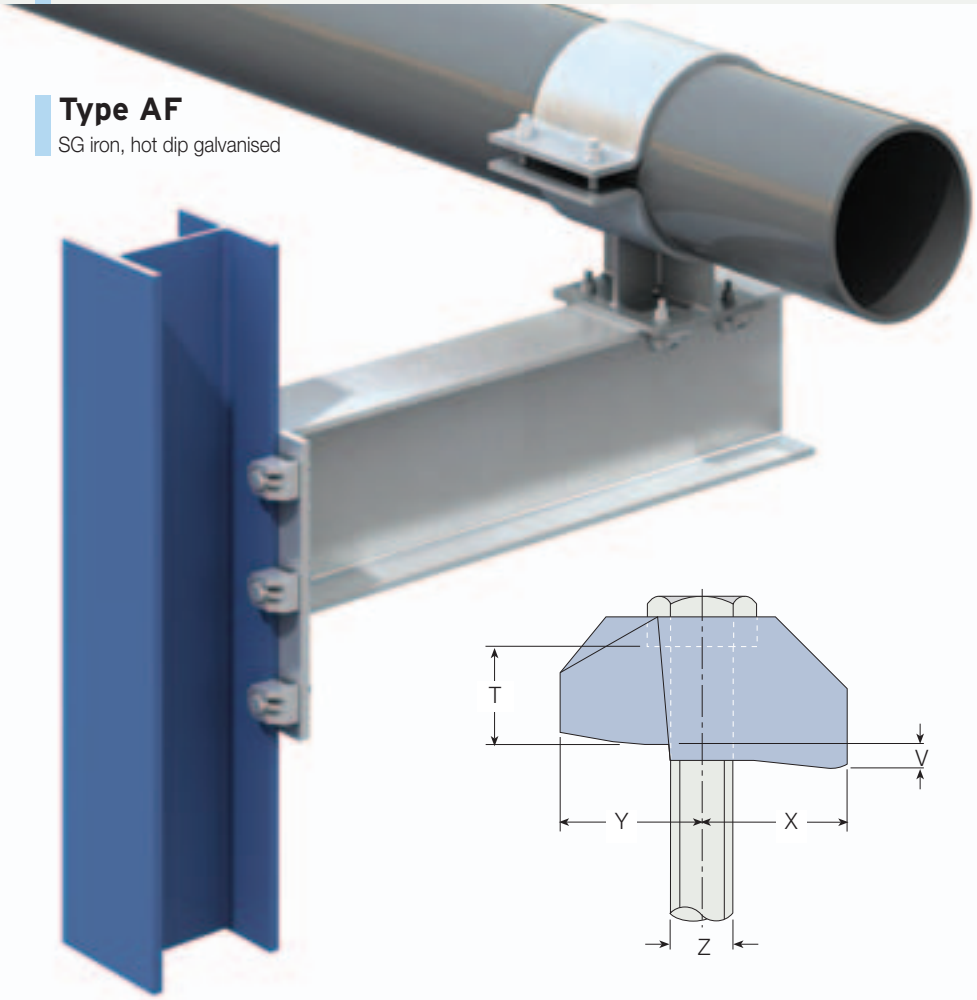
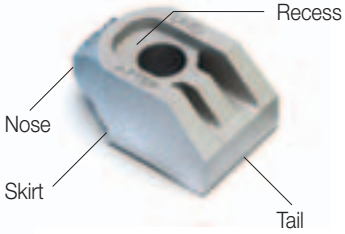
Type AF

SG iron, hot dip galvanised



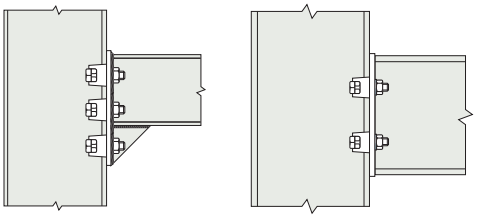
Without washer: For bolt grade 8.8



With washer Type AFW

With washer inverted Type AFW
for bolt grade 10.9 with larger hexagons (M12 - M20)

Typical Applications
(see also page 36-39)



High friction clamp with recessed top to hold bolt head captive whilst the nut is tightened. Can be combined with type CF. The skirt prevents the clamp rotating during installation. The tail of the AF spans across slotted holes. For flanges up to 10°. Washer type AFW available (see illustration).

For correct tail length/packing combinations please see page 18.

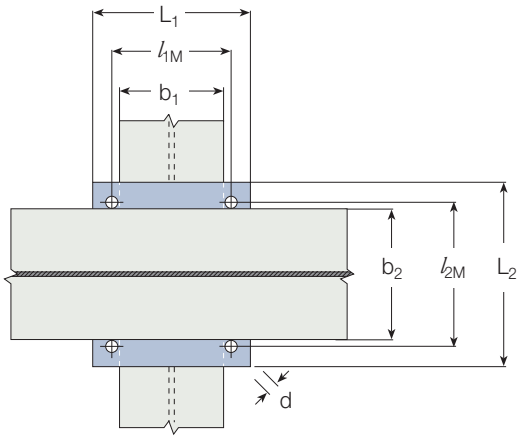
Product Code	Bolt Z	Bolt Grade	Safe Working Loads (5:1) Tensile / 1 Bolt kN	Factor of Safety (2:1) Frictional[1] / 2 Bolts Painted Steelwork[2] kN	Galv. Steelwork kN	Torque Nm	Dimensions Y mm	X mm	Tail Length V short mm	V medium mm	T Type AF mm	T Type AF with AFW mm	Width mm
AF12	M12	8.8	8.5	3.4	3.9	90	29	27	5	12.5	17	22	39
AF16	M16	8.8	16.0	8.0	10.0	240	35	37	8	15	22	27	49
AF20	M20	8.8	26.3	13.0	16.0	470	40	39	10	18	25	31	56
AF24	M24	8.8	40.0	24.0	30.0	800	48	60	15	30	32	42	82
AF12	M12	10.9[4]	10.0	4.0	5.2	130	29	27	5	12.5	17	22	39
AF16	M16	10.9[4]	19.5	11.0	12.0	300	35	37	8	15	22	27	49
AF20	M20	10.9[4]	30.0	20.0	25.0	647	40	39	10	18	25	31	56
AF24	M24	10.9[4]	62.5[3]	28.0	35.0	1000	48	60	15	30	32	42	82

1) Frictional Load figures are based on Type AF and Location plates in hot dip galvanised finish
2) Shot blast and painted steelwork
3) 3.2:1 factor of safety
4) For HR or HV bolts (hot dip galvanised and lubricated) please refer to manufacturers' recommendation for torque figures.

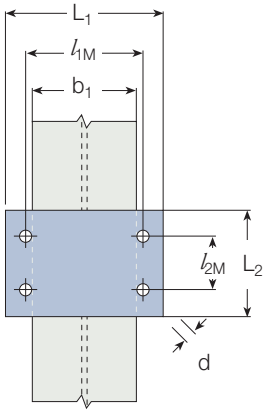
Order example: AF12 short

Location and End Plates

L_1 = Plate length
L_2 = Plate width
l_{1M}, l_{2M} = Hole centres
b_1, b_2 = Flange width
d = Hole Ø
s = Plate thickness



Location Plate



End Plate

Plate Dimensions
Material: Mild Steel Grade S355 JR (for other grades please contact Lindapter)

		Location Plate			End Plate[1)]				
Bolt Z	Hole Ø d mm	Plate Thickness s mm	Hole Centres l_{1M}, l_{2M} mm	Length/Width min L_1, min L_2 mm	Plate Thickness s mm	Hole Centre l_{1M} mm	Length min L_1 mm	Hole Centre min l_{2M} mm	Width min L_2 mm
M12	13	10	b + 13	b + 90	15	b_1 + 13	b_1 + 90	80	l_{2M} + 80
M16	18	15	b + 18	b + 110	25	b_1 + 18	b_1 + 110	100	l_{2M} + 100
M20	22	20	b + 22	b + 130	30	b_1 + 22	b_1 + 130	180	l_{2M} + 180
M24	26	25	b + 26	b + 180	40	b_1 + 26	b_1 + 180	200	l_{2M} + 200

1) Dependant on the use of the end plate the thickness might need to be increased.
2) For combinations of Type CF with A, B and BR see page 15 and for types D2, D3 and LR see page 23.

Calculation of bolt length see page 11

Tail Length / Packing Combinations for Types AF

Parallel flanges and beams of up to 10° slope

Flange Thickness	Type AF																
	M12				M16				M20				M24				
mm	AF	AFCW	AFP1	AFP2	AF	AFCW	AFP1	AFP2	AF	AFCW	AFP1	AFP2	AF	AFP1	AFP2
5	s	-	-	-	■	-	-	-	■	-	-	-	■	-	-
6	s	-	-	-	■	-	-	-	■	-	-	-	■	-	-
7	s	1	-	-	s	-	-	-	■	-	-	-	■	-	-
8	s	1	-	-	s	-	-	-	■	-	-	-	■	-	-
9	s	2	-	-	s	-	-	-	s	-	-	-	■	-	-
10	s	-	1	-	s	1	-	-	s	-	-	-	■	-	-
11	s	3	-	-	s	1	-	-	s	-	-	-	■	-	-
12	s	1	1	-	s	2	-	-	s	1	-	-	s	-	-
13	m	-	-	-	s	-	1	-	s	1	-	-	s	-	-
14	m	1	-	-	s	3	-	-	s	2	-	-	s	-	-
15	s	-	-	1	m	-	-	-	s	-	1	-	s	-	-
16	m	2	-	-	m	-	-	-	s	3	-	-	s	-	-
17	m	-	1	-	m	1	-	-	m	-	-	-	s	-	-
18	m	-	1	-	s	-	-	1	m	-	-	-	s	1	-
19	m	1	1	-	m	-	1	-	m	-	-	-	s	1	-
20	s	-	1	1	m	-	1	-	m	1	-	-	s	1	-
21	m	2	1	-	m	-	1	-	m	1	-	-	s	1	-
22	m	2	1	-	m	1	1	-	m	2	-	-	s	1	-
23	m	-	-	1	m	1	1	-	m	-	1	-	s	-	1
24	m	1	-	1	m	-	-	1	m	1	1	-	s	-	1
25	s	-	-	2	m	-	-	1	m	1	1	-	s	-	1
26	m	2	-	1	m	-	-	1	s	1	1	1	s	-	1
27	m	2	-	1	m	1	-	1	s	1	1	1	m	-	-

Flange Thickness	Type AF																
	M12				M16				M20				M24				
mm	AF	AFCW	AFP1	AFP2	AF	AFCW	AFP1	AFP2	AF	AFCW	AFP1	AFP2	AF	AFP1	AFP2
28	m	-	1	1	s	-	-	2	m	-	-	1	m	-	-
29	m	1	1	1	m	-	1	1	m	-	-	1	m	-	-
30	s	-	1	2	m	-	1	1	m	1	-	1	m	-	-
31	s	-	1	2	m	-	1	1	m	1	-	1	m	-	-
32	m	-	-	2	m	1	1	1	m	-	1	1	m	1	-
33	m	-	-	2	m	1	1	1	m	-	1	1	m	1	-
34	m	1	-	2	m	-	-	2	m	-	1	1	m	1	-
35	s	-	-	3	m	-	-	2	s	-	1	2	m	1	-
36	s	-	-	3	m	-	-	2	m	1	1	1	m	1	-
37	m	-	1	2	m	1	-	2	m	-	-	2	m	1	-
38	m	-	1	2	s	-	-	3	m	-	-	2	m	-	1
39	m	1	1	2	m	-	1	2	m	-	-	2	m	-	1
40	s	-	1	3	m	-	1	2	m	1	-	2	m	-	1
41	s	-	1	3	m	-	1	2	m	1	-	2	m	-	1
42	m	-	-	3	m	1	1	2	m	-	1	2	m	-	1
43	m	-	-	3	s	-	1	3	m	-	1	2	m	1	1
44	m	1	-	3	m	-	-	3	m	-	1	2	m	1	1
45	s	-	-	4	m	-	-	3	m	1	1	2	m	1	1
46	s	-	-	4	m	-	-	3	m	1	1	2	m	1	1
47	m	-	1	3	m	1	-	3	m	-	-	3	m	1	1
48	m	-	1	3	s	-	-	4	m	-	-	3	m	-	2
49	s	-	1	4	m	-	1	3	m	-	-	3	m	-	2
50	s	-	1	4	m	-	1	3	m	1	-	3	m	-	2

s = short m = medium ■ = Type not applicable