

Q&A Forkarm Design & Manufacture

Is there an Australian standard to which the fork arm must comply?

Yes. All fork arms must comply with;

1. AS2359 Powered Industrial Trucks.
2. AS3990 Mechanical Equipment, Steel Work.
3. AS1554 Structural Steel Welding, category SP.

How must the fork arms comply with AS2359?

1. A minimum design (safety) factor for a specific capacity.
2. Fatigue and impact requirements.
3. Dimensional and alignment specifications.

Is there a preferred fork arm type?

No. All supporting types are acceptable if properly designed and manufactured however most fork arms up to lifting capacities of 5,500kg each are I TA type.

When manufacturing a carriage; design and manufacture that which for the application performs best, lasts longest and can be better maintained.

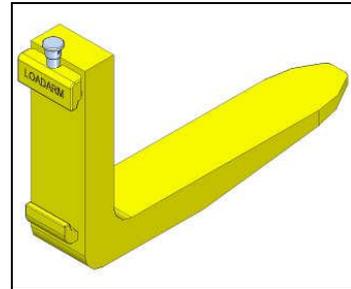
When manufacturing an I TA carriage; build it in accordance with AS2359. This will allow access to forkarms and spare parts ex-stock.

How do I determine the fork arm design lifting capacity?

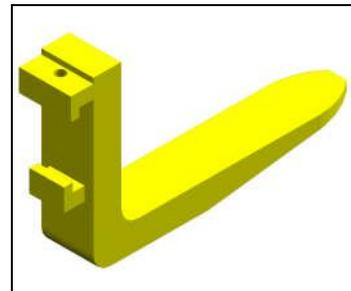
The minimum design lifting capacity is the forklift truck rated capacity divided by the number of fork arms fitted.

Why is it necessary to know the fork arm load centre?

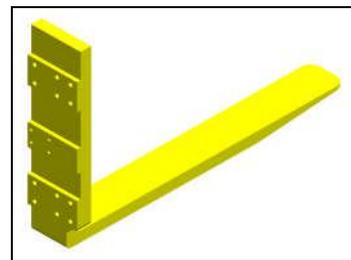
Because it is the combination of design load and design load centre which determines the maximum design stress and therefore the forkarm section.



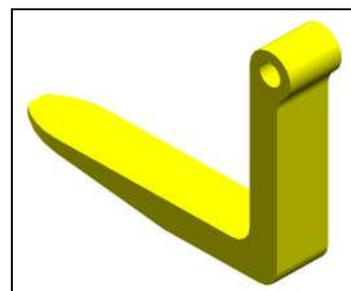
ITA Hook Mounted Forkarms



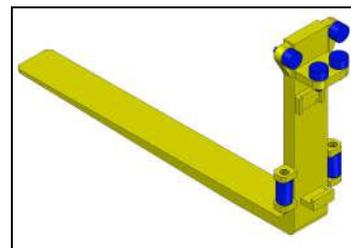
Square Hook Mounted Forkarms



Bolted Forkarms



Shaft Mounted Forkarms



Special Roller Mounted Forkarms

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Can the shank extend pass the top retaining part?

Yes; however, the shank will usually end in the vicinity of the top supporting device. Simply because there are usually no reasons to have it extend up pass this point.

Can the blade thickness be less than the regular section for a given capacity?

Yes. These fork arms are wider to compensate for the loss of thickness and are often used in the timber industry.

Can the blade width be less than the regular section for a given capacity?

Yes. These fork arms are thicker to compensate for width reduction and are often used in brick related industries.

Can the blade width & thickness be less than the regular section for a given capacity?

Yes. These fork arms are manufactured from special very high strength steels and are used to overcome operational restrictions.

Can I purchase fork arms with a taper along the full length of the blade (Full Bottom Taper)?

Yes. But note the taper ends approximately 2-3 times the blade thickness out from the inside radius.

What is a timber taper?

A "timber taper" is a full bottom taper (FBT).

Can the forkarm be coated to minimise or prevent product slipping?

Yes, coatings (Rubber substances) can be applied to forkarm blades to reduce slippage.

Can the forkarm be coated to minimise or prevent damage to product?

Yes. Protective coatings (Rubber substances) can be applied to forkarm parts.

Can the forkarm be coated to minimise or prevent sparking?

Yes.

Copper sheeting or plating can be applied to forkarm parts.

Can a fork arm be purchased to operate inverted?

Yes.

Can a fork arm be designed so it detaches from the carrier quickly?

Yes.

Can a fork arm be purchased with a removable lower retaining hook?

Yes.



Blade with Rubber coating to prevent slippage

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