

## FORMWORK LIFTING HOIST

The TFL 2000 Formwork Lifting Hoist - for safe and efficient vertical distribution of all slab formwork systems

The FINAN Formwork TFL 2000 is primarily designed for the re-cycle of the slab formwork systems from floor to floor between each casting phase

It is also suitable for transporting other formwork accessories & construction equipment at the civil phase of the works

An efficient & safe system of vertical distribution removing the demands on busy crane hook time periods, as well as the potential crane down times, during windy periods. All work in connection with assembly & erection, dismantling, and the first time of putting into service, must be supervised by a certified specialist trained or supervised by the system provider.

- The operating crews will require specialist knowledge on installation & operation to be provided by the approved supplier.

 As proof that they have received such special instruction, a certificate is issued to persons who have undergone this training.

Passenger transportation' with the Formwork Lifting Hoist is forbidden. (Exception: for carrying out site-assembly and maintenance work)





## Product description



## Bottom to top-floor height

- Erected from an engineered ground base, suitable to work up to 100 M with nominated floor tie offs

- When suspended from floor slab: standard application up to 15 m

#### Formwork Lifting Hoist

#### Max Load:

2500 kg

Safe Working Wind Speed Note: To be confirmed geographically

SWL

Max 40 mi/hr



- Integral railings
- Integral loading gates
- Integral loading ramp

- Protective grating Formwork Lifting Hoist 1.80m may also be mounted if desired

#### Landing level safety gates

- For safeguarding the loading and offloading points
- Landing level safety gates for every floor
- Integral control for every floor

#### Drive mechanism

The Formwork Lifting Hoist is driven electromechanically.

- Required supply voltage: 400V/50Hz (fuse protection min. 3 x 32A, slow-blow)

#### Lifting speed

- Starting speed: 5 m/min.
- Lifting speed: 10 m/min.



## **Plan view**





## **Component Break Down**





#### Configuration 1: Working on ground level



This configuration can be utilized for the initial installation at ground level

Engineering Support Slab





## **Possible Configurations**

## Configuration 2: Suspended from floor slab





## Load Data

#### Building anchorage points with applied & reaction forces.



Note: Recommended installation of back props under each anchor point, while transferring the load across 3 floors.

Floor distance	Vertical Reac- tion Force F <sub>y,1</sub>	Tension F <sub>y,2</sub>	Force through the prop F <sub>p,s</sub>	Shear Forces		Horizontal Re- action/shoring
				F <sub>x</sub>	F <sub>x,1</sub>	Force F <sub>x,0</sub>
3.00 m	72.12 kN	32.9 kN	51.19 kN	3.9 kN	29 kN	29 kN
4.50 m	72.12 kN	32.9 kN	51.19 kN	3.9 kN	19.34 kN	20 kN



#### Anchoring on the structure



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**Through Tie and Brace Bracket** 

Α	M36 Bolt (8.8 Grade)
В	150X150 MM Plate Washer
С	Slab Needle
D	Brace Connection Bracket
Е	M36 Nut (8.8 Grade)



## <u>Through Tie</u>

The through tie is engineered as a sleeved fixing through the slab providing additional counter uplift measures when used in conjunction with the soffit mounted –Slab Needle Brace Bracket



#### <u>Slab Needle</u>

## Brace Bracket

The Slab needle brace bracket working in conjunction with the through tie as a soffit mounted fixing to receive the— Internal Slab Anchor Brace



## Internal Slab Anchor Brace 1000MM

The Internal Slab Anchor Brace is connected diagonally from the underside of the through tie to the main vertical support channels.



#### Slab needle attachment



А	Twin C Channel 180x75x20
В	Base plates
С	Needle to Channel Locking Arms
D	Mounted hook
Е	Guide rail to channel



## Main Channel Mounting Pins









## TFL 2000



## **Electrical Details**

Electrical Supply	400V 50Hz / 460V 60Hz
Motors power (Kw)	2 x 4
Nominal current absorption (Amp)	36
Start up current absorption (Amp)	232
Max, Speed (m/min)	12

## **Mast Details**

Mast section dimensions (mm)	525 x 505 x 1489	
Mast section weight (kg)	70	
Tie in distance (m)	3 to 4.5	

Designed and manufactured according to EN16719 CE Standard and to EN12158 CE Standard.

## **Technical Details**

Cage size useful dim (m) L x W x H	4.9 x 3.2 x 1.2	
Ground Dimensions (m)	4.9 x 5	
Max working height (m)	150	
Max Payload (kg)	2000 (2500 optional)	
Net Weight (kg)	8100	







#### Landing Safety Gates







Lifting Mechanism



## SINGLE STROKE LIFTING SYSTEM

With two 50KN C-Series Rotating Machine Screw jacks mechanically linked and operating as a pair via a 0.55kW geared motor.

Mobile Floor Anchor

