



**BUILDING THE FUTURE...
... RESTORING THE PAST**



SCAFFOLDING



INTRODUCTION

Since 2005, ACH has been providing a full range of construction services to public and private clients and has built a solid reputation through delivering complex projects and providing high quality construction tools and equipment.

ACH owns a steel factory in Lebanon “ACH Steel”, offering a complete line of scaffolding formwork and tools to Middle Eastern and African clients.

Whether for rental or purchase purposes, ACH will tailor the production of construction tools upon the clients' specifications and will offer required safety trainings to clients' staff.

ACH is committed to providing our customers with the best products, while competing on price offering and service delivery.

This technical manual serves as a guide to all construction professionals. It provides detailed information about ACH Steel's construction tools and products. Please note that the technical information provided in this catalogue is for indicative purposes.

Please feel free to contact us for any technical clarification.

Eng. Joseph Mirza
*Partner and
Managing Director*

A handwritten signature in blue ink, appearing to be 'JM', written over a horizontal line.

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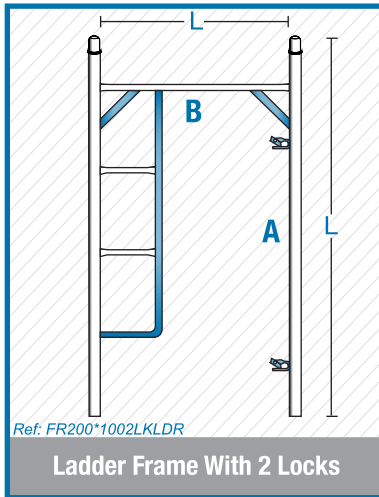
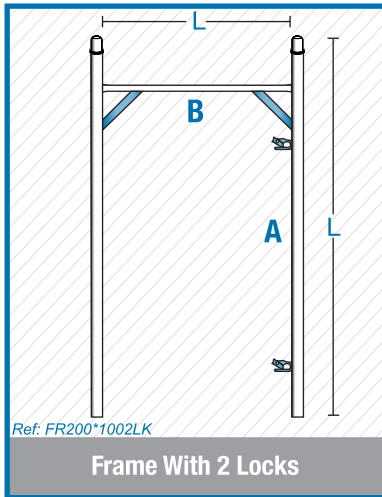
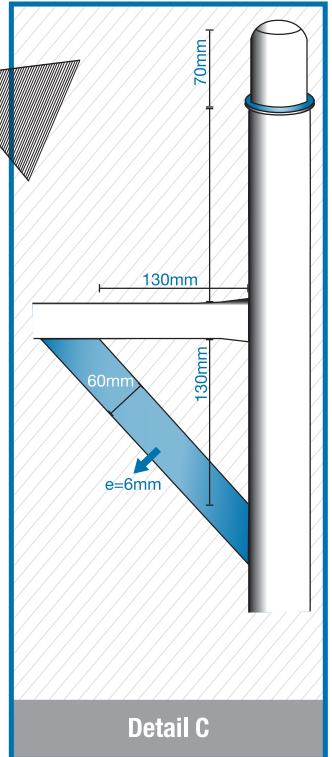
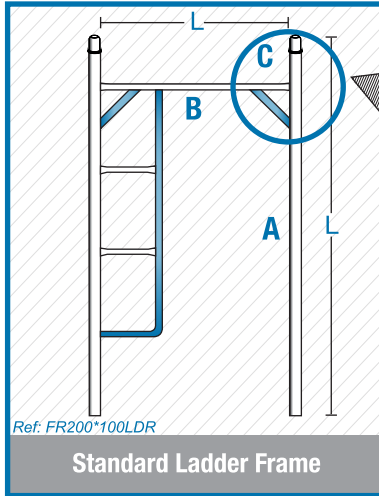
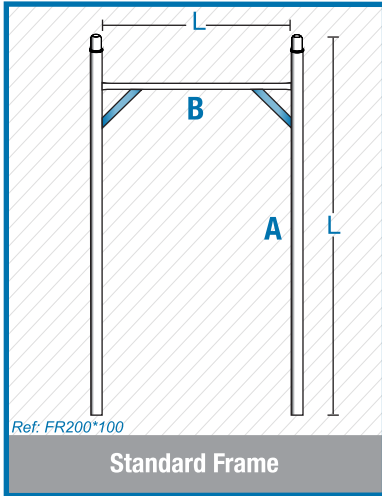
PROPS

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FORMWORK SLAB

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Scaffolding Frame



	L(mm)	D(mm)	E(mm)
A	2,000	48	2.5
B	1,000	48	2.5

- Two frame types are available: “Standard Frame” and “Frame with 2 locks”
- The most popular types of scaffold in the construction and maintenance industries
- Versatile, economical, and easy to use
- “Standard Frames” are connected by horizontal connectors
- Frames “with 2 gravity locks” are connected by Cross-braces
- Both frame types can have a ladder on the side to facilitate labor access
- Sizes provided are the most popular in the market
- Different sizes and standards can be manufactured based on clients’ specifications

Note : L = Length; D = Diameter; E = Thickness

Horizontal Connector (Long)



Ref. HORIZ.300*32

Horizontal Connector 2950

L(mm)	D(mm)	E(mm)
2,950	32	2



Ref. HORIZ.185*32

Horizontal Connector 1850

L(mm)	D(mm)	E(mm)
1,850	32	2



Ref. HORIZ.150*32

Horizontal Connector 1500

L(mm)	D(mm)	E(mm)
1,500	32	2



- Horizontal tube connecting the scaffolding frames
- Three dimensions are the most popular in the market (2,950 mm; 1,850 mm and 1,500 mm)
- Different sizes and standards can be manufactured based on clients' specifications

Note : L = Length; D = Diameter; E = Thickness

Horizontal Connector (Short)



Ref. HORIZ.100*32

Horizontal Connector 1000

L(mm)	D(mm)	E(mm)
1,000	32	2



Ref. HORIZ.70*32

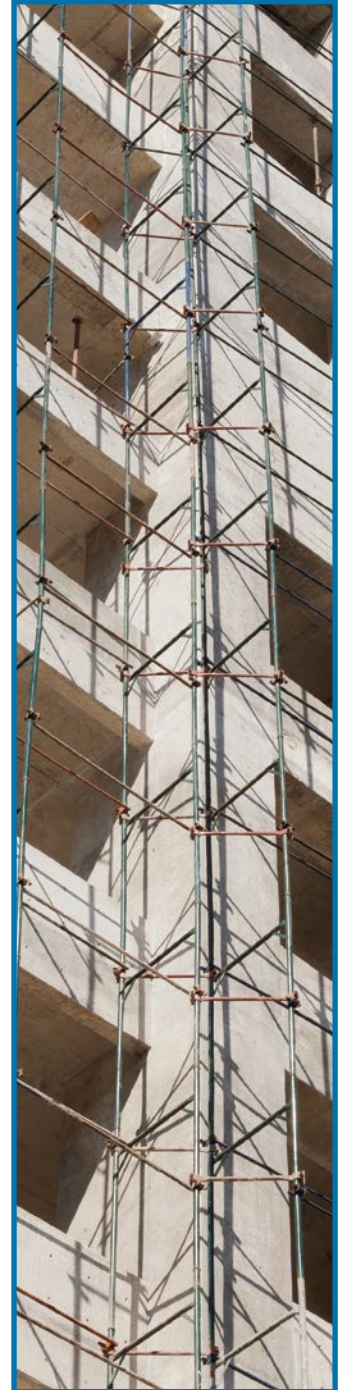
Horizontal Connector 700

L(mm)	D(mm)	E(mm)
700	32	2



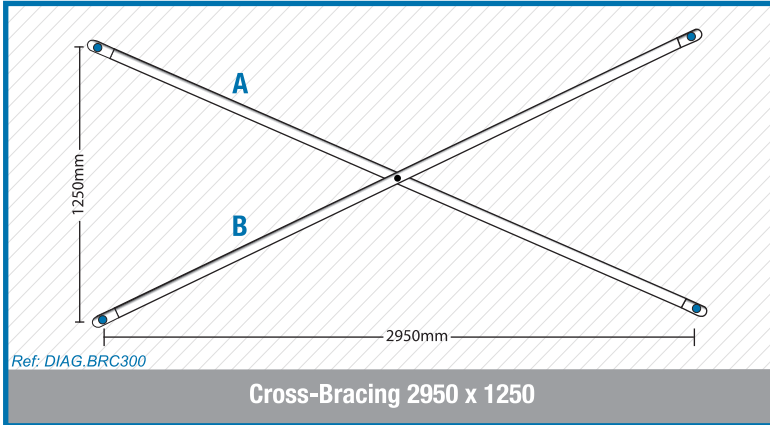
- Horizontal tube connector that is generally used in particular conditions, such as framing the corner of a building
- Two dimensions are the most popular in the market (1,000 mm and 700 mm)
- Different sizes and standards can be manufactured based on clients' specifications

Note : L = Length; D = Diameter; E = Thickness

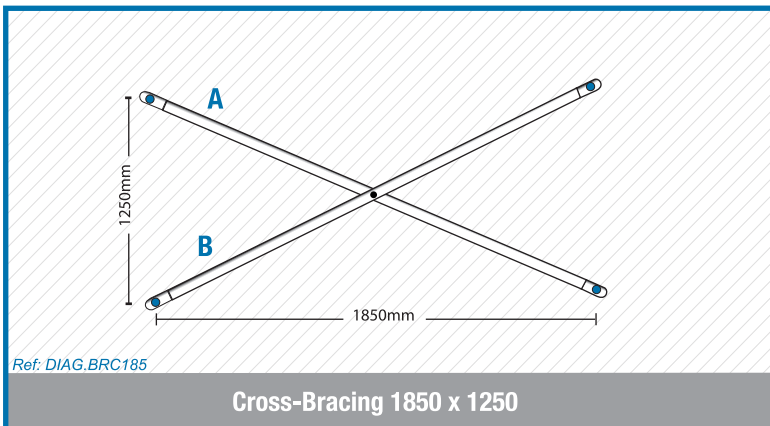


Cross-Bracing

(For Frames with 2 Locks)



	D(mm)	E(mm)
A	27	2
B	27	2



	D(mm)	E(mm)
A	27	2
B	27	2

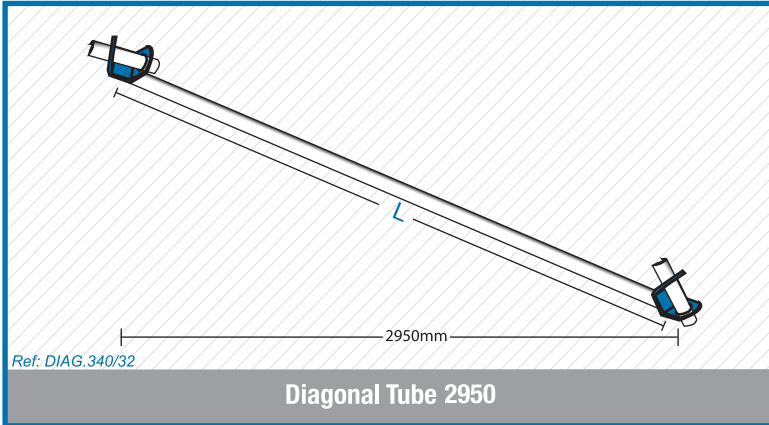


- Diagonal tubes connect the scaffolding frames “with gravity locks”
- Two dimensions are the most popular in the market (2,950 mm and 1,850 mm)
- Different sizes and standards can be manufactured based on clients’ specifications

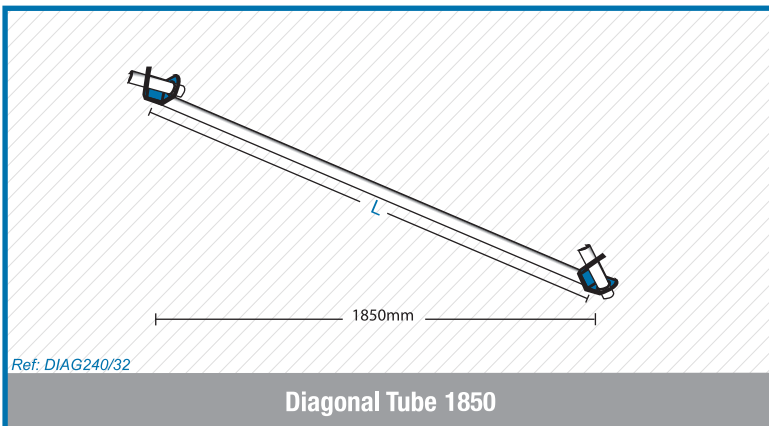
Note : D = Diameter; E = Thickness

Cross-Bracing

(For Standard Frames)



L(mm)	D(mm)	E(mm)
335	32	2



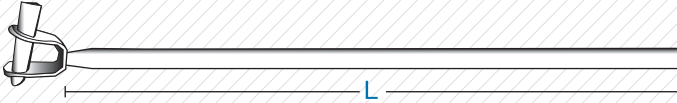
L(mm)	D(mm)	E(mm)
240	32	2



- Diagonal tubes connect the scaffolding frames “ Standard Frames”
- Two dimensions are the most popular in the market (2,950 mm and 1,850 mm)
- Different sizes and standards can be manufactured based on clients’ specifications

Note : L = Length; D = Diameter; E = Thickness

Facade Tie



Ref: FCTIE100*48/48

Long Facade Tie

L(mm)	D(mm)	E(mm)
1,000	48	2.5



Ref: FCTIE30*32/48

Short Facade Tie

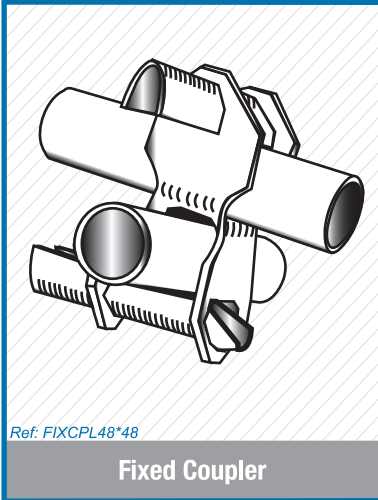
L(mm)	D(mm)	E(mm)
300	32	2



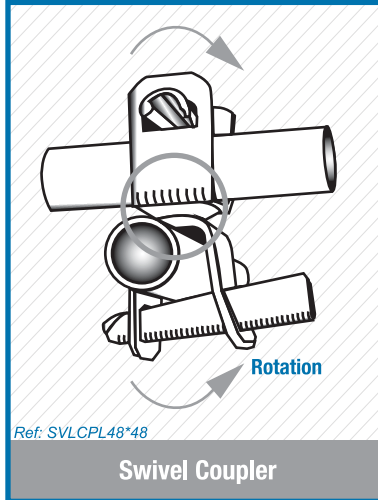
- Horizontal tube linking the scaffolding frames to the building elements e.g., balconies
- Ensures stability of the scaffolding structure
- Long or short Facade Tie is generally selected depending on the distance between the scaffolding structure and the building
- Different sizes and standards can be manufactured based on clients' specifications

Note : L = Length; D = Diameter; E = Thickness

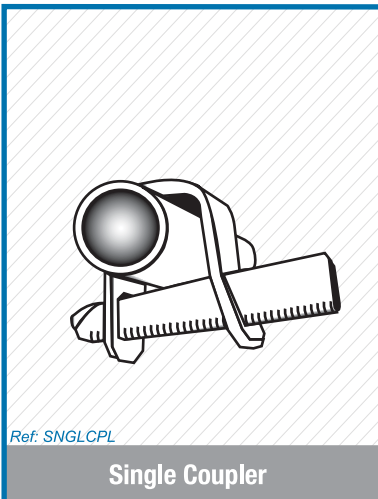
Coupler



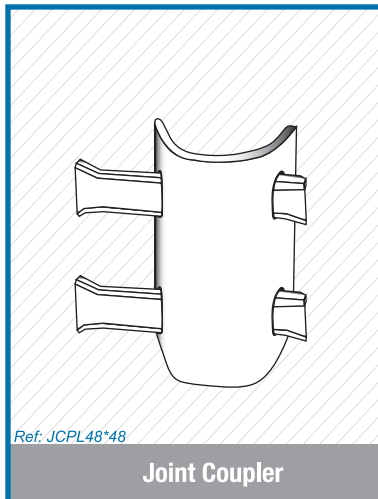
- Fixed Coupler connects two scaffolding tubes at a 90 degrees angle



- Swivel Coupler connects two scaffolding tubes at any angle



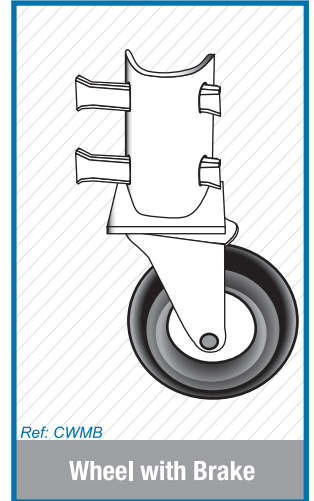
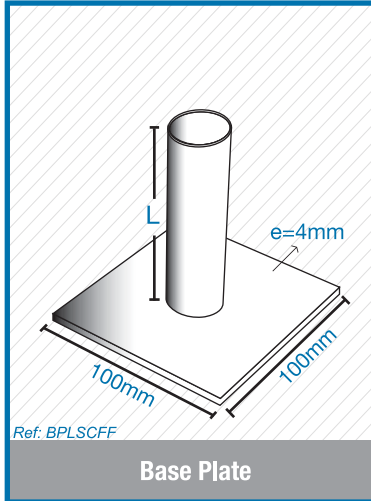
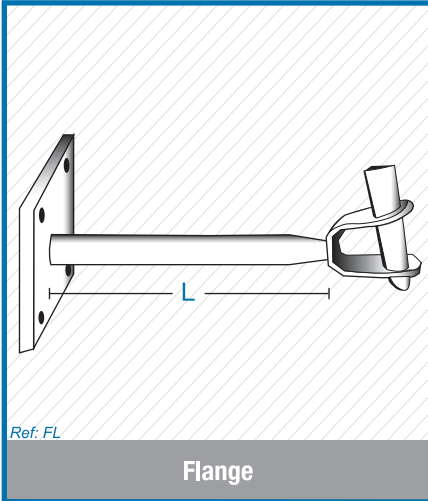
- Single Coupler is the main component of the scaffolding accessories used to connect the latter to the main frame or tube



- Joint Coupler connects two vertical scaffolding tubes



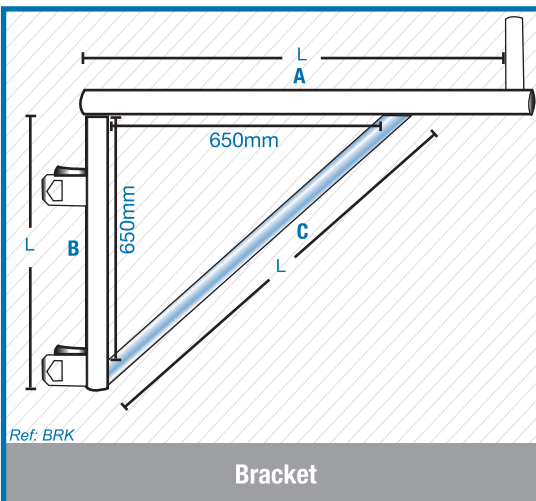
Accessories



L(mm)	D(mm)	E(mm)
Variable	48	2.5

L(mm)	D(mm)	E(mm)
200	32	4

Most Manufactured Diameter (mm)		
170	200	250



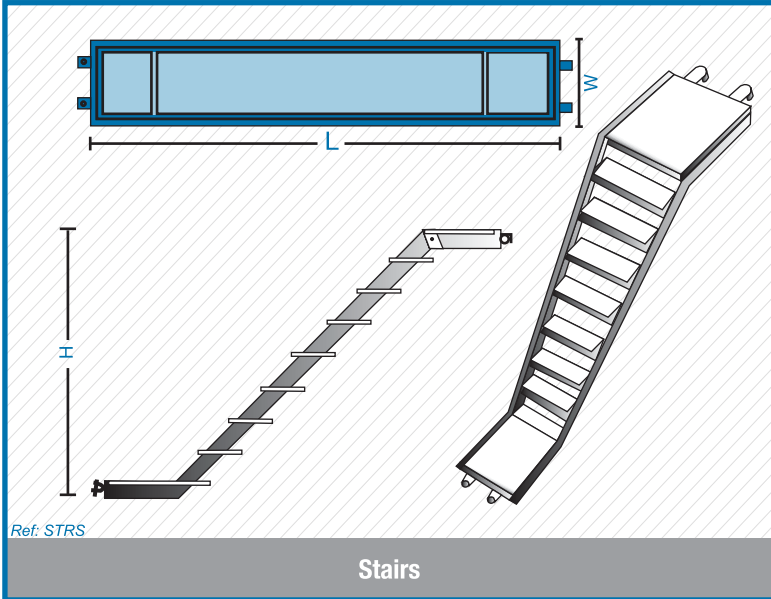
- The Flange is generally used when the Facade Tie is not suitable for connecting the scaffolding structure to the building
- The Base Plate serves as a bearing plate for the scaffolding structure. It links the whole structure to the soil
- The Wheel is attached to the scaffolding structure via a Joint Coupler and provides mobility and agility
- The Bracket is generally used when the scaffolding structure cannot be erected from the soil and should therefore be erected from the building
- Different sizes and standards can be manufactured based on clients' specifications

	L(mm)	D(mm)	E(mm)
A	1,000	48	2.5
B	700	48	2.5
C	920	48	2.5

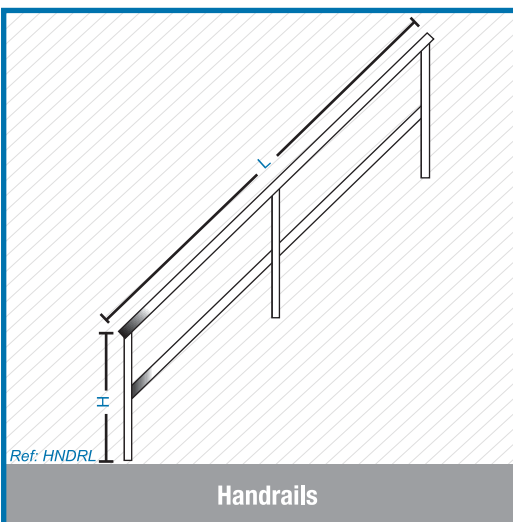


Note : L = Length; D = Diameter; E = Thickness

Stairs & Handrails



H(mm)	W(mm)	L(mm)
1,500	600	2,950



H(mm)	L(mm)
850	2,400

- Mainly used as exterior stairs
- Facilitates labor access to the building and scaffolding structure
- Handrails are connected to the stairs to ensure safety access
- Different sizes and standards can be manufactured based on clients' specifications

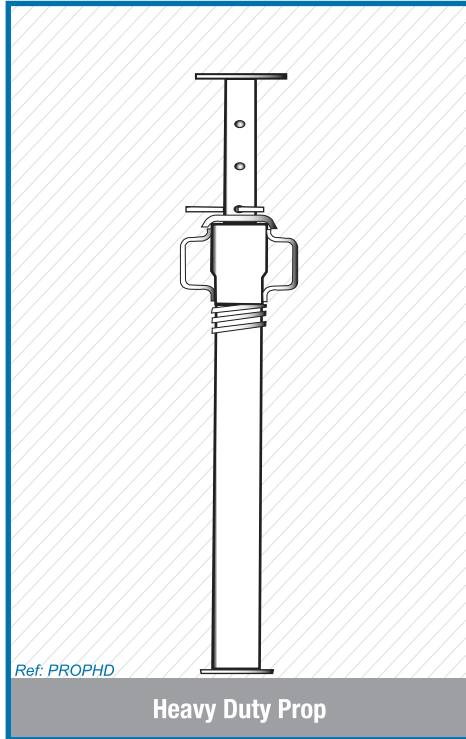
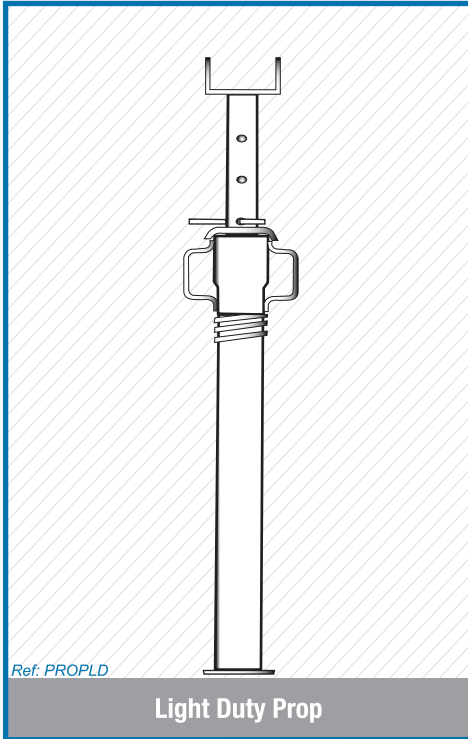


Note : H = Height; W = Width; L = Length



PROPS

Single Prop

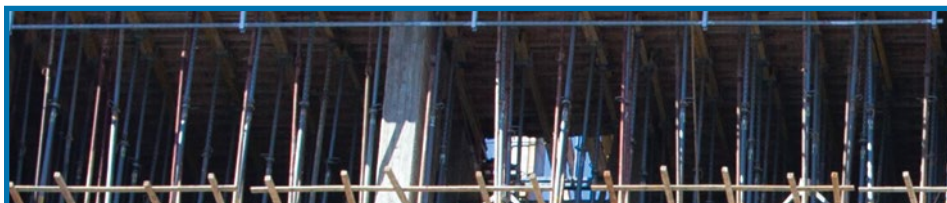


Minimum Extension (mm)	Maximum Extension (mm)
650	1,000
1,250	2,000
2,050	3,800
2,400	4,100
3,100	5,000
3,500	6,000

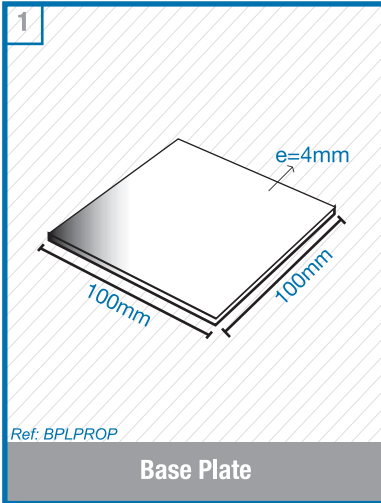
Minimum Extension (mm)	Maximum Extension (mm)
650	1,000
1,250	2,000
2,050	3,500
2,400	4,100
3,100	5,000
3,500	6,000

- Used for standard slabs with low thickness e.g; residential buildings

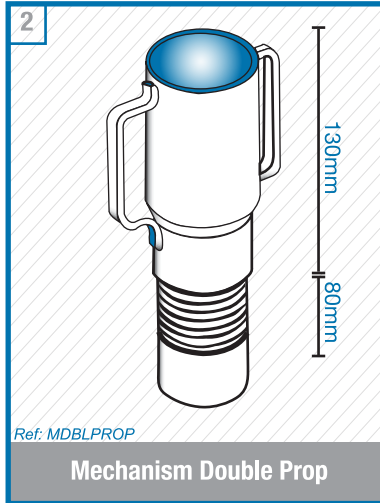
- Used for special slabs e.g; industrial and high rise buildings



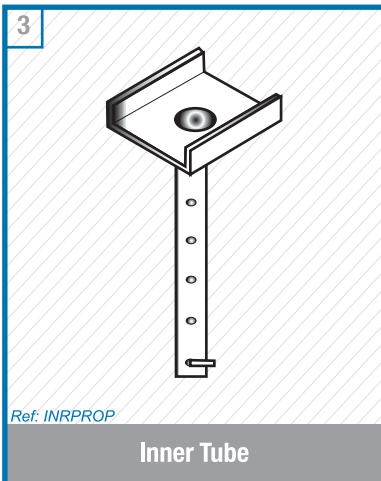
Accessories



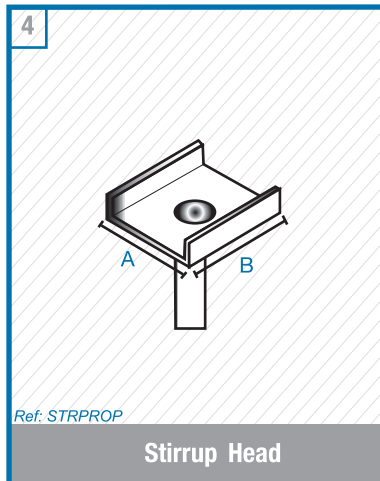
- Serves as a bearing plate for the scaffolding structure. It links the whole structure to the soil



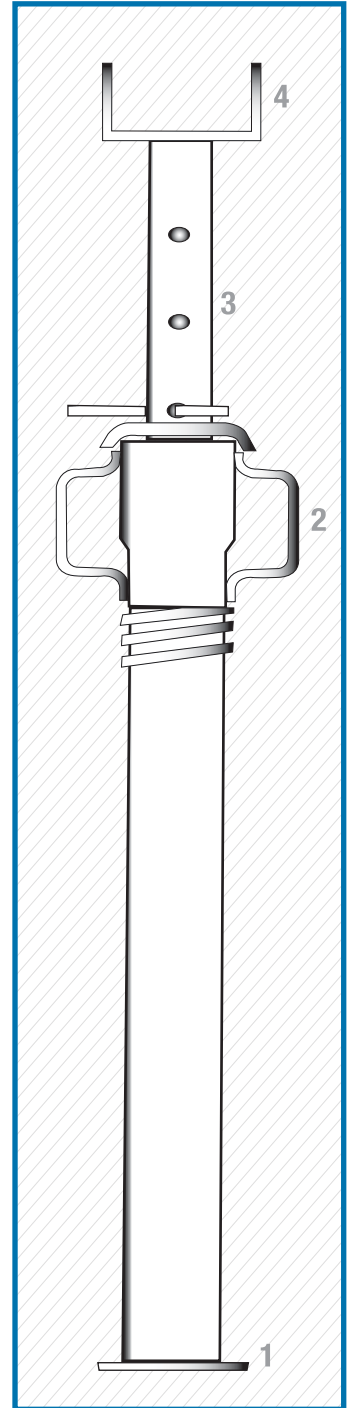
- Used to adjust the length of the prop
- Other dimensions and specifications can be also manufactured



- The length and thickness of the Inner Tube are variable and depend on the length of the prop



- The Stirrup Head has two variables:
 - With or without borders
 - Multiple A and B dimensions

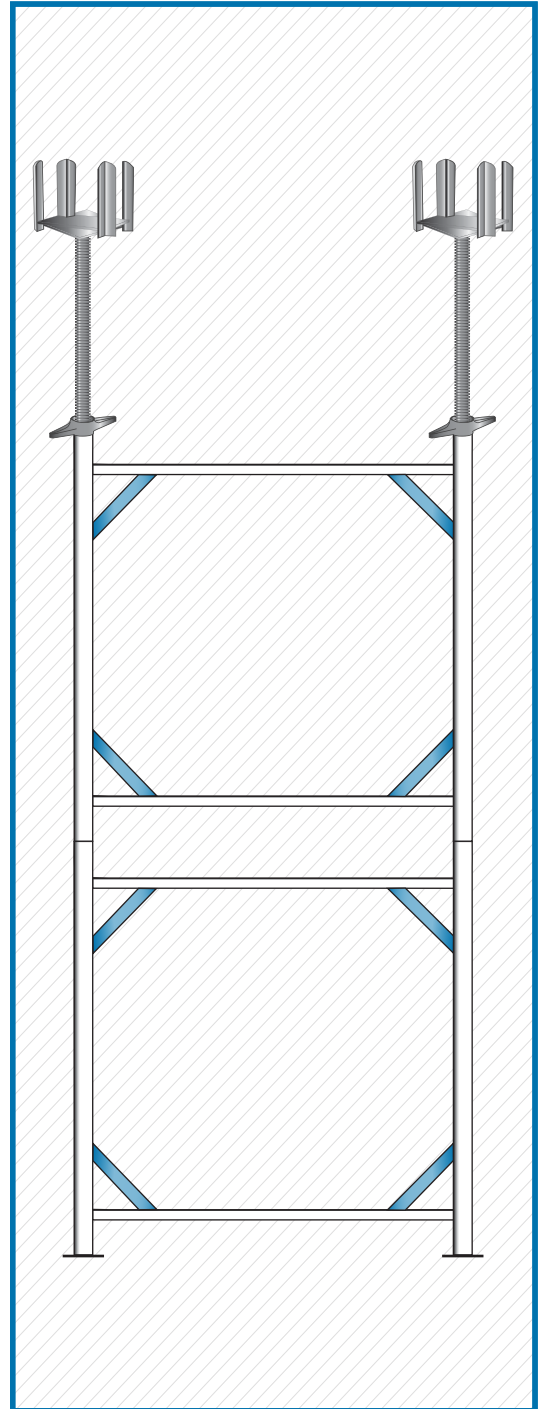
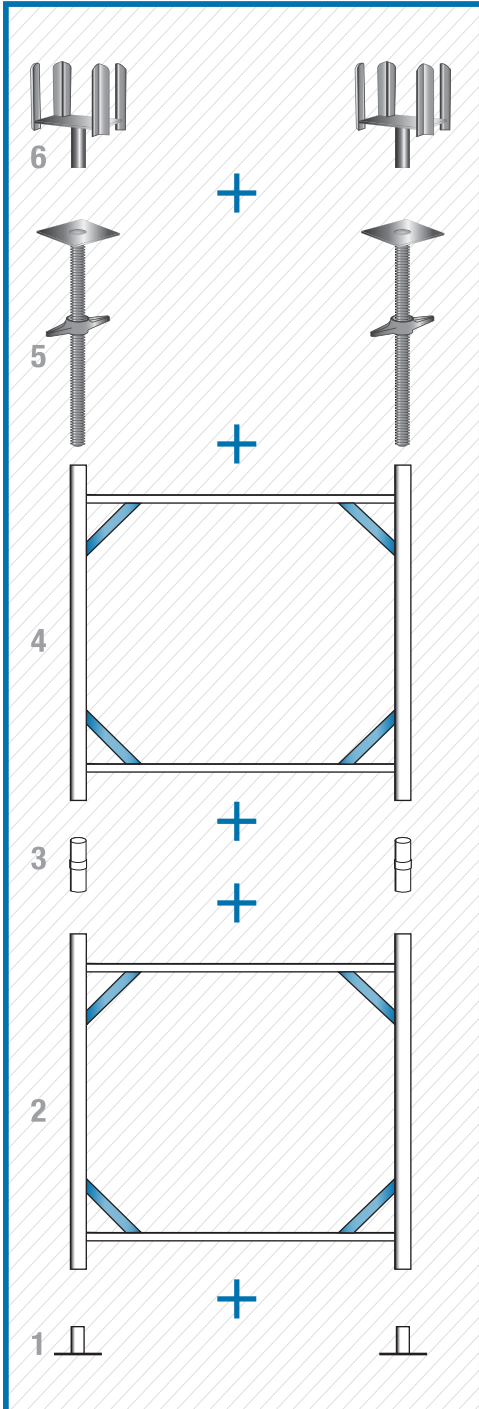




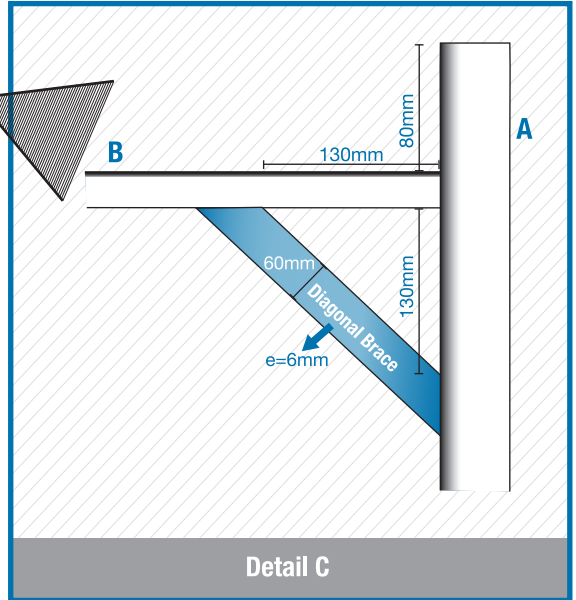
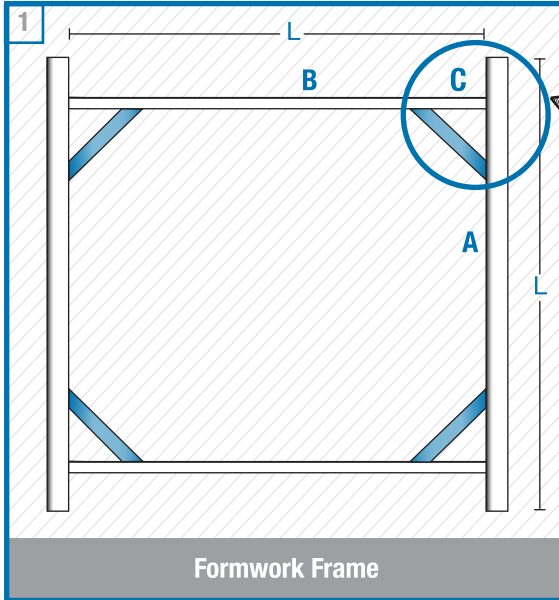
FORMWORK SLAB



Formwork Frames



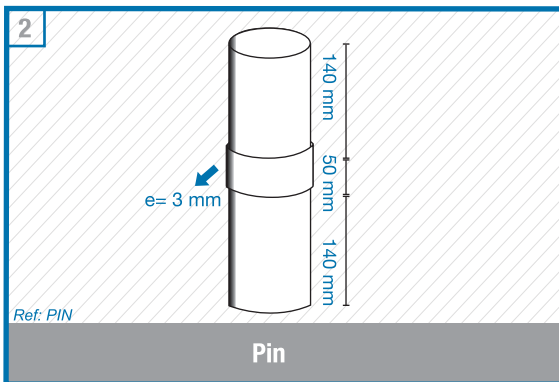
Accessories



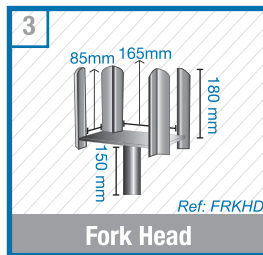
$L_A \times L_B$ (mm)	A_1 (mm)	A_2 (mm)	A_3 (mm)
B_1 (mm)	2,000x1,000 <i>Ref. FRMF200*100</i>	2,000x1,080 <i>Ref. FRMF200*108</i>	2,000x1,250 <i>Ref. FRMF200*125</i>
B_2 (mm)	1,500x1,000 <i>Ref. FRMF150*100</i>	1,500x1,080 <i>Ref. FRMF150*108</i>	1,500x1,250 <i>Ref. FRMF150*125</i>
B_3 (mm)	1,000x1,000 <i>Ref. FRMF100*100</i>	1,000x1,080 <i>Ref. FRMF100*108</i>	1,000x1,250 <i>Ref. FRMF100*125</i>

	D(mm)	E(mm)
A	60	3
B	48	2.5

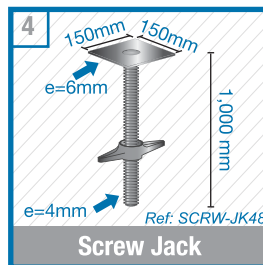
- The Diagonal Brace (6mm thick) provides extra security and safety



- Links two vertical frames or tubes
- The length of 140 mm will ensure a safe interconnection



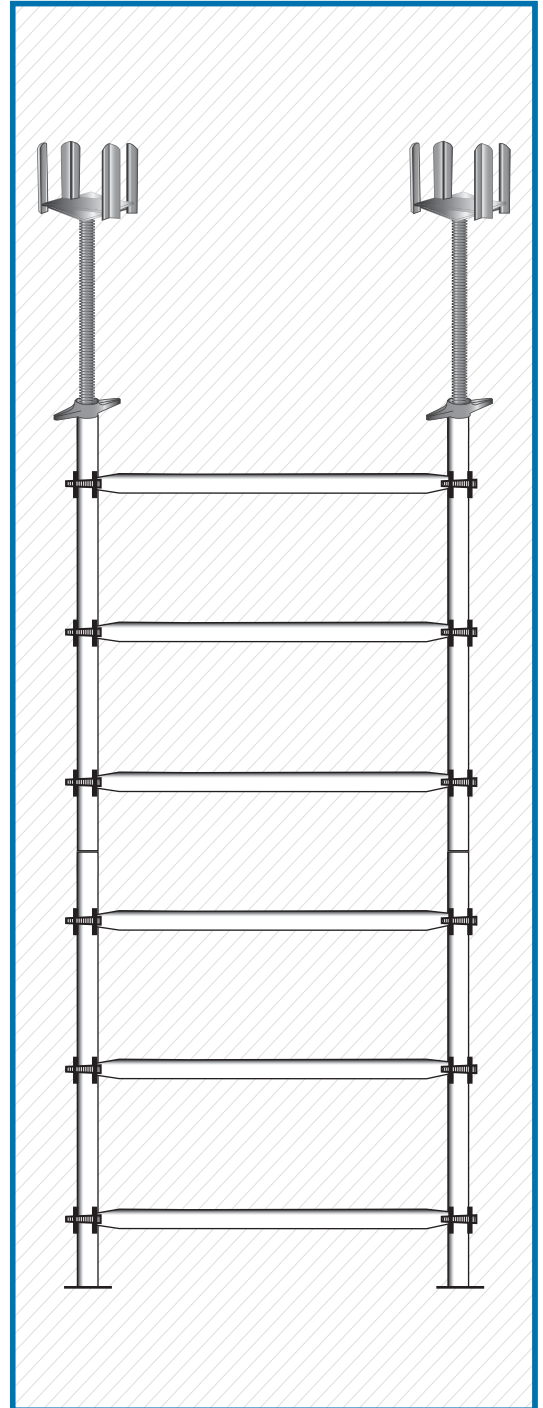
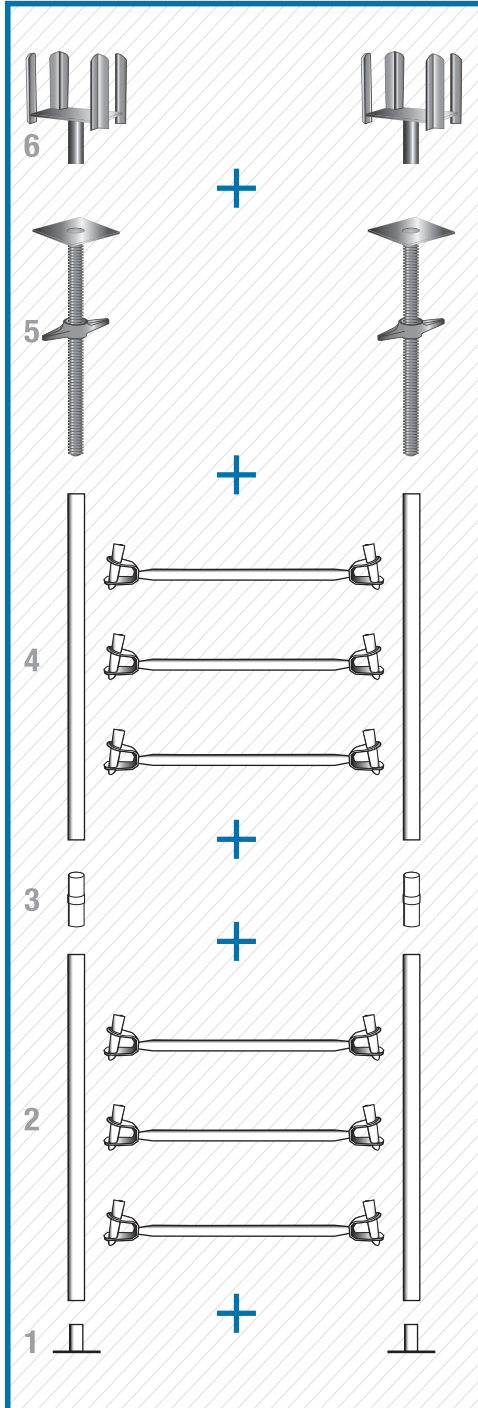
- The Fork Head is used to support formwork beams
- It can be used in two different directions



- The Screw Jack is galvanized and used as horizontal level adjusting for construction scaffolding system

Note : L = Length; D = Diameter; E = Thickness

Formwork Tubes



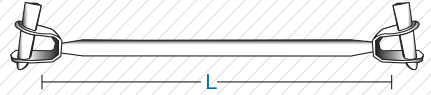
Formwork Assembly



Ref: HORIZ.

Formwork Horizontal Connector Long

L(mm)	D(mm)	E(mm)
2,800	48	2.5
1,900	48	2.5

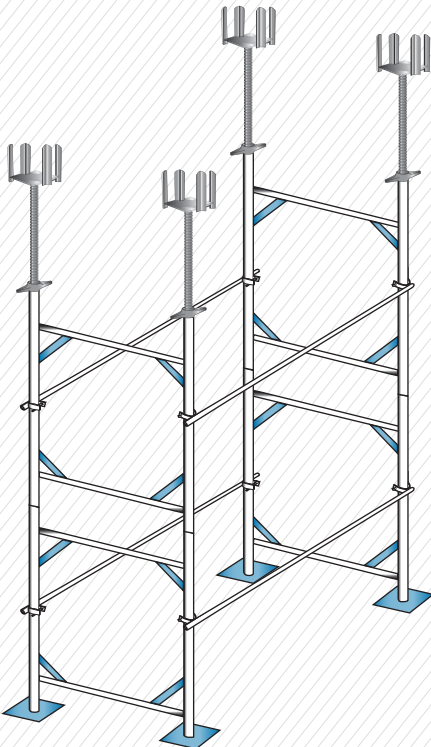


Ref: HORIZ.

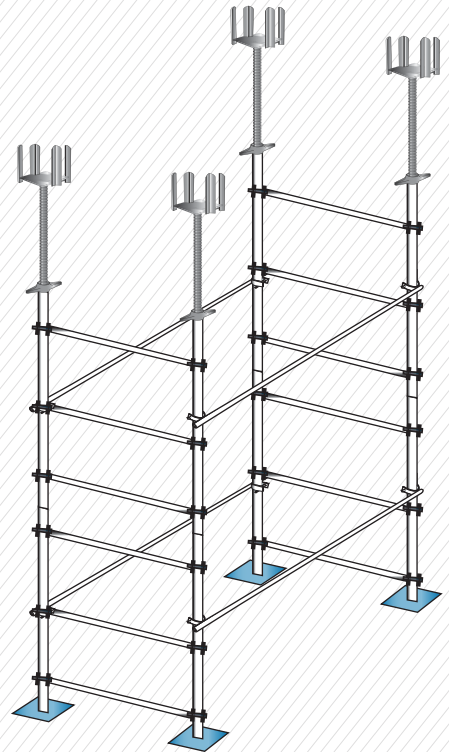
Formwork Horizontal Connector Short

L(mm)	D(mm)	E(mm)
1,000	48	2.5
700	48	2.5

- Connects two scaffolding frames or tubes with a 2-inch Half Coupler



FORMWORK FRAMES ASSEMBLY



FORMWORK TUBES ASSEMBLY

Note : L = Length; D = Diameter; E = Thickness