

# SteelWall®

Connectors for steel sheet pile walls

2023



LOtn connects Larssen Z sheet piles



LPB100-10 connects a pipe and Larssen Z sheet pile (eccentrically)

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<b>Larsen</b>	
Corner connectors	4
Omega corner connectors	6
T connectors	7
Cross connector	8
Combined wall connectors	9
Pipe pile, H-pile and combined wall connectors	10/11

<b>Ball &amp; Socket</b>	
MF connectors	12/15
MF connectors for DTH driving method	16
MF64 connectors comparative tensile test	17
Corner connectors	18
T connectors	19/20
Cross connectors	21

<b>Flat sheet pile connectors</b>	22
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<b>Cold formed sheet pile connectors</b>	23
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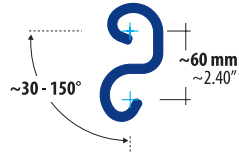
LPB100-10 eccentrically welded to a pipe

# Larsen Corner connectors

## LV20n

For Larsen sheet piles

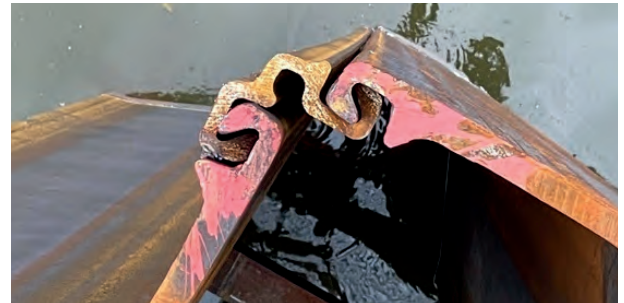
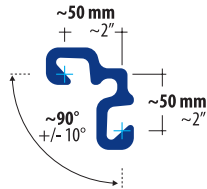
Steel grade: S355J2  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths:  
 38.7 ft (11.8 m)  
 45.9 ft (14 m)  
 59 ft (18 m)  
 Weight: 9.45 lbs/ft (14.07 kg/m)



## LLS90

For Larsen sheet piles

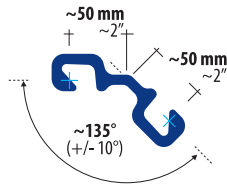
Steel grade: S355J2  
 Steel thickness: 0.35" (9 mm)  
 Standard lengths:  
 26.25 ft (8 m)  
 38.7 ft (11.8 m)  
 Weight: 11.87 lbs/ft (17.66 kg/m)



## LLS135

For Larsen sheet piles

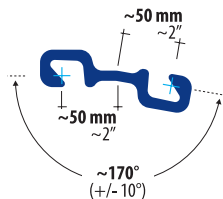
Steel grade: S355J2  
 Steel thickness: 0.35" (9 mm)  
 Standard lengths:  
 26.25 ft (8 m)  
 38.7 ft (11.8 m)  
 59 ft (18 m)  
 Weight: 11.87 lbs/ft (17.66 kg/m)



## LLS170

For Larsen sheet piles

Steel grade: S355J2  
 Steel thickness: 0.35" (9 mm)  
 Standard lengths:  
 26.25 ft (8 m)  
 38.7 ft (11.8 m)  
 59 ft (18 m)  
 Weight: 11.85 lbs/ft (17.63 kg/m)

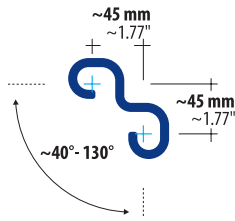


## Larsen Omega corner connectors

### LVO

For Larsen sheet piles

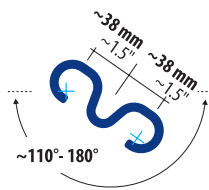
Steel grade: S355J2  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths: 38.7 ft (11.8 m),  
 45.9 ft (14 m), 59 ft (18 m)  
 Weight: 9.3 lbs/ft (13.85 kg/m)  
 This connector will be modified in 2023 and  
 thereafter enable angular positions of approx.  
 55°-145° (VL603/AZ18). The modified connector will be called LVOn.



### LV-Omega

For Larsen sheet piles

Steel grade: S355J2  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths: 38.7 ft (11.8 m),  
 45.9 ft (14 m), 59 ft (18 m)  
 Weight: 9.43 lbs/ft (14.04 kg/m)

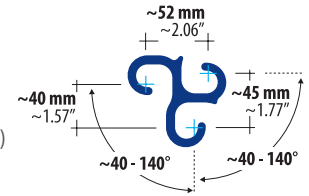


## Larsen T connectors

### LTn

For Larsen sheet piles

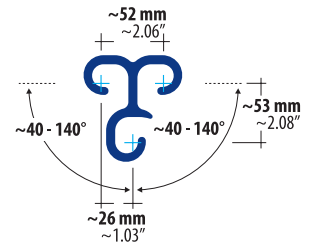
Steel grades: S355J2, S355GP  
 Steel thickness: 0.32" (8 mm)  
 Standard length S355J2: 38.7 ft (11.8 m)  
 Standard length S355GP: 45.2 ft (13.8 m)  
 Weight: 10.42 lbs/ft (15.5 kg/m)



### LOTn

For Larsen sheet piles

Steel grades: S355J2, S355GP  
 Steel thickness: 0.32" (8 mm)  
 Standard length S355J2: 38.7 ft (11.8 m)  
 Standard length S355GP: 45.2 ft (13.8 m)  
 Weight: 11.56 lbs/ft (17.2 kg/m)

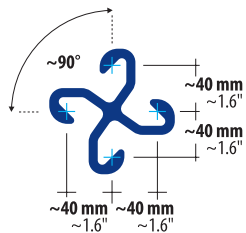


## Larssen Cross connector

### L4S

For Larssen sheet piles

Steel grade: S355J2  
Steel thickness: 0.32" (8 mm)  
Standard length: 38.7 ft (11.8 m)  
Weight: 15.6 lbs/ft (23.2 kg/m)

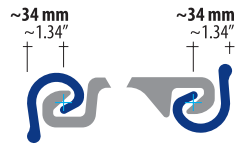


## Larssen Combined wall connectors

### LV22

Weld-on connector for Larssen  
sheet piles

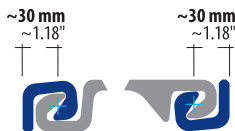
Steel grade: S355J2  
Steel thickness: 0.32" (8 mm)  
Standard length: 38.7 ft (11.8 m)  
Weight: 5.39 lbs/ft (8.02 kg/m)



### L8

Weld-on connector for Larssen  
sheet piles

Steel grade: S355J2  
Steel thickness: 0.375" (9.5 mm)  
Standard length: 38.7 ft (11.8 m)  
Weight: 5.69 lbs/ft (8.47 kg/m)



### LPB100-9A

Weld-on connector for Larssen  
sheet piles

Steel grade: S355J2  
Steel thickness: 9 mm  
Standard lengths: 8 m, 11.8 m  
Weight: 9.05 kg/m

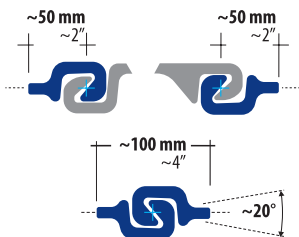


# Larsen Pipe pile, H-pile and combined wall connectors

## LPB100-10

Steel grade: S355J2  
Steel thickness: 0.39" (10 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight: 6.63 lbs/ft (9.86 kg/m)  
Max. tensile strength:  
5.6 kips/in (980 kN/m)

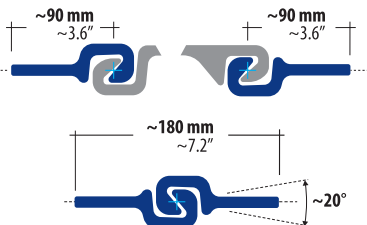
For Larsen sheet piles



## LPB180-10

Steel grades: S355J2, S430GP  
Steel thickness: 0.39" (10 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight: 8.7 lbs/ft (12.94 kg/m)  
Max. tensile strength:  
5.86 kips/in (1,026 kN/m)

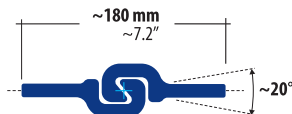
For Larsen sheet piles



## LPB180-12

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight: 9.74 lbs/ft (14.5 kg/m)  
Max. tensile strength:  
8.58 kips/in (1,502 kN/m)

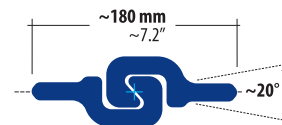
Not suitable for Larsen sheet piles



## LPB180-16

Steel grade: S355J2  
Steel thickness: 0.63" (16 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight: 15.05 lbs/ft (22.4 kg/m)  
Max. tensile strength:  
please see LPB300-16

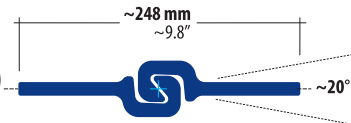
Not suitable for Larsen sheet piles



## LPB248-12

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight: 12.27 lbs/ft (18.26 kg/m)  
Max. tensile strength:  
8.57 kips/in (~1,500 kN/m)

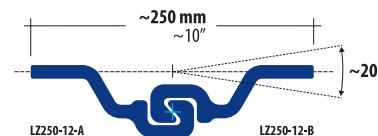
Not suitable for Larsen sheet piles



## LZ250-12A, LZ250-12B

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight, each:  
13.1 lbs/ft (19.48 kg/m)  
Max. tensile strength:  
6.85 kips/in (1,200 kN/m)

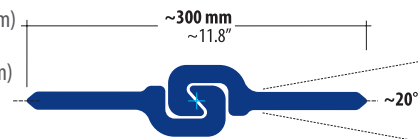
Not suitable for Larsen sheet piles



## LPB300-16

Steel grade: S355J2  
Steel thickness: 0.63" (16 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight:  
19.92 lbs/ft (29.65 kg/m)  
Max. tensile strength:  
10.43 kips/in (1,828 kN/m)

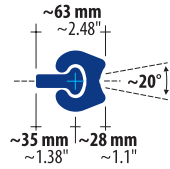
Not suitable for Larsen sheet piles



## MF high tensile connectors Pipe pile and H-pile walls, combined walls (Ball+Socket)

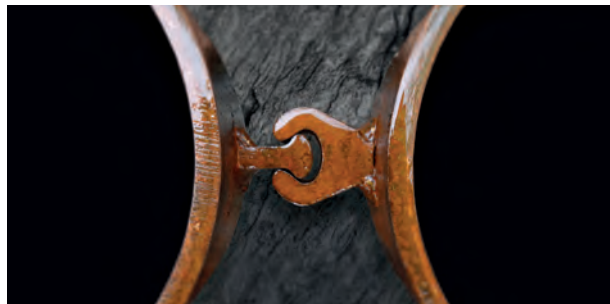
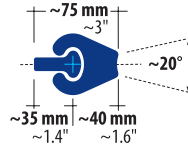
### MF63

Steel grade M35: S355J2, F28: S355J2/-GP  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M35: 3.2 lbs/ft (4.76 kg/m)  
Weight F28: 7.19 lbs/ft (10.7 kg/m)  
Max. tensile strength:  
14.57 kips/in (2,552 kN/m), (FEM)



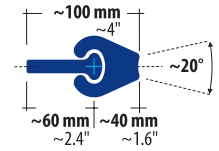
### MF75

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M35: 3.2 lbs/ft (4.76 kg/m)  
Weight F40: 9.6 lbs/ft (14.28 kg/m)  
Max. tensile strength:  
19.52 kips/in (3,419 kN/m)



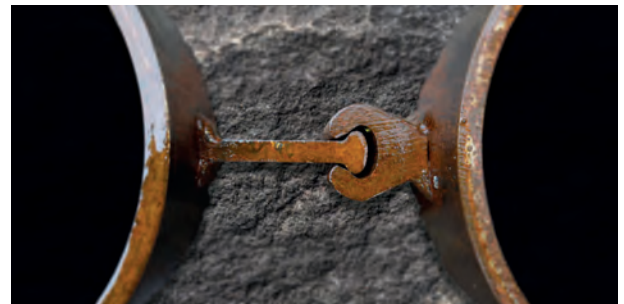
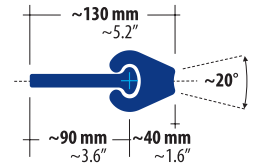
### MF100

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M60: 4.64 lbs/ft (6.9 kg/m)  
Weight F40: 9.6 lbs/ft (14.28 kg/m)  
Max. tensile strength:  
19.52 kips/in (3,419 kN/m)



### MF130

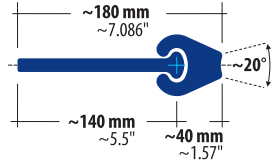
Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M90: 6.56 lbs/ft (9.76 kg/m)  
Weight F40: 9.6 lbs/ft (14.28 kg/m)  
Max. tensile strength:  
19.52 kips/in (3,419 kN/m)



## MF high tensile connectors Pipe pile and H-pile walls, combined walls (Ball+Socket)

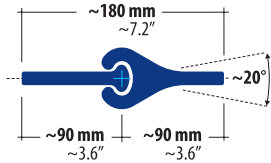
### MF180a

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M140: 9.92 lbs/ft (14.77 kg/m)  
Weight F40: 9.6 lbs/ft (14.28 kg/m)  
Max. tensile strength:  
19.52 kips/in (3,419 kN/m)



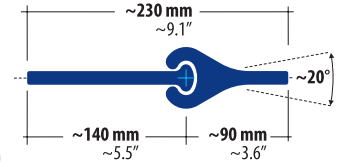
### MF180b

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M90: 6.56 lbs/ft (9.76 kg/m)  
Weight F90: 12.377 lbs/ft (18.42 kg/m)  
Max. tensile strength:  
12.15 kips/in (2,128 kN/m)

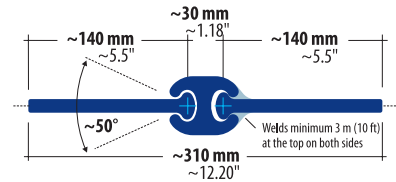


### MF230

Steel grade: S355J2  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M140: 9.92 lbs/ft (14.77 kg/m)  
Weight F90: 12.377 lbs/ft (18.42 kg/m)  
Max. tensile strength:  
12.15 kips/in (2,128 kN/m)



### MDF310



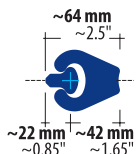
Steel grade M140: S355J2  
Steel grade DF: S430GP  
Steel thickness: 0.47" (12 mm)  
Standard lengths:  
26.25 ft (8 m), 38.7 ft (11.8 m)  
Weight M140: 9.92 lbs/ft (14.77 kg/m)  
Weight DF: 9.82 lbs/ft (14.62 kg/m)  
Max. tensile strength: 18.3 kips/in (3,204 kN/m), (FEM)



## MF high tensile connectors For DTH driving method

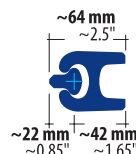
### MF64

Steel grade: S355J2  
 Steel thickness: 0.47" (12 mm)  
 Standard lengths: 26.25 ft (8 m), 38.7 ft (11.8 m)  
 Weight M22: 2.3 lbs/ft (3.42 kg/m)  
 Weight F40: 9.6 lbs/ft (14.28 kg/m)  
 Max. tensile strength:  
 19.52 kips/in (3,419 kN/m)  
 Exclusively for DTH driving method



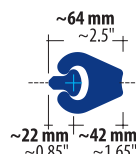
### MF64-IC

Steel grade: S355J2  
 Steel thickness: 0.39 - 0.47" (10 - 12 mm)  
 Standard lengths: 26.25 ft (8 m), 38.7 ft (11.8 m)  
 Weight M22: 2.3 lbs/ft (3.42 kg/m)  
 Weight F40-IC: 9.1 lbs/ft (13.55 kg/m)  
 Max. tensile strength:  
 18.08 kips/in (3,167 kN/m)  
 Exclusively for DTH driving method



## MF64 high tensile connectors Comparative tensile test with WOM-S/WOF-S

### MF64

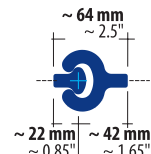


Test setup



After testing, failure through deformation

### WOM-S / WOF-S



Sample no.	Maximum force $F_m$		Length of the clutch bar		Length-related maximum resilience		
	[kN]	[lb]	[mm]	[in]	[kN/m]	[t/m]	[kip/in]
P1Z1 (WOM-S/WOF-S)	111,97	25.171,83	50,5	1,99	2.217,23	226,09	12,66
P2Z1 (MF64, S355)	168,92	37.974,69	49,4	1,94	3.419,43	348,69	19,53

### Conclusion

It is proven that the MF64 connectors can take more than 50% more tensile force than the WOM-S/WOF-S connectors. This is very important information for pipe pile steel wall applications in the DTH driving method.

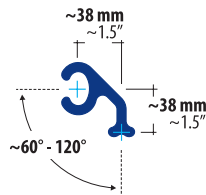
Please see/download the complete test report from our website: [steelwallus.com](http://steelwallus.com)

## Ball & Socket Corner connectors

### US-90

Steel grades: S355, S572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 6.85 lbs/ft (10.1 kg/m)

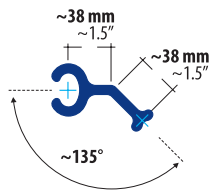
Corner connector



### US-135

Steel grades: S355, S572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 6.92 lbs/ft (10.3 kg/m)

Corner connector

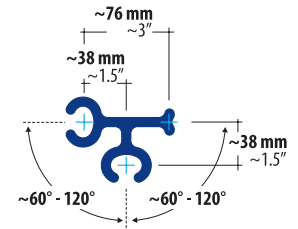


## Ball & Socket T connectors

### US-TS

Steel grades: S355, S572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 11.1 lbs/ft (16.5 kg/m)

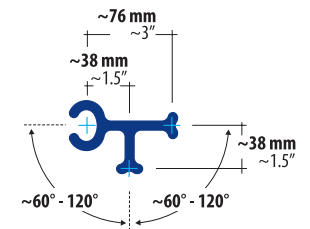
T connector



### US-T

Steel grades: S355, S572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 9 lbs/ft (13.4 kg/m)

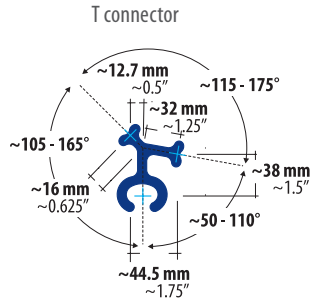
T connector



## Ball & Socket T connectors

### US-Universal

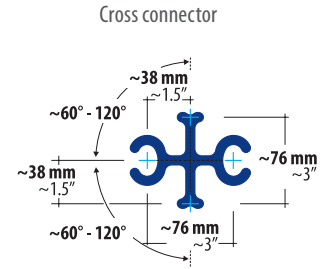
Steel grades: S355, 572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 8.33 lbs/ft (12.4 kg/m)



## Ball & Socket Cross connectors

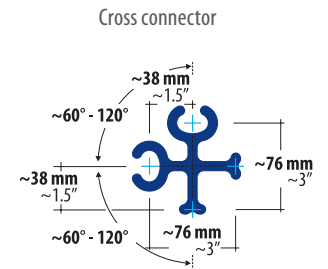
### US-Cross I

Steel grades: S355, 572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 13.4 lbs/ft (20 kg/m)



### US-Cross II

Steel grades: S355, 572 Grade 50  
 Steel thickness: 0.32" (8 mm)  
 Standard lengths on request,  
 variable from  
 25 to 35 ft (7.6 m - 10.6 m)  
 Weight: 13.4 lbs/ft (20 kg/m)

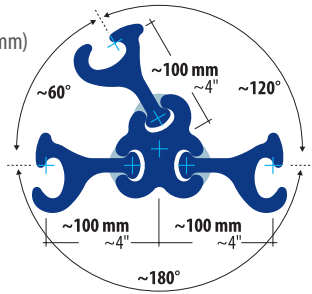


## Flat sheet pile connectors

For PS and YSP straight web piles only

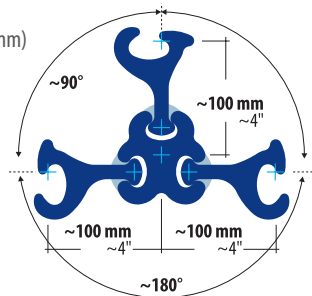
### FSC60 Center, FSC Leg

Steel grade: S355J2  
Steel thickness FSC60 Center: 0.63" (16 mm)  
Steel thickness FSC Leg: 0.5" (12.7 mm)  
Length FSC60 Center: 31.2 ft (9.5 m)  
Length FSC Leg: up to 59 ft (18 m)  
Weight FSC60 Center:  
20.5 lbs/ft (30.5 kg/m)  
Weight FSC Leg: 13.1 lbs/ft (19.5 kg/m)  
Max. tensile strength FSC60 Center:  
32 kips/in (5,604 kN/m), (FEM)



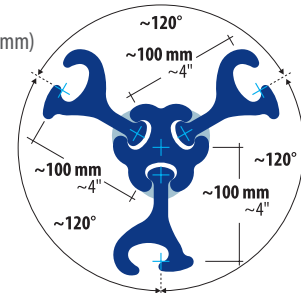
### FSC90 Center, FSC Leg

Steel grade: S355J2  
Steel thickness FSC90 Center: 0.63" (16 mm)  
Steel thickness FSC Leg: 0.5" (12.7 mm)  
Length FSC90 Center: 32.8 ft (10 m)  
Length FSC Leg: up to 59 ft (18 m)  
Weight FSC90 Center:  
19.62 lbs/ft (29.2 kg/m)  
Weight FSC Leg: 13.1 lbs/ft (19.5 kg/m)  
Max. tensile strength FSC90 Center:  
35 kips/in (6,129 kN/m), (FEM)



### FSC120 Center, FSC Leg

Steel grade: S355J2  
Steel thickness FSC120 Center: 0.63" (16 mm)  
Steel thickness FSC Leg: 0.5" (12.7 mm)  
Length FSC120 Center: 36.8 ft (11.2 m)  
Length FSC Leg: up to 59 ft (18 m)  
Weight FSC120 Center:  
17.67 lbs/ft (26.3 kg/m)  
Weight FSC Leg: 13.1 lbs/ft (19.5 kg/m)  
Max. tensile strength FSC120 Center:  
36 kips/in (6,129 kN/m), (FEM)

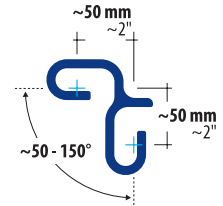


## Cold formed sheet pile connectors

### CF90

Corner connector for midsize  
cold-formed sheet piles

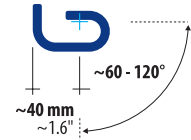
Steel grade: S355GP  
Steel thickness: 0.32" (8 mm)  
Standard length: 44.1 ft (13.45 m)  
Weight: 11.76 lbs/ft (17.5 kg/m)



### CF-Junction

Weld-on connector for midsize  
cold-formed sheet piles

Steel grade: S355J2  
Steel thickness: 0.32" (8 mm)  
Standard length: 38.7 ft (11.8 m)  
Weight: 6 lbs/ft (8.87 kg/m)



# SteelWall®

Connectors for steel sheet pile walls



US90 connects PZC sheet piles.

SteelWall ISH GmbH  
Tassilostr. 21  
82166 Gräfelfing  
Germany

US sales line 8:30 am to 4:30 pm (Arizona time)  
Toll free 1(888) 309 2250  
Fax: 1(888) 743 7712  
E-Mail: [chang@steelwallus.com](mailto:chang@steelwallus.com)

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[www.steelwallus.com](http://www.steelwallus.com)