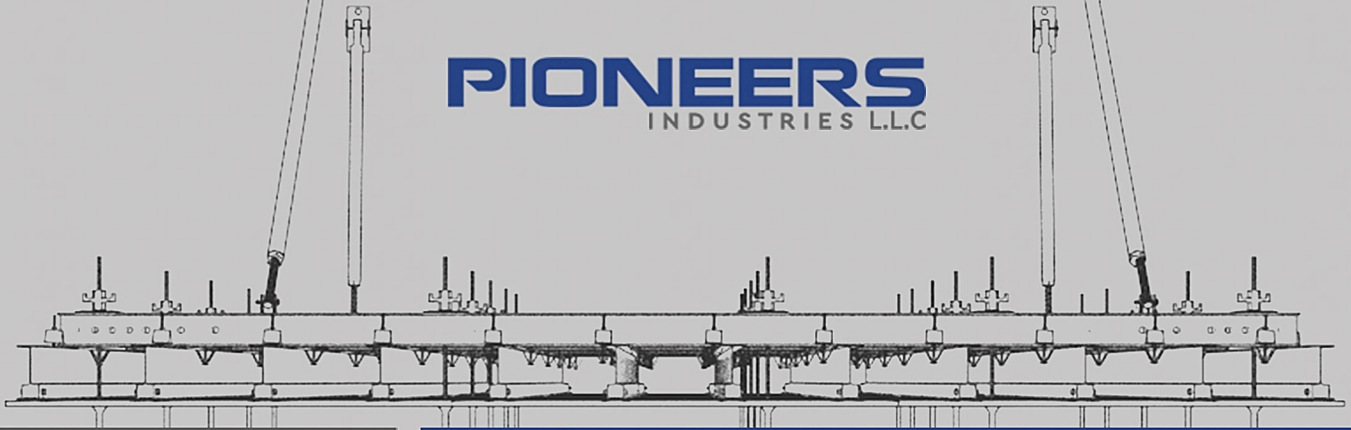


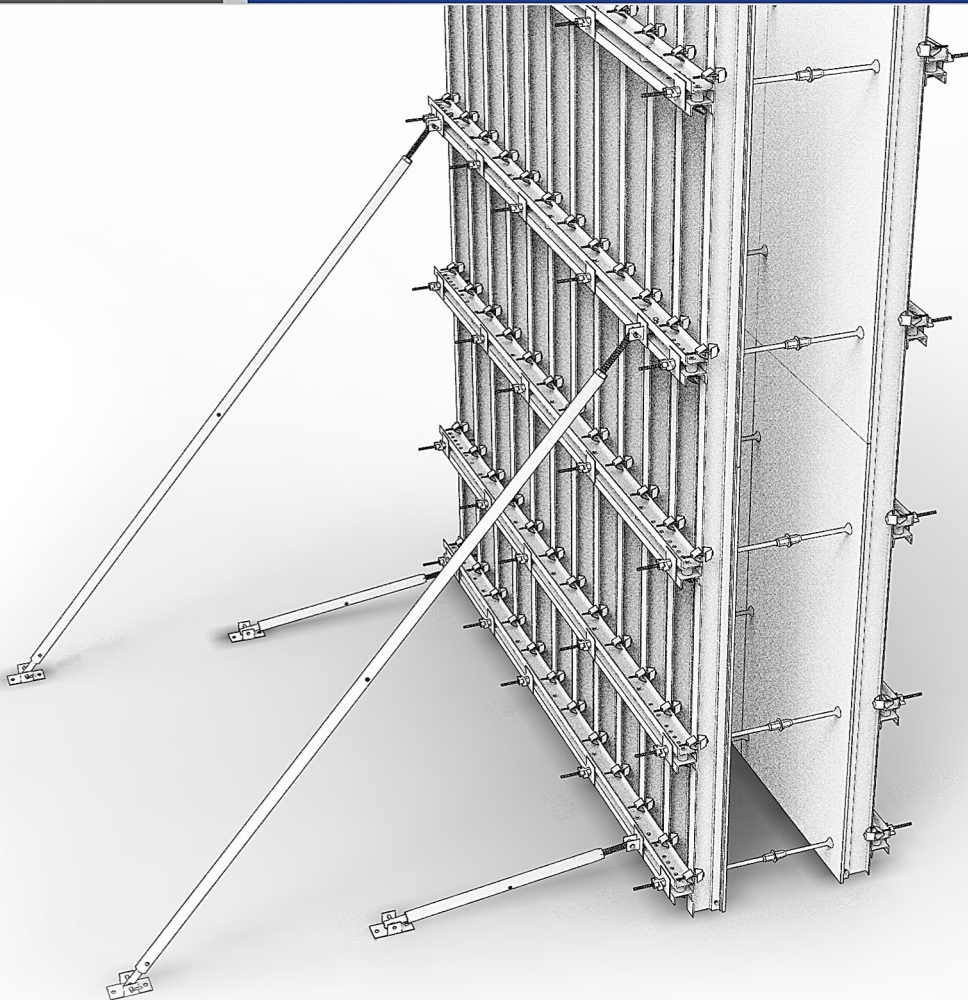
PIONEERS
INDUSTRIES L.L.C



WALLS
COLUMNS
CURVED WALLS
SINGLE SIDE WALLS

WALL FORMWORK SYSTEMS

HANDBOOK



WWW.PIONEERS-IND.COM

Introductions

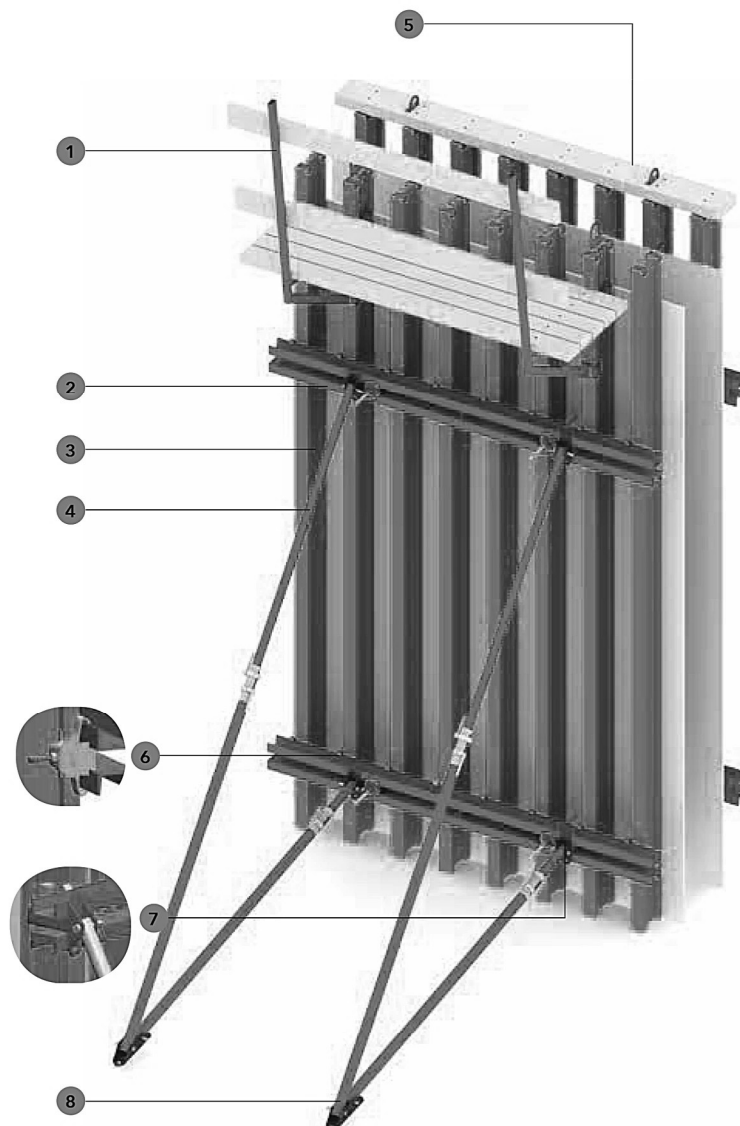
H20 & Steel Waler System for wall

This system is being done to complete the process of molding the structure of the walls of different heights.

And the system is illustrated in this drawing three-dimensional

Componants

- 1 - Access Bracket for H20
- 2 - Steel Waler 10
- 3 - H20 Beam
- 4 - Tilt Up Shore
- 5 - H20 Lifting Eye
- 6 - H20 Beam Clamp
- 7 - H20 Head Plate
- 8 - Double Base

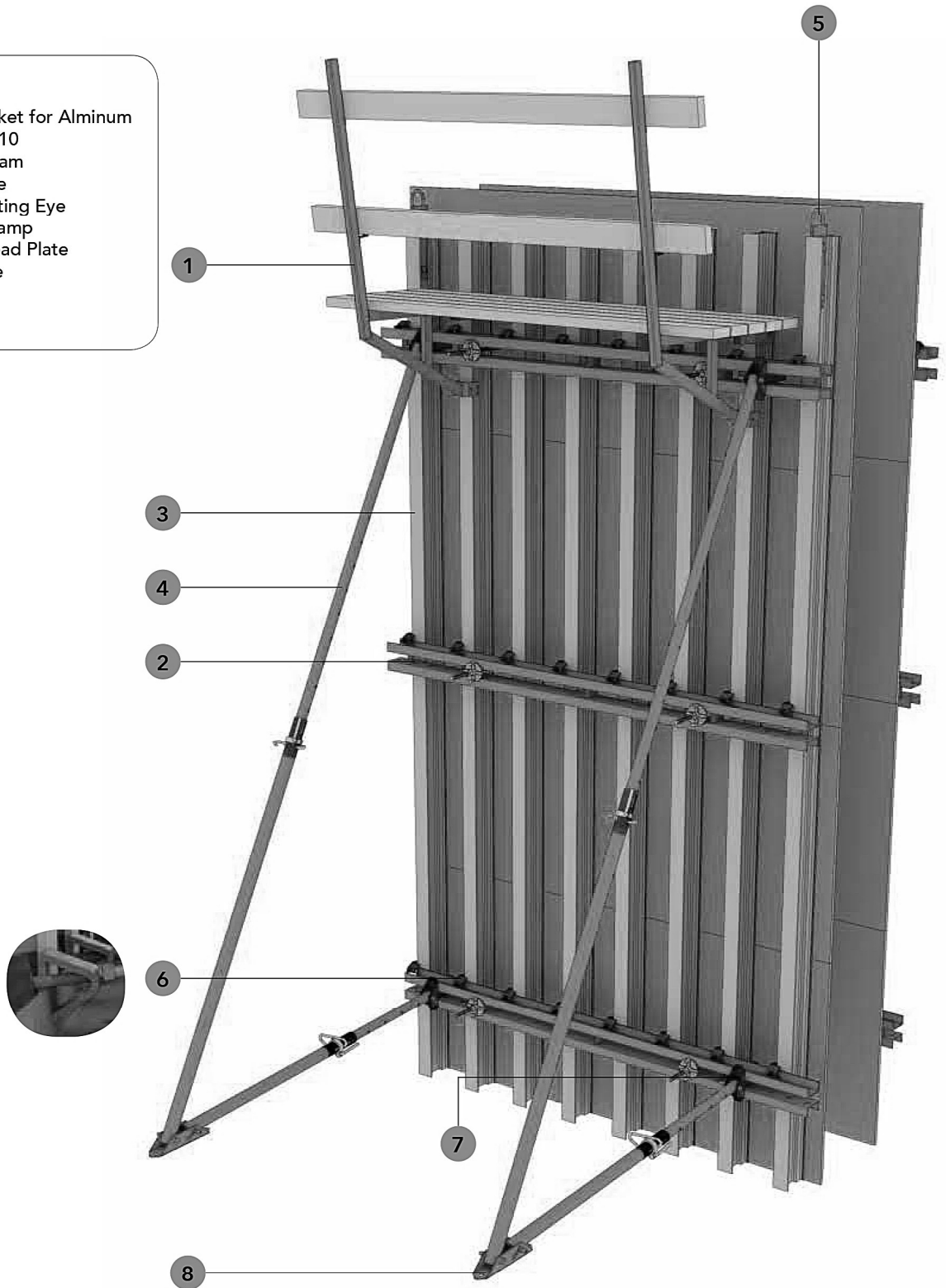


Introductions

Aluminum & Steel Waler System for wall

● Components

- 1 - Access Bracket for Alminum
- 2 - Steel Waler 10
- 3 - Alminum Beam
- 4 - Tilt Up Shore
- 5 - Alminum Lifting Eye
- 6 - Universal Clamp
- 7 - Alminum Head Plate
- 8 - Double Base



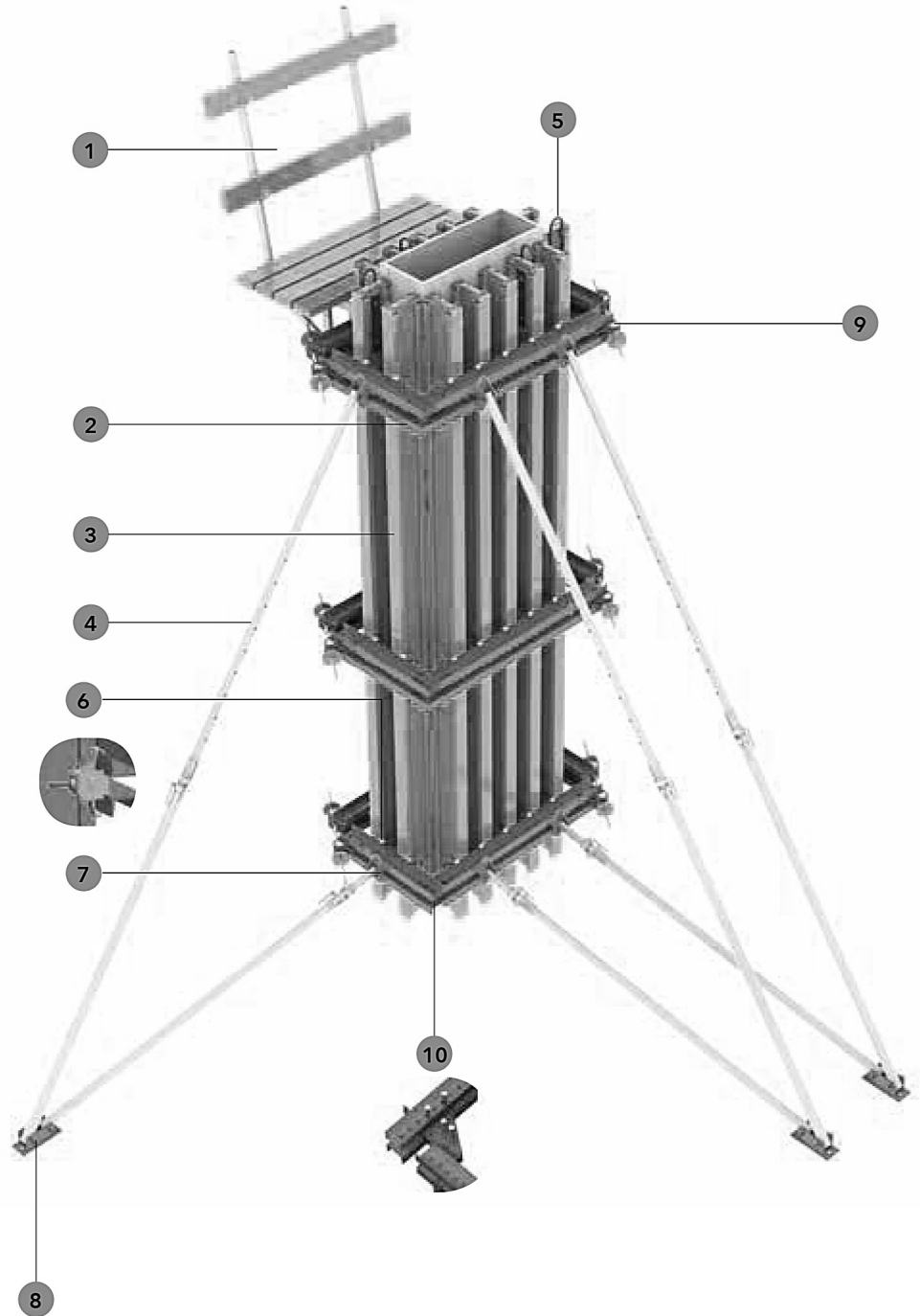
Introductions

H20 & Steel Waler System for Column

This system is being done to complete the process of molding the structure of the columns of different heights. And the system is illustrated in this drawing three-dimensional

● Components

- 1 - Access Bracket for H20
- 2 - Steel Waler 10
- 3 - H20 Beam
- 4 - Tilt Up Shore
- 5 - H20 Lifting Eye
- 6 - H20 Beam Clamp
- 7 - H20 Head Plate
- 8 - Double Base
- 9 - Universal Angle Tie
- 10 - Steel Waler Connection

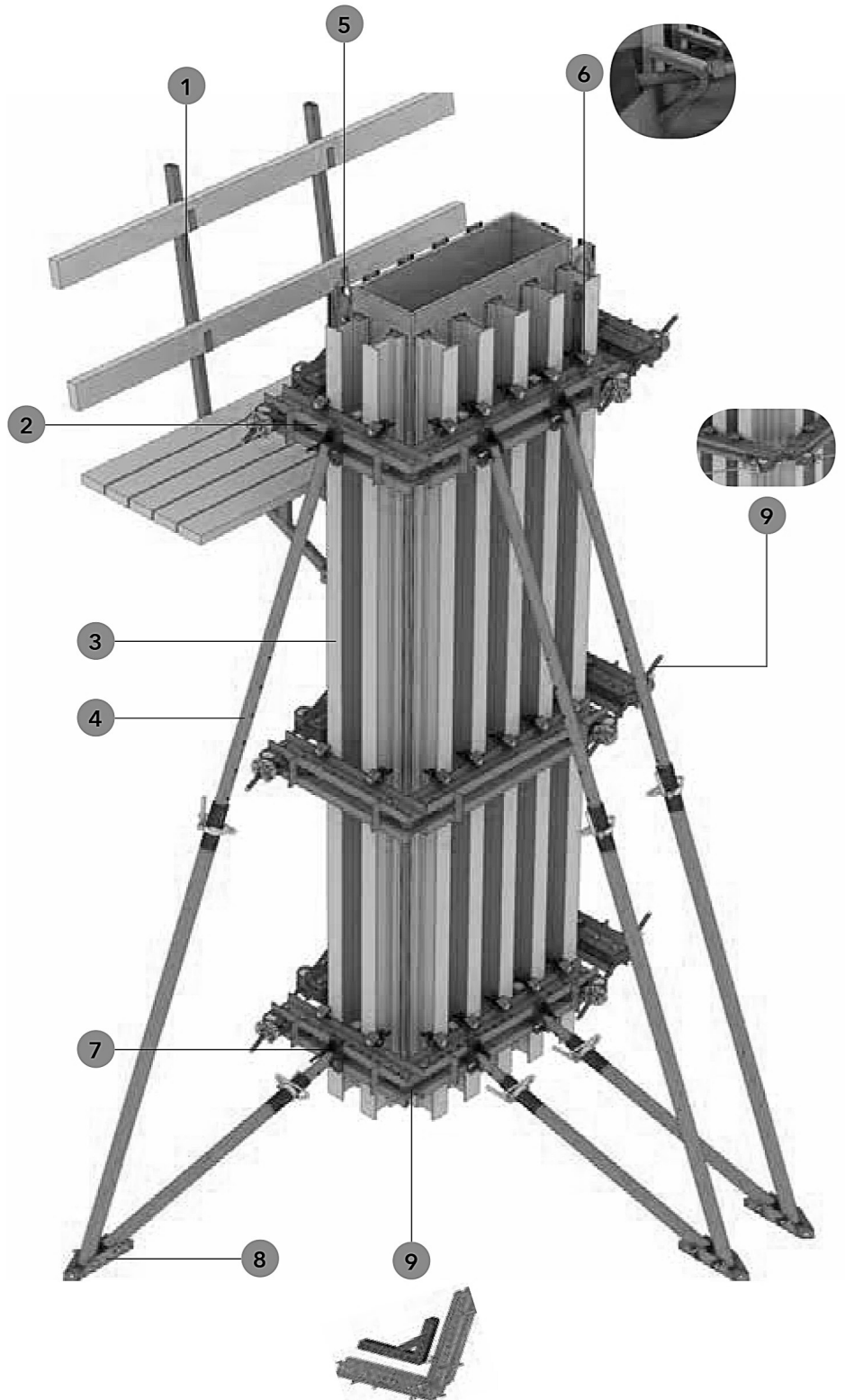


Introductions

Aluminum & Steel Waler System for Column

● Components

- 1 - Access Bracket for Alminum
- 2 - Steel Waler 10
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- 4 - Tilt Up Shore
- 5 - Alminum Lifting Eye
- 6 - Universal Clamp
- 7 - Alminum Head Plate
- 8 - Double Base
- 9 - Universal Angle Tie



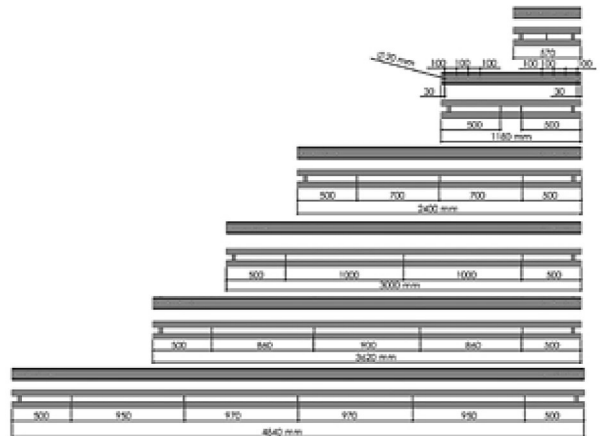
Standard Components

Steel Waler 10 for Wall

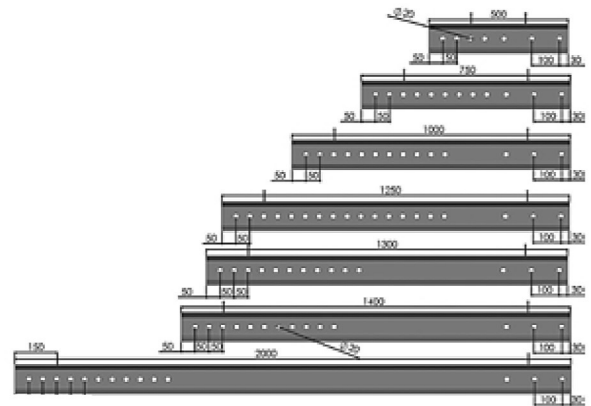
Provide, support, tying locations in the panels, and alignment for the panel

Wall steel waler connected with H20 & Aluminum Beams PECIAL clamps

Available in different lengths to meet design requirements.



Steel Waler 10 for Column



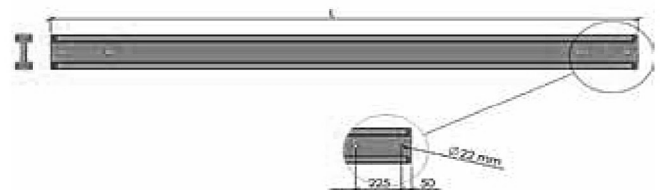
H20 Beams

The H20 formwork timber beam is a solid - Beam used for concret fromwork construction .

The height of beam is 200 mm & available in different standard lengths .

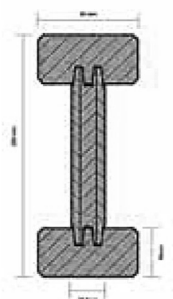
The webs made of 3 Ply laminated solid wood panels ensuring use in all climate zone .

The chords are made of superior quality smoothly surfaced and slightly chamfered .



Technical Specification

- 1 - Permissible modulus (M) = 0.5 t
- 2 - Permissible shear force (Q) = 1.10 t
- 3 - Section modulus (Z) = 461 cm³
- 4 - Geometrical moment on inertia (i)=4613 cm⁴



Accessories

Tilt up shores

Used for aligning and supporting against wind loads .

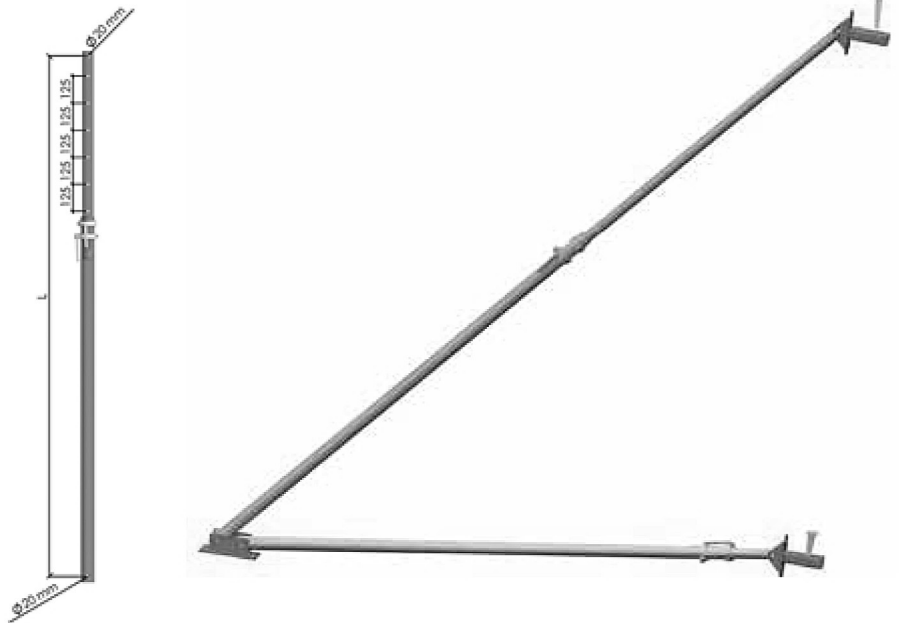
They are tension and compression resistant in picking up and diverting wind load.

Tilt up shore allows to have formwork perfectly vertical.

Tilt up shore can reach up to 4.8m formwork height.

Tilt Up Shores are available in different ranges to fit needed length and applied load.

Lift the inner tube to open or close the tube for specific needed length.



Push Pull Props

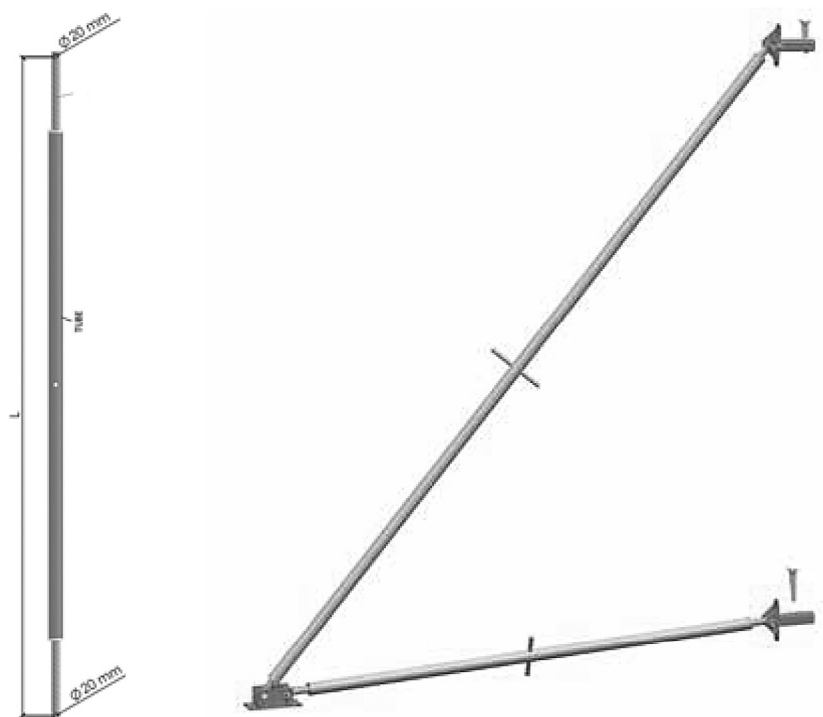
Used for aligning and supporting the formwork. They are tension and compression resistant in picking up and diverting wind load.

Push Pull Prop allows to have formwork perfectly vertical.

Push Pull Prop available with different standard ranges as shown in technical data.

Push Pull Props are available in different ranges to fit needed length and applied load.

Turn the tube clockwise or counter clockwise to open or close the spindle to a specific needed length.

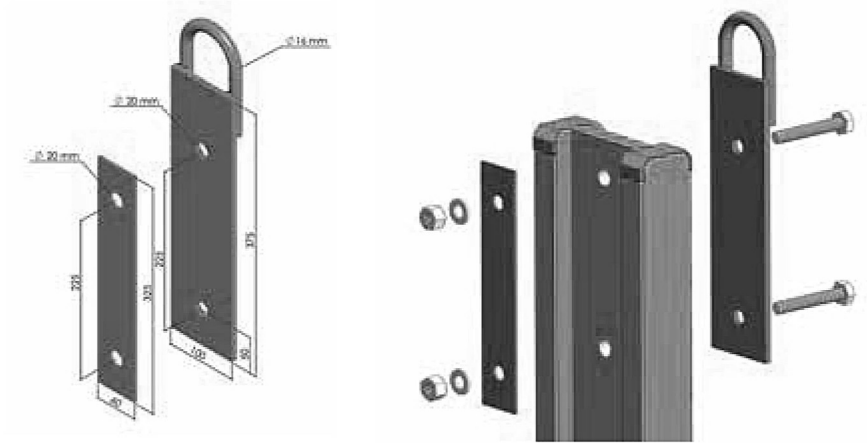


Accessories

Lifting Eye for H20 Beam

For setting upright, transporting and hitting formwork panels.

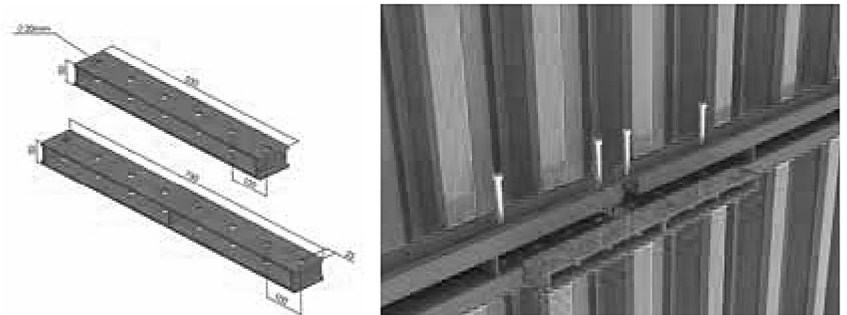
Bolted on to the webs of H20 Beams.



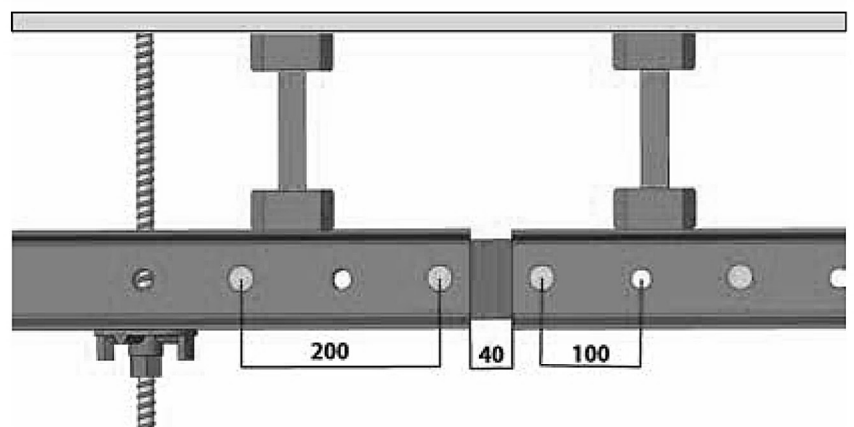
Steel Waler Splices for H20 Beam

For Connecting to panel at position of the Steel Waler, produces an aligned, compression and tension resistant tightening of the wall panels.

Panel splices joining to Steel Waler using rivet pin fast and easily.



C/W refers to 4 rivet pins with spring clips

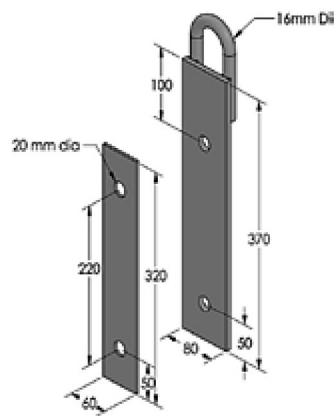


Accessories

Lifting Eye for Aluminum Beam

For setting upright, transporting and hitting formwork panels.

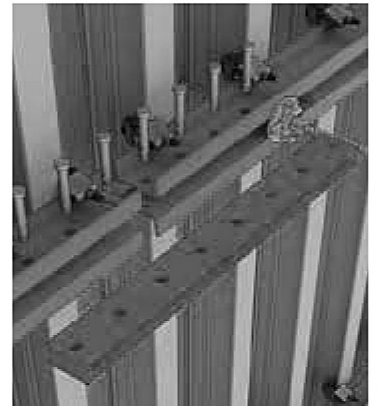
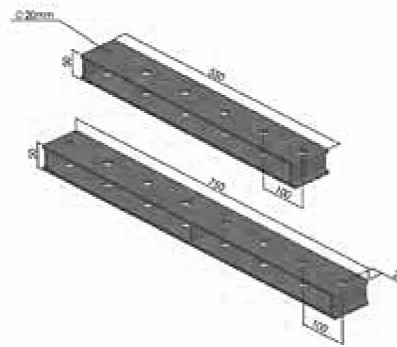
Bolted on to the webs of Aluminum Beams.



Steel Waler Splices for Aluminum Beam

For Connecting to panel at position of the Steel Waler, produces an aligned, compression and tension resistant tightening of the wall panels.

Panel splices joining to Steel Waler using rivet pin fast and easily.



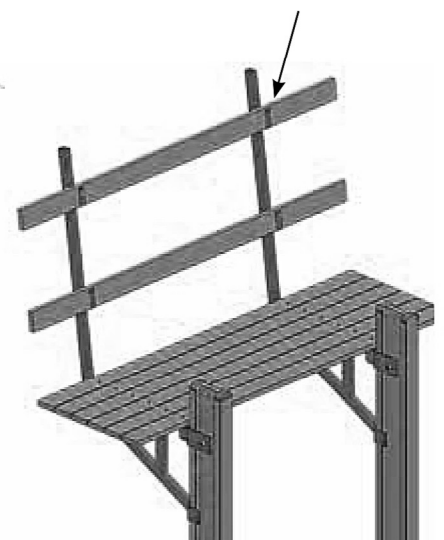
H20 & Aluminum Beam Access Bracket

Used for construction of pouring and services platforms helping labors in erection and pouring.

It is recommended to maintain the distance between two brackets not greater than 2.00 meters.

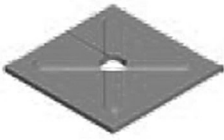
Max permitted live load 1.5 KN/m2

Timber Wood
2"X4"
2"X5"
2"X6"



Components

Counter Plate



Description	Weight Kg
120 x 120 x 8 mm	0.86
120 x 120 x 6 mm	0.65

Wing Nut 16 mm



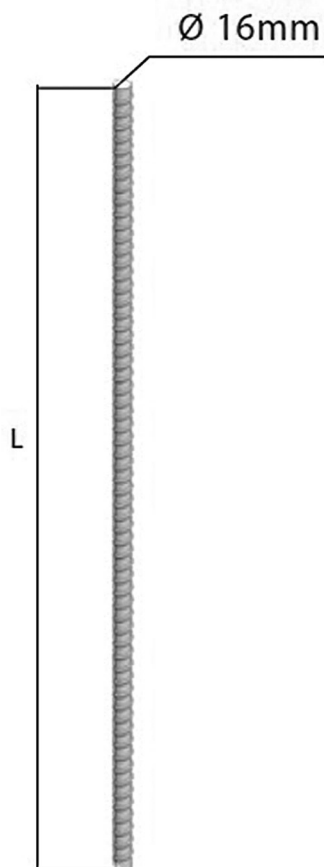
Description	Weight Kg
Wing Nut	0.28

Washed Nut



Description	Weight Kg
Washed Nut Ø 16Mm-100 mm	0.76

Tie Rod



Description	Weight Kg
Tie rod 16 mm L= 1m	1.48
Tie rod 16 mm L= 2m	2.96
Tie rod 16 mm L= 3m	4.45
Tie rod 16 mm L= 4m	5.94
Tie rod 16 mm L= 5m	7.41
Tie rod 16 mm L= 6m	8.90

Components

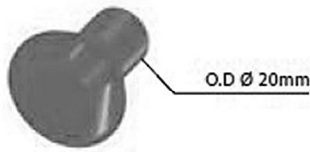
Plastic Sleeve



Description
Plastic sleeve L = 3m

Weight Kg
0.22/m

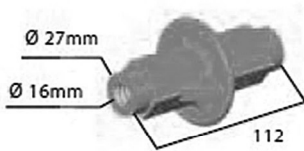
Plastic Cone



Description
Plastic cone

Weight Kg
0.01

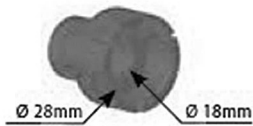
Water Stopper



Description
Water Stopper

Weight Kg
0.61

Water Stopper plastic



Description
Water Stopper Plastic

Weight Kg
0.005

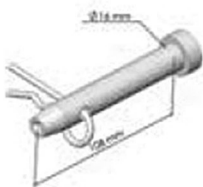
Counter Sunk Bolt



Description
Counter Sunk Bolt

Weight Kg
0.02

Rivet Pin With Spring Clips



Description
Rivet Pin With Spring Clips

Weight Kg
0.20

Bolt Ø 16Mm-L60mm



Description
Bolt Ø 16mm-L60mm

Weight Kg
0.06

Components

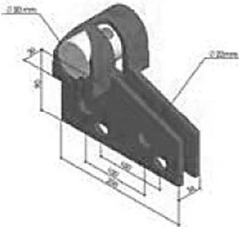
Aluminum Extension Splice



Description
Extension splice

Weight Kg
5.90

Column Steel waler Connection



Description
Steel waler connection

Weight Kg
2.10

H20 Beam Clamps



Description
H20 Connection
Flang clamp H20

Weight Kg
0.98
0.70

Universal Clamp

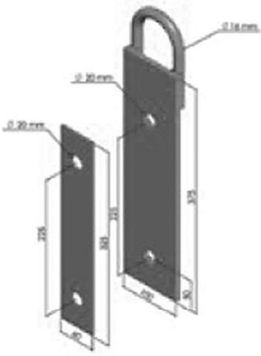


Description
Universal clamp

Weight Kg
0.98

Components

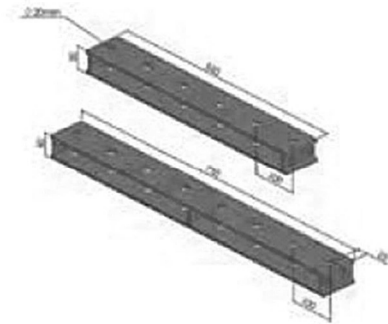
H2O Lifting Eye



Description
H2O Lifting Eye

Weight Kg
4.18

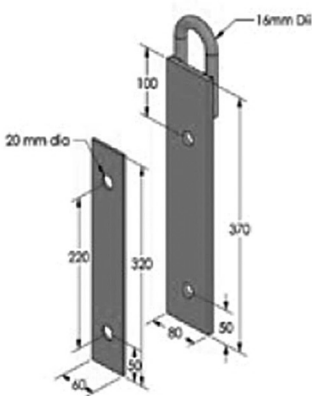
Steel waler splice



Description
Splice 750 mm
Splice 550 mm

Weight Kg
7.80
5.70

Aluminum Lifting Eye



Description
Aluminum Lifting Eye

Weight Kg
4.18

Access Bracket

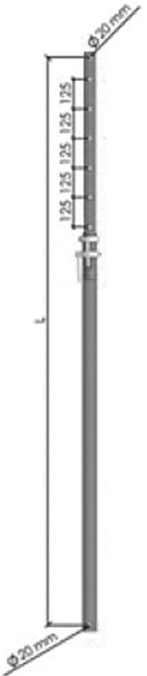


Description
Aluminum Access Bracket
H2O Access Bracket

Weight Kg
11.00
11.00

Components

Tilt up shores



Description	Weight Kg
Tilt up shore X0	12.70
Tilt up shore X0	21.10
Tilt up shore X0	22.00
Tilt up shore X0	24.60
Tilt up shore X0	29.30

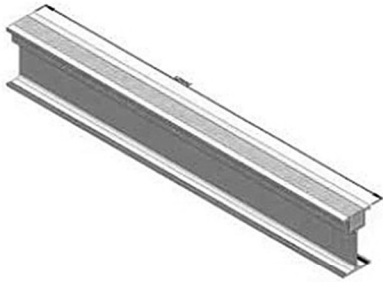
Push Pull Prop



Description	Weight Kg
Push Pull Prop 1	9.00
Push Pull Prop 2	9.83
Push Pull Prop 3	13.14
Push Pull Prop 4	15.29
Push Pull Prop 5	17.17
Push Pull Prop 6	18.99
Push Pull Prop 7	23.07

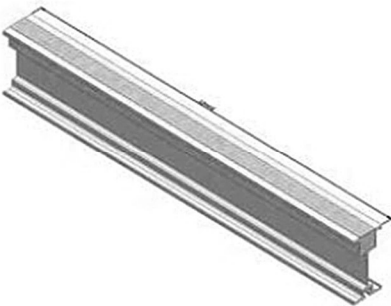
Components

Aluminum Beam Single Web



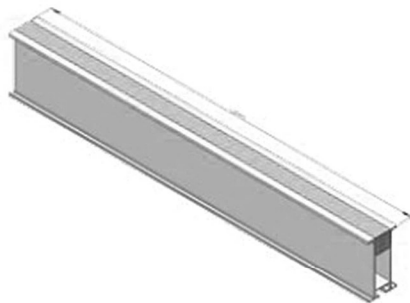
Description	Weight Kg
A.B.S 1000 mm	3.2
A.B.S 2000 mm	6.25
A.B.S 3000 mm	9.78
A.B.S 4000 mm	13.04
A.B.S 5000 mm	16.30

Aluminum Beam Heavy



Description	Weight Kg
A.B.H 1000 mm	4.25
A.B.H 2000 mm	8.50
A.B.H 3000 mm	12.75
A.B.H 4000 mm	17.00
A.B.H 5000 mm	21.25

Aluminum Beam Double Web



Description	Weight Kg
A.B.D 1000 mm	4.49
A.B.D 2000 mm	8.98
A.B.D 3000 mm	13.47
A.B.D 4000 mm	17.96
A.B.D 5000 mm	22.45

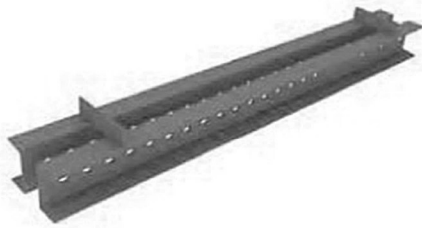
Components

Steel waler 10 for wall



Description	Weight Kg
L 570 mm	12.54
L 1180 mm	25.96
L 2400 mm	52.80
L 3000 mm	66.00
L 3500 mm	79.64
L 3570 mm	106.48

Steel waler 10 for column



Description	Weight Kg
L 500 mm	11.00
L 750 mm	16.50
L 1000 mm	22.00
L 1250 mm	27.50
L 1300 mm	28.60
L 1400 mm	30.80
L 2000 mm	44.00

H20 Beams



Description	Weight Kg
L 1900 mm	8.74
L 2450 mm	11.27
L 2900 mm	13.34
L 3900 mm	17.94
L 4900 mm	22.54
L 5900 mm	27.14

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