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ENGLAND ATHLETICS GUIDE

SEATED THROWS GUIDANCE



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Seated, or secured, throwing takes place in a throws circle. Events include shot, javelin, discus, and club and are for athletes that are unable to stand or have balance and stability problems that make throwing from an ambulant position difficult.

Athletes in the seated throwing events throw from either their day chairs, or from custom made throwing frames, which are secured to the ground by straps.

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CLASSIFICATION AND ELIGIBILITY

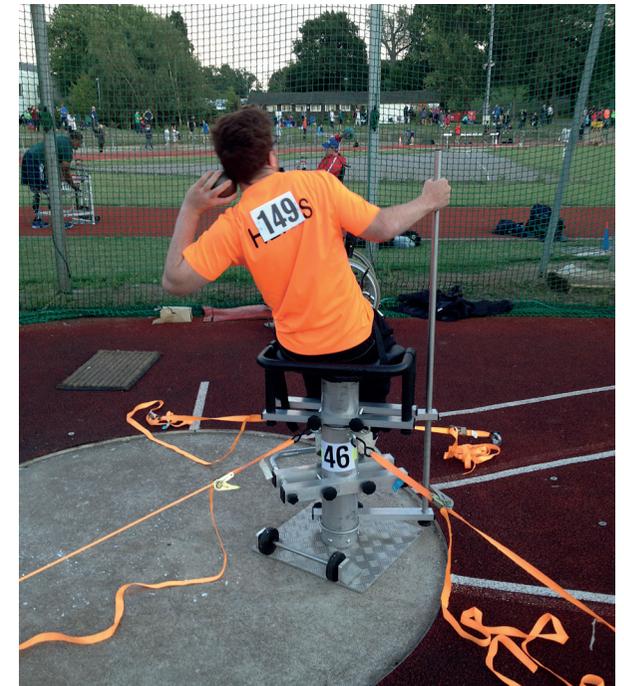
The impairments and classifications associated with seated throwing events are:

- ✔ Athletes with hypertonia, ataxia or athetosis (for example cerebral palsy, multiple sclerosis or stroke) - F31, F32, F33, F34
- ✔ Athletes with spinal injury - F51, F52, F53, F54, F55, F56, F57
- ✔ Athletes with a limb deficiency, impaired passive range of movement, impaired muscle power, or leg length difference (for example spinal cord injuries, amputees, or muscular dystrophy)

Classification is coordinated nationally by British Athletics. A classification is required to enter all Parallel Success competitions and for results to be recognised on the [UK Rankings](#).

For more information on classification visit [UK Athletics](#).

For more information and changes to eligibility rules see [World Para Athletics](#).



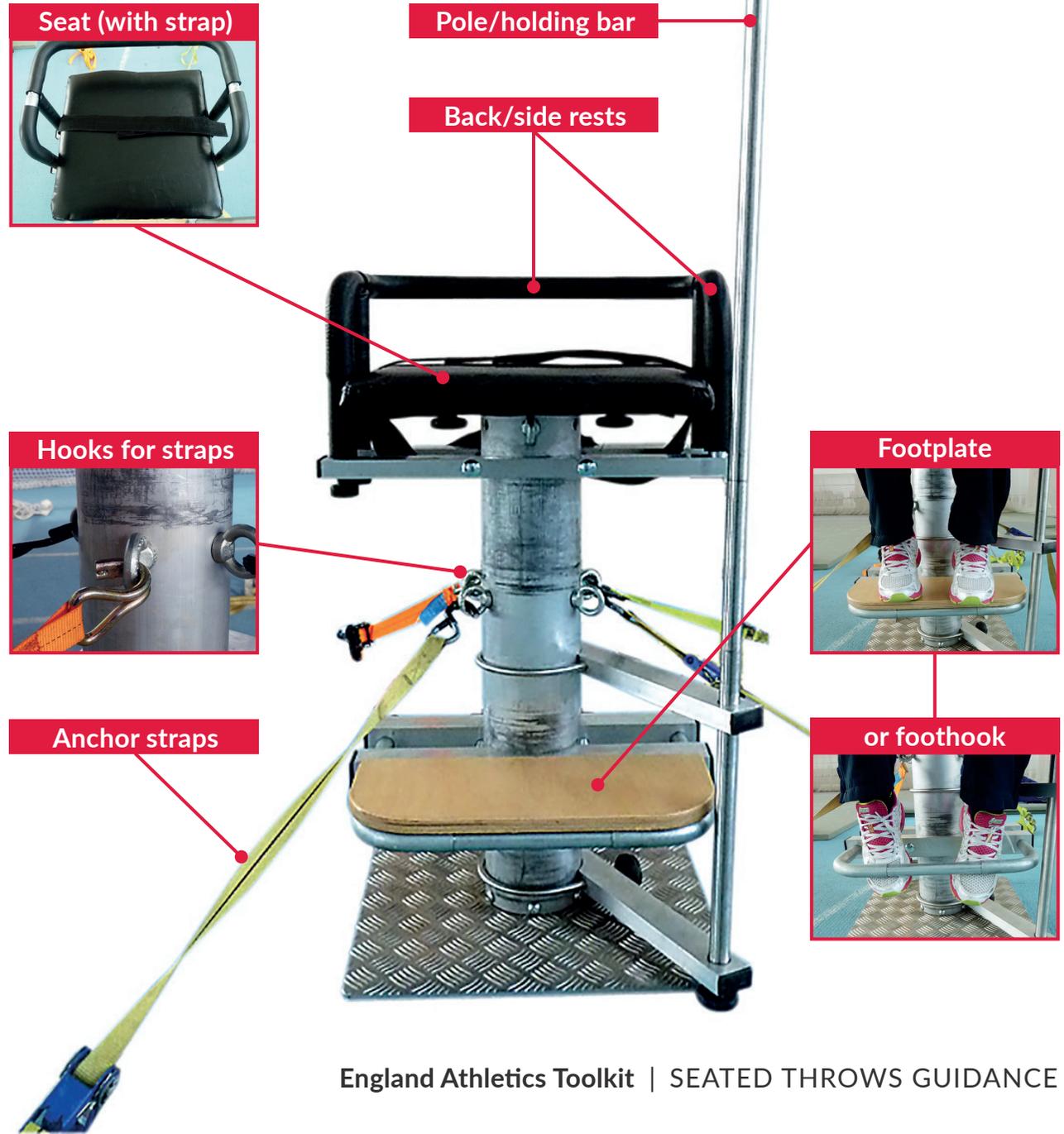
THROWING FRAMES

Throwing frames are individually designed assistive devices which are scaffold-like chairs made of metal bars and plates welded together. Its main purpose is to assist in weight bearing and consequently, it also contributes to the performance of an athlete by enabling the optimum throwing action (range of movement, velocity of body segments, final body position at release etc). *

A variety of different classes are eligible to compete in seated throws, consequently, there is a range of frames within and between the different classes of athletes.



*Frossard L, O’Riordan A, Goodman S. ‘Throwing frame and performance of elite male seated shot-putters’. Sports Technology. 2010. 3 (2), p 88-101. DOI: 10.1080/19346182.2010.542005.



FRAME SPECIFICATIONS

Please visit [World Para Athletics](#) for up-to-date rules on throwing frame specifications and also rules for seated throws.

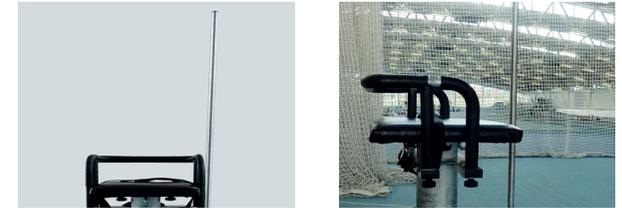
Seat



The maximum seat height is 75cm from the ground (including seat padding)

- ✓ The seating area must be square or rectangular in shape.
- ✓ Each side to be at least 30 cm in length.
- ✓ The seat surface of the frame must be level, or with the front higher than the back (i.e., inclined backwards).

Pole/Holding Bar



- ✓ The throwing frame may have a rigid vertical holding bar.
- ✓ The holding bar must be a single, straight piece of material without curves or bends, and with a cross-sectional profile that is circular or square, not oval or rectangular. It must not incorporate springs or movable joints or any other feature that could assist with propulsion of the throwing implement.
- ✓ They are used mainly for support and stability and mostly used by low class spinal injury athletes and athletes with cerebral palsy (F51-55, F31-34).

FRAME SPECIFICATIONS

Back and side rests



- ✓ The seat may incorporate back and side rests for the purposes of safety and stability. They can either be made of non-elastic fabric (e.g., non-elastic canvas) or be a rigid construction that does not move (e.g., rigid steel or aluminium).
- ✓ The backrest may incorporate cushioning that must not exceed 5cm in thickness.
- ✓ The backrest should not incorporate springs or movable joints or any other feature that could assist with the propulsion of the throwing implement.
- ✓ Backrests are used mostly by those athletes with no to minimal abdominal and back muscle control (F51-54, F31-33).
- ✓ The height of the backrest is usually at a height to suit the individual and usually replicates the height of the backrest on the athlete's day chair.

Footplates



- ✓ Footplates, if used, are for support and stability only.
- ✓ Footplates must stay behind the front of the throwing circle.
- ✓ Athletes with good leg and foot function are likely to just place their feet on a footplate (e.g., F57).
- ✓ Less functional athletes with no, or poor to fair leg and foot function in one or both legs may want to secure/hook their feet in place to limit extra movement (e.g., F31-34, F51-56).
- ✓ Additional strapping can be used around legs and/or knees for stability and support.
- ✓ A daily wheelchair that satisfies these criteria is acceptable (including the requirement that it must not move during the throwing action).

ACCESSING THROWING FRAMES

A fully adjustable throwing frame, the 'Protean STF' is now available for purchase through England Athletics (full information at the [Protean website](#)). It enables athletics clubs to provide training opportunities for new and beginner athletes who want to try seated throwing.

The throwing frame meets the World Para Athletics rule specifications and has anchor points for securing it to the ground when throwing. It is easily adjustable, so multiple athletes can use it, and it will also assist the coach with developing the functional template for those athletes that commit to the sport and may need a more bespoke throwing frame.

Bespoke frames are designed and engineered around an individual athlete that has committed to training and competing. Currently, the construction of each individual throwing frame is mainly driven by an empirical approach, relying on the feedback from coaches and athletes as well as functionality and

sensations of comfort. *

The fully adjustable 'Protean STF' frame makes this process simpler, by assisting with the development of an individual athlete's functional template. This functional template can then be taken to local welders/fabricators for design and manufacture.

JGB Engineering also manufacture the Throwster throwing frame. More information can be found by visiting the [Throwster website](#).

The following national organisations are also able to design, develop and manufacture bespoke items of equipment for disabled people.

Remap: www.remap.org.uk

Demand: www.demand.org.uk

* Frossard L, O'Riordan A, Goodman S. 'Applied biomechanics for evidence-based training of Australian elite seated throwers', in Sport for persons with a disability, ICSSPE, Editor. 2006, International Council of Sport Science and Physical Education "Perspectives" series. 175-198. 2

SECURING THROWING FRAMES AND WHEELCHAIRS



Throwing frames and wheelchairs need to be firmly secured to the ground during throwing. Ratchet straps are commonly used to tie down a throwing frame or wheelchair.

These are secured to the ground with ground anchors or a tie down bar which are concreted in place around the throwing circle. Stakes may also be used instead to secure a frame or wheelchair into grass surfaces. Athletes need to have their own ratchet straps, but it is useful for clubs to have some too for beginner athletes. Good sources for straps include local DIY stores as well as athletics equipment suppliers. Stakes can be purchased cheaply from a local welder and some athletics suppliers (see page 10 for suppliers).

Fixing Point Installation for Seated (secured) Throws

The UKA SAPCA Code of Practice for the Construction of Athletics Track and Field Facilities gives details of the technical designs and drawings for installation of seated throws fixings. Registration on the [SAPCA website](#) is free and will allow any revisions to the Code of Practice to be emailed directly.

For all new build/refurbishment projects provision should be made to accommodate athletes using throwing frames or wheelchairs by installing throws circle fixing points.



Fixings for Performance Facilities and Higher Level Domestic and International Competition

The pictures below show the fixings layout that was used for the London 2012 Paralympic Games. This is the UKA recommended layout for higher level competition and training and all new build throws circles.

A set comprises of nine sockets (with nylon caps for when not in use), one central straight angle iron, two x front and rear shaped angle irons and three struts to rear angle iron to prevent any movement of fittings. These fittings give maximum choice of adjustment with a hole for fitting the ratchet straps to every 50mm. The finish should be galvanised to provide a long-lasting finish.



Fixings for club facilities (training and competition)



Another layout option for general club usage and low-level competition for club facilities is shown above. A set comprises 5 sockets (with nylon cap for when not in use) and 2 galvanized angle irons. The holes for attaching straps are every 100mm. The number of fixing points back and front can vary, however a greater number will add flexibility for different sized throwing frames.

Ground Anchors



For existing facilities and low-level refurbishments ground anchors can also be used.

Ground anchors for throws circles consist of three parts:

- 1 **The ringbolt** – made of steel
- 2 **The buried sleeve** – made of steel, into which the ring bolt screws
- 3 **The concrete foundation** – the most important of the three.

(The ring bolt and sleeve should be made of stainless steel to prevent rusting).

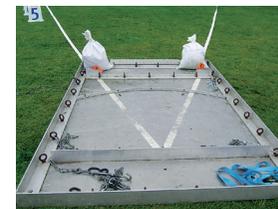
UK Athletics can provide advice and guidance on the installation of throws fixings. For contact details please visit the [UK Athletics website](#).

The Sport and Play Construction Association (SAPCA) maintain an updated list of recommended contractors for the installation of throws fixings: www.sapca.org.uk

Throwing Platforms or Stakes

When throws circles with fixings are not available it is possible for athletes to throw from throwing platforms or for throwing frames and wheelchairs to be secured using stakes in the ground. These fixing methods are best done only in training situations and full throwing circles should be used wherever possible for competition.

Particular attention should be paid to the safety and distance of other athletes and any other persons when throwing without a cage, especially during club or javelin training or competition. It is advisable NOT to participate in discus without a cage under any circumstance.



THROWING IMPLEMENTS



Disabled athletes throw different weight implements. Details of the recommended weights and age groups are available from the World Para Athletics.

In general, standard size implements can be used by disabled athletes with a couple of exceptions:

- ✓ **Club** – A throwing club has 2 main head types, round or square, and a competition club weighs 397g.
- ✓ **Shot** – Smaller sized, same weight shots are available for dwarf or short stature athletes who have smaller hands and therefore more difficulty holding the larger implements.

Suppliers

This is not an exhaustive list but throwing implements can be purchased from:

Eveque

www.eveque.co.uk

Neuff

www.neuff.co.uk

Stadia Sports

www.stadia.sports.co.uk

Track and Field Sports

www.trackandfieldsports.co.uk

Safari Sports

www.safarisports.com



For more digital club
support visit England
Athletics [Club Hub](#)