

BRAVI[®]

PLATFORMS





Leonardo HD

*Innovation and simplicity
for high performance
in all sectors!*



● **CONSTRUCTION SECTOR**

- ELECTRICAL INSTALLATIONS*
- HYDRAULIC INSTALLATIONS*
- FALSE CEILINGS AND PLASTERBOARD*
- BURGLAR AND FIRE ALARM INSTALLATION*
- INSTALLATION & REPAIR OF HEATING/AIR-CONDITIONING SYSTEMS*
- PAINTING*
- INTERIOR FINISHING*
- CONSTRUCTION REFURBISHMENT AND MAINTENANCE*
- CLEANING*

LEONARDO can be used in this sector to speed up work, increasing worker productivity and reducing operating costs. It is equally suited for working at heights of 9-16 feet above ground as a replacement for rolling scaffolds or ladders.

LEONARDO is particularly useful for new constructions and even more so on multi-story sites, where reduced space and limited floor capacity make the use of other types of aerial work platforms impossible. For example:

- Hotels**
- Supermarkets and shopping centres**
- Sports centres and spas**
- Hospitals**

- Offices**
- Airports**
- Schools**
- Restaurants**

● **INDUSTRIAL, INSTITUTIONAL, GOVERNMENTAL, AND WAREHOUSING SECTORS**

LEONARDO can be used in all warehouse types, both for picking and to speed up general maintenance work and cleaning so often necessary in the various workplaces.

SIMPLIFY YOUR LIFE!

LEONARDO is efficient and versatile. It makes working at heights of 9-16 feet above ground quicker and easier. It reduces the time and costs at all stages of work.

Loading and transport

Thanks to its limited weight and the ability to cope easily with slopes of up to 35%, **LEONARDO** is quick and easy to load and unload, and can even be transported in small trailers and pick-ups.

The machine remains perfectly blocked, immobile and stable, even when left at the top of steep slopes; this is further proof of its strength and reliability.

Designed to be used in the harshest sites, it features active pothole protection for an increased ground clearance, preferred in the contracting environment. The active pot-hole protection system ensures that the frame does not scrape against the ground at the top of the slope and makes loading and unloading from van and truck easy, as well as allowing the machine to cope with slopes, steps and other such obstacles that may be encountered upon arrival on site.



LEONARDO can be loaded with standard forklift trucks, telehandlers and cranes.

All-steel chassis design, with integrated forklift-pockets, tie down and lifting points-making life easier for Transportation!



Arrival on site

The machine is compact and easy to steer, meaning that it can enter even the narrowest paths, for example, via the disabled ramp. **LEONARDO CAN TURN CORNERS AS SHARP AS 90 degrees**, which are impossible to access by any other type of mobile or rolling scaffold!

Weighing in at just 1212 lbs, it can easily access the top floors of any building by simply loading it into a normal elevator.



Robust and quick off the mark, even the most difficult terrain is no problem. It will successfully overcome steps, small holes, residual material lying on the ground and all those other little obstacles that often make reaching the workplace slow or difficult.

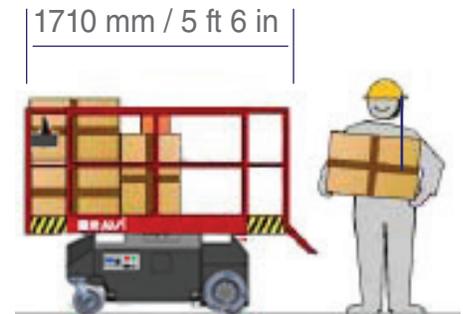
Work begins

With Leonardo, the user can move easily around the whole site, through doors, using access ramps, reaching the furthest points. This is thanks to the machine's extremely compact size and revolutionary drive system.

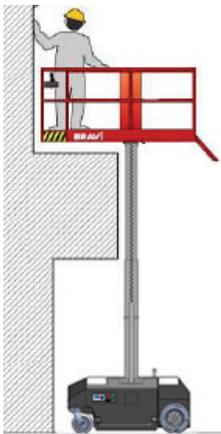
You never get off!

The movement from above, along with the possibility of extending the basket from both sides, allows the worker to load all the material into the spacious basket and start work. No more wasting time and energy going up and down the non self-propelled platform, ladder or similar such means.

LEONARDO therefore reduces the need to move loads manually, as well as heavy physical work and frequent bending and rotating of the body - some of the major causes of accidents today. A fully-charged battery will travel a total of over 5.5 miles, completing up to 250 ascent and descent cycles. Work can therefore continue uninterrupted for a full day!

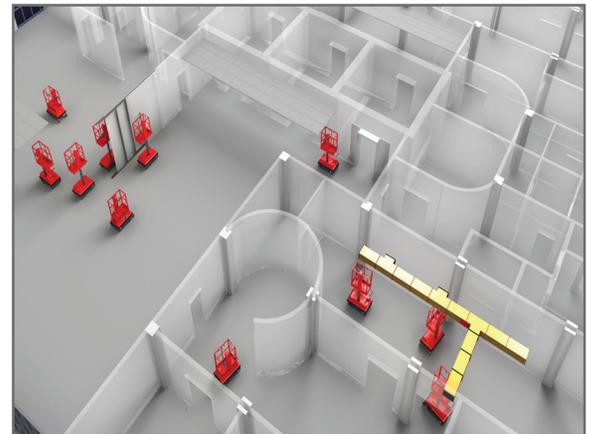


There's always room for LEONARDO!



The column system and compact base design make **LEONARDO** perfectly usable even in areas filled with furniture, shelving or other materials.

LEONARDO can be used in operative environments with no need to stop work to move furniture and make room for the operator.

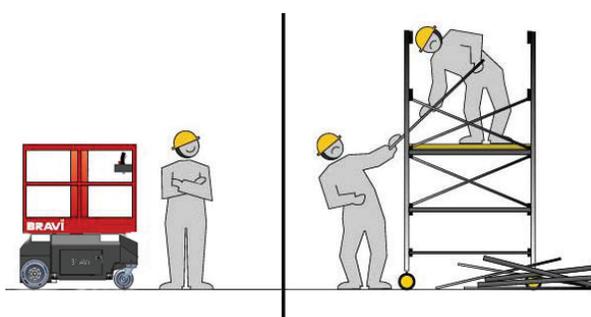


The position is always right!

LEONARDO moves quickly, lifting the operator and materials to the desired height. The possibility of adjusting working height accurately allows the operator to ensure he always works in complete comfort, with no risk of accident and fatigue due to having to work in tiring, uncomfortable or painful positions for many hours a day.

Immediately ready to go home!

At the end of a long working day, it only takes the **LEONARDO** worker a few minutes to put the machine away, plug it in to recharge the battery, and then he can move on to something else. The on-board machine battery charger system automatically stops charging when complete. **LEONARDO** requires no other ordinary maintenance! If the work on site has been finished, **LEONARDO** can be loaded onto any type of van in just a few seconds, speeding up transport too. Say goodbye to all that pointless waste of time and energy due to having to dismantle the platform, taking care to ensure that you take all the parts home with you. After a hard day's work, the fatigue of dismantling the platform, loading all the parts onto the van and running around the whole site in search of missing parts is nothing short of frustrating to say the least!



Greater productivity and reduced labor costs for a truly competitive business!

When compared with traditional methods, such as non self-propelled platforms, ladders or similar normally used for working at low heights, **LEONARDO** can allow the worker to double his output, in complete safety and comfort. The operator no longer wastes valuable energy climbing up ladders or manually moving the platform.

And working, producing more, with less physical effort, is yet further incentive to work more!

“More highly motivated workers are more productive and efficient, and staff turnover rates fall. This all helps businesses become more competitive.”

Interview with Jukka Takala, Director of the European Agency for Safety and Health at Work

Bilbao, 28th April 2008

“With traditional access equipment such as scaffold towers, 50 per cent of the time spent at work is climbing the equipment and not actually doing the job. It’s a huge amount of time to be inactive.”

Phil Thompson – NG Bailey Best Practise coordinator

“Why we won’t be using scaffold” - Construction News 07.2007

Less time wasted:

- **LEONARDO** moves quickly and safely lifts the operator with his equipment and materials, positioning them at the desired height.
Once on board **LEONARDO**, the operator has no further need to get off and push the ladder or platform to reposition. With a manual platform, on the other hand, to load material and move around the site, the average worker gets on and off 40 times a day. This results in a tired worker, a waste of time spent on moving and less productivity, as well as an increased risk of accident.
- **LEONARDO** is ready for use in just a few seconds, with no need for any preparation or configuration. After inspecting the work area and the unit’s functions, the worker safely and simply turns the machine on and heads for the workplace at a speed of almost 2 mph, going through doors, over uneven terrains or slopes. No obstacle slows the start of work! With traditional methods, on the other hand, even the smallest change in surface can be a problem. The platform structure, for example, cannot go through doors and must be dismantled and then re-assembled to go from one room to the next. A typical platform consists of approximately 44 components, which must be correctly positioned each time, and then dismantled once work is over. Apart from the time wasted on dismantling and assembling, there is always the possibility of losing parts and the significant accident risk due to parts left lying around.

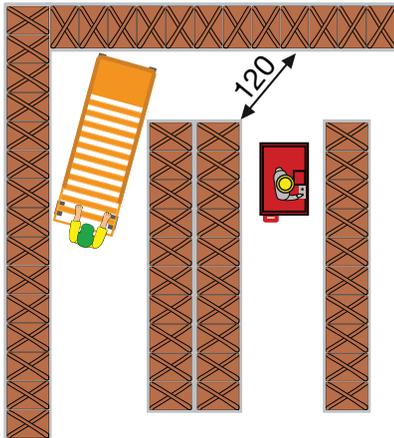
Maximum efficiency, minimum space required!

All the high performance and comfort offered by the **LEONARDO** platform are enclosed in just 29 inches width and 48 inches length.

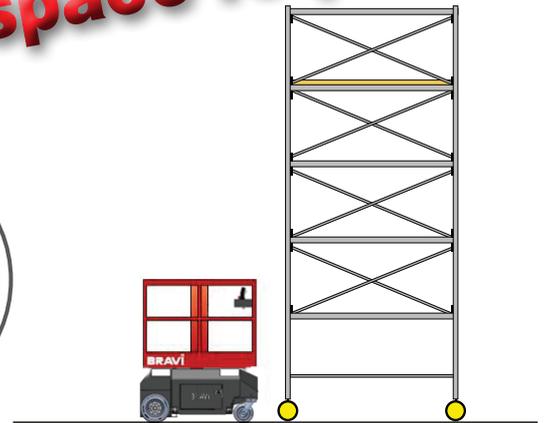
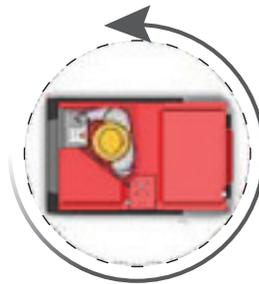
Yet the working surface, thanks to the basket that can be extended from both sides, is only slightly less than that provided by a platform. **LEONARDO** requires 55% less room than a platform providing the same performance!

This standard and compact design is in addition to the innovative drive system providing an outside turning radius of just 39 inches! **LEONARDO** CAN TURN CORNERS AS SHARP AS 47 inches, which are impossible to access by any other type of aerial work platform!

LEONARDO can navigate even the most inaccessible workplaces with the greatest of ease!



55% less space required!



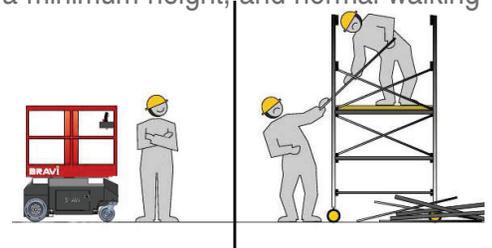
One productive person instead of two tired ones!

Safe use of a manual platform involves the work of two people. One person stands above the platform and another below, to pass him the material. Safety provisions also prohibit moving the platform with people or objects loaded on top. When moving, part of the scaffolding has to be dismantled to lower it to a minimum height, and normal walking speed must not be exceeded.

All this is a huge limit to the worker's productivity, since he has to waste valuable energy simply preparing for work, rather than actually working.

A worker using traditional methods is tired and suffers fatigue. He is physically unable to match the productivity performance of a worker using **LEONARDO**, who:

- works at the desired height, with no need to assume dangerous, uncomfortable and tiring positions
- concentrates his energy on his work, without the fatigue of assembling equipment or moving it on foot from one place to another
- does not waste energy going up and down from the non self-propelling platform, ladder or similar equipment, several times a day, to get materials or reposition
- can work alone, thereby avoiding the distractions and cost that can occur when working as a team.



It would take two men between 30-60 minutes to build a six metre tower to work on the end of a pipe or lug a valve off. Now we must save 80 percent of this time doing the same 'one-off' job using the Bravi and about 50 percent if there was a whole floor area of fittings that needed checking."

*John Anderson - Kylemore Services
"A pipe dream" – Cranes & Access June/July 2009*

By using the **LEONARDO** platform, you will see an increase in productivity that can reach up to 100% as compared with traditional means.

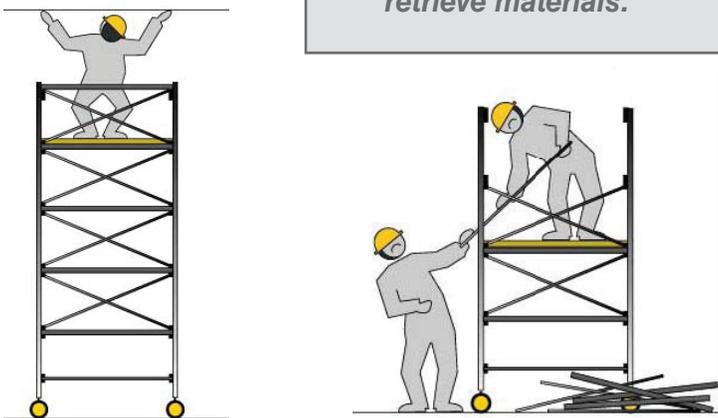
Worker safety = Economic advantages for your business

The use of **LEONARDO** simplifies all those operations that are potentially hazardous for the worker.

International Safety at Work Organizations have focused their campaigns on risks related to working at heights without the use of appropriate equipment for some time now. To reduce as much as possible the risk of falling, ANSI 92.6 has revolutionized many operating methods, lowering the definition of working at 'height' to 6 feet. The prevention of risks due to the manual movement of loads, which can be just as dangerous, is equally important.

Using **LEONARDO** means you can eliminate the risks of possible accidents caused by:

- manually moving materials and equipment
- frequently bending or rotating the body
- physically demanding work
- assuming risky, painful or tiring postures due to the impossibility of adjusting the platform to the desired height
- loss of balance, slipping, falling of objects from above linked to having to get on and off platforms and ladders many times a day, to reposition or retrieve materials.



Muscular-skeletal pathologies are the main cause of time off work. One worker in 4 suffers from backache. In some European countries, 40% of compensation paid to workers is linked to these problems. This amount can account for up to 1.6% of the whole country's Gross Domestic Product.

"Every accident produces a series of costs, of which medical expenses are only the tip of the iceberg. There is a whole range of hidden costs, such as insurance (insurance coverage rarely covers the full expenditure) and legal fees as well as damages deriving from the machine being out of work, temporary suspension of work and, in the end, a dissatisfied customer. All this, in extreme cases, can come together to lead a company to bankruptcy. Studies carried out on a sample of businesses that had suffered serious accidents has shown that hidden costs following an accident can vary from a minimum of three times to a maximum of fifty times the cost initially seen."

Safety in overhead access: training first and foremost – by Renata Bernardini, International Powered Access Federation (IPAF) communications department

- **LEONARDO** also does the following:
- **eliminates the costs for moving heavy loads:**
the European Agency for Safety and Health at Work considers a load of 55-66 lbs as potentially too heavy to lift by most people (Osha Fact Sheet 73). So If the material is too heavy, an additional machine is required to lift the material to the desired height.
- **eliminates the risk of accidents caused by parts of the platform left lying around during assembly and dismantling of the scaffolding**
- **reduces the possibility of damaging products and related accidents:**



Materials falling from above, broken, lying around or spilled during manual moving or while passing material from one operator to the ground.

Suspended lights or panels damaged while moving a ladder or platform. Once assembled, these remain high and, as well as hindering your view, can also damage suspended objects.

INVESTING IN WORKER SAFETY MEANS CUTTING COSTS:

“Accidents and illnesses are costly. (...) There is the human cost for workers and their families: behind the statistics are real people, each with their own story. There is the cost for organisations when things go wrong, including the cost of reduced productivity. And there are costs for governments, as accidents and illness place a burden on healthcare systems. (...) Accidents and illness at work are costly for organisations and governments. When things go wrong at work, it affects business productivity, and places a burden on healthcare systems. The creation of safe working conditions enables companies to cut costs arising from occupational accidents and illness.”

*Interview with Jukka Takala, Director of the European Agency for Safety and Health at Work
http://osha.europa.eu/en/press/articles/Interview_JT_RA_en.pdf*

Simplicity simplifies life!

BRAVI can boast twenty years' experience in the production of mobile platforms. Over the years, we have always opted for developing products that combined high technology with a reduced number of parts. Since 1995, we have subjected the IAWP-9.6 to continuous technological development and a careful selection of the very best components in terms of reliability and duration over time. The result is a high quality, practical product requiring very little maintenance and which reduces machine ownership costs to a minimum.



- The innovative wheel steering system installed since its very first appearance on the market makes it the only mobile platform able to rotate fully around its axis, with an inside turning radius of ZERO.

New Drive System

- To make things even simpler for the machine operator, the machine now also features the NEW DRIVE SYSTEM. This simple wheel lock system is enabled and disabled by means of a button on board the machine. It allows you to work close to obstacles, reducing the possibility of operator error in moving in a straight line.



- Designed to be used in the harshest sites, it features active pothole protection for an increased ground clearance, preferred in the contracting environment. The active pot-hole protection system ensures that the frame does not scrape against the ground at the top of the slope and makes loading and unloading from van and truck easy, as well as allowing the machine to cope with slopes, steps and other such obstacles that may be encountered upon arrival on site.



- In the unlikely event of a battery failure, the LEONARDO HD is equipped with a brake release. Simply pressing two buttons simultaneously on the ground controller to release the brake and push the unit manually. The brake release deactivate all other functions.





- Proportional joystick for movement, ascent and descent. Ergonomic design with rear lever enabling the functions, allowing for a comfortable, safe grip even when wearing gloves.
- Battery charge status shown on board the machine
- Button to increase and decrease transfer speed with the basket fully lowered

Easy, safe access to the operator platform, guaranteed by:

- comfortable entrance with 'saloon' style gate
- step height of just 15 inches
- no obstacles at the entry point.



Ground controls:

- The ground control panel is a computerized electronic device, equipped with an efficient automatic diagnostics control system that is easy to use and can detect any anomaly or malfunction affecting the vehicle.
- Errors can be caused by a machine operation error or by a given condition in the working area. The operator can usually correct these failures with no need to request the intervention of a qualified mechanic to repair the machine.
- The ground controls are also equipped with a warning light showing charge progression when the battery charger is operating. There is also a vehicle charge indicator and a convenient emergency descent system that is enabled by pulling a lever.

LEONARDO has all safety systems generally used for machines reaching double the working height!

- Slope alarm with automatic interruption of all functions with the exception of descent.
- Audible alarm for movement, ascent and descent
- Flashing beacon
- Anti-tilt system-built-in pot hole protection: proven machine stability even when, with the basket fully extended, a weight of 397 lbs concentrated in the corner of basket extension, one wheel ends up in a hole in the floor!
- Overload control with auto lock out lifting interruption.



Innovative chain and lubricant-free elevation system!

The revolutionary lifting system designed by BRAVI PLATFORMS for all our mobile platform models is a radical change in the lift structure.

The special extruded aluminium alloy column requires absolutely no maintenance.

- No more chains to be inspected every year
- No more greasing the column, meaning you can work in complete safety, even in totally hygienic environments, such as food industries and hospitals.
- No maintenance required – lifting system guaranteed for 10 YEARS!

Leonardo^{HD}

Outdoor Edition

Now also available as a version for outdoor use!

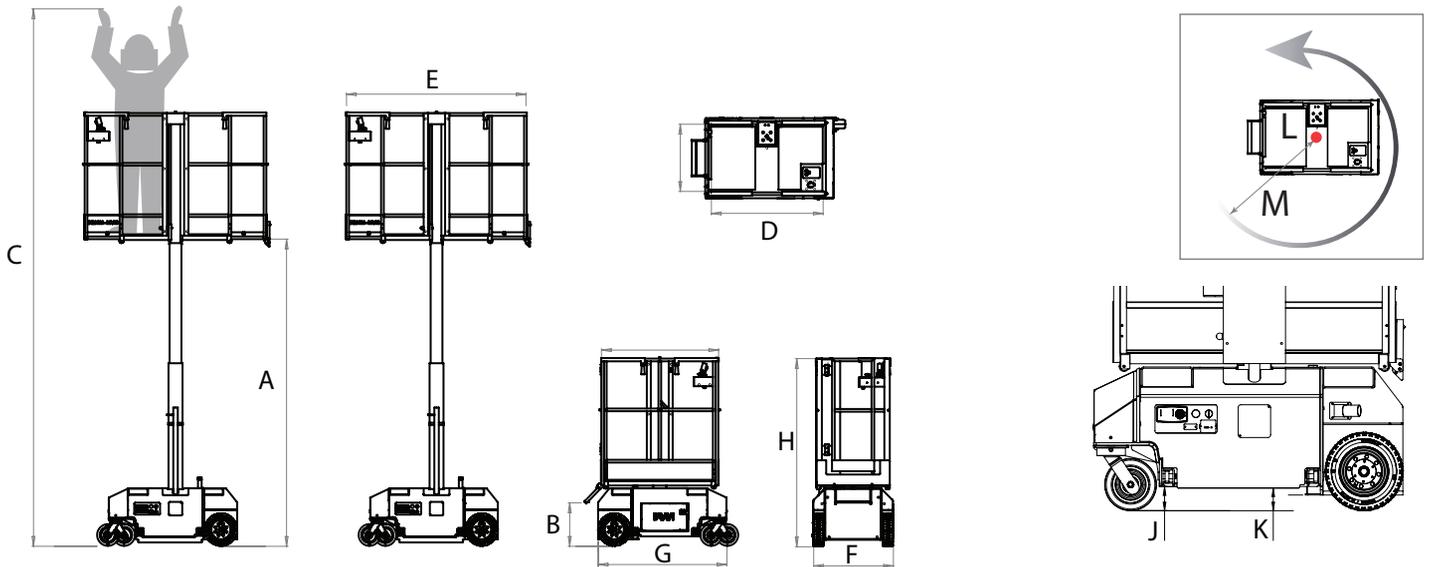
With the '**Leonardo Outdoor Edition**', you can work outdoors in normal conditions, thereby extending the possible uses and increasing applications.

Ideal for:

- Construction of multi-storey buildings when the facades have not yet been built.
- General maintenance and cleaning

The Leonardo Outdoor Edition weighs just 555 kgs (1,221 lbs) and is exactly the same size with exactly the same functions as the **LEONARDO** standard version.





MEASUREMENTS	Metric		US
Platform Height	2900	A	9 ft 6 in
Entry Step	400	B	1 ft 3 in
Working Height	4900	C	16 ft
Platform Width	680		2 ft 2 in
Platform Length	1115	D	3 ft 9 in
Platform Length W/decks ext	1710	E	5 ft 6 in
Width	739	F	2 ft 4 in
Base Length	1192	G	3 ft 10 in
Height Stowed	1747	H	5 ft 8 in
Ground Clearance Front	92	J	3,6 in
Ground Clearance Middle	87	K	3,4 in
Platform Capacity w/ decks ext	180 kg		397 lbs
Rated Number of Occupants 		1	
Rated Number of Occupants 		2	
PERFORMANCE			
Drive Speed Stowed	3 km/h		1.9 mph
Drive Speed Elevated	0,6 km/h		0.35 mph
Inside Turning Radius	Zero		Zero
Outside Turning Radius	1253		4 ft 7 in
Gradeability	35%		35%
Raise/Lower Speed	16 / 21 sec		16 / 21 sec
Controls	One Hand proportional controller		
Tires	Solid Rubber, Non Marking		
POWER			
Power Source	110/220 V ca 24 V 12 Ah automatic		110/220 V ca 24 V 12 Ah automatic
Batteries	2 - 12V 85Ah		2 - 12V 85Ah
Hydraulic System Capacity	20 lt		5.3 gal
Unit Weight 	510 kg		1124 lbs
Unit Weight 	550 kg		1212 lbs
STANDARD COMPLIANT	Ansi A92.6, CE Compliant, AS1418.10 (int)		



Other products:

BRAVI[®]

PLATFORMS

Bravi Lite



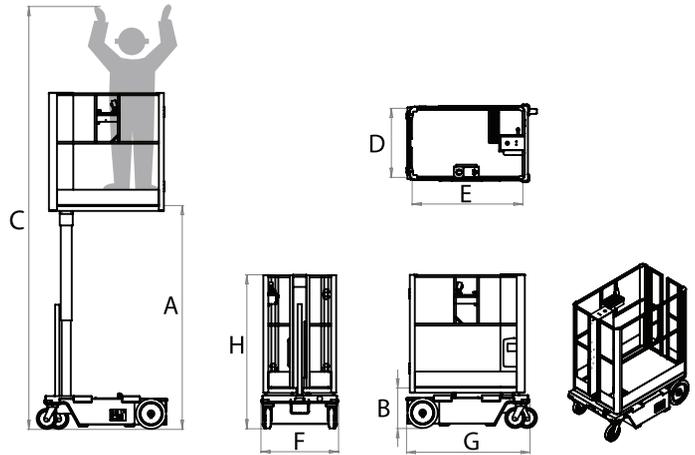
Lui 460



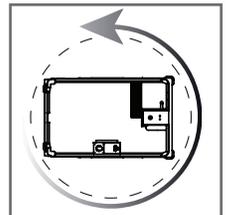
Solo Gyps



Bravi Lite



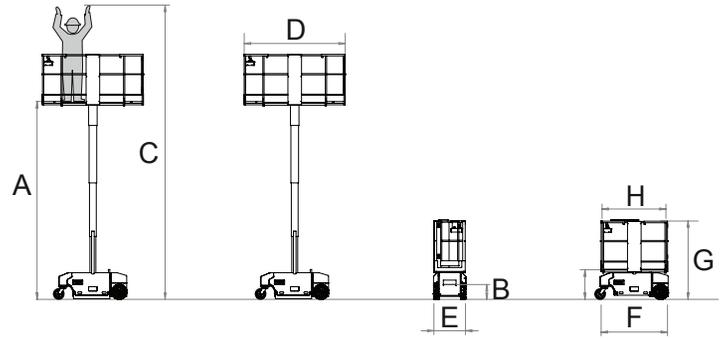
Technical Data	Metric	US
Platform Height Elevated	2210 mm	A 7ft 3in
Platform Height Lowered	398 mm	B 1ft 3in
Max Working Height	4210 mm	C 14ft
Platform Width	682 mm	D 2 ft 2 in
Platform Length	1101 mm	E 3 ft 7 in
Base Width	772 mm	F 2 ft 6 in
Base Length	1232 mm	G 4 ft
Stowed Height	1525 mm	H 5 ft
Maximum Capacity	1-person + tools 180kg 397lbs	1-person + tools 180kg 397lbs
Total Transport Weight 	398 kg	877lbs
Total Transport Weight 	438 kg	965 lbs
Gradeability	35%	35%
Inside Turning Radius	Zero	Zero
Batteries	2 - 12V 85Ah	2 - 12V 85Ah
Power source	110/220v	110/220v
Max drive speed (lowered)	3km/h	1,9km/h
Elevated Drive Speed	0.6km/h	0.35mph
STANDARD COMPLIANT	Ansi A92.6, CE Compliant, AS1418.10 (int)	



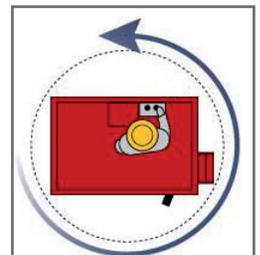
**ZERO Inside Turning Radius
and 1350 mm (53") Outside
Turning Radius**



Lui 460



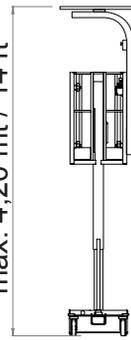
MODELS	LUI 460	
	Metric	US
MEASUREMENTS		
Platform Height	4620 mm	A 15 ft 2 in
Entry Step	340 mm	B 13.6 in
Working Height	6620 mm	C 21 ft 8 in
Platform Width	680 mm	2 ft 3 in
Platform Length W/decks ext	2376 mm	D 7 ft 9.5 in
Width	760 mm	E 2 ft 5 in
Length Stowed	1560 mm	F 5 ft
Height Stowed	1855 mm	G 6 ft 1 in
Base Length	1659	H 5 ft 4 in
Platform Capacity w/ decks ext	280 kg	616 lbs
Ground Clearance	100 mm	4 in
Rated Number of Occupants	2	2
PERFORMANCE		
Drive Speed Stowed	3 km/h	1.9 mph
Drive Speed Elevated	0,6 km/h	0.35 mph
Inside Turning Radius	Zero	Zero
Outside Turning Radius	1700 mm	67 in
Gradeability	35%	35%
Raise/Lower Speed	25 / 16 sec	25 / 16 sec
Controls	One Hand Proportional Controller	
Tires	Solid Rubber, Non Marking	
POWER		
Power Source	24 V c.c.	24 V c.c.
Batteries	4-6V; 245 AH@20h	4-6V; 245 AH@20h
Unit Weight	1250 kg	2755 lbs
STANDARD COMPLIANT	Ansi A92.6, CE Compliant, AS1418.10 (int)	



Solo Gyps

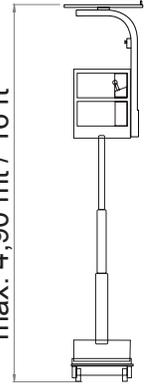


max. 4,20 mt / 14 ft



BraviLite

max. 4,90 mt / 16 ft



Leonardo

	<i>Metric</i>	<i>US</i>
A	4200 mm	14 ft
B	4900 mm	16
	45 kg	99.2 lbs
	40 kg	89 lbs
	max 3650 mm	max 12 ft





“Not being able to drive between work places means having to descend, get out, push to the next position, climb in and ascend again, too much time is wasted”

*John Anderson - Kylemore Services
“A pipe dream” – Cranes & Access June/July 2009*

*... since
1995*

It takes time to create a masterpiece...

In 1995 Bravi was an idea, but an idea started out of necessity. The first self-propelled unit to work up to 16 feet was started because the designer was also an end-user. A ceiling tile/acoustic tile/dry wall installer who had grown tired of scaffold, too big scissors and time wasting other options. He needed a unit that would be safe, support him and his product, be portable while elevated and performing his tasks. So the LUI MINI was born, a true self propelled aerial work platform.

Over the years through customer feedback and research and development, the LUI MINI has evolved into a premier unit known for its unique features, attention to detail as well as its time and field tested toughness: the LEONARDO.

This masterpiece is now an unbeatable solution to all your low level access requirements...

*...The **FIRST** and still the **BEST**...*

