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# straight to the point

Self propelled booms are now the most widely used form of powered access equipment after Scissor lifts, however the preferred type of boom varies depending on where you are. Straight booms are far more popular in the USA than articulated, while in Europe the opposite is true. We look at why? and highlight the benefits of Straight telescopic booms, what products are available, recent product developments and interesting applications.

As is often the case one reason for the divergence in popularity lies with history and market development. The North American access market took off well before Europe, and before Articulated Booms were developed, thus the habit of using Straight booms for particular jobs became more entrenched.

Another is space and transportation, the lighter weight of articulated booms particularly on a 40/45ft unit suited the size of truck that many European rental companies operated. In the USA big articulated trucks with "lowboy" trailers were the norm early on. The cost of space also leads to a greater number of confined working locations in Europe so the

narrower width, zero tailswing and up and over ability of an articulated boom is more appreciated.

So when is a Straight Boom the best tool for the job? In a nutshell, when Outreach and Speed are required. A 40ft straight boom provides around 10.5metres of outreach compared to only seven on a 40/45ft articulated boom.

Time taken to reach the job is also a factor particularly, with higher units, for example a 60/66ft articulated can take a good operator 100 seconds to reach full working height, a straight boom with a mediocre operator can do it in 60



Nationwide Access supplied 14 straight booms to erect 1,400 tonnes of steelwork on the 870,000 Sq metres Magan Park distribution centre in Lutterworth.

seconds a substantial saving if you are up and down on a regular basis. While the actual time saved in a full day is measured in minutes, this is all about perception. None of us like to be stuck in a slow lift or slow moving traffic.

One trade that loves straight booms no matter which side of the pond is Steel erectors, yes they like the speed and the outreach, but most of all they like the extra rigidity of a plain straight boom, articulating jibs are even scorned by some of these users. Many steel erectors use the simple rugged telescopic boom to push steel beams into place, which is why straight boom baskets are damaged so frequently, some steelworkers, regard a booms basket as a consumable item, paying

the rental company for a replacement basket on almost every contract.

With platform/basket abuse in mind, it pays to check out the replacement cost up front if you are buying a straight boom. JLG introduced a modular platform a few years back allowing damaged sections to be replaced rather than the whole kit and caboodle. Genie on the other hand somehow manage to sell its baskets for a fraction of some other producers. If steel work is a regular application it will pay to have a new or rebuilt cage ready to go. Most straight booms now have a quick connection time for the platform, allowing an owner to switch rapidly between 1.8 metre and 2.4m baskets or to replace a damaged one.



*Straight booms offer the best outreach*

## Equivalent outreach comparison

Size Class	Straight Boom	Articulated Boom
40/45ft	10.2 metres	7.5metres
60/65ft	15.8 metres	11 metres
80/85ft	21.5 metres	16 metres
120ft	22 metres	18 metres

## Speed to full height comparison

Size Class	Straight Boom	Articulated	% Difference
40/45ft	40 seconds	45-60 seconds	15 to 50%
60/65ft	60 seconds	100 seconds	70%
80/85ft	80 seconds	130 seconds	60%
120ft	120 seconds	N/A	N/A

The main producers selling in the UK and Ireland are; Genie, Haulotte and JLG, while Snorkel is beginning to make inroads. Aichi is also stepping up its efforts in 2005.

Most straight booms sold today are equipped with four wheel drive and a wide ranging articulating jib. Some purists prefer a simple straight stick for maximum rigidity and the fastest speed to the work place.

### Width and weight

Straight telescopic booms have an overall width of 2.4 to 2.5 metres, there appears to be little to no demand for a narrow aisle model, Articulated booms are simply better in congested narrow aisle applications. You would expect a straight boom to be heavier than an articulated boom in order to handle the additional outreach, but it is not always so. These days, Articulated booms have similar gross weights to straight booms due to their narrower overall widths and less tailswing.



Platforms are 1.8m or 2.4m with rotation of between 140 and a full 180 degrees

### Trends and developments

While enormous strides have occurred with articulating booms, straight boom product development has been relatively static in recent years, the last big step forward was the addition of an articulating jib, but that trend began over ten years ago! Many users will tell you that the product is so well refined that constant change and development is not required, However manufacturers are constantly upgrading their offerings, striving for lower GVW, less tailswing with new control systems and easier maintenance. Aesthetics aside, some straight booms built over 20 years ago still look and work brilliantly. Take the Grove MZ76 and its later variants, no longer in production but still selling very well on the used market. It is still regarded as one of the best products ever produced.

## c&a self propelled straight booms

Nationwide S40 straight boom works on the North Carr lightship in Dundee.



In terms of platform rigidity, smoothness of controls, reliability and durability. Today's offerings are hardly any better. However the new products score highly when it comes to gradeability, rough terrain capability, overall weight, speed of operation, serviceability and overall quality of finish.

### Second Hand value

The fact that straight booms have not otherwise changed that much in recent years mean that refurbished booms tend to be an excellent buy as long as they come from one of the main producers. JLG and Snorkel are doing excellent business in the USA providing full scale factory refurbishment. If you are an end user considering buying your own 60 to 80ft boom on a budget, you might do well to look at a second hand model and having it refurbished. Your lift will be slower, less manoeuvrable, less able to handle the roughs and not as pretty as a new model but in terms of outreach, rigidity and safety for your staff it will still score highly.

### Turn your boom into a specialist tool

One area that has received a good deal of development, as with other types of lift is the range of options that manufacturers now offer. Straight booms can be equipped with inbuilt welding kits, onboard air, hydraulic or electrical power to

the platform, lifting racks for such items as glass or other panels to ease installation, power washers, blasting equipment and tool trays just to mention a few. Many rental companies will provide these options if you rent regularly with them.

### Shipyard and heavy duty work

When it comes to rough tough work, nothing can touch a straight boom, it is still the tool of choice for shipyard applications, from blasting to pressure washing, painting and cleaning, the straight boom with its simple rugged lift structure is in its element. Hostile environment kits are available from most manufacturers, today these tend to concentrate on special filtration, seals to keep the worst of the blast material out and the avoidance of areas that might trap it and allow it to pile up.

Some users prefer to fit only the basic essential protection and then



A Genie S125 on an ideal straight boom application.

simply carry out regular rebuilds, seeing this as a more practical and, they claim, a more cost effective way of handling this tough work.

Here are the key specifications of the main straight boom product offerings in the UK and Ireland.

## Models Available 40/46ft

Model	Work Height	Max outreach	Jib m/degrees	Capacity Kgs	GVW Kgs	O/A Width
Genie S40	14.2m	9.7m	No	227	5,284	2.3m
Genie S45	15.7m	11.2m	1.5m/135	227	6,709	2.3m
Haulotte14TX	14m	10.17m	No	230	6,040	2.3m
Haulotte16TPX	16m	11.8m	1.44m/140	230	6,800	2.3m
JLG 400S	14.2m	10.36m	NO	230	6,200	2.34m
JLG 460SJ	16.0m	12.34m	1.83m/140	230	7,850	2.34m
Snorkel TB42	14.6m	10.1m	NO	227	4,944	2.4m
Snorkel TB42J	14.6m	10.6m	1.5m	227	5,262	2.4m
Snorkel TB47J	16.5m	11.9m	1.5m	227	6,123	2.4m
Snorkel TB50	17.2m	11.9m	No	227	6,155	2.4m

## Models Available 60/66ft

Model	Work Height	Max outreach	Jib m/degrees	Capacity Kgs	GVW Kgs	O/A Width
Aichi SP18AJ	20.7m	15.8m	1.5m/130	227	12,300	2.43m
Genie S60	20.3m	15.3m	NO	227	9,525	2.49m
Genie S65	21.9m	16.8m	1.5m/135	227	10,069	2.49m
Haulotte H21TX	20.8m	16.5m	NO	360	13,100	2.47m
HaulotteH23TPX	22.6m	19.5m	1.8m/140	250	13,750	2.47m
JLG 600S	20.29m	15.9m	NO	230	10,230	2.44m
JLG 600SJ	20.29m	15.34m	1.83m/130	230	12,270	2.44m
JLG 660SJ	22.12m	17.3m	1.83m/130	230	13,115	2.44m
JLG 601S	20.29m	14.93m	NO	230	10,330	2.44m
Snorkel TB60	20.1m	16.2m	NO	227	9,544	2.4m
Snorkel TB66J	22.2m	17.1m	1.8m	227	11,340	2.4m
UpRight SB60	20.3m	16m	2.4m/140	2227	10,750	2.44m

## Models Available 80/86ft

Model	Work Height	Max outreach	Jib m/degrees	Capacity Kgs	GVW Kgs	O/A Width
Aichi SP21AJ	23m	17.8	1.5m/130	227	14,300	2.43
Genie S80	26.4m	21.9m	NO	272	15,140	2.43
Genie S85	27.9m	23.4m	1.52m/135	227	16,266	2.43
HaulotteH25TPX	25m	16.9m	1.8m/140	250	13,850	2.49
JLG 800S	26.4m	21.6m	NO	230	14,820	2.49
JLG 860SJ	26.2m	23.4m	1.83m/130	230	16,490	2.49
Snorkel TB80	24.4m	21.74m	NO	227	13,644	2.6
Snorkel TB85J	25.9m	23.4m	1.5m	227	13,680	2.6
UpRight SB80	26.4m	22m	2.4m/140	272	14,750	2.44

## Models Available 100ft Plus

Model	Work Height	Max outreach	Jib m/degrees	Capacity Kgs	GVW Kgs	O/A Width
Genie S100	32.5m	22.9m	NO	340	18,008	2.49m
Genie S105	34m	24.4m	1.5m/135	227	18,144	2.49m
Genie S120	38.6m	22.9m	NO	340	20,112	2.5m
Genie S125	40.1m	24.4m	1.5m/135	227	20,248	2.5m
JLG 120SJP	38.6m	22.86m	2.44m/130	230	18,650	2.44m
JLG1350SJP	43.5m	24.38m	2.44m/130	230	20,300	2.44m
Snorkel 120	38.6m	18.9m	NO	227	18,390	2.6m
Snorkel 126J	40.4m	19.2m	1.8m	227	19,119	2.6m

Overall widths = minimum for transport some units have larger working widths.

# Hey Ho and up she goes



AFI Aerial Platforms used one of the largest self propelled booms in its fleet to meet a tall order from Dunstan (Ship Repairs) Ltd of Hull. Dunstan's and its specialist sub contractors needed every centimetre of the Haulotte H25 TPX straight boom's reach to allow contractors to work on the lower and mid rigging of the Stavros S Niarchos tall ship. The ship, which is operated by the Tall Ships trust has 45 metre high masts.

The H25 TPX proved particularly popular for this job thanks to the extra versatility provided by its jib which made it much easier for the users to work around the ships rigging.

"Straight booms are an important part of AFI's growing rental fleet said Nick Selley, the company's Corporate Development Director, "Straight booms offer a greater working envelope than a comparable articulating boom and they also provide quicker access for certain applications because you do not need to move the base unit, an example being painting/spraying. Straight booms can also provide excellent productivity because they can be controlled more easily and more quickly than a comparable articulating boom."

Selley stressed, however, that despite those benefits, articulating booms still make up the highest percentage of boom lifts in the AFI fleet, mainly because of their extra flexibility.