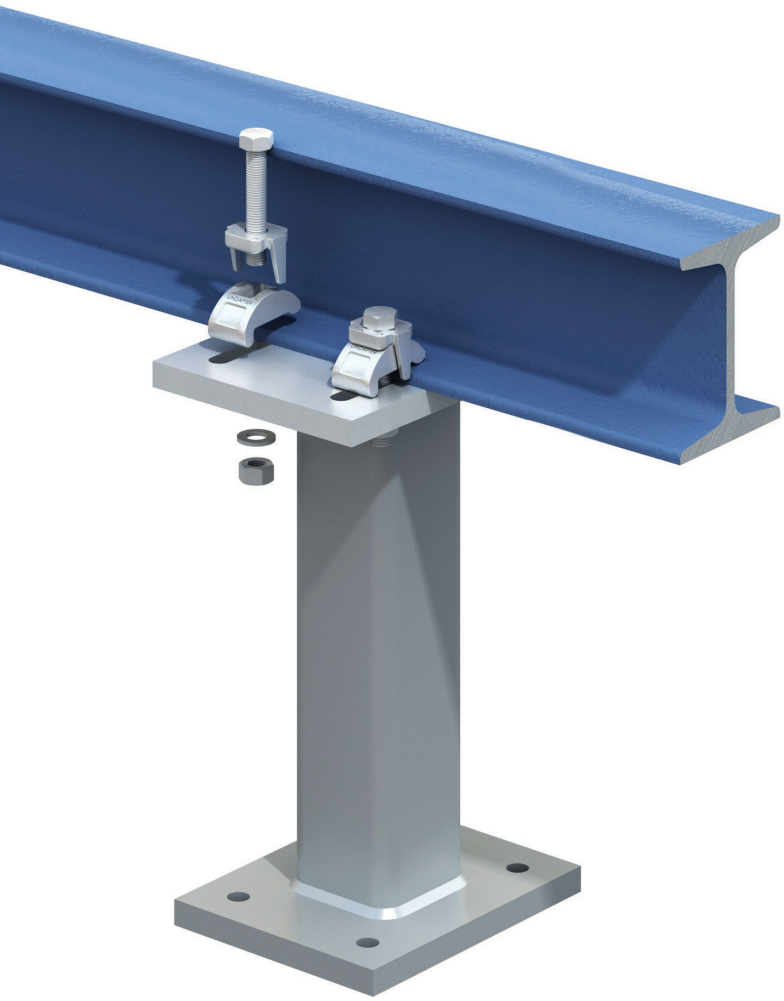
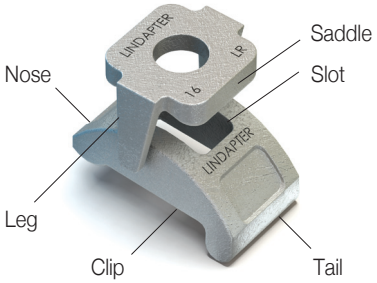
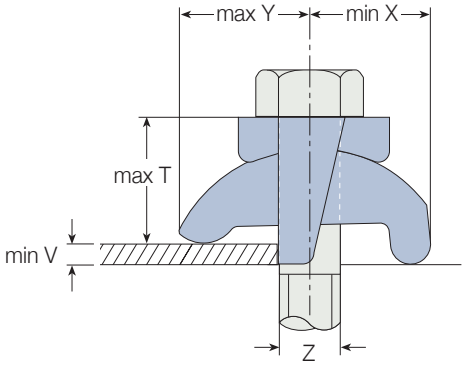
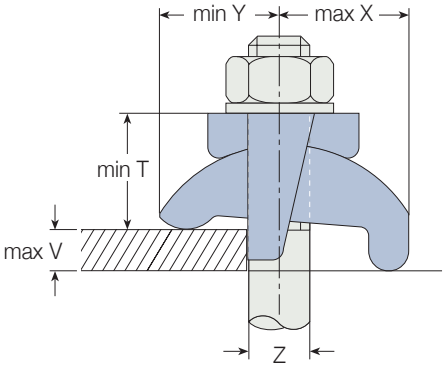
Type LR

Malleable iron, bright zinc plated / hot dip galvanised

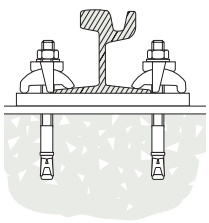


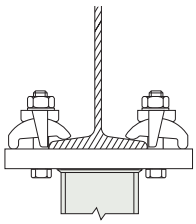






Typical Applications *(see also page 34-37)*





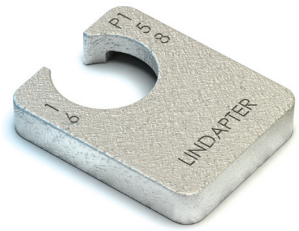
A self adjusting clamp for various flange thicknesses and slopes up to 15°. The leg of the saddle prevents the clamp rotating during installation. The LR tail spans slotted holes. For thicker flanges packings P1 long and P2 long are available. For correct packing combinations please see page 23.

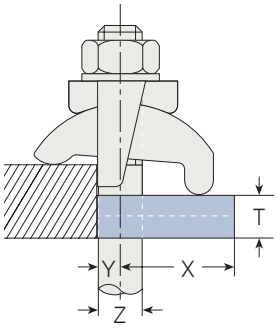
Product Code	Bolt 8.8 Z	Safe Working Loads (5:1 Factor of Safety) Tensile / 1 Bolt kN	Frictional / 2 Bolts kN	Tightening Torque Nm	Clamping Range V mm	Dimensions Y mm	X mm	T mm	Width with Saddle mm
LR10	M10	1.5	-	20	3 - 10	21 - 24	24 - 26	21 - 24	33
LR12	M12	5.8	0.7	69	3 - 12	26 - 29	25 - 31	25 - 29	39
LR16	M16	7.3	1.5	147	3 - 16	30 - 35	34 - 37	30 - 36	46
LR20	M20	14.7	3	285	3 - 20	42 - 49	46 - 51	41 - 48	57
LR24	M24	19.7	4.5	491	3 - 24	47 - 57	52 - 58	44 - 54	76

Order example: LR10 BZP

Type P1 long / P2 long

Mild Steel, malleable iron, bright zinc plated / hot dip galvanised





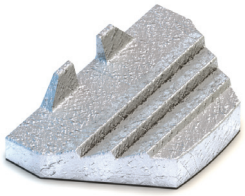
A packing used to adjust the tail length of the clamp to meet differing beam flange thicknesses.

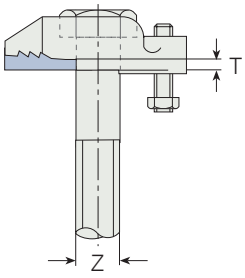
Product Code (P1)	Product Code (P2)	Bolt Z	Dimensions Y mm	X mm	(P1) T mm	(P2) T mm	Width mm
P1L10	P2L10	M10	5	24	5	10	24
P1L12	P2L12	M12	6	32	6	12	30
P1L16	P2L16	M16	8	40	8	16	35
P1L20	P2L20	M20	10	47	10	20	43
P1L24	P2L24	M24	12	64	12	24	54

Order example: P1L10 BZP

Type T

Malleable iron, bright zinc plated / hot dip galvanised





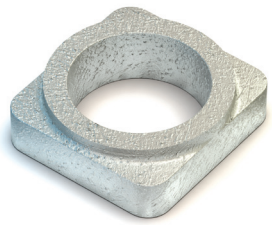
A packing to fill the nose of Type D2 and D3 making it horizontal. For parallel flanges only. The thickness 'T' should be added for tail length and bolt length calculations. The product is for aesthetic purposes only and is not mandatory from a technical perspective.

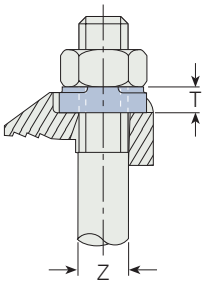
Product Code	Bolt Z	Dimensions T mm
T12	M12	3
T16	M16	4
T20	M20	5
T24	M24	6.5

Order example: T12 BZP

Type W

Mild Steel, malleable iron, bright zinc plated / hot dip galvanised





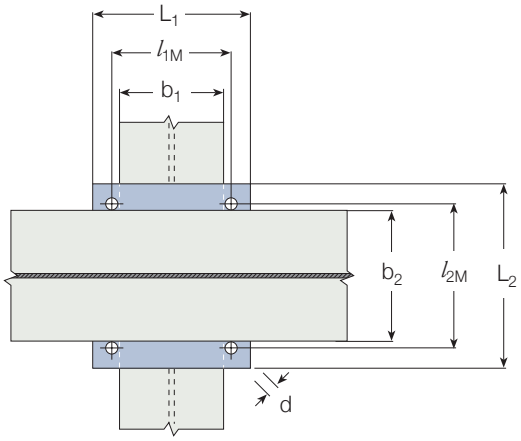
A washer used to fill the recess of Type D2 to enable the nut to be tightened. When calculating the bolt length, please add 'T'.

Product Code	Bolt Z	Dimensions T mm
W08	M8	4
W10	M10	5.5
W12	M12	6.5
W16	M16	8
W20	M20	9.5

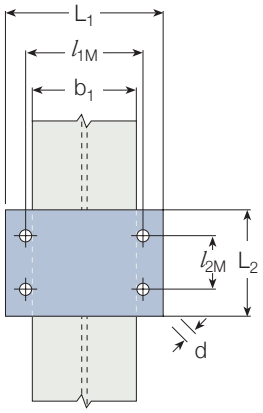
Order example: W08 BZP

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 S275 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
M10	11	12	b + 11	b + 66	15	b_1 + 11	b_1 + 66	70	l_{2M} + 50
M12	13	12	b + 13	b + 81	15	b_1 + 13	b_1 + 81	80	l_{2M} + 60
M16	18	15	b + 18	b + 105	20	b_1 + 18	b_1 + 105	100	l_{2M} + 70
M20	22	20	b + 22	b + 132	25	b_1 + 22	b_1 + 132	120	l_{2M} + 90
M24	26	25	b + 26	b + 156	30	b_1 + 26	b_1 + 156	150	l_{2M} + 110

1) Depending on the type of connection and associated end plate use, the thickness may need to be modified to comply with accepted local design codes.

Calculation of bolt length see page 10

Packing Combinations for Type LR

Parallel flanges

Type Combinations			M10	M12	M16	M20	M24
			Clamping Range				
LR	P1L	P2L	mm	mm	mm	mm	mm
1	-	-	3 - 10	3 - 12	3 - 16	3 - 20	3 - 24
1	1	-	8 - 15	9 - 18	11 - 24	13 - 30	15 - 36
1	-	1	13 - 20	15 - 24	19 - 32	23 - 40	27 - 48
1	1	1	18 - 25	21 - 30	27 - 40	33 - 50	39 - 60
1	-	2	23 - 30	27 - 36	35 - 48	43 - 60	51 - 72
1	1	2	28 - 35	33 - 42	43 - 56	53 - 70	63 - 84
1	-	3	33 - 40	39 - 48	51 - 64	63 - 80	75 - 96

Packing Combinations for Type D2 & D3

Parallel flanges and beams of up to 5° slope

Type Combinations			M10 D2	M12 D2 / D3	M16 D2 / D3	M20 D2	M24 D2
			Clamping Range				
D	P1L	P2L	mm	mm	mm	mm	mm
1[1]	-	-	5 - 10	5 - 10	6.5 - 13	8.5 - 17	10 - 19
1	-	-	10 - 20	10 - 22	13 - 20	17 - 24	19 - 30
1	1	-	15 - 25	16 - 28	21 - 28	27 - 34	31 - 42
1	-	1	20 - 30	22 - 34	29 - 36	37 - 44	43 - 54
1	1	1	25 - 35	28 - 40	37 - 44	47 - 54	55 - 66
1	-	2	30 - 40	34 - 46	45 - 52	57 - 64	67 - 78
1	1	2	35 - 45	40 - 52	53 - 60	67 - 74	79 - 90
1	-	3	40 - 50	46 - 58	61 - 68	77 - 84	91 - 102

1) Setscrew S inverted.

Packing Combinations for Type LR

For IPN-Beams of an 8° slope

IPN Profile	M10			M12			M16			M20			M24		
	LR	P1L	P2L	LR	P1L	P2L	LR	P1L	P2L	LR	P1L	P2L	LR	P1L	P2L
80	1	-	-	■	-	-	■	-	-	■	-	-	■	-	-
100	1	-	-	1	-	-	■	-	-	■	-	-	■	-	-
120	1	-	-	1	-	-	1	-	-	■	-	-	■	-	-
140	1	-	-	1	-	-	1	-	-	■	-	-	■	-	-
160	1	-	-	1	-	-	1	-	-	1	-	-	■	-	-
180	1	-	-	1	-	-	1	-	-	1	-	-	■	-	-
200	1	-	-	1	-	-	1	-	-	1	-	-	■	-	-
220	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-
240	1	1	-	1	-	-	1	-	-	1	-	-	1	-	-
260	1	1	-	1	-	-	1	-	-	1	-	-	1	-	-
280	1	1	-	1	1	-	1	-	-	1	-	-	1	-	-
300	1	1	-	1	1	-	1	-	-	1	-	-	1	-	-
320	1	1	-	1	1	-	1	-	-	1	-	-	1	-	-
340	1	1	-	1	1	-	1	-	-	1	-	-	1	-	-
360	1	-	1	1	1	-	1	1	-	1	-	-	1	-	-
380	1	-	1	1	1	-	1	1	-	1	-	-	1	-	-
400	1	-	1	1	1	-	1	1	-	1	-	-	1	-	-
425	1	-	1	1	-	1	1	1	-	1	1	-	1	-	-
450	1	-	1	1	-	1	1	1	-	1	1	-	1	-	-
475	1	1	1	1	-	1	1	1	-	1	1	-	1	-	-
500	1	1	1	1	-	1	1	1	-	1	1	-	1	-	-
550	1	1	1	1	1	1	1	-	1	1	1	-	1	-	-
600	■	-	-	1	1	1	1	-	1	1	1	-	1	1	-

P1L = P1 long P2L = P2 long ■ = Type not applicable

For thicker flanges please contact Lindapter.