



November | 2023

NZ

Spartan™

Product Catalogue

The following document contains important user information with regards to the Spartan Formwork System.

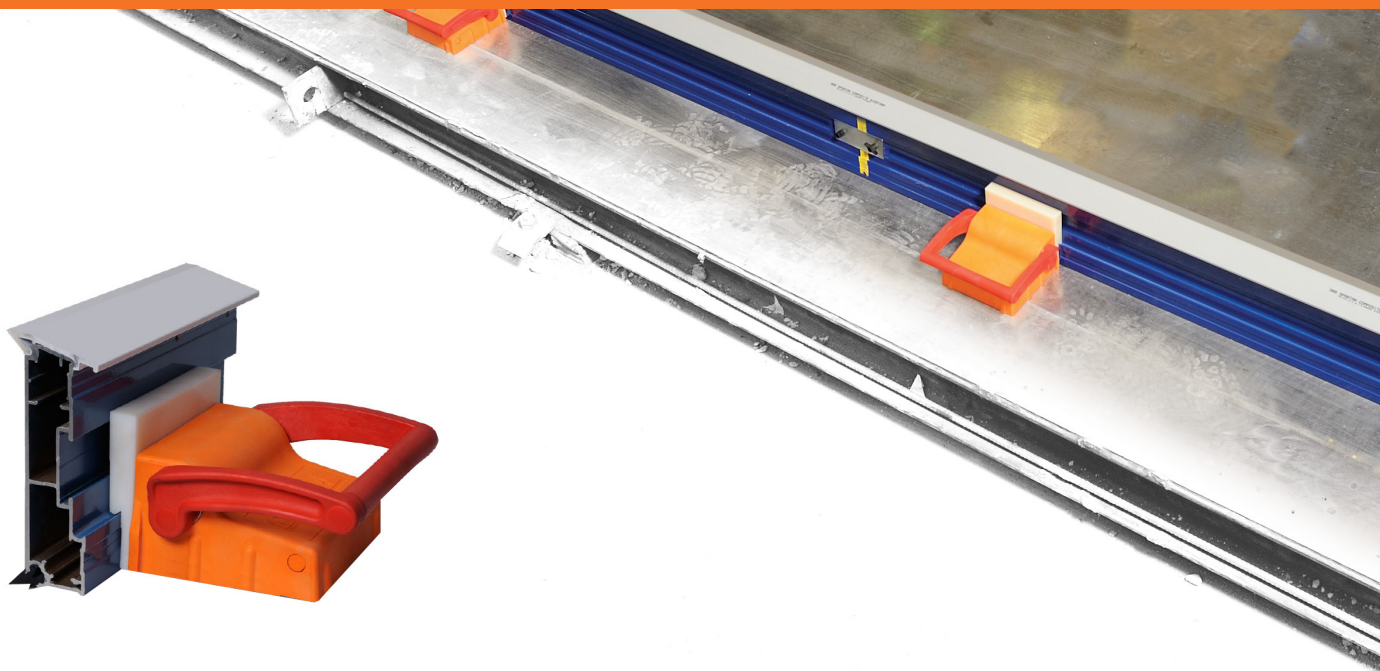


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Introducing the complete pre-cast formwork system

The Spartan™ Formwork System brings innovative, smart technology to the pre-cast yard which allows imagination the freedom of full expression in the physical structure.

Central to the Spartan™ Formwork System is the Titan™ Magnet Clamp and Spartan™ Sideform which provide unparalleled levels of accuracy, flexibility, efficiency and safety to pre-cast yards.

Reid™ is proud to introduce the next generation of innovative formwork products - and the arrival of the industry's most comprehensive pre-cast formwork solution.

Smarter. Easier. Stronger. Safer.



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Features & Benefits



Smarter.

Spartan Sideform is the only system that enables precasters the flexibility of incremental changes in height with the simple change-over of capping.



Easier.

The Spartan Rubber Base Insert provides a silicone-free seal between the bed and formwork to prevent concrete bleed – eliminate the material and labour costs associated with the silicone application and removal processes.



Stronger.

Spartan Sideform is manufactured from ultra lightweight, high-grade 6082 and 6005A Aluminium Alloys which provides durability and strength. Spartan Sideform will not bend or buckle and can withstand job site use and abuse.

The Titan Magnet Clamp is the industry's most powerful. It's ultra compact design saves space and enables precasters to maximise the working area of a steel bed.



Safer.

The Titan Precast Magnet Clamp's de-magnetising plate safely secures the magnet to prevent it from unexpectedly engaging on the steel bed – minimizing the risk of fingers or other limbs being caught under the magnet.

Spartan Sideform's innovative aluminium design is significantly lighter than traditional steel formwork, improving OH&S and making it much safer to use.



Titan™ III Magnet Clamp

The Titan III patented Precast Magnet is the strongest magnet for its size and is significantly smaller than other commercially available magnets:

Smaller and lighter: Weighs just 4.1kgs

Stronger: Up to 1,800kgs of pull-down force!

Rubber Base Skirt: Fully seals the underside of the housing to protect against dirt, metal particles and other contaminants. The Rubber Skirt also minimises the possibility of fingers or limbs being caught under the magnet.



De-magnetising Plate: Safely secures the magnet to prevent it from unexpectedly engaging against the steel bed.

Easy to Clean: Concrete does not stick to the magnet's plastic housing, making it quick and easy to clean.

Durable: The 8mm reinforced plastic housing is job site tough!

Reid™ recommends the use of water based release agents.

Part No.	Colour	Dimensions
MAG3	Orange/Red	140mmL x 155mmW x 85mmH

Cleaning

The Titan™ Magnet Clamp housing is made from a glass reinforced plastic which prevents concrete from sticking to it, making it easy to clean.

- The magnet housing can be cleaned by using a dry/damp cloth or a fine plastic bristle brush.
- The underside of the magnet (the magnet pack) should be cleaned of any foreign matter. This will enable the magnet to sit flush on the precast bed and perform to specification.
- Do not clean the Titan™ Magnet Clamp using high pressure water cleaners, acids or aggressive detergents.

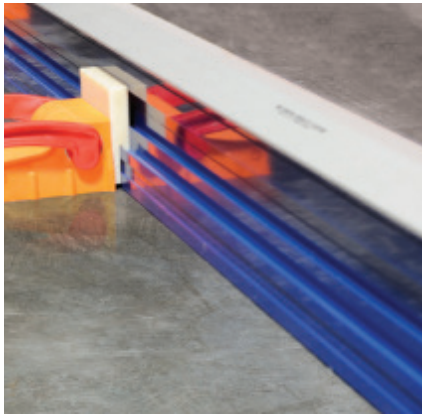
Periodic maintenance

1. Turn the magnet upside down and check that the bottom is clean and free from slurry, metal wire and other particles. It can be cleaned with a rag or by using a plastic scraper (the Spartan™ Capping Removal Tool: CAPRT).
2. While the magnet is in this position, check that there is no excessive wear on the rubber skirting. If required, the rubber skirting can be replaced by an authorised repairer.
3. Make sure that the handle bolts are securely fastened using a 4mm or 5/32" hex wrench. If they are loose, remove the bolts, apply Loctite® (262) and replace. The Loctite® will prevent the bolts from working loose again.
4. Remove any excessive concrete build up from the magnet handles. Avoid hitting handles with a hammer. If there is any visible damage, the handles should be replaced.
5. Remove the adapter plate and clean both the front of the magnet housing, and the adapter plate. Ensure that the bolts are only finger-tight when replaced. DO NOT over-tighten the bolts.

Storage

When not in use, the Titan™ Magnet and sideform, like any other capital equipment, should be cleaned and stored away under cover to prevent accidental damage. The magnets can be stored on any metal surface such as columns, edges of beds, etc.

Spartan™ Sideform



Lightweight: Spartan Sideform is significantly lighter than steel formwork reducing any potential OH&S issues.

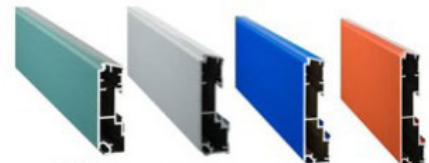
Thick wall sections: Sideform will not bend or buckle. Thick wall sections provide for proper screw bite when fixing fittings to the sideform.

Centre line marking: Spartan Sideform provides a horizontal line-of-centre to assist with the alignment or positioning of fittings.

Easy to Clean: Powder coated Spartan Sideform can be easily cleaned and is protected against the elements.

- Magnet Securing Rail on the rear of Spartan Sideform does not allow concrete to become wedged and is easily removed.
- Sideform is colour-coded to reflect the variations in height.
- Spartan Sideform accommodates interchangeable top capping for height and profile flexibility.
- The Spartan Sideform also houses the unique Rubber Base Seal which prevents concrete bleed without the need for use of silicone

Part No.	Colour	Dimensions (LxH)	Weight (kg)
SF125	Green	5.8m x 125mm	17.7
SF150	Grey	5.8m x 150mm	20.0
SF175	Blue	5.8m x 175mm	22.4
SF200	Burgundy	5.8m x 200mm	24.7
SF250	White	5.8m x 250mm	33.9
SF300	White	5.8m x 300mm	38.6



Cleaning

- The unique epoxy powder-coating makes cleaning the sideform easy and more efficient.
- Once stripped, clean the sideform surfaces using a damp cloth, a plastic scraper (CAPRT) or a fine plastic bristle brush. Cleaning as soon as possible after stripping will make it easier and will prolong the life of the epoxy coating. On the back of the Spartan™ Sideform, use the Capping Removal Tool to clean the “Ball Lock Rail” and joiner plate slots.
- It is important not to clean the sideform using high pressure water cleaners, aggressive detergents or chemicals as these may prematurely wear the epoxy powder-coating, damage the top capping and rubber base - as well as potentially forcing slurry in between the rubber base and the sideform.

Periodic maintenance

1. Remove the rubber base from the sideform body and check that both the bottom recess and the base slots are clean.
2. Turn the sideform upside down and check that the bottom is clean. If not, use the Capping Removal Tool (CAPRT) to scrape away any foreign materials from the base.
3. On the back of the Spartan™ Sideform, use the Capping Removal Tool to clean the “Ball Lock Rail” and joiner plate slots.
4. If there are any sections of top capping showing excessive wear, they can be replaced by removing the capping from the side body and simply cutting out the segment and replacing it with a new section cut to the required size.

Storage

When not in use, Spartan™ Sideform should be stored in racks, under cover where they are safe from damage.



The patented Spartan Sideform is manufactured from a unique combination of composite materials and offers a multitude of benefits over traditional steel or wood formwork.

Spartan Sideform Configuration Table:

PANEL THICKNESS (mm)	Kits Inc, Sideform, Cap, Base Part No	BASE SIDEFORM				TOP CAP (12 x 12 Chamfer)			BASE INSERT (12 x 12 Chamfer)			JOINER PLATE Part No.
		Colour	Height (mm)	Length (m)	Part No.	Colour	Part No.	Box/Pack Qty	Colour	Part No.	Box/Pack Qty	Part No.
125	SF125C12	Green	125	5.8	SF125	Grey	CAPC12	8	Black	BIC12	4	SJP100125
130						White	CAPC1205					
135						Sky Blue	CAPC1210					
140						Pink	CAPC1215					
145						Orange	CAPC1220					
150						Navy Blue	CAPC1225					
150	SF150C12	Grey	150	5.8	SF150	Grey	CAPC12	8	Black	BIC12	4	SJP150200
155						White	CAPC1205					
160						Sky Blue	CAPC1210					
165						Pink	CAPC1215					
170						Orange	CAPC1220					
175						Navy Blue	CAPC1225					
175	SF175C12	Blue	175	5.8	SF175	Grey	CAPC12	8	Black	BIC12	4	SJP150200
180						White	CAPC1205					
185						Sky Blue	CAPC1210					
190						Pink	CAPC1215					
195						Orange	CAPC1220					
200						Navy Blue	CAPC1225					
200	SF200C12	Burgundy	200	5.8	SF200	Grey	CAPC12	8	Black	BIC12	4	SJP150200
205						White	CAPC1205					
210						Sky Blue	CAPC1210					
215						Pink	CAPC1215					
220						Orange	CAPC1220					
225						Navy Blue	CAPC1225					
250	SF250C12	White	250	5.8	SF250	Grey	CAPC12	8	Black	BIC12	4	SJP150200
255						White	CAPC1205					
260						Sky Blue	CAPC1210					
265						Pink	CAPC1215					
270						Orange	CAPC1220					
275						Navy Blue	CAPC1225					
300	SF300C12	White	300	5.8	SF300	Grey	CAPC12	8	Black	BIC12	4	SJP150200
305						White	CAPC1205					
310						Sky Blue	CAPC1210					
315						Pink	CAPC1215					
320						Orange	CAPC1220					
325						Navy Blue	CAPC1225					

Spartan™ Sideform Capping

The Spartan Sideform Capping provides precasters with the flexibility to change sideform height and profile, without the need to invest in entirely new sideform. Available in 6 sizes ranging from +0mm to +25mm in 5mm increments, the Spartan Top Cap simply snaps on to the sideform, and snaps off as required.

Chamfer – 12 x 12 Profile



Part No.	Colour	Dimensions (LxH)
CAPC12	Grey	3m x 0mm
CAPC1205	White	3m x 5mm
CAPC1210	Sky Blue	3m x 10mm
CAPC1215	Pink	3m x 15mm
CAPC1220	Orange	3m x 20mm
CAPC1225	Navy	3m x 25mm

Square – 12 x 12 Profile



Part No.	Colour	Dimensions (LxH)
CAPSQ00	Light Grey	3m x 0mm

Spartan™ Sideform Rubber End Caps



Spartan End Caps provide a silicone free join between sideform sections, preventing concrete bleed through gaps in temporarily joined sideform.

Likewise, the Spartan End Caps plug the ends of the sideform, preventing any concrete from filling the internal cavities.

The Spartan Sideform End Caps now feature a taper or draft which makes stripping of both internal and external corners even easier!

Part No.	Suits
SFEC150	SF150 Sideform - Left and Right Pair
SFEC175	SF175 Sideform - Left and Right Pair
SFEC200	SF200 Sideform - Left and Right Pair
SFEC250	SF250 Sideform - Left and Right Pair
SFEC300	SF300 Sideform - Left and Right Pair



Spartan™ Rubber Base Inserts

Not all steel beds are perfectly flat and small gaps do appear between the underside of the sideform and the bed. These can cause concrete bleed or seepage. Traditionally, a bead of silicone is used between the sideform and the steel bed - a labour intensive and cost prohibitive exercise.



Part No.	Profile	Colour	Lengths
BIC12	12mm Chamfer	Black	6m
BICSQ	Square	Black	6m

Titan™ Magnet Adapter Plates

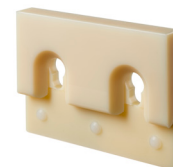


The Titan range of Magnet Adapter Plates are the crucial link in the Spartan Formwork System, enabling quick and easy interchangeability of the magnet between sideform of varying size.

Part No.	Suits	Dimensions (LxWxH)
MAP125	SF125	145 x 20 x 85mm
MAP150175	SF150 & SF175	145 x 20 x 110mm
MAP200	SF200	145 x 20 x 160mm
MAP250	SF250	140 x 30 x 170mm
MAP300	SF300	140 x 30 x 220mm



MAP200

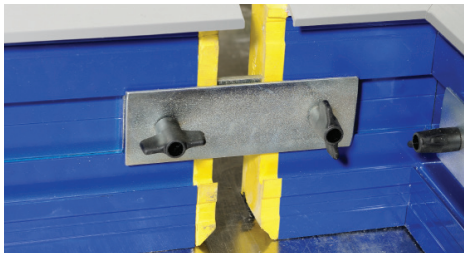


MAP150175



MAP125

Spartan Sideform Joiner Plates



Spartan Joiner Plates are used for temporary or semi-permanent joining of sideform and used for joining the Spartan Internal Corner system.



Part No.	Colour	Suits
SFJP150200	Silver	SF150, SF175, SF200, SF250, SF300

Handy Tip

Permanent Joining of Sideform



Whilst Joiner Plates are recommended for temporary or semi-permanent joining of sideform and internal corners, Spartan™ Sideform can be permanently joined using square stainless steel tubing.

- The size of tubing required varies depending on the height of the sideform you are using:
- 100mm to 125mm sideform use two 19.05mm x 19.05mm x 300mm long sections.
- 150mm to 200mm sideform use two 25.4mm x 25.4mm x 300mm long sections.
- Insert the two lengths of tubing 150mm into the end of the sideform.
- Lay the sideform on its front face.
- Using stainless steel screws (8g x 25mm) fasten the tubing into position. To ensure a solid connection, 2 screws per side per tube are required.
- To aid in this process, Spartan™ Sideform features centreline marks on the rear face to help locate the point of the screw.
- Push the other length of the sideform into position and repeat the fastening process.
- The sideform is now permanently joined together.



Spartan™ Capping Removal Tool

The Spartan™ Capping Removal Tool is a multi-purpose tool designed for the removal of capping, cleaning concrete from sideform and capping, and its unique Ball Lock P base removes concrete build up. The Capping Removal Tool's molded Ball Lock Rail base also helps pull sideform away from the concrete.



Part No.	Colour	Dimensions (LxWxH)
CAPRT	Orange	220 x 70 x 50mm

Assembly and How to Use Guide



Preparing the Sideform:



Attaching the Top Capping

To attach the top capping onto the sideform, hook the front of the capping into the top, front recess of the sideform. Push the rear of the capping down so that it clips firmly into position. Once the capping is clipped onto one end, move along the full length of the sideform body.



Removing the Top Capping

The capping is easily removed by using the Capping Removal Tool (CAPRT). Likewise, the capping can be removed by placing the sideform upside down and whilst holding it vertically, gently push down with your heel onto the rear of the overhanging section and by tilting the sideform forward. The capping will unclick.



Installing the Rubber Base

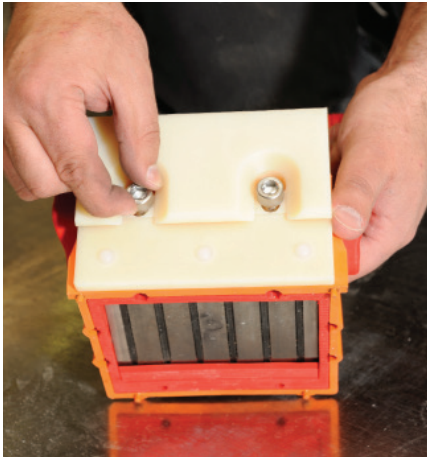
To install the rubber base, lay the sideform body flat onto its back and using your fingers, push the rear of the base into the bottom slot of the sideform. Once the base is in position at one end, move along until you reach the end of the sideform.



Installing the End Caps

Spartan™ End Caps are easily installed by aligning the end cap with the sideform and gently pressing it into position. The end caps are easily removed if required, but are recommended for seamless joining of sideform and bleed-free panels.

Handy Hint: When cutting Spartan™ Sideform to length, ensure cuts are made with a docking saw running an aluminium blade and always use a wax stick lubricant to prevent burrs. Clean cutting of sideform which is free of aluminium burrs results in a precise and easy fit of the end caps. When the top capping, rubber base and end cap have been installed correctly, the sideform is ready for use.



Preparing the Magnet Clamp

- Each Titan™ Magnet is supplied with 2 hex bolts that are used to secure the adapter plate to the magnet housing.
- Partially install the bolts to the housing (approx 3 turns).
- Slot the adapter plate over the head of the bolts. Pull the adapter plate up until the bottom of the slotted holes are hard up against the bolts.
- Tighten the bolts using an 8mm hex key (5/16"). Ensure that the back of the adapter plate is flush with the front of the magnet housing.
- DO NOT OVERTIGHTEN THE BOLTS.

The Magnet is now ready for use.



Using the Magnet Clamp

Place the Titan™ Magnet behind the sideform at the recommended spacing. Magnet spacing varies depending on the height of the sideform you are using.

Magnets should be spaced as follows:

100mm to 170mm high sideform
Magnets should be spaced 1.5m to 1.8m apart

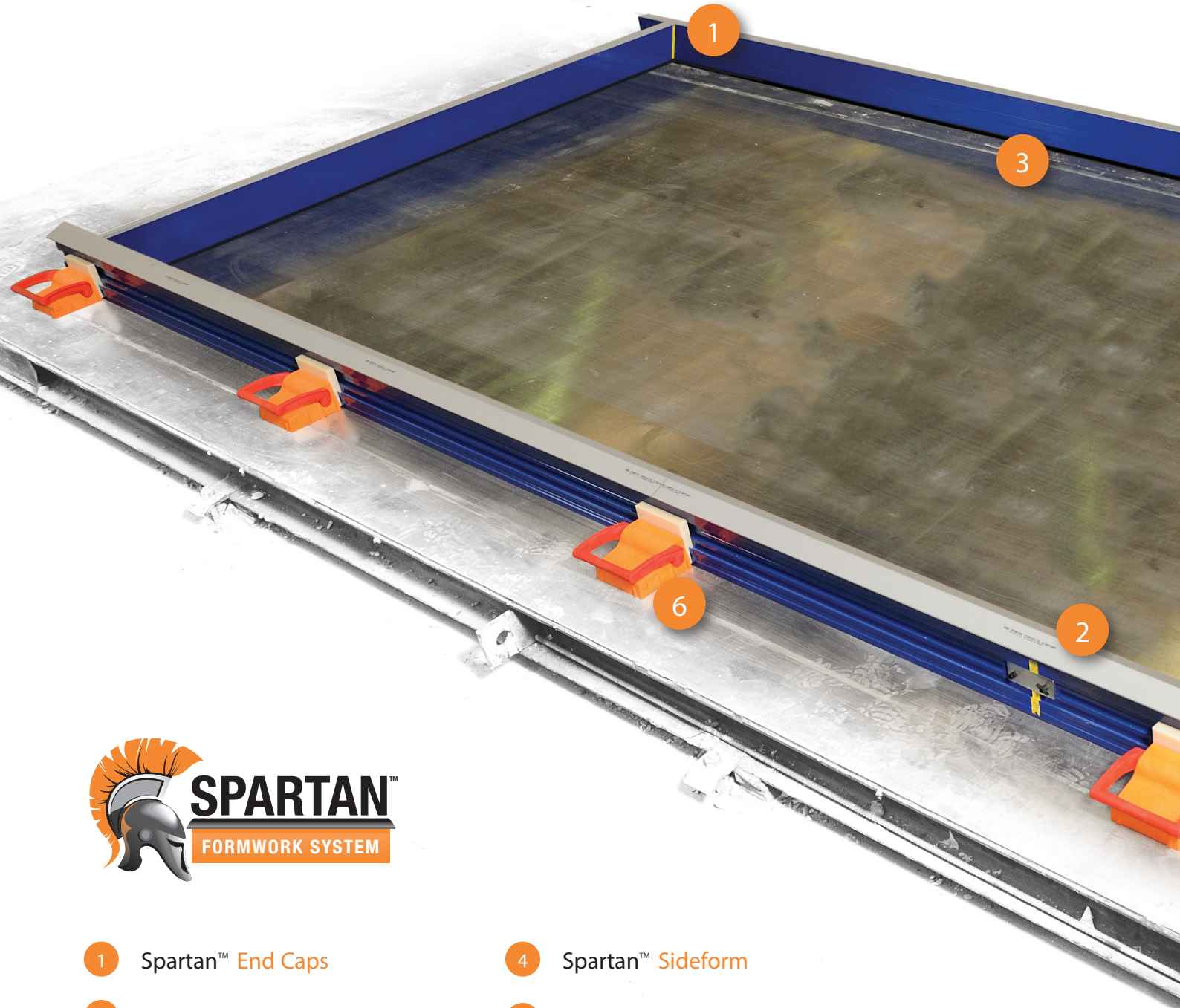
170mm to 195mm high sideform
Magnets should be spaced 1.2m to 1.5m apart

200mm to 220mm high sideform
Magnets should be spaced 1.0m to 1.2m apart



- Starting from one end of the sideform, tilt the sideform forward (away from the magnet) and seat the male section of the ball lock (located on the front of the adapter plate) into the female recess ball lock rail located on the rear face of the sideform.
- At this stage, the Titan™ Magnet Clamp does not need to be engaged as it has enough initial magnetism to remain in place. If fine adjustment of position is required, the magnet housing or the sideform can be gently tapped with a rubber mallet or by foot.
- It is important not to use hammers or similar devices as both the sideform and magnet can be damaged. Once the first magnet has been positioned, continue along the full length of the sideform until all magnets are correctly located.
- Once all magnets have been positioned, engage each magnet by pushing the handle down towards the pre-cast bed.

Steel Bed Layout



- 1 Spartan™ End Caps
- 2 Spartan™ Joiner Plates
- 3 Spartan™ Rubber Base Insert
- 4 Spartan™ Sideform
- 5 Spartan™ Sideform Capping
- 6 Titan™ Magnet Clamp

Spartan™ Sideform is delivered in three separate components: Sideform, Rubber Base and Top Cap, which requires assembly prior to use. All assembly should be completed by hand, without the use of hammers or similar devices.

Panel Setup: It is important to ensure that the beds are clean and free of any foreign matter. Place the sideform on the precast bed in the desired position. If required, the sideform can be cut-to-length by using a fine tooth wood or aluminium saw. To ensure a smooth cut, it is important to use paraffin wax on the blade.



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