

FORMWORK WITH ONE-SIDE TIE TECHNOLOGY









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Safeguard Formwork 19-21 Cairns St Loganholme Qld 4129 Ph: 1300 971 603

Email: info@safeguardformwork.com.au

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With subsidiaries in Slovenia, Croatia, Hungary, Czech Republic and Germany, RINGER on-site supervision for the most complex of

wide makes RINGER the ideal partner for all



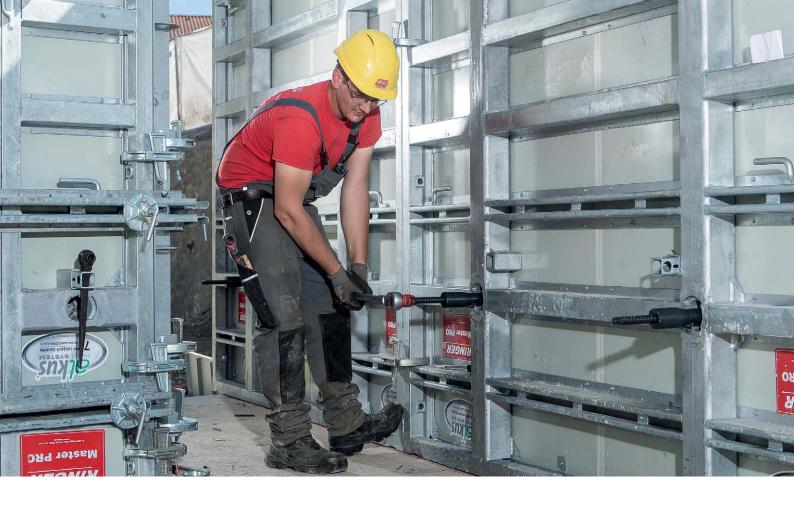


# Master wall formwork for your construction site

RINGER WALL FORMWORK SYSTEMS ARE A MATCH FOR THE TOUGHEST APPLICATIONS. THE MASTER SYSTEM, AVAILABLE IN STEEL AND ALUMINIUM, SAVES RESOURCES, TIME AND MONEY ON THE CONSTRUCTION SITE.

#### Master PRO system

- One-side tie technology
- Sophisticated panel size increments
- Very short forming time for maximum efficiency
- Large-scale formwork using a crane
- Simple handling
- Plastic coated plyood or Alkus solid plastic plywood
- Compatible with Alu Master and Steel Master



## **Master PRO**

THE STEEL FRAME FORMWORK WITH ONE-SIDE TIE TECHNOLOGY FOR THE HIGHEST FORMWORKING SPEEDS.

Master PRO opens a new dimension in formwork efficiency. An innovative one-side tie technology greatly accelerates formworking operations. Furthermore the system meets the rising demands on concrete surfaces.

A conical tie and the sealing system on the anchor sleeve are the most innovative features of this formwork.

3 m of formwork height demand only two rows of ties. Adjustment of wall thickness is just a flick of the wrist, and the system bears a fresh concrete pressure of up to 80 kN/m<sup>2</sup>.

The reduced time required for one-sided anchoring and the large formworking area per anchor allows labour costs to be reduced by more than one third.

## **Product features**

## Master PRO

#### > Performance

• 80 kN/m<sup>2</sup> fresh concrete pressure

#### > Versatile

- Panel height: 0.60m / 0.90m / 1.20m / 3.00m
- Panel width: 0.30m / 0.50m / 0.55m / 0.60m
   0.65m / 0.90m / 1.20m / 2.40m

#### > Faster forming

· Saves more than one third of forming and stripping time

#### > Reduced costs

- One-sided anchoring by just one person
- · No spacer tubes required
- · Long service life and large numbers of cycles
- · Only two rows of ties over 3m of formwork height

#### > Sturdy and ergonomic geometry

- Sturdy panels of galvanised steel
- · Easy to clean

#### > Excellent concrete finish

- Tidy joint pattern
- · Symmetrical tie pattern
- · Various sealing methods for the tie holes

#### > Innovative tie system

- Conical tie
- Wall thicknesses adjustable from 15-50cm in 1cm increments
- · No spacer tubes required
- · Self-sealing
- · No protruding parts on the standing formwork side

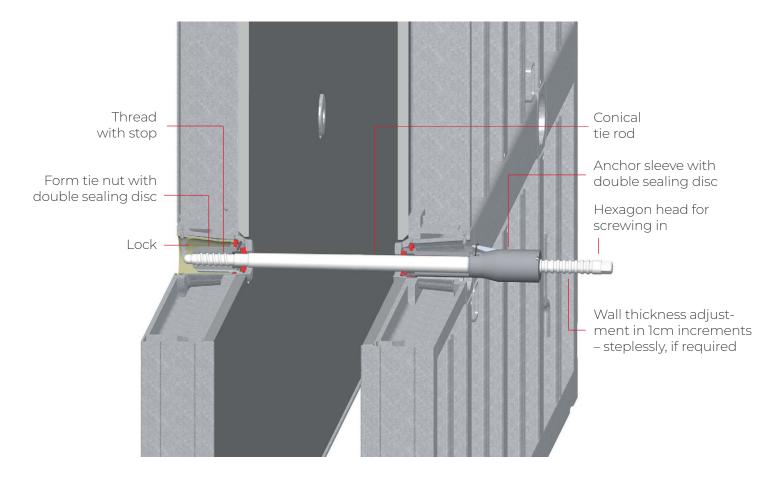
#### > Plywood

- · Plastic coated or
- Solid-plastic plywood Alkus for >1000 cycles

### > Compatible with Steel Master and Aluminium Master

# One-side tie technology

# Sophisticated technology



#### Form tie nut with lock

The form tie nut with double sealing disc is fitted and locked on the standing formwork side once before the first use. There are no protruding parts, so that the panels can be stacked even with fitted form tie nuts.



#### Single-sided anchoring

The preadjusted tie rod is screwed in completely on the closing formwork side. No further steps are necessary.



## **Smart details**



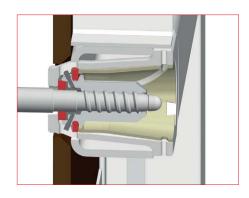
#### Quick, flexible wall thickness adjustment

The wall thickness can be adjusted at the flick of the wrist and without the use of tools in 1 cm increments, even steplessly, if necessary. Walls from 15 to 50cm can be formed with the three tie rod types. The middle tie rod with 20 to 35cm covers the majority of the usual wall thicknesses.



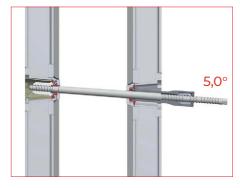
#### Practical tie rod storage

A storage point for the tie rod is integrated directly at the anchoring point so that it is always quickly on hand.



#### Perfect sealing

Thanks to the innovative plastic double sealing discs, fair-faced concrete walls can be poured without additional measures. The higher the fresh concrete pressure, the higher the sealing effect. The seal material was specifically developed for this application.



#### Angles up to 5°

The sophisticated anchoring point allows one or both panels to be inclined by up to 5°. That makes it easy to compensate lateral and height offsets.

# Sturdy and functional



#### For the toughest applications

The profiles of the frame are made of rolled finegrained steel. They are particularly dimensionally stable, torsion-resistant and durable. The hot dip galvanized panels are designed for a maximum fresh concrete pressure of 80 kN/m<sup>2</sup>.



#### Manual connection

The robust forged steel Uni-clamp makes the perfect inter-panel connection. Due to integrated clamp wedge, it can be mounted and locked single-handedly.



#### Aligning clamp

With its aligning effect, the aligning clamp ensures perfekt connection of the panels. In addition it enables timber and compensation infills up to 10cm.



#### Effortless setup

The notched panel profile allows easy set up and stripping of the formwork using an alignment tool.

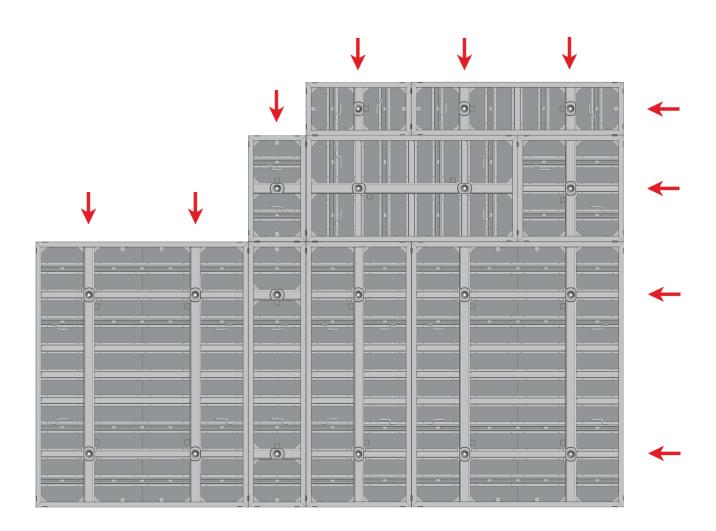
# Sophisticated panel size increments

# Symmetrically attractive

#### horizontally or vertically

The tie points are arranged at 60cm intervals. That allows a flexible combination of horizontal and vertical panels as well as panels of different sizes.

The tie points are exactly aligned.







# **Quality in fair-faced concrete**

THE SYMMETRICAL ANCHOR HOLES AND THE SOPHISTICATED PANEL GEOMETRY ENSURE PERFECT FAIR-FACED CONCRETING RESULTS

The inside tie points make the system the best choice for jobs with fair-faced concrete. The special sealing system prevents runners on the concrete surface. The anchor holes are sealed with either exposed concrete plates or exposed concrete plugs.

# The right plywood for perfect concreting results





#### Plastic coated plywood

- Sturdy multi-layered board from cross-glued birch wood. 18mm thick
- Double-side plastic coating [1.8mm]
- Resistant to chemicals and UV
- Easy nailing, no fragmentation
- Maximum abrasion resistance, no jolting marks
- No onion effect & no embrittlement
- No moisture penetration of the wood core
- Simple recycling





#### Solid-plastic plywood (ALKUS)

- Alkus solid plastic plywood, 19mm thick
- No moisture absorption
- More than 1000 applications
- No shrinking, swelling or rotting
- No rippling or discolouration of the concrete
- High UV resistance and abrasion resistance
- High resistance to acids, alkalis and chemicals
- Easy nailing & simple repairs
- Perfect fair-faced concrete quality
- Easy and fast cleaning using the high pressure cleaner

## **Article list**

## Master PRO

#### Symmetrical panels

The formwork panels are symmetrical and can be combined at random as required. Thanks to the panel height of 300 cm, many construction projects can be formed with just two rows of ties

All formwork applications can be covered with just 20 different panel types.



### Panel height 3.00m (Alkus plywood solid-plastic)

Art. No.	Description	m²	Weight	Art. No.	Description	Weight
V808V240	Panel 300/240	1.35m²	539.0 kg	703V133	Outside corner 300	43.5 kg
V808V120	Panel 300/120	1.13m²	292.0 kg	V808V3030	Inside corner 300/30/30	120.0 kg
V808V090	Panel 300/90	0.90m <sup>2</sup>	206.0 kg	703V341	Hinged outside corner 300/6/6	65.5 kg
V808V065	Panel 300/65	0.83m²	162.0 kg	703V148	Hinged inside corner 300/30/30	141.0 kg
V808V060	Panel 300/60	0.75m <sup>2</sup>	154.0 kg	704V822	Compensation panel 300/10	17.0 kg
V808V055	Panel 300/55	0.68m <sup>2</sup>	145.0 kg	704V812	Compensation panel 300/5	16.0 kg
V808V050	Panel 300/50	0.45m <sup>2</sup>	136.0 kg	704V872	Compensation panel 300/3	13.5 kg
V808V030	Panel 300/30	0.38m²	98.0 kg	704V882	Compensation panel 300/2	11.8kg
V808VU120	UNI panel 300/120	1.13m²	243.0 kg	709V5	Stripping corner 300/30/30	225.0 kg

### Panel height 2.40m (Alkus plywood solid-plastic)

Art. No.	Description	m²	Weight
V807V120	Panel 240/120	1.35m <sup>2</sup>	229.0 kg
V807V090	Panel 240/90	1.13m <sup>2</sup>	172.0 kg
V807V060	Panel 240/60	0.90m <sup>2</sup>	128.0 kg

### Panel height 1.20m (Alkus plywood solid-plastic)

Art. No. I	Description	m²	Weight	Art. No.	Description	Weight
V806V120	Panel 120/120	1.35m <sup>2</sup>	123.0 kg	703V137	Outside corner 120	18.0 kg
V806V090	Panel 120/90	1.13m²	94.0 kg	V806V3030	Inside corner 120/30/30	52.0 kg
V806V065	Panel 120/65	0.90m <sup>2</sup>	74.0 kg	803V241	Hinged outside corner	26.0 kg
V806V060	Panel 120/60	0.83m <sup>2</sup>	70.0 kg	703V150	Hinged inside corner 120/30/30	59.0 kg
V806V055	Panel 120/55	0.75m <sup>2</sup>	66.0 kg	704V84	Compensation panel 135/10	8.5 kg
V806V050	Panel 120/50	0.68m <sup>2</sup>	62.0 kg	704V83	Compensation panel 135/5	7.5 kg
V806V030	Panel 120/30	0.45m <sup>2</sup>	45.0 kg	706V1	Stripping corner 135/30/30	107.0 kg
V806VU120	UNI panel 120/120	1.13 m²	109.0 kg			

## **Accessories**

## Master PRO



**Complete tie set** 15-30 cm / 20-35 cm / 35-50 cm



Form tie nut set incl. double sealing disc



Master PRO lock Locking wrench



**Adapter plug DW15/DW20** for conventional anchoring with tie rod



Fair-faced concrete accessories Cone wrench, exposed concrete plug, exposed concrete plate



**Filler plugs** for closing anchor sleeves in corner panels



Closing plug 24/38mm for anchor holes in the concrete



**RiveStop** for watertight sealing of the anchor holes



Push-pull prop size 1 / size 2 / "G" with extension up to 10m formwork height



Push-pull prop with spindle



3S concreting platform



Concreting platform "L" Lenght 2.70m



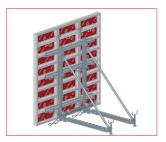
**Uni clamp**friction locked connection
with a hammer blow



Master aligning clamp friction locked connection up to 10cm opening width



**Master clamp, adjustable** Adjustment range up to 20cm



Brace frame "L" up to 2.7m



**Stop end coupler** up to 40cm wall thickness



**100** or **150** waler



Uni fixing bolt RS clamp



Brace frame "M" up to 3.3m



**Compensation panels** 2/3/5/10cm



**Hinged corners** for inside and outside



**Stripping corner** for rational internal forming of shafts



**Brace frame "S"** incl. attachable frame up to 6m

# Reference projects



Thanks to the tie rod storage space, the tie rods are always where they should be.



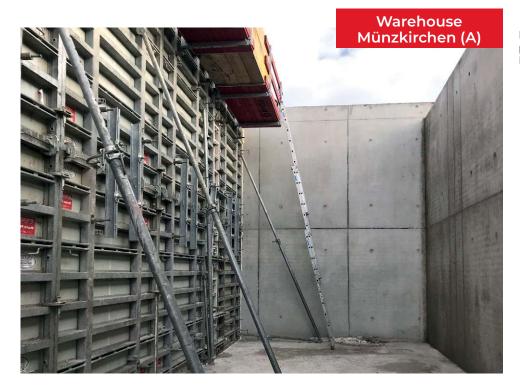


Horizontal and vertical panels are symmetrical, the tie pattern remains harmonious.



The project was oriented to the form of the old state hospital of the Ludwig-Hatschek Foundation that was located next door.

# **Reference projects**



Rapid construction progress thanks to large Master PRO panels.



Optimum formwork for fairfaced concrete results with the Master PRO.



The eight-metre-high walls for the gymnasium were formed with the Master PRO.



# LET'S BUILD





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