject to corrosive atmosphere, e.g., tidal zones, high corrosive environments, etc.

SFSBOLT-M12S	
LOAD TYPE	ULTIMATE CAPACITY
X-X (along slot)	7.5 kNm
Y-Y (perpendicular to slot)	7.5 kNm
Z-Z	3 kN



INSTALLATION

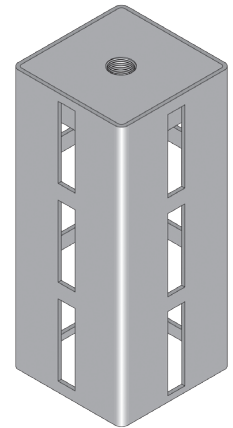
1. Place the bolt head through the bracket.
2. Turn the bolt head through 90° so that both locating lines on the bolt and washer are perpendicular to the slotted holes.
3. Check that the lock washer locates within the slotted hole and tighten to 80 Nm for M10.



LIFTING ACCESSORIES

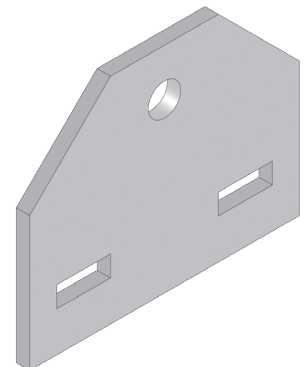
WELDED LIFTING PLUG

Part Nos:	Description	Thread	Finish	Working Load Limit (kg)
ZCA: SFS50-WLP S&T: P0095454	SFS50 welded lifting plate	M12	Hot-dip galvanised	1500
ZCA: SFS80-WLP S&T: P0095454	SFS80 welded lifting plate	M20	Hot-dip galvanised	2000
ZCA: SFS100-WLP S&T: P0095454	SFS100 welded lifting plate	M20	Hot-dip galvanised	2000



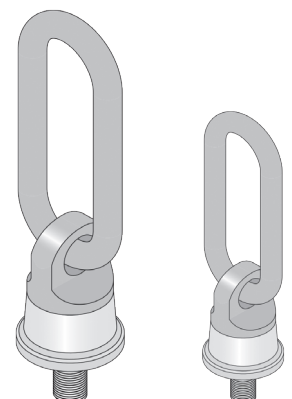
LIFTING BRACKET

Part No:	Description	Hole (mm)	Finish	Working Load Limit (kg)
ZCA: SFS80-LB S&T: P0096631	SFS80 lifting bracket	24	Hot-dip galvanised	2000
ZCA: SFS100-LB S&T: P0096631	SFS100 lifting bracket	24	Hot-dip galvanised	2000



LIFTING LUG

Part No:	Description	Thread	Finish	Working Load Limit (kg)
ZCA: SFS50-LL S&T: P0095030	SFS50 lifting lug	M12	Painted	1500
ZCA: SFS80-LL S&T: P0095030	SFS80 lifting lug	M20	Painted	2000
ZCA: SFS100-LL S&T: P0095030	SFS100 lifting lug	M20	Painted	2000

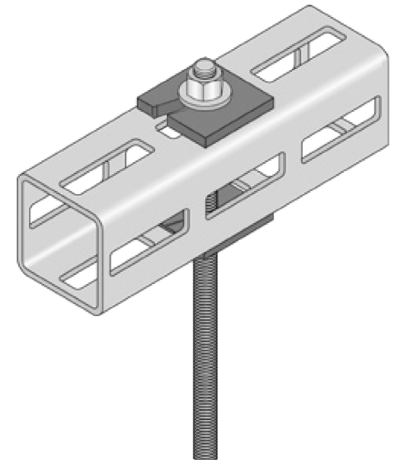


Contact Zip-Clip Technical Department to discuss appropriate lifting lug.

OTHER ACCESSORIES

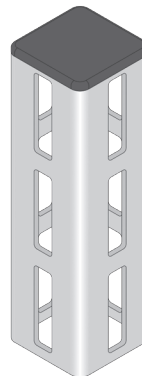
REINFORCEMENT WASHER

Part No.	Description	Compatible With	Finish
ZCA: SFS50-RW S&T: P0112075	SFS50 Reinforcement washer	M10 rod	Hot-dip galvanised



END CAP

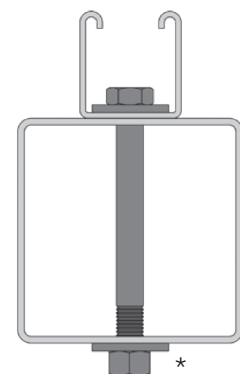
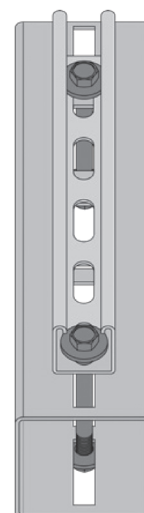
Part No.	Description	Colour
ZCA: SFS50-CAP S&T: P0112063	SFS50 end cap	Orange



STRUT CONNECTION GUIDE

Relevant for all systems – 50, 80 and 100

System Size	Bolt and Nut	Washer*
ZCA: SFS50 S&T: P0011791	M10 × 75	M10
ZCA: SFS80 S&T: P0010713	M10 × 110	M10
ZCA: SFS100 S&T: P0010838	M10 × 130	M10



*M10 Round Washer
S&T: P0029264

DISCLAIMER:

The product capacities, descriptions, and installation guidelines within this product guide are the position and copyright of Zip-Clip Atlas.