

# access

## INTERNATIONAL

November-December 2022

[www.accessinternational.media](http://www.accessinternational.media)

A KHL Group publication



### INTERVIEWS

**Lasse Orre**

Bronto Skylift at 50



**Kim Bach Jensen**

Time Manufacturing  
acquisitions

**access**  
**CONFIDENCE**  
**SURVEY**

Forecasting  
2023

OFFICIAL MAGAZINE  
OF IPAF



**ARTICULATING BOOMS**

Latest launches

**FUTURE FOCUS**

Hydrogen vision

**TRAILER MOUNTS**

Gaining pace

**REVIEW**  
**bauma**



# LGMG HELPS YOU REACH NEW HEIGHTS!



**CONEXPO  
CON / AGG**

MARCH 14-18 / 2023 / LAS VEGAS / NEVADA

**LGMG**

**F9527**



## LINGONG HEAVY MACHINERY CO., LTD.

Address: No. 2676, Kejia Road, Jinan, Shandong, China  
Email: sales@lmgm.com.cn Tel: +86 531 6787 9283

## LGMG Europe B.V.

Address: Donker Duyvisweg 301, 3316 BL Dordrecht, The Netherlands  
Email: sales@lmggeurope.com Tel: +31 850 642 777

## LGMG North America Inc.

Email: sales@lmgmna.com Tel: +1 833 288 5464

[www.lmgmlifts.com](http://www.lmgmlifts.com)



**LGMG**

RELIABILITY IN ACTION



**STAFF LIST**

**Editor**  
Euan Youdale  
euan.youdale@khl.com

**Editorial Director**  
Murray Pollok

**Staff Writers**  
Lindsey Anderson, Andy Brown,  
Alex Dahm, Steve Ducker,  
Mike Hayes, Niamh Marriott,  
Cristián Peters, D. Ann Shiffler,  
Belinda Smart

**IPAF News Editor**  
Peter Douglas

**Events & Creative Director**  
Saara Rootes

**Digital and Print Production Manager**  
Charlotte Kemp  
charlotte.kemp@khl.com

**Junior Publishing**

**Production Executive**  
Emily Powell

**Junior Production Executive**  
Freya Homewood

**Group Design Manager**  
Jeff Gilbert

**Group Designer** Jade Hudson

**Creative Designer** Kate Brown

**Event Design Manager**  
Gary Brinklow

**Brand Manager**  
Ollie Hodges  
ollie.hodges@khl.com

**Office Manager**  
Philippa Smith

**Digital Media Director**  
Peter Watkinson

**Head of Data and Audience Development**  
James Taylor

**Audience Development Deputy Manager**  
Anna Philo

**Head of Finance & HR**  
Alison Filtness

**Finance Manager**  
Yasmin Youmi

**Finance Team**  
Carole Couzens, Kate Trevillion

**Chief Financial Officer**  
Paul Baker

**Chief Operating Officer**  
Trevor Pease

**Chief Executive Officer**  
James King

Access International is published seven times a year (Jan-Feb, March, April, May-June, July-August, September, October, November-December) and has a worldwide circulation of more than 12,000. Access International is only available to subscribers (IPAF members receive a free copy, details available on request). Annual airmail subscription rate £130, US\$210, U155.



# Show highlights

**H**aving spent a very enjoyable week in Munich during October at the Bauma show, I can firmly say, as an access industry journalist, that I'm a fan of exhibitions.

Since the Covid restrictions lifted in Europe, I've been to a number of them, culminating in the largest of all construction shows last month - namely Bauma.

Where else can you meet so much of the access industry all in one place? Yes, Bauma is the size of a small city and walking around it for a week can feel like you've walked several marathons, (and you probably have). However, the benefits of meeting so many familiar faces and a large number of new ones, while seeing the latest equipment in the metal, are incalculable.

I make this point, as exhibitions have come under the spotlight since the beginning of the Covid pandemic. I hear the questions, 'Are they too expensive and are they still relevant?' Indeed, I've asked these questions myself.

A number of well-known access equipment manufacturers decided not to have stands at Bauma. And their reasons are understandable - one of them being that the supply chain crises, which has extended lead times, means some OEMs haven't got stock to sell, especially off the stand.

But, who am I to make a judgement? All I know is that my week in Munich, along with other visits to more domestic shows over the last 12 months, have all been worthwhile from my point of view, as a reporter of access industry information.

You won't be surprised to learn that this issue has a number of pages dedicated to Bauma and the equipment that was on display. As always, this edition of Bauma represented the cutting edge of the industry and the direction it is taking.

In this issue, we share these products and show news for those who couldn't make it, or were not able to see all of the exhibition.

**Euan Youdale**  
Editor

**“** Bauma 2022: Where else can you meet so much of the access industry all in one place? **”**

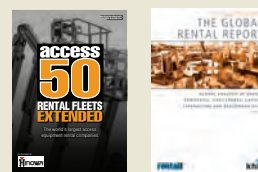


## ACCESS PORTFOLIO

**MAGAZINES**



**SPECIAL REPORTS**



**WEBSITE**



**ACCESS SOURCING GUIDE**



**SOCIAL MEDIA**

**f** accessinternational  
**@**accessinternationalmag  
**@**KHL\_AI  
**in** Access International

**NEWSLETTERS**



**EVENTS**



**Correspondence or comments should be sent to:**

The Editor, Access International,  
Southfields, Southview Road,  
Wadhurst, East Sussex  
TN5 6TP, UK.  
T: +44 (0)1892 786214  
F: +44 (0)1892 786257  
euan.youdale@khl.com

The paper in this magazine originates from timber that is sourced from sustainable forests, managed to strict environmental, social, and economic standards. The manufacturing mill has both FSC & PEFC certification, and also ISO9001 and ISO14001 accreditation.

# DINGLI

Exceed · New Height

## MODULAR DESIGN

85% of components are common



**In recovery**

The year's ACCESSORIES leading choice that soared in the industry has bounced back from the struggles of 2020, despite the continuing challenges.

**access M20 MANUFACTURERS**

1	JLG
2	Terex A
3	Dingli
4	Skyja

**Global TOP3**  
2021 Industry Global Manufacturers Sales Ranking  
\*Data source: (Access International)



Working Height

## Modular Boom Series

ZHEJIANG DINGLI MACHINERY CO.,LTD.

ADD:188 Qihang Road, Leidian Town, Deqing, Zhejiang, P.R.C

TEL:+86-572-8681688

Phone:+86-13806523131 Susan Huang

E-Mail:export@cndingli.com

Https://en.cndingli.com



Standard Container Transport For The Full Range







The official magazine of  
the International Powered  
Access Federation

## KHL OFFICES

### UK Head office

KHL Group  
Southfields, Southview Road,  
Wadhurst, East Sussex TN5 6TP, UK.  
T: +44 (0)1892 784088  
F: +44 (0)1892 784086  
access@khl.com  
www.khl.com/ai

### USA Office

KHL Group Americas LLC  
14269 N 87th Ste. 205  
Scottsdale, AZ 85260, USA.  
+1 480 6590578  
americas@khl.com

### South America Office

KHL Group Américas LLC  
Av. Manquehue Sur 520, of. 205,  
Las Condes, Santiago, Chile  
+56 9 7798 7493  
cristian.peters@khl.com

### China Office

KHL Group China  
Room 769, Poly Plaza, No.14,  
South Dong Zhi Men Street,  
Dong Cheng District,  
Beijing 100027, P.R. China.  
+86 (0)10 6553 6676  
cathy.yao@khl.com

### KHL Sales Worldwide:

#### BRAND MANAGER

#### Ollie Hodges

+44 (0)1892 786253  
ollie.hodges@khl.com

#### NORTH AMERICA Tony Radke

+1 602 721 6049  
tony.radke@khl.com

#### UK Eleanor Shefford

+44 (0)7850 313 753  
elleanor.shefford@khl.com

#### EASTERN EUROPE, AUSTRIA & SWITZERLAND

#### Simon Battersby

+49 711 34 16 74 70  
simon.battersby@khl.com

#### GERMANY/SPAIN Petra Kaiser

+49 711 34167472  
petra.kaiser@khl.com

#### THE NETHERLANDS/BELGIUM LUXEMBOURG/SCANDINAVIA

#### Arthur Schavemaker

+31 547 275005  
arthur@kenter.nl

#### FRANCE Hamilton Pearman

+33 (0)1 45930858  
hpearman@wanadoo.fr

#### ITALY Fabio Potestà

+39 010 5704948  
info@mediapointsrl.it

#### TURKEY Emre Apa

+90 532 3243616  
emre.apa@apayayincilik.com.tr

#### JAPAN Michihiro Kawahara

+81 (0)3 32123671  
kawahara@rayden.jp

#### CHINA Cathy Yao

+86 (0)10 65536676  
cathy.yao@khl.com

#### KOREA Simon Kelly

+44 (0) 1892 786223  
simon.kelly@khl.com

#### VP GLOBAL SALES

#### Alister Williams

+1 843 637 4127  
alister.williams@khl.com



## 6 NEWS

Oshkosh acquires Hinowa, United Rentals to buy Ahern Rentals, Sinoboom partners with Falcon, CMC majority acquired, Riwal may exit UK market, Haulotte sets up in Israel.



## 10 INTERVIEW

In the 50th anniversary year of Bronto Skylift, the company's CEO Lasse Orre, speaks with Euan Youdale about the direction the company is taking.

## 13 IAPA AWARDS UPDATE

The judges for the International Awards for Powered Access (IAPAs) have been confirmed, alongside a new 13th award for the 2023 event – see inside.



## 15 TRAILER MOUNTS

These sturdy and steady products are carving a larger niche for themselves in the access market.



## 29 CONFIDENCE SURVEY

There is a more cautious approach to the coming year in this year's survey, compared to this time last year. Hardly surprising considering the uncertainties that lie ahead across the industry.



## 22 BAUMA REVIEW

Bauma was the place to be for new product launches and industry news. *AI* was there to discover the details.



## 32 CHINA AMBITION

*AI* talks to major Chinese manufacturers at Bauma about their European growth plans.



## 34 ARTICULATED BOOMS

Most of the recent launches of articulating booms are unsurprisingly electric-related, as the interest in battery-powered MEWPs continues.

## 39 IPAF NEWS

New catapult effect safety awareness leaflet, IPAF spreads India safety message, ePAL app surpasses quarter of a million downloads, In-person return to Mexico.



## 42 INTERVIEW

Since Time Manufacturing acquired FE Group and Ruthmann, its employee numbers have grown from 350 to around 1,300. *Kim B Jensen*, vice president of Time in Europe, explains what lies ahead.

## 46 TRAINING

The skills shortage has become a key challenge in the access industry and more widely, writes IPAF's *Matt Brereton*, and an initiative to encourage more women to the sector is seeing positive results.

## 49 FUTURE FOCUS

*AI* assesses the future of hydrogen power and how the industry is pushing the agenda.

## ON THE COVER

Bronto Skylift's giant 104m working height S104HLA was on show and in use at Bauma 2022.



### MEMBER OF



Access International, ISSN:1352-7517, is published monthly by KHL Group c/o SPP, Emigsville, PA and additional entries. Periodicals postage paid at Emigsville, PA. Postmaster: send address corrections to Access International c/o SPP, PO Box 437, Emigsville, PA 14318.

Printed by: Buxton Press.

ISSN No: 1352-7517  
© 2022 Copyright KHL Group





IN BRIEF

Canadian rental company **Lou-Tec** has acquired **Yep Location D'équipements**, its second acquisition this year following the deal in June to buy **Accès Location+**. Founded in 1977, Yep is based at Saint-Jean-Sur-Richelieu in Quebec and has more than 70 employees and five branches, all in the province of Quebec. The deal is part of Lou-Tec's growth plan following its acquisition last year by private equity firm Sagard.

**CTE** will supply its Saudi Arabia-based distributor **Metal Work Co.** with a B-LIFT 360 telescopic truck mounted platform. The agreement with the Saudi-based company, which has been an exclusive CTE dealer since 2017, was signed at global trade show Bauma, which took place last month. As part of the agreement, Metal Work has purchased three CTE B-LIFT 360 platforms, which will be mounted on Nissan UD 33 truck.

# Sinoboom partners for Falcon spiders

China-based equipment manufacturer Sinoboom has agreed a partnership with spider lift specialists Falcon Lifts, that will see the company increase and develop spider lift sales.

Effective immediately, the new partnership is a continuation of what Sinoboom describes as an "extensive research and cooperation" effort carried out by the respective companies over the last 12 months.

In its role, Falcon Lifts will continue to build spider lifts for Sinoboom, while Sinoboom will distribute them as its own brand both in China and abroad, with the exception of the USA, Canada and Denmark.

Commenting on the agreement at global trade show Bauma, Susan



**Thyge Mikkelsen, CEO of Falcon Lifts and Susan Xu, CEO of Sinoboom, signed the agreement at Bauma. PHOTO: SINOBOOM**

Xu, CEO of Sinoboom, said, "This agreement is part of Sinoboom's total commitment to providing its global customer base with a complete range of MEWPs.

"We expect the combination of Falcon high quality design with Sinoboom's worldwide customer base and after sales support to

make this a great success."

One result of the collaboration over the last year was on show at Bauma, with visitors given a first look at the hybrid SPA33HJ spider lift, which the two companies developed together.

Already available in China, the unit made its European debut. **AI**



**The Gujer Landmaschinen and Leguan team.**

## EXPANSION IN SPAIN

EasyAlquiler has announced a partnership with Spanish rental firm Uping Acces that will see the company represent the Easy brand in Catalonia.

Barcelona-based Uping, which is owned by Acces Industrie in France, specialises in MEWP rental and has a fleet of 400 machines.

Uping, which has been in MEWP rental for over 25 years, said the partnership would "enhance its presence in the digital world and the continuation of the easyHire project."

EasyAlquiler, which provides digital services with the aim of simplifying equipment rental, says the partnership will reinforce its presence in the Spanish rental market.

The partnership with Uping is the latest move into Spain for EasyAlquiler, which is the Spanish brand of the company easyHire.

The company first launched into the country in 2021 when it appointed Maxber as its regional partner for Spain.

# Leguan reorganises Swiss distribution

The Finnish spider lift manufacturer Leguan Lifts is realigning its distributor base in Switzerland.

Gujer Landmaschinen, which has been selling parent company Avant loaders for 28 years, is now taking over the distributorship of Leguan aerial platforms for Switzerland too. With Gujer Landmaschinen, Leguan Lifts said it gains a partner which is well known throughout Switzerland in the municipal, construction and agricultural machinery sectors.

Aggeler, which previously represented Leguan Lifts across Switzerland, continues to sell Leguan aerial platforms in Eastern Switzerland. Emil Aggeler, said, "With Gujer Landmaschinen we have a traditional partner at our side who is known throughout Switzerland through the Avant agencies. We can concentrate even

more intensively on our main area in Eastern Switzerland."

Leguan Lifts has experienced fast growth in Europe in recent years. **AI**





## UNITED TO BUY AHERN RENTALS

United Rentals will acquire Ahern Rentals for US\$2 billion, adding annual revenues of around \$890 million and 106 locations in the US. The deal will combine the country's largest and the eighth largest equipment rental businesses.

The transaction, which is expected to close before the end of the year, will bolster United's footprint on both US coasts and in the Gulf region and strengthen its aerial platform and telehandler fleets, which represent 75% of Ahern's equipment.

United will fund the deal through a combination of new debt and existing asset backed loans. The \$2 billion price equates to 6.5 times Ahern's adjusted EBITDA for the 12 months ended 30 September.

Ahern Rentals is based in Las Vegas and was founded in 1953 by John Ahern, father of current CEO Don Ahern. It began to focus on equipment rentals in 1958 and grew into one of the 20 largest rental businesses in the world and a top 10 operator in North America.

It is part of the Ahern Family of Companies owned by Don Ahern. Sister companies include aerial platform manufacturer Snorkel (which is 49% owned by Tanfield Group) and telehandler specialist Xtreme Manufacturing.

Matthew Flannery, CEO of United Rentals, said, "We view ourselves as the ideal owner of these assets within our network, as customers will benefit from the combination of the two organisations moving forward together."

# CMC acquired by finance firm

A private finance company has acquired a 70% share of Italy-based spider lift specialist CMC.

The majority investment by Metrika SGR will allow CMC to implement a range of development programmes, including the 12,000 square metre expansion of its current factory to incorporate new product lines, increase its spider platforms range with new models and new product families, and strengthen its presence in export markets.

A targeted acquisition policy is also in place to speed up the expansion of production capacity to meet the growing number of orders from the market, said the manufacturer.

The Mastrogiacomo and Moretti families, founders



**Alessandro Mastrogiacomo.**

of CMC, will remain on the company's board of directors, where Alessandro Mastrogiacomo has already assumed the role of CEO and Giuseppe Moretti that of COO.

"With this operation, CMC confirms itself as a leading company, in terms of production and a managerial perspective," said Alessandro Mastrogiacomo. **AI**



**France Elévateur's  
base in Leipzig.**

# France Elévateur and Ruthmann deal

Ruthmann Holdings has taken over the exclusive distribution and maintenance of France Elévateur products in Germany, Austria and Switzerland.

The arrangement follows parent company Time Manufacturing's acquisition of Ruthmann and FE Group, which incorporates France Elévateur. It will see all current orders and contracts taken over by Ruthmann, and FE Deutschland's premises in Leipzig becoming a Ruthmann maintenance centre.

The company has distributed Time's Versalift products in Germany, Austria and Switzerland for more than 10 years. Charles Goffin, director of France Elévateur, said, "We are also confident that we will work together with Ruthmann to develop our sales in Germany and strengthen our presence." **AI**

**Authorised dealer BSI GmbH (BSI), based in Dortmund, has received one of the first Genie S-80 J TraX boom lifts in Germany. The 26.1m working height boom's first application is in forestry operations in Northern Germany's Harz mountains, picking fir cones that are needed for their seeds.**



## DIARY

### 2023

#### CONEXPO-CON/AGG

14-18 March 2023

Las Vegas, US

[www.conexpoconagg.com](http://www.conexpoconagg.com)

#### IAPA AWARDS/IPAF SUMMIT

20 April 2023

Berlin, Germany

[www.iapa-summit.info](http://www.iapa-summit.info)

#### APEX/IRE

6-8 June 2023

Maastricht, the Netherlands

[www.apexshow.com](http://www.apexshow.com)

## AI NEWSLETTER

**access newsletter**  
INTERNATIONAL news from around the access world

AI's weekly digital newsletter provides a summary of all the latest access news. If you are not already receiving these regular updates, please register by visiting: [www.khl.com/register](http://www.khl.com/register) Access International newsletter will then be sent directly to your inbox. Don't miss out on this definitive weekly news blast from KHL Group.

## HAULOTTE SETS UP IN ISRAEL

France-based Haulotte has moved into the Israeli access equipment market, by partnering with one of the largest crane rental providers in the country.

The manufacturer signed a distribution deal with specialist lifting equipment and services provider AVI Cranes, which operates an aerial platform fleet of around 1,300 units.

The deal was finalised by AVI Cranes' CEO Hila Yochanan and Patrick Murris, Haulotte's Managing Director for Europe and Africa, who signed the contract during Haulotte's recent 'Open Up - Welcome Home' distributor event at its headquarters in Lorette, near Lyon in France.

The agreement makes AVI Cranes the only Haulotte certified distributor in Israel and follows a recent equipment order from AVI Cranes for several of the manufacturer's Compact scissor lifts, vertical masts, articulating and telescopic booms.



OBITUARY



**AMILCARE MERLO:**  
1934 - 2022

The president and founder of Merlo Group, **Amilcare**

**Merlo**, one of the pioneers in the development of telehandlers for both construction and agriculture, has died.

Born in 1934 on the outskirts of Cuneo, Italy, Merlo founded the company in 1964 and built it to become a major player in the international market, with six subsidiaries and 600 dealers worldwide.

One thing that didn't change was the roots of the company, which remained in Cuneo. For this, he was awarded honorary citizenship of the city in 2015. Just before, the company was named in the Italian register of historic companies.

# Hinowa acquired by Oshkosh

**O**shkosh Corp. has entered an agreement to acquire Hinowa for approximately \$192 million, the company announced. Hinowa, based in Italy, manufactures spider lifts, mini dumpers and lift trucks. The deal is expected to close over the next three months.

"We look forward to welcoming the Hinowa team into the Oshkosh family," said John Pfeifer, Oshkosh Corporation's president and CEO. "This acquisition will accelerate our electrification capabilities and provide growth opportunities across core markets."

At the recent Bauma exhibition, JLG showed new electric EC boom lifts, which were produced

for the company by Hinowa and shown on Hinowa's stand.

"We are excited to expand our long-term relationship with Hinowa," said Frank Nerenhausen, executive vice president Oshkosh Corporation and president, JLG Industries. "Combining our capabilities will enable us to better serve customers and expand our operational footprint in Europe."

"We are pleased to join Oshkosh Corporation," said Dante Fracca, founder and owner of Hinowa. "Our 12-year relationship with JLG, along with shared core values around culture, safety, productivity and sustainability position us well for the future." **AI**

# Riwal to exit the UK?

After thirteen years of activity in the UK, Riwal has announced that it is "actively" considering a plan to exit the UK market.

The access rental specialist, which is present in 15 countries and has a total fleet of 20,000 MEWPs, telehandlers and forklifts said the plan would see it exit the market from 1 January 2023.

The company said the decision was based on the long-term outlook of the UK rental market and Riwal UK's small market position. Riwal currently employs 51 staff in the UK, compared to its 1,400 employees in total.

Pedro Torres, CEO, Riwal, said, "We do not see a viable long-term business for our operations, given the fierce market conditions." **AI**

PEOPLE NEWS



**LGMG North America** has named **RICK QUICK** as its new director of product support.

**TED GRACE** has been named executive vice president and CFO of **United Rentals**, replacing Jessica.



**SARA VINCENT** becomes director of marketing in North America and Latin America at **Oshkosh's**

Access segment, including JLG and Jerr-Dan towing. She replaces Jennifer Stiansen, now VP global branding and communications.

# Sunbelt buys into the movies

Sunbelt has acquired UK-based specialist TV and film rental company Media Access Solutions (MAS).

The buyout will see Tim Kendall, founder and managing director, of MAS staying on to run the company, which Sunbelt has committed to expand. As such, all 28 employees at MAS and its three branches will be retained, and it will continue to operate under the same brand.

Kendall, who started MAS in 2017, said Sunbelt was seeking to expand into the film and TV market, which it sees as recession proof. **AI**

FINANCIAL HIGHLIGHTS

**JLG's** third quarter 2022 sales for the three months ending 30 September increased 22.7% to \$1.04 billion as a result of higher pricing in response to greater input costs and improved sales volume in North America. Demand is being driven by aged fleets and strong non-residential construction and infrastructure spending.

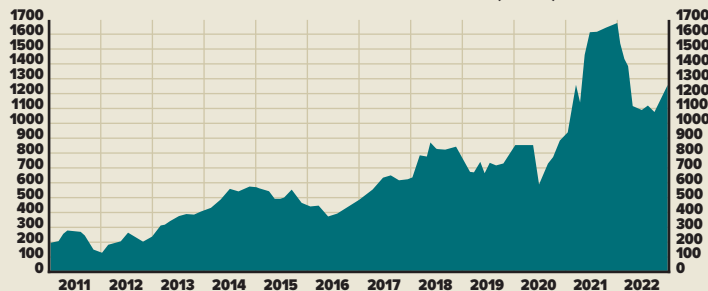
**Manitou** reported a 33% revenue increase in the third quarter, amounting to €575 million. The group's order book stood at €3,666 million, in comparison to €2,295 million at the end of the third quarter in 2021. With quarterly revenues of €476 million, the Product Division recorded an increase of 36%.

**United Rentals** has reported record third quarter rental revenues of \$2.73 billion, an increase of \$455 million or 20% year-over-year. Total revenues for the three months were \$3.051 billion, resulting in United raising its full year guidance for total revenue of \$11.5 to \$11.7 billion, an increase of \$50 million at midpoint.

**Haulotte** has reported positive revenues in the third quarter of its financial year, amid persistent supply chain difficulties. In the third quarter of 2022, Haulotte revenues were €140 million, up 17%. For the nine months up until the end of September, consolidated sales stood at €429.1 million, an increase of 16%.

**Alimak Group AB's** third quarter results suggest its New Heights Programme is delivering on its design with solid organic growth, increased margins and accelerated merger and acquisition activity. It engineered a 21% revenue jump in the quarter to MSEK 1,095 (million Swedish kronor, or \$970.8 million) at an EBITA.

## ACCESS SHARE INDEX (ASI)



21 June 2002 = 100 base

COMPANY	CURRENCY	START DATE	PREVIOUS	CURRENT	%
		21/6/02	03/10/22	17/11/22	CHANGE
Acces Industrie	€	1.34	-	-	-
Aichi Corporation	YEN(¥)	208	776	796	2.6
Ashtead Group	£	0.47	40.70	40.01	-1.7
Kanamoto	YEN(¥)	-	2051	2230	8.7
Haulotte Group	€	9.0	2.65	3.22	21.5
Oshkosh Corp	US\$	-	71.58	92.22	28.8
Tanfield Group	£	-	0.02	0.03	50.0
Terex Corp	US\$	23.08	29.74	43.92	47.68
Ramirent	€	15.0	-	-	-
United Rentals	US\$	21.47	273.64	347.71	27.1
<b>ASI INDEX</b>		<b>100</b>	<b>1085.92</b>	<b>1267.64</b>	<b>16.3</b>



# ELECTRIFY YOUR FLEET



ZERO EMISSIONS AND QUIET OPERATION  
FOR INDOOR AND OUTDOOR JOBS

High quality nano  
electrophoretic  
paint technology

---



Common components  
you know and trust

---



LEARN MORE AT [SINOBOOM.COM](https://www.sinoboom.com)

**SINOBOOM**<sup>TM</sup>

**PARTNERS IN ACCESS**<sup>TM</sup>



# Half century

In the 50th anniversary year of Bronto Skylift, the company's CEO Lasse Orre, speaks with Euan Youdale about the direction the company is taking.



Lasse Orre, CEO, Bronto Skylift.

**B**ronto Skylift has gone through some significant changes in recent years, including its acquisition by Japanese firefighting vehicle mount specialist Morita Holdings in 2016.

Lasse Orre took over as CEO from Bronto Skylift's previous managing director Harry Clayhills in December 2019, with a long career in international business.

Being at the helm of Bronto Skylift, which holds an esteemed position as one of the few very large truck mounted platform manufacturers, Orre is looking to take the company into the next half century, following its launch in 1972, with a move into digitalisation and internationalisation. This is all set to boost the company's current annual revenues of €112 million.

A key area of development as far as Orre is concerned is in employee development. As Lasse simply puts it – "people are important".

Indeed, since he started in the role back in 2020, there is a greater depth to the management team, with a wider experience from outside of the company and backgrounds in different business types.

However, there are 425 employees at Bronto Skylift and the desire to create an increasingly employee-led business is at the heart of Orre's development goals. As he explains, "There as a new direction in the human resources department to "focus on wellbeing and company values."

## Outsource strategy

When it comes to the equipment, standardisation and modularisation is the way forward, even when it comes to relatively large equipment like the truck mounts that Bronto Skylift produces, ranging from the relatively compact 35m unit to its 104m working height giant.

Digitisation is also taking equipment into a new realm, not just helping with the day to day running of equipment. "It's about the life cycle service. That's what's important to customers. It is not just the hardware, it is about taking care of the whole lifetime [of the equipment]."

From a manufacturing point of view the company is moving to more outsourcing to increase flexibility. This includes components and some assembly work.

"We are extending the relationship with key suppliers. So that when we develop new generations, they can support us more."

This allows internal production to be streamlined so there is a real focus on the key areas of equipment development and manufacturing. "We produce the core product and outsource the non-core business."

Indeed, as part of the transition, the production of the company's access equipment

## BAUMA INTRODUCTIONS

Bronto Skylift launched a new hybrid system at this year's Bauma. (See news from more manufacturers that exhibited at the October show in the Bauma preview, in this issue).

The new lithium battery-powered Hybrid Pack is designed to be a simple and cost-effective way of making large truck mounts hybrid, said the company, allowing the equipment to be operated emission-free and noise-free.

It represents a move away from the use of lead acid batteries by the company, thanks to the better weight to energy ratio that lithium batteries offer.

At bauma, the Bronto Hybrid Pack concept was paired with the compact Bronto S35EM, which is designed for use in tight spaces like city centres. The Bronto Hybrid Pack will keep the S35EM running for full working day on an average worksite, says the company.

Once the new system has been approved by customers of the S35EM, following possible further updates, it will be expanded to other Bronto models.

The target is for the Hybrid Pack to be made available as a retrofit, however, as many of the units are customised, a case-by-case evaluation will be required to ensure compatibility.

### A Bronto S35EM with the company's new Hybrid Pack.



## New customer portal

The Finnish manufacturer also introduced the new Bronto One customer portal at Bauma that will replace the company's Skyliftfleet system.

Bronto One is based on cloud technology and is significantly different to other systems in the market, says the company, as it offers an open interface for integration with other systems, for example customers' own ERP solutions.

All Bronto aerials equipped with a modem will automatically be fully connected to Bronto One. However, fleets often include other types of equipment too.

In addition to better, more comprehensive fleet management, Bronto One offers personnel training logs, self-learning material and access to a hub with hundreds of solutions and guidance information.

## Products on show

The largest aerial platform on Bronto Skylift's stand was the 104m S104HLA, mounted on a new type Volvo chassis, which allows compact configuration that is easy to drive in worksite conditions and regular traffic. Since the cabin is not lowered in front of the front axle, the approach angle is improved and the driveability increased.





has moved away from its longstanding home in Tampere to the coastal town of Pori, which also carries out welding work and fixed assembly.

**Strong data**

Expanding on the lifecycle service philosophy that kicks in following production and sale of the equipment, Orre adds that there are range of important elements that go together to create the ideal scenario. This ranges from training, spare parts, along with the need for effective data and preventative maintenance.

“We produce a lot of data and we are looking to use more of it to improve uptime.”

**Switzerland-based rental company Maltech AG has expanded its equipment fleet with two new aerial platforms from Bronto Skylift. Maltech, which operates across 46 locations and offers a range of self-powered units, scissors and articulating booms, added a Bronto S70XR and S38XDT.**

In 2016, Bronto Skylift’s former owner Federal Signal Corporation, based in the US, sold the fire service and industrial truck mounted platform business to Morita Holdings Corporation, based in Japan.

To support this there are always two employees from Morita working at Bronto Skylift in Finland, in three-year stints. As Lasse explains the current pair are coming to the end of their three-year tenure and will be replaced soon.

Indeed, Morita, despite concentrating on the firefighting sector, supports Bronto’s access business. “They have stated to us that this it is key commitment going forward.”

As Orre adds, there are more global opportunities for the access business, accounting for around 50% of total revenue.

And, as he explains it is crucial that support is understood by its growing supplier base. “Our service partners need to understand that there is that commitment.”

Part of the next step is for Bronto to broaden its skills in the key activities that remain at the

company’s premises. For example, it is setting up a training centre in Tampere to educate its customers via video so that they do not have to visit the site in person.

**Market goals**

The company is undertaking a market study to establish which countries it wants to develop. One of the potential growth markets is China, which is expanding quickly, while another is Japan, where there are currently just 10 Bronto Skylift units.

The US, on the other hand, is already expanding at a good rate. Bronto has established a Branch in Orlando, Florida. The plan is to expand its presence there.

The company is seeing success in the country, including a working height record. TGM Wind recently placed a large order for several Bronto units, including the first 341ft working height Bronto S341HLA in the US.

It also means that with the S341HLA delivery, Kardie will be the sole owner of North America’s tallest aerial platform.

However, there are no immediate plans to increase the range above or below the company’s existing working heights. But as Orre points out, it’s not so much about size, but how the products are being used.

“We are happy with the range from 35m to 104m. the key is better standardisation across the range, rather than expanding.”

AI

# #1 Hydraulic Generator to the MEWP industry



**Reliable custom hydraulic and belt driven generators with all the AC power you need for the job.**

**Sizes range from 2kW to 40kW**

**Clean, Reliable, Mobile Power since 1969**



**www.harrisonhydragen.com**  
**sales@harrisonhydragen.com**  
**800-723-3334**







FOR YOUR SUCCESS

XCMG **K** SERIES AERIAL WORK PLATFORM SAFER MORE STABLE SMARTER  
**YOU RAISE ME UP**



**XCMG EUROPEAN SALES AND SERVICES GMBH**

Add: Europark Fichtenhain B 4, 47807 Krefeld, Deutschland  
Tel: +49(0)21518206890  
Fax: +49(0)21518206899  
Email: info@xcmg-ess.de

**XCMG NORTH AMERICA CORPORATION**

Add: 5145 Schirlls St Las Vegas, NV 89118  
Tel: 321-654-9877  
Web: www.xcmg-usa.com  
Email: sales-usa@xcmg.com

**XCMG MEWP DIVISION CHINA**

Add: NO.17 Eastern Zhujiang Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu, China  
Web: www.xcmg.com/en-ap/product/Aerial-Working-Equipment/pro-list-1000127.htm  
Tel: +86-516-8798 9556  
Email: xgxfjgh@xcmg.com





# New award and judges announced



The judges for the International Awards for Powered Access (IAPAs) have been confirmed, alongside a new 13th award for the 2023 event.

Taking place in Berlin, Germany, on 20 April, the IAPAs celebrate excellence and best practice in the access industry.

Complementing that excellence will be the five-strong judging panel, who will consider the 13 categories open for entry, across a range of themes.

They include new products, digital and technological development, safety and the new category introduced for the 2022 awards, sustainability. There will also be the usual Rental Company of the Year award and IPAF-specific categories for training instructors and training centres.

The independent panel of judges consists of longstanding access experts, with a wealth of knowledge across the sector.

The IAPA awards are open for entry now, with the deadline for submissions being 15 December 2022.

## IAPA 2023 JUDGING PANEL

**Xu Shugen**, chairman, Dingli.

Dingli has grown to become one of the largest access equipment manufacturers in the world, over its 20-year history. Founded by Xu Shugen, the company offers a full range of scissor, boom and vertical mast lifts with the expansion of its electric and hybrid rough terrain equipment being an example of recent product developments.



**Wayne Taylor**, managing director of Safelift LLC, based in Abu Dhabi. Taylor has long industry experience, including at Grove Cranes – Manlift, UK access rental companies Nationwide Platforms and Hi-Reach, before rising to the post of managing



## NEW CATEGORY FOR 2023

A new category has been added to the 2023 International Awards for Powered Access (IAPAs).

The **EQUALITY, DIVERSITY AND INCLUSION (EDI) AWARD** is now open for entries to any company or individual who has demonstrated a sustainable commitment to improving these areas in the powered access industry. Judges will be looking for entries that demonstrate how entrants have recognised the importance of diversity in the workplace and taken actions towards fostering a more inclusive environment where all employees feel valued and can thrive.

Karin Nars, president of IPAF, who has been instrumental in creating the new IAPA category, alongside the development of IPAF's Women in Powered Access initiative, commented, "As part of the judging panel for this year's awards, it will be fascinating to see the companies and individuals who submit their stories of fostering equality, diversity and inclusion in the workplace."

"In case anyone is wondering what would qualify as worthy of nomination for an individual, that person could be a role model who has inspired or supported others, or someone who has overcome personal barriers to excel in their career. Likewise, a company or individual may have been involved in introducing concrete changes or visible actions that ensure workplace colleagues feel valued, respected and listened to."

The EDI Award joins 12 other award categories, previously announced. Visit the event website to enter.

director of Safelift. He is also vice chairman of IPAF's Middle East Regional Council.

**Karin Nars**, managing director of Finland-based Dinolift and president of IPAF. Knars joined the IPAF council in 2010, having joined the federation in the late 1990s with Dinolift.

Roll forward to 2022 and Nars now steers Dinolift as its managing director, with its range of specialist lightweight boom lifts, truck mounts, spider lifts and trailer mounts.

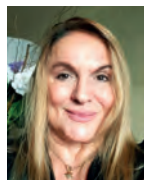


**Marco Govoni**, sales and marketing director, at Italy-based truck mount and spider lift manufacturer CTE. Govoni started his career in 1990 at Italian truck mounted manufacturer Bizzocchi where he became export manager, before moving to Socage in 2000. Govoni returned to Bizzocchi until it was acquired by CTE in 2007 and from 2021 he has been vice president sales, marketing and service.



**Sandra Franco**, founder of Chile-based ALO Group.

ALO operates in Chile, Argentina, Peru, Panama and Colombia, and has a rental fleet of more than 1800 units. Franco was instrumental in the opening of the first IPAF operator training centre outside Europe: ALO Training, in Santiago, Chile. Today, Franco is focused on developing the industry in Central America from ALO Group's operational hub in Panama.



AI



The winner's of the 2022 IAPA awards in London.

### IPAF NETWORKING EVENT & SITE VISIT

**WHEN:** 19 April 2023

**WHERE:** Location to be confirmed

### IAPAS & IPAF SUMMIT

**WHEN:** 20 April 2023

**WHERE:** H4 Hotel Berlin Alexanderplatz, Berlin, Germany

[www.iapa-summit.info](http://www.iapa-summit.info)





Promoting the safe and effective use of powered access

# GET YOUR PAL CARD ON YOUR PHONE!

WITH IPAF'S NEW APP



# ePAL

[www.ipaf.org/ePAL](http://www.ipaf.org/ePAL)

- Free to download
- For all PAL Card holders
- Digital wallet for IPAF licences & qualifications
- Digital logbook
- Show & share your credentials
- Convenient
- Best practice tips & advice

## DOWNLOAD NOW

Scan here or search your app store for 'ePAL'





# Gaining pace

AI steps into the realm of the trailer mounted platform.

As Niftylift says, the trailer mount offers ease of operation but, most importantly, portability, as they can usually be towed behind a domestic vehicle. When hired, they don't incur a large delivery charge as customers can collect them.

Simon Maher, marketing manager at Niftylift, points out, "Add to this their ability to set up on most surfaces, due to their outriggers and they become a very versatile option for, particularly for short-term work."

Ultimately, trailer mounts are favoured for their outreach rather than their working height. Low level outreach is often essential, as demonstrated by the Nifty 120T, one of Nifty's most popular trailer mounts, along with the 150T, 170 and latest model, the 210.

"We are also seeing an overall move towards including our Traction Drive and Bi-Energy power options on machines" says Maher.

Niftylift's Traction Drive is an integrated drive system that assists with manoeuvring the trailer mount once on-site, enabling a single operator to move the machine.

The manufacturer's Bi-Energy is the combination of an IC engine with either battery or AC power inside as well as outside.

Certainly, trailer mounts are here to stay. "They are often an 'entry machine' for new rental companies starting in powered access.

"Many rental companies now realise the higher profit margins that can be made on trailer mount hires, as the customer base for these machines doesn't wield the same buying power that the self-propelled customers, often large construction companies, do."

This is also demonstrated by the residual values of Nifty trailer mounts in the used equipment market, concludes Maher.



Haulotte carrying out roof maintenance.

## Residential work

Haulotte features a full range of trailer mounted equipment including a 36ft telescopic boom and four articulating booms at 35, 45, 55, and 65ft platform heights.

Where the company sees significant growth is residential use of these machines by homeowners. "During the pandemic we saw a growing number of homeowners decide to tackle home maintenance projects like tree removal or pruning."

The first Haulotte machine was released in 2005, with the most important feature being the one touch auto-leveling feature, meaning operators can get to work in less than 30 seconds of set up time. Then, Haulotte's controls box provides electric piloting capability with ruggedised button switches laid out next to a drawing of the machine.

Haulotte's entire range of trailer mounted machines also come standard with air and water hoses routed up to the platform.

Electrification has been the largest trend in the equipment industry in general, adds Haulotte. The company's full range is battery powered with capacity to operate a full day on a single charge. "We also have an optional range extending generator available to extend the working day as needed."

## Market potential

Finland-based Dinolift's latest models are the Dino 120TB and Dino 105TL. They are the smallest lifts in the Dino range, with 10.5m and 12m working height.

The 120TB is a battery powered version of



The DINO105TL.



A typical Nifty application.

120T, which is 230VAC powered. The 105TL is the smallest of all and is popular because of a very low weight of 950kg, says Dino, which allows it to be towed with most regular cars.

The main markets for its trailer mounts are the Nordic countries, Baltics, Central Europe and Australia and the company is seeing increasing sales in the US. Santtu Siivola, Chief engineer at Dinolift comments, "Any market looking at working height versus life cycle cost efficiency is a market for trailers.

"Also, markets with long distances are generally looking for towable machines. There is a lot of demand for used towable lifts and we have especially seen a significant impact of the wide and heterogeneous after market on the quite high price level for used Dinos."

Siivola adds, "Also end-user segments are generally investing more in towable lifts and especially in the US we see a demand for our higher models in those customer segments."

Jussi Saarikallio, Dinolift's regional manager, explains that customers and end users want simple usability at a low cost. "This is, of course, something we are constantly working on.

"And making lifts even more light is both from a sustainability point of view and a towing point of view important and a design principle."

Will trailers be able to be towed by the increasing number of electric cars on the road? Saarikallio answers, "Regarding electric cars and their towing capacity, there are already



## TRAILER MOUNTS



numerous cars with sufficient towing capability, and it is of course not only lifts that are towed behind cars, also campers and trailers for boats.”

### Entry point

The Snorkel line of towable boom lifts features the TL37J, TL39 and TL49J, with the features customers like most including the quick setup, ease of operation, and the fact that they’re simple to service and maintain.

Snorkel towable boom lifts also offer self levelling for the outriggers and come with an optional wheel kit they can be self-propelled for short distances.

The lifts are equipped with a 24V battery operating system with two operation options; a petrol engine and petrol/battery bi-energy.

Robby Hagan, senior vice president of sales, Xtreme Manufacturing and Snorkel, says, globally there is an increase in the use of towable boom lifts as they are an inexpensive entry point into aerial equipment. “Users can simply ‘tow & go’ as opposed to the traditional full-sized self propelled boom lifts.”

Some common uses are tree trimming, window washing, sign maintenance, general rental, painting and building maintenance.

Looking to the future, Hagan believes lithium-ion technology is growing in popularity. “Longer usage between charges and zero-maintenance batteries are a plus when utilising a mobile piece of equipment at many different locations during a day, week or month.

“Also, there is a demand for lighter weight towable lifts as many homeowners are renting towable machines and using their smaller personal vehicles to tow them.”

### Product development

In Germany, Rothlehner took over the assets and rights of the Denka Lift brand in 2013 and brought the production to Germany.

In recent years, the company has developed the products further, with a number of improvements and options to bring them up to date, including new software-based control system with integrated onboard diagnostics, charging technology, sensor electronics for levelling the basket, automatic outrigger setup and LED lights in the basket.

And work has been done on the

## EXTRA COMPACT

Comet has two models, the Xtrailer 12 and Xtrailer 14 with 12m and 14m working heights. These are even more light and compact compared to other trailer mounts on the market, small in size and able to reach difficult access areas towed by an ordinary vehicle.

They were both launched a few years ago, but have been updated, including with the introduction of the Comet high life hybrid system.

This system allows the machine to work in hybrid with twin engines full electric. The result is no noise pollution and an eco-friendly environment.

The company is considering launching new models for different market niches, as well for train maintenance.

“They have very low running costs and small companies of craftsmen, such as painters, electricians, antenna fitters, are our main customers,” says the company.

“Another growing trend is customers’ demand and interest for hybrid models that can work without making noise and without polluting.”



Part of the manufacturer's X-Range

maneuvering characteristics. These have been significantly improved in the DK-Series, with its basket to the rear.

Simple operation is key, and the units have a stable and durable telescopic boom made of extruded aluminum profiles, says Rothlehner, with the most popular still being the DK18 and DK25, and the DL series DL18/21 and DL25/30, with a basket to the front.

### Flexible use

The 12.19m working height TZ-34/20 and 16.92 m TZ-50 are Genie's offerings in the trailer mount market, both providing a platform capacity of 227kg.

Both the TZ-34/20 and the TZ-50 can be towed behind many different models of pickup truck or SUV.

Once on site, dual pneumatic jockey wheels make it easy to precisely position the machine. An optional Drive and Set lets operators drive the unit from the platform when fully lowered, while Up-and-over boom angles, plus 359° non-continuous turntable rotation further assists platform positioning.

The Genie TZ models also boast the operating envelope of a Genie Z boom, including the ability to reach up, over and out.

Simone Mancini, at Genie, comments, “Trailer mounted booms have long been a staple for rental companies. Additionally, they are a popular rental category with major home



Rothlehner's Denka-Lift DK25.

improvement centres, where they can be towed to the jobsite.”

Mancini adds, “Contractors typically use trailer mounted booms for painting, trim work and roof projects. A municipality or university might rent or even own a trailer mounted boom for jobs such as general maintenance and cleaning of building exteriors, changing lights in parking lots or garages.”

Genie trailer mounts are finding popularity in North America, China, Australia, and the Asia Pacific region, and there are new opportunities.

AI

### The lightweight Genie TZ model.







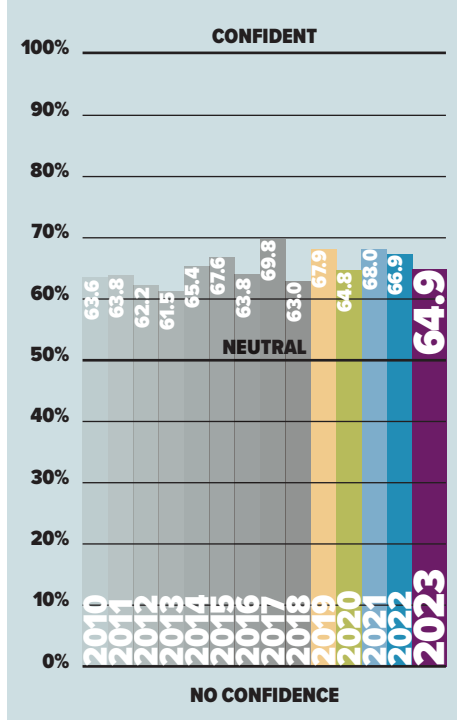
# Uncertain!

AI provides its annual round-up of the expectations of the access industry for the years ahead.

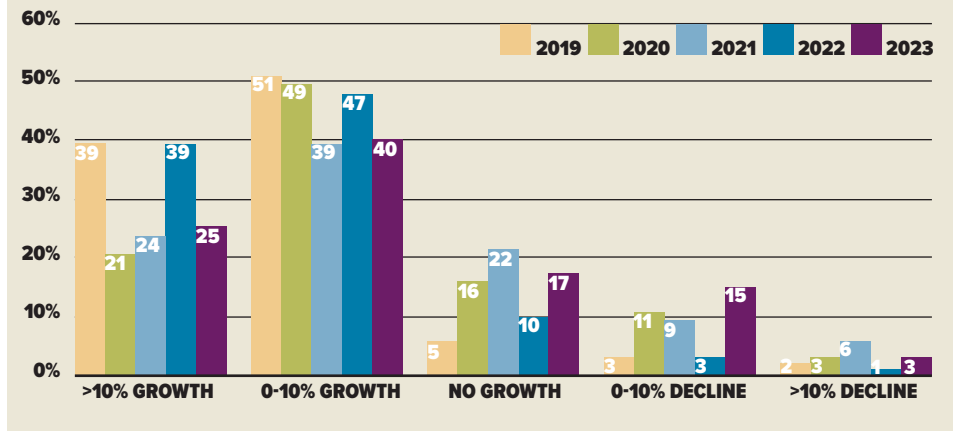


## CONFIDENCE INDEX?

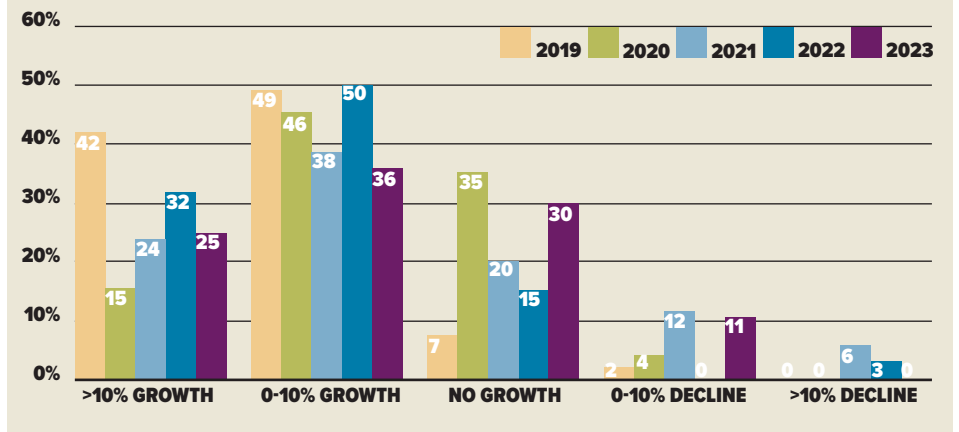
Respondents were asked how they rate opportunities for their business over the next five years.



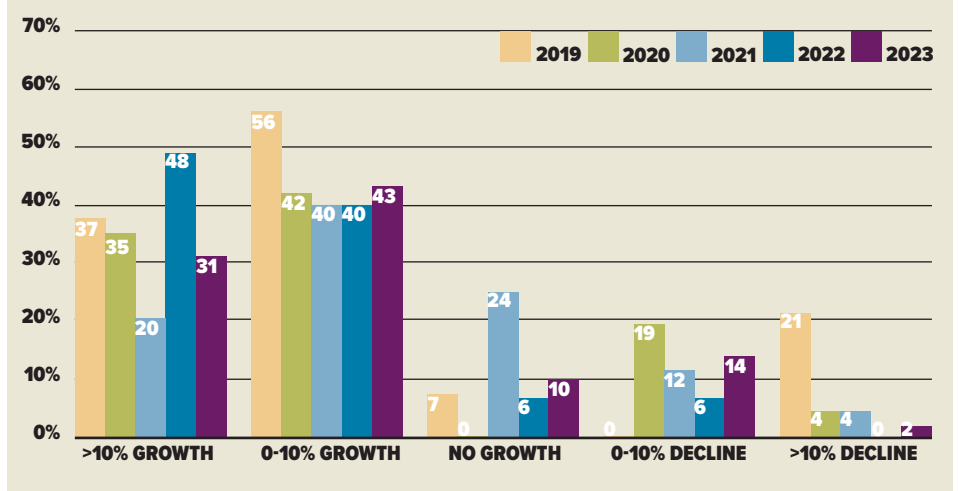
## 2023 PROSPECTS: ALL SECTORS



## 2023 PROSPECTS: RENTAL COMPANIES



## 2023 PROSPECTS: MANUFACTURERS/DISTRIBUTORS





# prospects

There is a more cautious approach to the coming years in this year's survey.

For a start, the Confidence Index, in which participants are asked how they rate opportunities for their business over the next five years out of a maximum score of 100, shows an average of 64.88 this year, compared to 66.86 in last year's survey.

Looking back over the years the 2021 Confidence Index was at one of its highest levels since the period leading up to the

financial crash in 2008. This time last year, the direct day-to-day impact of the Covid-19 pandemic had eased significantly in many parts of the world, including North America and Europe – home to many of the access equipment manufacturers and major rental companies.

These were the days before the energy crisis had taken grip, the start of the war in Ukraine and rocketing inflation. There was a view that with Covid becoming less of a hindrance, the

only real issue was the supply chain, which could be worked out over time.

## New expectations

Roll forward 12 months and the world sits in a very different economic setting overall.

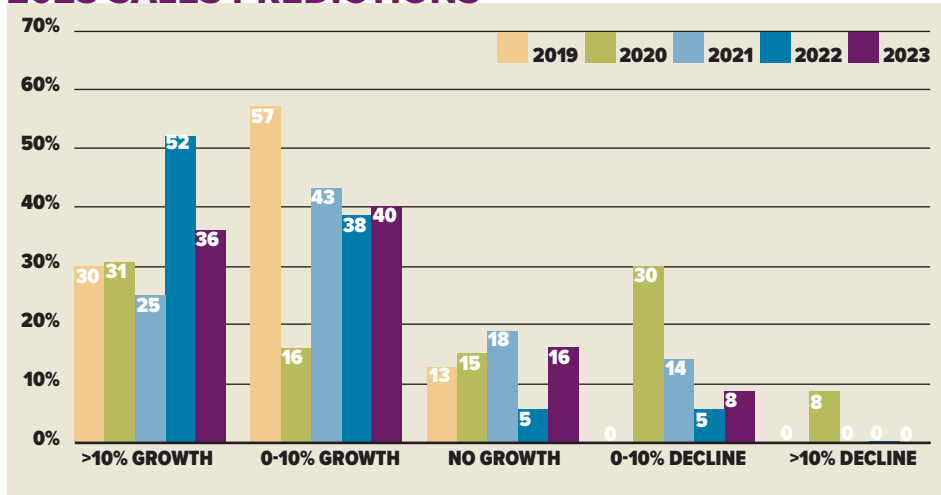
This is reflected somewhat by the combined views of the rental companies, manufacturers and end users who took part, when asked what their prospects were for the year ahead. As always, there is a mixed response, as this is a global survey, yet 17% are expecting no growth, compared to 10% of those that responded this time last year. Further to that fewer are expecting growth in 2023 and more are looking at drops – 14% of respondents expect up to 10% decline in 2023, compared to just 3% who 12 months ago were expecting the same for 2022.

Rental companies that took part tell a similar story – almost double forecast no growth in 2023, compared to those that took part this time last year. Zero percent expected up to 10% percent decline a year, compared to 11% in this year's survey. However, a higher percentage of rental companies are looking to purchase new machines next year than they were a year ago, and fewer are expecting to invest in used equipment. Perhaps this is a sure sign that once the supply chain eases, there will be a move to make up lost ground in introducing new kit to their fleets.

The manufacturers overall also see less growth next year and more declines in their

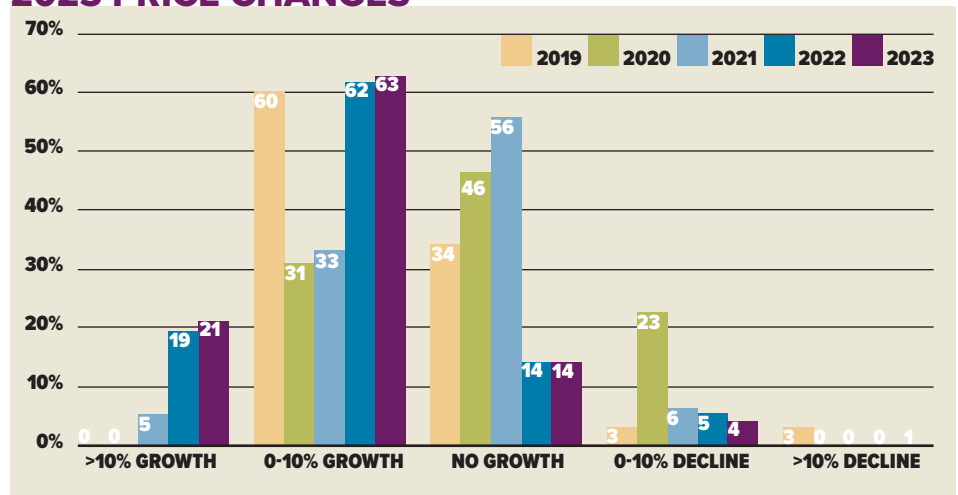
## WHAT DO SUPPLIERS THINK?

### 2023 SALES PREDICTIONS



Fewer are expecting growth in 2023 and more are looking at drops – 14% of respondents expect up to 10% decline in 2023, compared to just 3% who 12 months ago were expecting the same for 2022.

### 2023 PRICE CHANGES





# PL~~AT~~TFORM B A S K E T

Platform Basket srl - Via Montessori, 1 - 42028 Poggio - RE - Italy -  
Tel. +39 0522 967666 - Fax +39 0522 967667 - info@platformbasket.com



[www.platformbasket.com](http://www.platformbasket.com)



Made in Italy



sales predictions for next year, while forecasted production levels are somewhat mixed. The more than 10% increase in production levels that was expected to occur this year with the hope that the supply chain would work itself out by now, were dashed. In this year's survey respondents are much more cautious about next year.

**Considered views**

Overall those who took part this year are also more conservative in their view of rental rates over the next 12 months. Again, the global picture is mixed but overall there is less excitement for the market and a more cautious

approach to the business conditions next year.

A general view in the comments that we have received from those who took part in the survey, is that the current market is good, despite the challenges, but a slowdown is inevitable due to the promise of recession in many parts of the world. Some point to the increasing difficulty in acquiring decent finance next year and in general sound a word of caution.

Compared to this time last year, there has been a shift in mood away from the idea that things can only get better, to the realisation that they could get worse in the foreseeable future.

Nevertheless, the growth opportunities

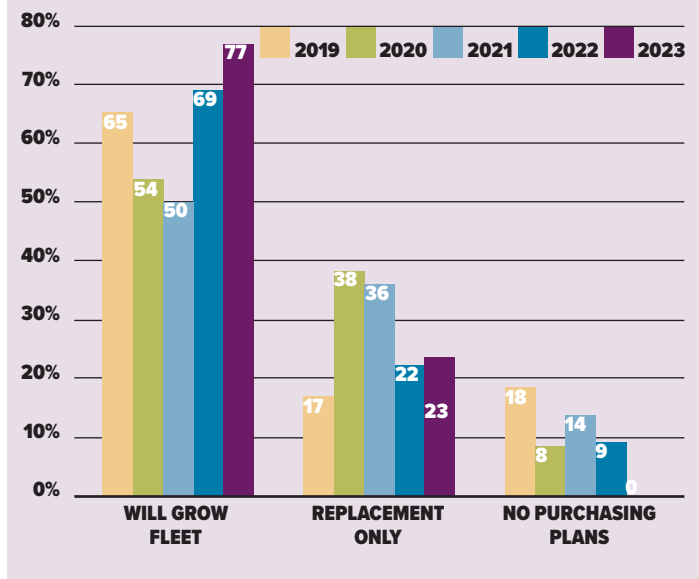
afforded to the access industry in many parts of the world, including emerging nations like China, will mean that the downward trend will be bucked in certain quarters. **AI**

**ABOUT THE ACCESS CONFIDENCE SURVEY**

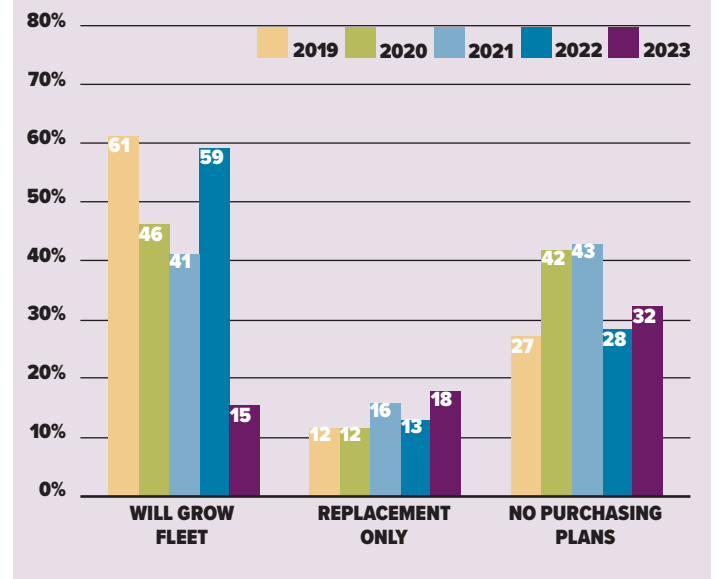
Manufacturers, rental companies and end users involved in the access industry were asked to provide their forecasts for the sector for 2023. The anonymous survey was carried out in October and November, via an e-cast request. For questions about the survey contact the Editor, Euan Youdale.

**2023 INVESTMENT PLANS**

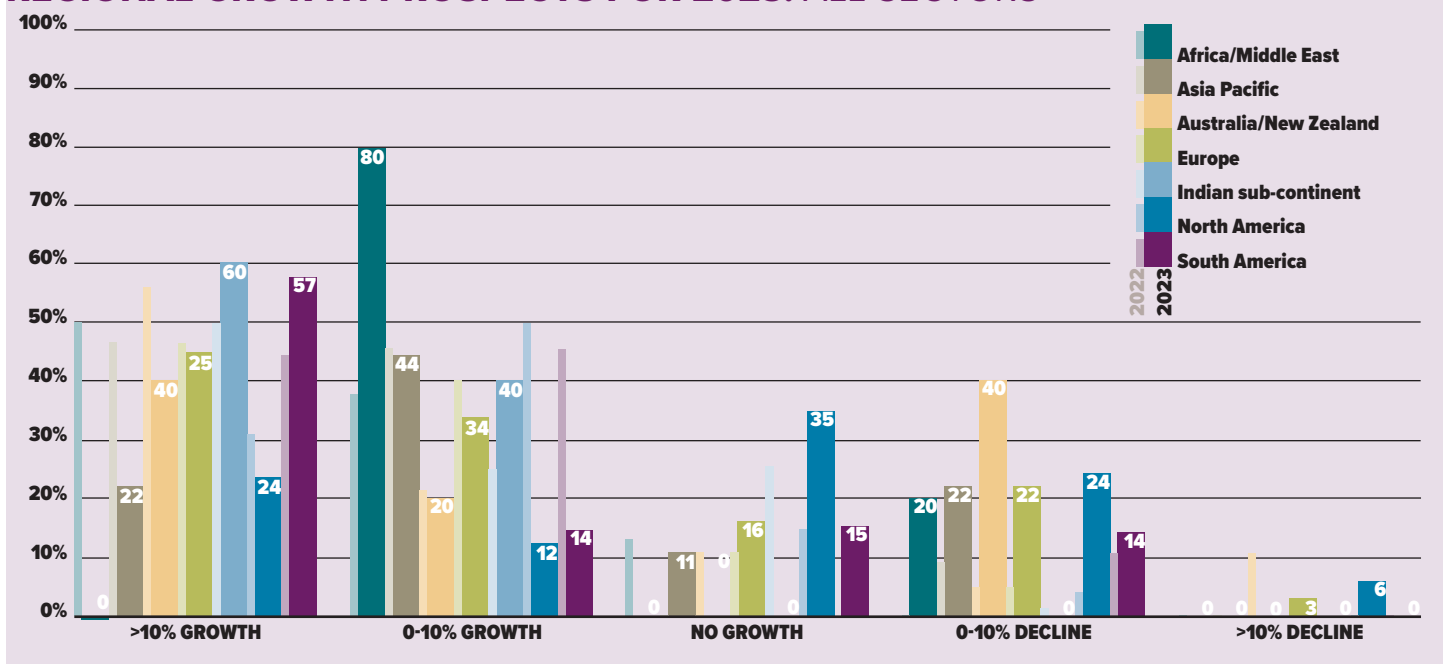
**RENTAL COMPANIES: NEW MACHINES**



**RENTAL COMPANIES: USED MACHINES**



**REGIONAL GROWTH PROSPECTS FOR 2023: ALL SECTORS**



# bauma Launch

**Bauma was the place to be for new product launches and industry news. AI was there.**

**T**here was uncertainty leading up to this edition of bauma, following its postponement to October, from its original dates in April this year, due to Covid-19 and the concern that the pandemic might still prevent the show going ahead in the earlier part of 2022.

This was accompanied by a growing view during the months of lockdown in Europe that the traditional trade show format might have had its day and was no longer relevant.

No wonder the world and the exhibitors set to attend the show were holding their breath and wondering how the world's largest construction exhibition would fair.

For these reasons, on top of a lack of available equipment, due to the supply chain crisis, some of the largest access equipment manufacturers chose not to exhibit at the show. As has previously been reported, among those

were JLG, Genie, Skyjack, Haulotte, Snorkel and Niftylift.

Just before Bauma, however, JLG announced that it would indeed be present at Bauma on partner Hinowa's stand where it launched the renewed version of its electric, lithium battery-powered EC Series, with two new models. (See the Boom lift feature in this issue).

On the other hand, the major Chinese manufacturers of access equipment, notably Dingli, Sinoboom, XCMG, LGMG and Zoomlion, which have major MEWP sales in their domestic market, did choose to attend the exhibition, alongside much of the rest of the European access industry, with its wide range of equipment.

The attendance figures of almost 500,000 from show organiser Messe Münche demonstrate that while down on the more than 625,000 visitors in 2019, the show still has pulling power, particularly as it's still difficult for residents in some Asian countries to travel, while many in North America remain cautious.

And, the message from a majority of access manufacturers at the show was that it had been a success, with a majority saying that Bauma is a 'must attend' exhibition, and they would



## VEHICLE MOUNTS

The electric and hybrid focus was just as keen on the stands of vehicle mount producers at the show.

**TIME MANUFACTURING** had a range of products, including those from members Versalift, Ruthmann, France Elevatuer and Movex. (See the interview with Time's CEO of Europe in this issue).

**KLUBB** was showing electric, gas or bi-fuel-powered vehicles mounted with aerial platforms which can work with the vehicle engine off.

The 11.8m KL26, mounted on a cutaway Renault e-tech and offering 57kW of power; the 10.5m K20L mounted on a 50kWh Peugeot e-expert and the

10.7m KL26 mounted on a Piaggio Porter NP6, will be prominent on the stand.

As far as light equipment goes, Klubb will show the new 13.5m KL38P, with an articulating jib, available on vans, with or without a cutaway.

It will be there in addition to the KL21B, KL26 and KL32, that are already in light versions and offer

better payloads.

Visitors will also discover the new KT18PZ on a 5 tonne Mercedes Sprinter 5T; a van solution designed for optimum performance with 19m working height and 9.4m offset.

**CTE** debuted its MP 20 Ev truck mount. The 100% electric truck mount has a 20m working height.

With measurements of 1,598mm width, 5,200mm length and 1,965mm height, and a 3,500kg GVW, the eCarry is the most advanced vehicle of its category, claims the vehicle manufacturer.

Specifications of the platform also include a 13m outreach and 250kg capacity, as well as a telescopic boom, plus jib, using SSAB steel.

There is a ground control console with wireless remote and integrated display for wire-free operations, as well as the basket display with the same features, including integrated display, for easy familiarisation. The unit comes equipped with CTE's S3 EVO control system.

EMS Europe is the importer and dealer for CTE in the Benelux region for its spider products and is also the distributor for the eCarry electric chassis on which CTE's new electric platform is mounted.

**MULTITEL PAGLIERO** is also working on full electric truck mount solutions and is working with



**Klubb's new prototype flat bed, made of bamboo composite.**



**CTE debuted its MP 20 Ev truck mount, on eCarry chassis.**



# pad



Manitou has dramatically expanded its Electric Oxygen.

return again. On the other hand, there were others who said they would review the option to attend in 2025.

As always, there were plenty of product launches at the show, along with product sales announcements and some new distributor agreements.

A firm message across the showground, and not just from the access manufacturers, is that 100% electric machines are the future, even if there is no fixed date on exactly when. However, that did not stop most of the manufacturers from launching or focusing on battery-powered products.

**MANITOU** was making a splash at the show with a range of additions to its electric Oxygen range, including boom lifts and telehandlers.

The French manufacturer launched a range of new products, including two additions to its electric articulated boom series, with 16m and 18m models to add to the existing 20m working height 200 ATJ e.

The company has also introduced a safety pack with a number of features, including sensors, lights and a system to show the harness clip is attached to the machine.

All of the articulating booms are currently powered by lead acid batteries and there is also an early attachable combustion engine range extender that can be attached in 15 minutes.

The company also premiered its new electric telehandlers models, (See Telehandlers box).

**SINOBOOM** only had electric equipment



The Sinoboom SPA33HJ spider, under the partnership with Falcon Lifts.

on its stand. The manufacturer has decided to sell purely electric equipment in the European market, including rough terrain scissors and booms and therefore 14 out of 15 products on the stand were 100% electric.

The only exception was the spider lift on Sinoboom's stand. The company has agreed a partnership with Danish spider specialist Falcon Lifts, that will see the company increase and develop spider sales. The hybrid SPA33HJ spider was on show, which the two companies developed together. (See News).

**AIRO** also chose to only show electric units on its stand, although it does offer diesel MEWPs to the market. The company was not

Iveco to launch a 100% electric product next year. The model is expected to have 130km driving autonomy. The platform will be driven by a Multitel battery pack, while the 3.5 tonne GVW truck will have its own battery power system. It will have a 16m working height.

This will then be followed by a second version on a 4.5 tonne truck that will still be able to be driven with a standard European B- licence. It will be up to 27m working height and the aim is to launch it in the second quarter.

The truck mount manufacturer was not launching any new models at the show, rather showing its latest ones, including the MTE230 Hybrid, with its 48-volt lithium battery and eight hour working autonomy.

However, a new control system was on offer at bauma. The Eve – Evolved Electronic system includes standard features stabilisation control and complements the manufacturer's Musa - outreach system.

The company was pointing out its growth over recent years at the show. Turnover in 2022 is expected to reach €155, in comparison to €122 in 2021. That amounts to the production of 2,200 units this year, compared to 1,725 that were produced last year.

**COMET** announced its distributorship cooperation with two companies that will cover areas of Germany. One is responsible for the whole



Multitel has electric product plans.

of Germany for the manufacturer's spider sales to rental companies, while Uf Gabelstapler will cover the south of the country for end users and utility related customers. The manufacturer said the activities of both companies would complement each other and they would work together to grow Comet sales in the country.

The move falls in line with Comet's plans to grow its market in Germany. Traditionally, the company operates in the likes of emerging markets, including the North Africa and the Middle East. To this end Comet is introducing a new Light range of double

articulated truck mounted platforms with 20m and 22m working heights.

The company was also introducing two new spider lifts on its stand. The 14m and 17m working height Leopard 14 & 18 spider lifts. The Leopard 14 is a 100% hydraulic machine with 6.5m outreach and 200kg capacity in the basket.

The 18m version is an electro-hydraulic product that has a 7.5m outreach and 250kg in basket. Both products have 400 degree continuous turn.

Also new on the stand was the Eurosky 16 mounted on an Isuzu pick-up. The double articulated unit has a fly jib. The Eurosky 14 is also new Piaggio Porter chassis powered by LPG. The vehicle was launched last year.





Comet was making distributorship and product announcements.



# ACCESS WITH ZOOMLION GREEN



CE Certified

 Electrification  
 Sustainability



Scissor Lifts  
4.5m - 16m



Articulating Boom Lifts  
9.55m - 31.85m



Telescopic Boom Lifts  
20.75m - 65.5m

ZOOMLION

Z16ERT-L1

ZOOMLION

Z16E

ZOOMLION

ZOOMLION

**ZOOMLION**

Zoomlion Intelligent Access Machinery Co., Ltd.

Add: ZOOMLION Wangcheng Industrial Park, Tengfei Road 997, Changsha Hunan, China  
E-mail: awp@zoomlion.com

Tel: +86 0731-89250971

Learn more at <http://en.zoomlion.com/>







The Airo XL20 RT scissor lift.



One of the new Tulip series from Holland Lift.

launching new products but was offering a new option on its RT scissor lifts, namely the addition of stabiliser pads, which can easily travel with the machine using two slots on the side of the unit where the pads can be placed.

Airo supported this with its latest RT scissor lift on show, the 20m working height XL20, which comes in an RTH hybrid version and an RTE full electric version. The 700kg capacity model can carry up to five people and has a double extension deck of 1.5m. With 4WD and 2-wheel steer, the XL20 is driveable at full height and has automatic stabilisation.

On a larger scale **HOLLAND LIFT** has been very active, again in the electric arena with the new Tulip series of scissor lifts. The two 24m RT scissors are offered as an electric or diesel version. Some of the features include a maintenance-free pin system, 90 degree steering, rather than four wheel steering, which, as Chris Kochheim, managing director of Holland Lift, told *AI*, is opposed to four wheel steering, which he says is not safe on rough terrain.

Another important element is the introduction of diagnostics and an in-house developed control system. While these digital developments are a common theme at bauma and beyond, they tell an important story about the requirement for remote diagnostics, when



ELS will be expanding its vertical mast range.

it comes to telematics information and saving valuable time in service callouts, particularly as skilled labour is becoming hard to source. The Holland Lift control panel includes a full display. Another important safety feature is lighting that illuminates when in transport and when lifting.

In the near future, there will be a shorter 21m version with more than 1,000kg capacity. As a result of these launches, Holland Lift now offers a full range of electric scissors from 16m to 24m.

Further updates to the manufacturer's line is full USA ANSI certification for the 33m narrow unit. The rise in logistics centres in Europe is being followed in the US. As such the Tulip series will also be available in a US spec.

Kochheim said Holland Lift was now working on a US distribution agreement, which it will make public the first half of next year. This will follow the signing of a new dealer in the Czech Republic in October this year and the company is now looking for a dealer in France and Belgium.

**ELS** has also been optimising its range, which has grown significantly since it first showed its access equipment at Bauma 2016, then represented by a couple of slab scissor lifts. The company has said it plans to expand into electric boom lifts, along with extending its range of low level access equipment. The Turkey-based company had a wide range of equipment on its booth including its scissor series, which it is updating to include AC or DC options in the future.

There will also be a second generation of its general boom lift series, with a new control system as part of the upgrade. A new vertical mast is also in prototype stage - the 4.5m working height machine is compact and electric and will offer a stock picker attachment.

**DINOLIFT** was presenting its first all-electric boom lifts at the event. The lightweight Dino RXTE, with outriggers, is an extension of the Dino RXT Series of lightweight 4x4 booms, with the advantage of silent operation and zero emissions and lower cost of operation.

As with the existing diesel versions, the

series includes two models with working height models of 22m and 28m equipped with either an AGM or Li-Ion battery pack.

One of the design principles of the new models was that there would be no loss on drive or boom operation speeds, compared to the diesel machines.

The RXTE has a range of lift functions that can be used at the same, such as operating the outriggers simultaneously while driving is also possible. The electric motor has a continuous power rating of 15kW while the peak power is 20kW.

## SPIDERS

There was a wealth of tracked platforms at the show. **PALAZZANI** had the largest spider lift in the world on its stand, in the form of the TT2J 58. The 58m working height monster is at prototype stage but has some significant temporary specifications, until the full production-ready data is available. The unit currently offers an outreach of up to 20m, with three capacity options of 120kg, 230kg and 400kg capacity. The unit can fit 1, 2 or four people in the cage, respectively.

The whole unit weighs less than 17,000kg and has relatively compact dimensions, with a bi-energy and diesel power options. Currently the winch offers a 500kg capacity but that will rise to 920kg, as is already available on Palazzani's 52m unit. The boom system is different in that it is double articulated.

The manufacturer is hoping for a 2023 launch and says it will meet demands for equipment of at least 56m to work on telecoms and wind turbines, as well as indoor work in large buildings.



The world's largest spider lift, from Palazzani.





Hinowa was showing a range of innovations at the show.

However, Palazzani says the move to even higher spiders won't be so easy, as once a unit reaches a certain height it may not be classed as true spider lift, due to the requirement to use steel crawlers, among other elements. "Maybe this is the limit," said the manufacturer.

Tracked platform manufacturer **HINOWA** marked its 35th anniversary this year with a large single stand.

Among the aerial platforms was the direct electric drive TeleCrawler TC22S spider lift,



CMC was showing two upgrades.

## CRAWLER BOOM

**ALMACRAWLER** was showing the new Jibbi Primo telescopic crawler boom at the show. The Jibbi 1890 has full electric drive and offers self-levelling and a fully removeable power pack.

The 18m maximum working height model can be driven at up to 14m at a 15% lateral and longitudinal



inclination. The maximum outreach is 9.92m with a 140kg load in the basket and 8.32m with a 250kg load.

The interchangeable battery pack, means that a new one can be fitted at any time, providing the potential for limitless autonomy. The power pack itself can be easily transported said the company.

There are two power version available, one being the ELC 420ah, 48-volt lead acid battery version, with a 720kg weight and 6.5 hours use on full charge. The other LTH version has either a 330ah, 48-volt or 440ah, 48 volt lithium battery weighing 300kg or 350kg, respectively and offering 5 hours or 6 hours use.

The tracks have an automatic tensioner system as standard, which the manufacturers says leads to zero maintenance, and is directly connected to the and controlled by the main hydraulic system.

Another standard feature is the AES secondary guarding device, which uses an ultrasonic system to avoid entrapment by stopping the machine before the operator comes into contact with an option and leaves them space to safely remove themselves.

**Almacrawler's new Jibbi Primo telescopic crawler boom.**

designed with an unrestricted working range in difficult terrain or in small spaces.

The model is available with three power units: fully electric; bi-energy; or Kubota diesel engine coupled with a 220V electric motor.

Among the other items on the stand was the new compact Lightlift 18.80 and the Performance IIIS spider with an 18.5m working height and outreach of 7.8m, with a load capacity of 230kg.

Another model on the stand was the Lightlift 40.18 with a working height of 40.2m – another compact unit, considering its working height, with stabilisation area of 537cm x 504cm.

The Lightlift 20.10 MK3 platform, now with bi-energy version and IPM (Interior Permanent Magnetic) motor, was there too, along with the updated Lightlift 26.14 MK2, with the handy Hinowa Go Home feature.

**CMC** has upgraded the performance of two of its platforms, the S27 and S30.

The two new platforms, both equipped with double lateral outreach plus jib, reach working heights of 27m and 30m respectively - two metres higher than the S25 and S28 models

**EXMILE TYRE**  
Premium Special Tyre Manufacturer

**EXMILE TYRE**  
Lift The Future

[ EXMILE TYRE ]  
Website  
www.exmiletire.com

**EXMILE SPECIAL TYRE CO., LTD.**  
 ADD: Phoenix Industry Park-Laizhou Economy Developing Zone, Shandong Province, P.R.China  
 FAX: +86 535 2717077  
 E-mail: exmiletire@exmiletire.com

**+86 535 2717086**  
**+86 532 85800503**



LEGUAN®

[leguanlifts.com](http://leguanlifts.com)



REACH  
THE  
NEXT  
LEVEL

225

## Meet the Leguan 225

Get ready for the next generation of spider lifts. With faster boom hydraulics, greater working height, unrivaled up-and-over reach, and ground-breaking joystick controls, the Leguan 225 is our most advanced spider lift to date. User friendly design, improved driving features and a steel-reinforced chassis guarantee premium performance even in the roughest terrains.

PART OF  
**AVANT**  
GROUP



# DINGLI

Exceed · New Height

**In recovery**

The year's ACCESS...  
...taking place that south of  
the industry has bounced  
back from the struggle  
of 2020, despite the  
continuing challenges.

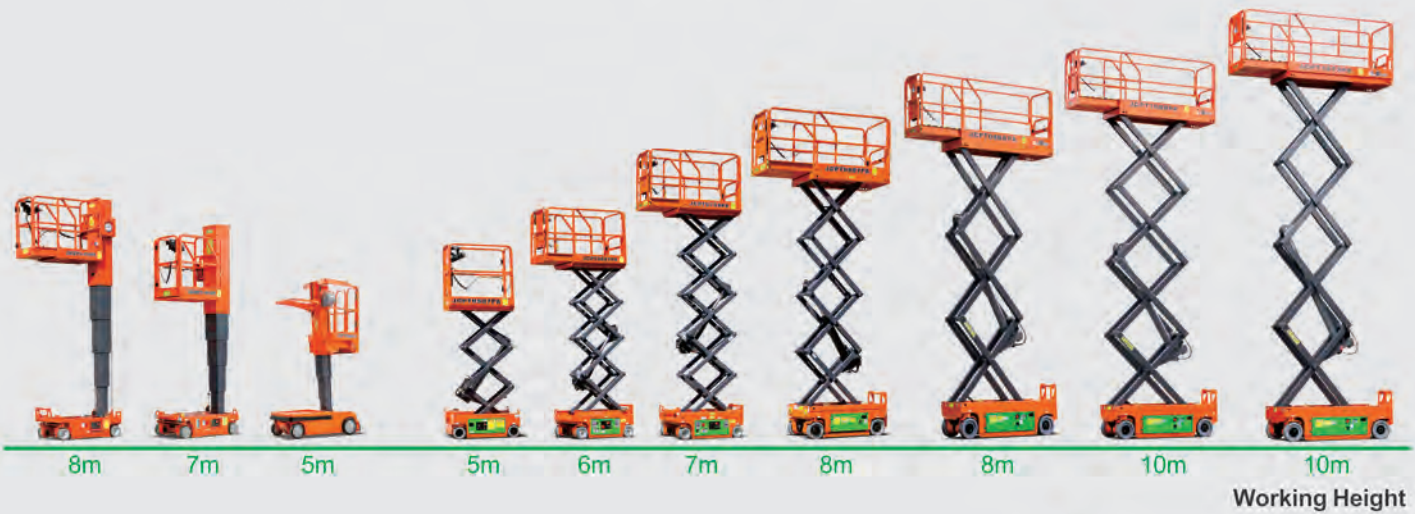
**access M20 MANUFACTURERS**

1	1	JLG
2	2	Terex A
3	7	Dingli
4	3	Skyja

**Global TOP3**  
2021 Industry Global Manufacturers Sales Ranking  
\*Data source: 《Access International》



**HYDRAULIC OIL FREE**



## World's First Oil-Free & All-Electric AWP Series

ZHEJIANG DINGLI MACHINERY CO.,LTD.

ADD:188 Qihang Road, Leidian Town, Deqing, Zhejiang, P.R.C

TEL:+86-572-8681688

Phone:+86-13806523131 Susan Huang

E-Mail:export@cndingli.com

Https://en.cndingli.com







they are replacing. The outreach, one of the widest in its class, is also increased by 1.4m, making it the largest ever.

Like the other models in the DP (Double Performance) Series, the pair offer an advanced automatic guidance and control system that is advanced in technologically, as well as simple and intuitive to use. They also offer low weight thanks to high tensile steel and compact dimensions that allow passage through a standard door.

Both have multiple stabilisation areas,

**The new Platform Basket compact 15.10.**

managed by CMC's Self Control System, negative working capability of -6.8m and a lateral outreach of 15.4m even with reduced stabilisation area.

**PLATFORM BASKET** announced that it had acquired design company Elma, which specialises in R&D. Six months ago the company moved its research and design to Elma, freeing it up to concentrate on production and effectively create a new division of the head company.

On the stand was the new 15.10; a compact, easy to use machine, with remote control and self stabilisation, offering one single envelope

**TELEHANDLERS**

The world premiere for a new series of fully electric telehandlers made by Italian equipment manufacturer **FARESIN** was at Bauma.

The 'Big Range Full Electric' series comprises the 14.42, 17.40 and 17.45 models, which offer maximum lifting capacities of 4.2, 4.0 and 4.5 tonnes, respectively.

The design of the machines is based on that of Faresin's existing diesel-powered models and, while the smaller 14.42 electric telehandler offers a top lifting height of 14m, the two larger models provide a lifting height of 17m.

The 17.45 offers a peak pulling force of 44.3kN and top speed of 25km/h. It is fitted with a 45.36kWh high-voltage lithium-ion battery pack at 435V, powering two electric motors, a 51kW motor for the transmission and a 23kW motor for machine movements.

**XCMG** used Bauma to reveal what it claims is the first electric powered telescopic handler to be launched by a Chinese equipment manufacturer.

The XC6-2506E weighs 5.3 tonnes and has a maximum lifting height of 6m and accompanies ten electric-powered aerial platforms from its fire-fighting safety equipment range on the stand.

According to XCMG, its newly-released models have the advantage of a large-capacity battery, quick charging times, and zero carbon emission.

**MANITOU** launched all lithium battery driven telehandlers and a range of electric or hybrid options.

The MRT 2260e and MRT 2660e rotating telehandler models are part of the manufacturer's VISION+ range and have a loading capacity of 6 tonnes for lifting heights of 22 and 26m respectively.

Offering the same performance levels as Manitou's internal combustion models, the rotating machines are fitted with a 700V/65kWh lithium-ion battery



**The all-electric Faresin 17.45.**

that is said to ensure optimum productivity, "even in difficult climate conditions like in Northern Europe".

**MAGNI** has unveiled its new telehandler models available for 2023 deliveries. The models include two new additions to the company's TH range; the TH 4,5.15 and the TH 4,5.19, and the RTH 10.37.

Key features of the Magni RTH 10.37 telehandler



**Magni RTH 10.37 telehandler.**

**See the video interview with Laurent Bonnaure, Manitou's vice president of sales and marketing, recorded at Bauma 2022.**

(Click on the image in the digital issue to watch)



**The T164E telescopic handler from AUSA.**

include a maximum lifting height of 36.7m and a reach of 30.5m. It is also fitted with a Stage V-compliant, 175kW engine from Volvo.

While the rotating machine offers a lifting capacity of 10.3 tonnes, both the the TH 4,5.15 and the TH 4,5.19 have maximum lifting capacities of 4.5 tonnes.

With a lifting height of 15m and 19m, respectively, the TH 4,5.15 and the TH 4,5.19 are available in two Deutz engines versions of 55kW and 75kW.

These new TH models, designed for construction and light industry are engineered to ensure maximum performance.

**AUSA** has launched a new range of electric vehicles, incorporating the D151AEG dumper and the T164E telescopic handler. The pair were launched at bauma, in Germany, last month.

The T164E is also the company' first electric telescopic handler with a 1,600kg payload on the market. With its all-terrain capabilities and a maximum lifting height of 4m, it is ideal for working in emission-free spaces such as greenhouses, enclosed spaces and working at night, due to its minimal noise.

Both models have been designed with an operating range of at least one full working day. The li-ion battery pack is managed electronically to offer maximum power in all-terrain conditions that match diesel vehicles. Also, when the accelerator is released, the electric motor reduces the speed instantaneously while the energy is regenerated, extending its range.







**Teupen presented the compact LEO24GT and LEO27GT spiders.**

area that is capable of 220kg capacity in the basket with the model's double pantograph boom. The unit is designed to provide excellent up and over capabilities. One section of the pantograph is shorter, meaning that closing of the unit is more compact. It also transports on a standard trailer.

The whole range is now complemented by Platform Basket Telematics system and the Green Concept, with the Green logo, which sees the entire line being offered as hybrid or electric. While this latter option has already been available, the plan is to optimise the hybrid and electric system.

Another new item on the stand was the update of the company's 18.90; now named the 18.95. It now has a 230kg capacity, compared to the previous model's 200kg capacity and has remote control as standard, along with the option of a winch.

**TEUPEN** launched the LEO24GT and LEO27GT platforms at Bauma.

The 24m and 27m working height machines, respectively, include a transport width of approximately 89cm and a 250kg basket load.

The LEO24GT has a deadweight below 3,000kg and will fit on a 3.5 tonne trailer.

Both machines have a lateral outreach of 12.2m and are equipped with basket load sensor and an efficient hydraulic system with a variable pump. There is a radio remote control, display in the basket and hydraulic height and width adjustable tracks.

Besides standard stabiliser set up, there is an additional one called the church position - both front stabilisers in wide position, both rear stabilisers in narrow position.

**OMME** launched its 3100RJ spider at the show. It marks the manufacturer's first full foray into digital controlled access through the next generation wireless unit controlled by a Danfoss system, and providing interactive diagnostics. New software can be uploaded remotely to the controller.

The controller can be used on the ground or

in the basket and can be kept in a secure box built into the back of the machine.

The 31m working height heavy duty wide product is designed for outdoor use and weighs 5,900kg. However, this is a current weight for the prototype that was displayed and is likely to go down. It also introduces a modular design, meaning that new batteries can easily be swapped, for example.

**EASYLIFT** was showing its 53m working height RA53, spider lift. The giant tracked platform is in prototype stage and is available as a diesel or hybrid HY version, with a lithium battery option. According to the Italian manufacturer one of its French customers will buy the machine once it is ready over the next year or so. The 53m spider tops the range which previously ran from 13m to 42m. It as 1,000kg winch, which means it can double a crane and a basket capacity of 360kg.

Easylift said it is now thinking of upping the working height again with a 60m model. For more details of that, we will have to wait.

**ICM**, founded in 1984 and traditionally a



**The heavy duty 3100RJ spider from Omme Lift.**



**ICM has newly launched into spiders with the Qlift brand.**



**Leguan was showing its new spider at the show.**

manufacturer of truck mounted cranes that moved into the production of excavators, has now moved into spider lifts too, with the launch of two products, branded the Qlift. They include the 15.8m working height H 160 model and the 22.9m working height H 230. The H160 offers a lateral extension of 9.5m with a single operator in the basket, or 7.6m with two operators.

The H 230 has two work modes, with an outreach of 11.6m, without extending the stabilisers and a single operator in the basket. An outreach of 11.6m is also possible with two persons in the basket, when the stabilisers are in full use.

**AI**



**The R420HY is an established hybrid on the market from Easylift.**





**DRIVE PRODUCTIVITY, ENHANCE SAFETY & SUSTAINABILITY**

# ACCESS ANYTIME, ANYWHERE

Construction hoists, transport platforms and work platforms from Alimak facilitate the work of many different users in many industries on all continents around the world. The construction market worldwide is currently in a state of change. The buildings that are erected are getting taller and more complex, but at the same time, higher and higher demands are placed on productivity, safety and sustainability in construction projects.

We feel at home in this world. Large and small customers can count on vertical access solutions from Alimak to drive productivity, improve reliability and, not least, employee safety and well-being. Furthermore, sustainability is the very DNA of Alimak's strategy.

Visit our website for further information

[alimak.com](https://alimak.com)

**ALIMAK**



# Taking their



**Zoomlion was launching its new 58m working height telescopic ZT581 boom lift, making it the largest boom lift in the world.**

**T**here was no doubt that Chinese manufacturers of scissor and boom lift access equipment are taking their opportunities in Europe.

This was clear at the Bauma exhibition in Munich, where they were out in force, with large stands covering complete ranges of MEWPs.

Zoomlion, for example, told *AI* at the show that its goal is to be the third largest manufacturer of access equipment in the world in the next two years. As Leon Liao, Zoomlion's sales director for North America, concedes, this is also the goal of a number of Chinese manufacturers that have entered the access market in recent years.

With the recent signing of a distributor partnership in Finland, Zoomlion now has a sales partner in every country in Europe. The company's ultimate goal is to capture 30% of the market share of MEWPs in Europe.

Liao says the next 18 months are critical for all Chinese manufacturers, while the established manufacturers in Europe and North America grapple with supply chain issues, causing a serious lack of components and available finished products.

While Zoomlion seeks to capitalise on this, as do other Chinese manufacturers, with their relatively shorter lead times, Liao confirms that competition in Europe will be fierce. "With

Chinese manufacturers were out in force at Bauma and they were making their global ambitions clear.



**LGMG telescopic booms at Bauma.**

this competition will be serious issues, such as limited margins, longer payment terms and a very competitive labour market.

"This time window is very important. We know that after this time, if we have not introduced good service then our image will crash. It's a survival challenge."

Liao foresees that by the end of 2027 there will only be 3-4 large Chinese manufacturers that survive in the market.

Sinoboom concurs with this ambition and aims to be in the top four access manufacturers globally by 2025. (See more news about that manufacturer in an online interview with co-owner Susan Xu, coming soon).

## New facilities

Demonstrating its ambition, LGMG has launched a new 8,000 square metre parts facility in Dordrecht, the Netherlands, with a PDI inspection area and service zone. The facility has the capacity to stock up to 2,000 units.

Most of the products on its stand were new products ranging from slab and RT scissors, to vertical masts, crawler lifts and electric articulating boom lifts. An example of its latest product lines is the new T-range, with the electric T20 JE being on the stand. This model is accompanied by 20m, 22mm, 26m and 28m versions. The axle drive system has four-wheel steer and a full-time oscillating axle system. And there are three steering modes. There is an AC drive and AC pump motor along with an

80-volt battery lithium battery.

As LGMG's vice general manager Yanyu Shi explained to *AI* at the show, there was "Electric products are very popular in the European market. In this exhibition, we focused on displaying a full range of electric products, as energy saving and environmentally friendliness have become a global consensus."

However, Yanyu is not lost on the challenges that remain in the European market when it comes to the roll out of electric MEWPs. "Due to charging infrastructure limitations, full electrification will still take some time – diesel and hybrid power will exist for a long time in some larger products."

As with competitors from its domestic market, LGMG's ambitions are strong. "In the next three to five years, LGMG will continue to increase its investment in the European market." It will do this, it says through localising its operations further, attracting talent from across the globe and focusing on cutting edge products.

"Chinese manufacturing no longer means low end manufacturing – a group of outstanding world-class manufacturers have emerged."

## Brand expansion

Dingli is making an active move to promote its products under its own brand name, although the existing arrangement with Italy-based Magni, under which it sells Dingli machines with Magni branding will continue with an effort to increase that distribution network.



**Dingli had a major product range at Bauma.**



# chances



One of the two scissors on LiuGong's stand.

The plans are now to further develop the service and administration department across Europe. Indeed, the manufacturer now has 10 divisions around the world, including South America.

In the US, Dingli plans to keep its

arrangement with MEC, similar to the Magni partnership in Europe, completely unchanged. Dingli Europe was launched last year, and complements the pre-existing Dingli UK.

The company had a large range of products no its Bauma stand, which have all been widely reported in this magazine and on the *AI* website. It included the large boom range, for example the 44m telescopic boom that can fit in a standard container. The hybrid Range Extender series was there too, incorporating a lithium powered motor, with a combustion diesel-fuelled recharger to back it up. Plus, there was low level access and the new Oil Free series. Currently the series of scissors and booms cover 13ft to 19ft and that will rise to include 20ft – 26ft versions, which are now at production stage, while the future will see oil free machines from 32m to 45m.

## Scissor presentations

LiuGong was on show, based on a stand shared by three of its distributors for Germany – Eder in Bavaria, IBB in the Frankfurt area and Hoffmann, based in Stuttgart.

The three, which between them cover the



Sunward presented a range of scissors on its stand. (See the online interview with Sunwards Access CEO on the *AI* website)

whole of Germany joined together for the show. The company is just starting its push into Europe and by the end of the year plans to have around 80 units in the continent. As with other Chinese manufacturers, the company is promoting a relatively short lead time of five months for its 15 models of scissors that will be available in Europe. Those being 4m, 5m and 6m narrow models and 6m, 8m 10m and 14m standard scissors, all of which are electric drive.

The scissors' component bays are attached as separate units, rather than being integrated. This allows for easier maintenance. **AI**



## ENHANCED PERFORMANCE

U.S. BATTERY'S **AGM DEEP CYCLE** batteries feature a CARBON-ENHANCED negative active material that improves charge acceptance and cycling performance.

[WWW.USBATTERY.COM](http://WWW.USBATTERY.COM)



# Electric arrivals



JLG's updated EC Series Gen 2, at Bauma.

Most of the recent launches of articulating booms are unsurprisingly electric-related as the interest in battery-powered MEWPs continues.

A surprise attendee at October's Bauma exhibition was JLG, or at least the company had announced its presence in the weeks leading up to the show.

JLG was on display at the Munich show on its then partner Hinowa's stand. Since then we have learned that JLG has acquired Hinowa.

The company was launching the renewed version of its electric boom EC Series models.

JLG had previously planned not to attend Bauma. However, its relationship with Hinowa and their manufacturing agreement, created an opportunity for JLG to present its products.

The partnership between the two companies was formed in 2010, when JLG Industries agreed to sell four of Hinowa's spider lifts exclusively in the US and other markets outside the EU. Over the years the supply agreement evolved to a broader partnership and extended the JLG's spider offering to six models and a manufacturing agreement under which the Italy-based company produces JLG's electric boom lift series, the EC Series.

Updates to the two new 15.72m and 18m working height EC Boom Series Mark II models include an advanced battery technology, with an improved battery capacity of 10kW, with the option to upgrade the pack to 20kW for prolonged duty cycles and autonomy.

JLG also made improvements around cold weather performance and introduced a 4x4 wheel drive option to increase terrain capability, a feature that had been requested by customers.

Karel Huijser, general manager JLG in EMEAI, comments, "The launch of the EC



Genie's Z45-FE is a hybrid machine, and an example of how the company is adapting.

The Dingli D-Series is available in electric, hybrid or diesel versions.





Series Gen 2 marks a successful collaboration between our two companies.”

**Next generation**

Huijser adds, “Whilst not being present at bauma, we are proud to unveil the EC Series at the Hinowa stand.”

Manitou Group is accelerating the roll out of its Oxygen low emissions range with two further rough terrain models.

The rough terrain 160 ATJe and 180 ATJe, with working heights of 16m and 18m respectively, joins the 200 ATJe model launched at the previous Bauma in 2019. As of this year, the 20m 200 ATJe is available with four-wheel steer for greater manoeuvrability and a basket that can now take 250kg of capacity - 30kg more than on the two-wheel drive version.

The 160 ATJe and 180 ATJe platforms also see their capacity increased by 50kg to a basket capacity of 250kg. A second version of the 160, named 160 ATJ+ e, offers a significantly larger capacity of 400kg.

A range extender is available for these products in the form of a removable diesel-powered generator common to all the machines.

The 160, 180 and 200 ATJe models also now come with a Safety Pack, which includes an alert if the harness is not attached and detects obstacles around the machine.

A loading pack provides lights positioned on the platform to ensure operators can see and that the platform can be seen.

A new version of the 120 AETJ platform has also been added to the industrial range. Presented as a sneak preview at bauma this year, the model has been entirely redesigned and is fitted with asynchronous AC motors. A lot of work has been done on the accessibility of the components, explains Manitou, such as the pivoting battery containers and tool-free access, for savings on machine maintenance.

This new generation of industrial articulated

**Manitou's new 160 ATJe.**



platforms is equipped with the same diagnosis system as the rough-terrain range for rapid maintenance without the need for external tools.

All these models are currently powered by lead acid batteries, as the company explains, they remain less costly and customers know where they stand with them following years of previous use. However, there is view to introduce lithium alternatives in the future.

**Electric partnerships**

Indeed, while diesel boom lifts still outsell electric options by a wide margin, the talk remains around the potential and need for electric equipment going forward. Therefore, the prominent launches tend to be in this area. As part of that development, OEMs are partnering with specialist firms to develop these products.

The latest one is Genie through its owner Terex Corp, which has invested in US technology company Acculon Energy to accelerate the electrification of its machines.

Acculon, based in Columbus, Ohio, has experience in advanced battery technologies as well as artificial intelligence and cloud-connected products. Terex says it had important expertise in certifying battery-enabled systems.

Simon Meester, Genie president, says, “Now, as the global construction industry gears up to get to the next level of emissions reduction, Genie is excited to be teaming with Acculon.”

Genie adds that the partnership with Acculon will push the progress on current and future development projects.

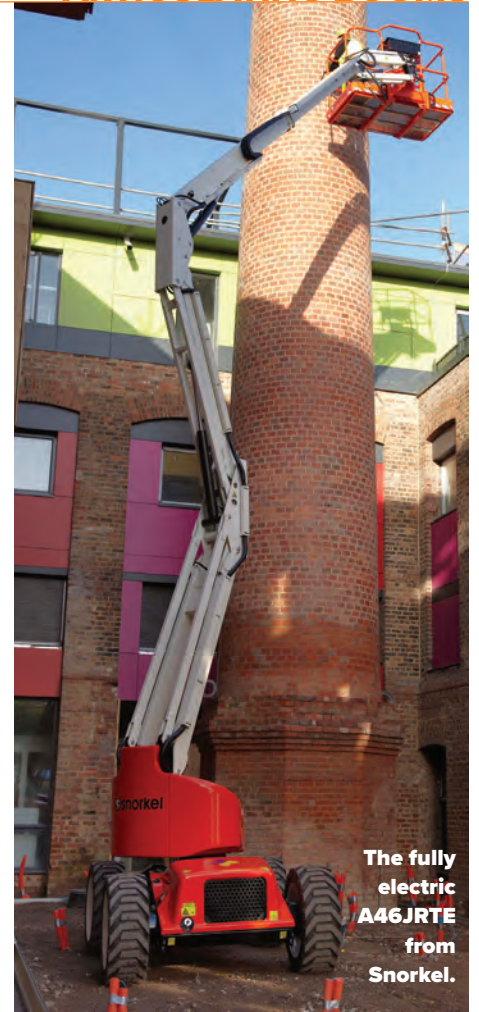
Acculon's president, Andrew Thomas, confirms, “Our partnership will accelerate the delivery of next-generation electrification solutions for Genie equipment and the people who count on that equipment every day.”

As Snorkel points out, once universal charging becomes more widely available, electric power trains are simpler and more cost-effective to maintain on the job than those powered by internal combustion.

For example, the company says its A46JRTE fully electric articulating boom lift reduces battery and electrical-system maintenance enough to drop servicing costs up to 93%, compared to a standard engine. A big chunk of that reduction is labour, and removing the boom's engine and hydraulics eliminates the costs and risks of waste oil and filter disposal.

**Lithium debate**

Snorkel adds that today's sealed, mostly lithium-based batteries also circumvent the significant investment in labour to maintain the water levels in the battery cells and the performance limits inherent in electric lifts that have drawn power from flooded lead-acid batteries (FLA) since early electrification.



The fully electric A46JRTE from Snorkel.

And, the chemistry of today's lithium-based batteries offers inherent performance advantages.

“With a high energy density, lithium-ion batteries are able to discharge more stored energy than lead-acid batteries, making them more efficient,” says Matthew Elvin, CEO of Snorkel. “Lithium-ion batteries have a better depth of discharge and can be used at a higher capacity before recharging.”

“Since lithium-ion batteries have a higher efficiency, they can handle a higher amp to charge faster than lead-acid batteries. The closer to full capacity, the slower lead-acid batteries need to be charged to avoid overheating. Additionally, not fully recharging lead-acid batteries could reduce their overall lifespan.”

Dingli, in its recent launch of lightweight equipment has also gone down the electrification and lithium route, as it has done as an option across its whole range of boom lifts. The D Series, which features seven models, are all available in either electric, diesel or hybrid versions.

Based on its original 16m to 22m boom lifts, the new D series of booms comprises four articulating models, the BA16, BA18, BA20 and BA22, and the BT16, BT18, and BT20 telescopic machines.

The platforms offer working heights from 16m up to 22m and maximum load capacity of 250kg.

The modular design of the machines means that 90% of their main components and over



follow us on:



for Site **215**

for Site **185**

# RAPTOR

SOCAGE



[SOCAGEWORLD.COM](http://SOCAGEWORLD.COM)

WELCOME TO OUR SIMPLE INSIDE™ WORLD



**EASYLIFT**  
AERIAL PLATFORMS

**FOR  
ACROBATIC  
WORK...**  
BUT IN SAFETY!



follow us

**TRIDENT**  
INTERNATIONAL PVT. LTD.

## TRAXTER

MEWP Tyres by Trident

Comprehensive Tyre Solutions for Boom Lifts  
| Rough Terrain Scissors | Telehandlers | Scissor Lifts

**Ex Stock availability of Tyres, Wheels & Assemblies for all makes and models**

- Ready to Fit Solid Tyres & Wheel Assemblies
- Ready to Fit Foam Filled Assemblies
- Non-marking Wheels for Scissor Lifts
- Consolidated Shipments
- Wheel Exchange Program



**CONEXPO  
CON / AGG**

Booth - W44231

**2022**  
MAINTENANCE  
EXHIBITION  
14-16 JUNE

STAND 130

INDIA : Survey No. 70/A, Rashmi Industrial Estate, Wanawadi,  
Pune - 411 040 India Phone : +91 20 40092355,  
Email : [salesteam@trident-intl.com](mailto:salesteam@trident-intl.com)

[www.trident-intl.com](http://www.trident-intl.com)





95% of the structural parts are common to the D Series, making maintenance cheaper and user training simpler.

While the models provide the same height coverage as the manufacturer's previous series models, their new lightweight design also offers a lower centre of gravity for greater stability.

All seven models, which are suitable for container transport, are equipped with an integrated four-wheel drive system, and their components are located on the sides of the chassis for easy access during maintenance.

The built-in universal range extender enables the machine to generate electricity by itself when there is no external charging facilities on site. Combined with a tank of fuel, the range extender can charge the lithium batteries at anytime.

Like many OEMs, Dingli has taken the lithium battery route, and understands that a lack of charging infrastructure in areas such as Europe, means that diesel powered range extenders that essentially re-charge the lithium battery are a useful tool.

It is for this reason that Dingli has introduced a new hybrid boom lift series designed for work on sites where there is no power supply to charge pure electric equipment.

The new Range Extended Series is an advanced version of Dingli's lithium battery-powered boom lift offering which comes with a 'mobile charger', in the form of a small combustion engine.

The series is based on the same specifications as the company's existing electric boom range, with maximum working heights of 22m to 34m, maximum load of 454kg and a 80V (420Ah) lithium battery pack.

## Battery only

Such is the obvious long-term benefit of electric products, a couple of manufacturers at the recent Bauma exhibition in Germany, chose to only show electric products on their stands. One of them, Italy-based Airo had chosen two articulated products, the 12m working height A12 JE and the 17m A17 JE.

Both have electric drive and AC pump control and offer a range of benefits, including proportional and simultaneous controls and a steel platform with a load limiter.



**Airo was only showing electric equipment on its Bauma stand, including the A17 JE.**

## ELECTRIC LIGHTWEIGHT

Lightweight equipment is the name of the game at Dinolift and now the company has extended this to its first all-electric boom lift, which was launched in August and shown at Bauma.

The Dino RXTE, with outriggers, is an extension of the Dino RXT Series of lightweight 4x4 boom lifts, with the advantage of silent operation and zero emissions and lower cost of operation.

As with the existing diesel versions, the series includes two models with working heights of 22m and 28m, equipped with either an AGM or Li-Ion battery pack.

One of the design principles of the new models was that there would be no loss on drive or boom operation speeds, compared to the diesel machines.

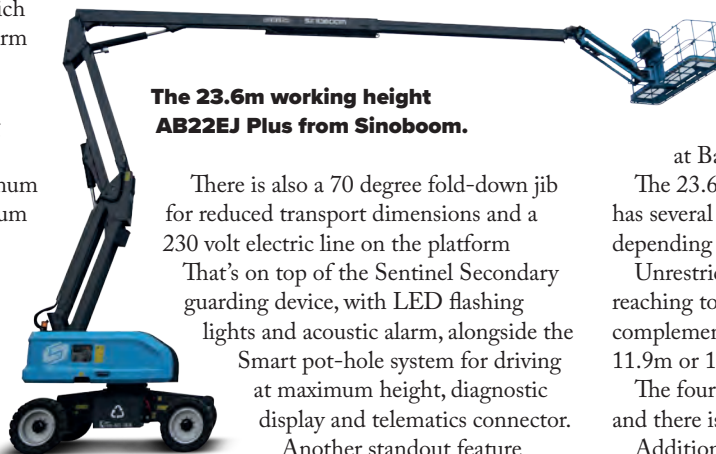
The RXTE has a range of lift functions that can be used at the same time, such as operating the outriggers simultaneously while driving is also possible. The electric motor has a continuous power rating of 15kW while the peak power is 20kW.

Thanks to the lightweight structure and outriggers, there is a general reduction in operational costs when comparing the RXT or RXTE to a larger boom lift with a larger 19kW engine. The units can be used in areas with load restrictions or where the surface is soft, for example lawns.

Another feature of the RXTE is that the structure and hydraulics largely coincide with the diesel model.

For tough work environments, where battery power may be depleted sooner, there is an optional combustion engine range extender that can be bolted onto the unit to charge the battery if required in non-environmentally sensitive settings.

**The Dino RXTE is an extension of the Dino RXT Series.**



**The 23.6m working height AB22EJ Plus from Sinoboom.**

There is also a 70 degree fold-down jib for reduced transport dimensions and a 230 volt electric line on the platform. That's on top of the Sentinel Secondary guarding device, with LED flashing lights and acoustic alarm, alongside the Smart pot-hole system for driving at maximum height, diagnostic display and telematics connector. Another standout feature is the possibility of driving and rotating the turret at the same time, while simultaneous controls allow greater versatility. Their height, at less than 2m, allows the units to pass through standard doors.

Sinoboom has gone a step further and is only selling electric equipment, including booms, in Europe. No diesel-powered equipment will be

available, along with a range of new articulating lifts including a Plus series model with 450kg lifting capacity that was at Bauma.

The 23.6m working height AB22EJ Plus has several platform capacity possibilities, depending on the working envelope.

Unrestricted, the capacity stands at 230kg, reaching to 340kg and 450kg restricted. To complement this, outreach extends to 13.4m, 11.9m or 10.45m, depending on the capacity.

The four-wheel drive offers 40% gradeability and there is standard active axle oscillation.

Additional to this is Sinoboom's Smart display screen for easily available machine status and fault diagnosis.

There is also an auxiliary power system and the company points out that the unit has a Rexroth controller.

The main boom and secondary boom are equipped with angle sensors, to reduce speed and act as a buffer. Proportional steering speed reduction technology is also available.

All these again will be complemented by Sinoboom's new factory in Poland. The proximity of the new facility in Poznań, western Poland, to Sinoboom's European subsidiary in the Netherlands, represents a significant milestone in Sinoboom's global strategy for a localised focus.

The facility occupies an area of 20,000m<sup>2</sup>, and features product lines including electric slab and rough terrain scissor lifts, articulating and telescopic boom lifts and an annual production capacity of 20,000 units.



THE NERVOUS  
SYSTEM  
OF EVERY  
GREAT  
MACHINE

**TRiONIC**  
GROUP

[www.trionicgroup.com](http://www.trionicgroup.com)

*Desired Height With Ansan...*



info@ansanhidrolik.com.tr +90 (262) 341 45 30

ansanhidrolik.com.tr





info@ipaf.org  
+44 (0)15395 66700  
www.ipaf.org/contact

**IPAF SPREADS INDIA SAFETY MESSAGE**



**Jason Woods (left) and Dr Ramesh VM, Honorary Secretary of the National Safety Council.**

An agreement between IPAF and a local chapter of the National Safety Council of India will see the two organisations work together in the state of Kerala to spread awareness about key risks and mitigations when using MEWPs to work at height.

Jason Woods, IPAF's Regional Manager for the Middle East & South Asia, met representatives of the Kerala Chapter of India's National Safety Council to discuss safety standards and the need to promote risk awareness and quality training for operators of powered access.

He says: "It is important for IPAF to collaborate with like-minded safety professionals, and recently I met Dr Ramesh VM, Honorary Secretary of the National Safety Council, Kerala Chapter. One of India's leading safety associations, the National Safety Council (NSC) of India was founded in 1966, and hosts 17 chapters across India. The NSC's Kerala Chapter was founded in 1970, to promote education under the mantra 'safety touches everyone'.

"IPAF will be supporting the NSC in every way possible, starting with the mutual promotion of IPAF's quality training across the region," added Woods.

■ IPAF's representatives will be attending the OSH India 2022 expo in Mumbai on 24-25 November. Visit IPAF in Hall 4 of the Bombay Exhibition Centre.

# New catapult effect safety awareness leaflet

**A** safety awareness leaflet has been issued to warn users of mobile elevating work platforms (MEWPs) about the catapult effect, which can cause occupants to be ejected from the platform, leading to serious injury and death, especially if occupants in boom-type machines are not wearing the correct personal fall protection equipment (PFPE).

The leaflet, entitled MEWP Catapult Effect, has been created by IPAF's Safety & Technical team as part of the federation's ongoing Don't Fall For It! global safety campaign, which is targeted at reducing falls from the platform.

Brian Parker, IPAF's Head of Safety & Technical, comments: "We have condensed the key



occurs when stored energy or an impact to the MEWP's structure causes a whiplash effect, which travels through the boom to the platform.

Key advice on the new leaflet is broken down into three sections: Planning the job, including thorough site risk assessment and rescue planning.

The section on the work environment touches on the need to plan and walk the route,

looking out for obstructions and hidden hazards, as well as making sure the ground is firm.

The section on operating the MEWP advises maintaining continual observation around the MEWP at all times, using a banksman or spotter to identify hazards.

■ To view and download your free copy of the updated IPAF MEWP Catapult Effect leaflet, please visit [www.ipaf.org/resources](http://www.ipaf.org/resources) **AI**

## 'Adopt ANSI standards now, before OSHA makes them law'

Attendees at the ALH Conference have been urged to adopt the ANSI suite of standards related to the design, safe-use and training of MEWPs in the US ahead of them being adopted in law by OSHA, the country's governing occupational safety and health body.

Speaking at the Access, Lift & Handlers Conference in Rosemont, Chicago, US, on 29

September, Peter Douglas, CEO of IPAF, urged the US powered access industry to start to "live by" the ANSI/SAIA A92.22 suite of standards, before it is officially adopted by OSHA.

"Do we have to wait until OSHA adopt these standards and they become regulation before we start living by them?" he asked, challenging attendees to consider whether their business

were meeting requirements in the updated standards, including the need for all those who operate MEWPs to be trained; people responsible for familiarizing others to be trained as demonstrators, and a requirement for trained supervisors.

"My question to you is 'are you living by these standards in your business?'" he asked. "I'm guessing the answer is probably not yes to all of these questions." He argued that if the industry cannot fully adopt the standard, how can it promote best practice among contractors and end users?

■ The ANSI/SAIA A92.22 4.2 Safe Use of Mobile Elevating Work Platforms (MEWPs) standards came into effect in the US in June 2020. For more information, visit [www.ipaf.org/ANSI](http://www.ipaf.org/ANSI) **AI >**



**Peter Douglas, CEO of IPAF.**



IPAF DIARY

IPAF will host or participate in the following events. Full details are at [www.ipaf.org/events](http://www.ipaf.org/events):

2022

**23 November**  
**IPAF IRISH PROFESSIONAL DEVELOPMENT SEMINAR (PDS)**

CityNorth Hotel and Conference Centre, M1 Meeting Hub – Junction 7, Gormanston, Co. Meath, Ireland

**24-25 November**  
**OSH INDIA 2022**

Bombay Exhibition Centre, Mumbai, India

**25-26 November**  
**PLATFORM GÜNLERİ 2022**

Tuzla'daki Autodrom, Istanbul, Turkey

**7 December**  
**IPAF UK PROFESSIONAL DEVELOPMENT SEMINAR (PDS)**

Online, via Zoom, 18:30-19:45

**14 December**  
**IPAF WEBINAR: PREVENTING MEWP MECHANICAL AND TECHNICAL FAILURES**

Sponsored by Hinowa and GemOne  
Online, via Zoom, 12:00-13:00 (GMT)

2023

**12-15 February**  
**THE ARA SHOW 2023**

Orlando, FL, USA

**14-18 March**  
**CONEXPO-CON/AGG 2023**

The Festival Lot - booth F8138  
Las Vegas Convention Center, Las Vegas, NV, USA

**29-30 March**  
**BUILDEX NI BELFAST**

Titanic Exhibition Centre, Belfast, Northern Ireland

**2-4 May**  
**UK CONSTRUCTION WEEK 2023**

Excel London, UK

**10-11 May**  
**VERTIKAL DAYS 2023**

Stand 618, East of England Showground, Peterborough, UK

**6-8 June**  
**APEX 2023**

MEEC, Maastricht, Netherlands

**13-15 June**  
**PLANTWORX 2023**

East of England Showground, Peterborough, PE2 6HE, UK

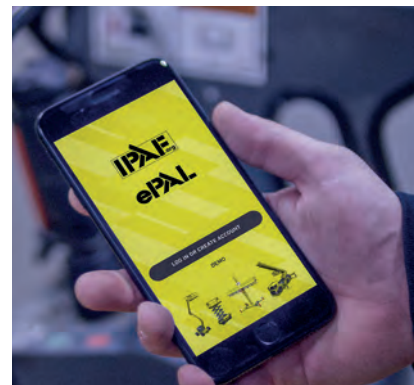
# ePAL app surpasses quarter of a million downloads

IPAF's ePAL mobile app for operators of MEWPs and MCWPs has surpassed a quarter of a million first-time downloads. The ePAL app was launched in June 2021, with the global roll-out completed earlier this year. The app allows digital certification of training, including IPAF's Powered Access Licence (PAL) Card. It is free to use and is available in seven languages.

The ePAL app features a digital IPAF PAL Card, operator logbook and safety guides, and also allows operators to receive safety information, technical tips and enables easy on-the-spot reporting of incidents and near-misses to IPAF's online portal. The

app is available in all territories where IPAF certifies training, and to date has active users in more than 160 countries worldwide.

Peter Douglas, IPAF's CEO and Managing Director, comments: "We developed ePAL in partnership with our member firm Trackunit in part to offer operators and supervisors a digital tool to share training certification and log equipment time, and also as part of our ongoing digitalisation projects. We are streamlining processing of IPAF licences and have significantly reduced the carbon footprint involved in sending hundreds of thousands of plastic PAL Cards and paper certificates all around



The ePAL app.

the globe each year.

"It is encouraging to see that ePAL is being downloaded by ever increasing numbers of people around the world."

■ To find out more about IPAF's ePAL mobile app, see [www.ipaf.org/ePAL](http://www.ipaf.org/ePAL).



## Successful in-person return

IPAF ELEVANDO returned as an in-person event for the first time since the pandemic on 10-11 November in Querétaro, Mexico, with around 180 delegates in attendance across the two days.

The event was hosted by IPAF to update on developments in the powered access industry across Latin America, and featured top-level speakers, industry networking and workshops across two days at the Hacienda Jurica Hotel in Querétaro. Last year the event was held as a digital seminar owing to the pandemic, so this year marked a return to the in-person format last hosted in 2019.

Diego Bustamante, IPAF's Latin America Regional

Representative, comments: "It was encouraging to see the appetite people showed for ELEVANDO's return as a physical event. This was reflected by the record number

of attendees the event attracted. I'm sure all who attend will have gained valuable insights into our industry and enjoyed the networking element."



### NEW MEMBERS

**IPAF welcomes the following new members. Full contact details are in the Membership Directory at [www.ipaf.org](http://www.ipaf.org)**

**CONTRACTOR/INDUSTRIAL USER**

- Access Engineering Group, Perth, Australia
- Multiplex Construction Europe, London, UK

**HIRER/RENTAL**

- Canal-Barberan, Tordera, Spain
- Empire Hire Group, Dunstable, UK
- Schünke Bauzentrum Baumaschine, Wehr, Germany
- Scotia Access Systems (NSW), Cleveland, Australia

**INDEPENDENT INSTRUCTOR**

- Kari Knott, Pencoed, UK

**SAFETY PROFESSIONAL**

- Arnold Angstetra, Singapore
- Bey Bey Fock, Singapore
- Raymond Lee, Singapore
- Sharul Nizam Bin Sawi, Singapore

**SERVICE/COMPONENT SUPPLIER**

- 3A Piracicaba Escoramentos E Máquinas Para Construção, Piracicaba, Brazil

**SMALL USER**

- Hedigan Construction, Birmingham, UK
- Primrose Property Maintenance, Penstraze, UK

**TRAINING**

- Qualitrain Powered Equipment, Nottingham, UK
- The Knowledge Opleidingscentrum, Tilburg, Netherlands







## Finding you the best talent in the **access** sector

Lawsons Recruitment has access to **unrivalled** industry knowledge and **connections** through our parent company, KHL Group.

With more than **200,000** industry professionals on our database, we can find the **perfect** people for your company.

POWERED BY **khl**



**LAWSONS**  
GLOBAL RECRUITMENT

[www.lawsons.com](http://www.lawsons.com)

**BRONTO SKYLIFT** 50 YEARS



## When the job gets tough, we get started

"In Finland, the cold can get extreme and the darkness sets early. We've learned to innovate in harsh conditions and build world-class solutions that make life easier. Even today, the Finnish persistence affects everything we do. We've been up for it since 1972."



[brontoskylift.com](http://brontoskylift.com)





# Full speed ahead

**W**ith a raft of acquisitions under its belt in Europe, Time Manufacturing Company has global growth and product development in its sights. Such a fast expansion requires a calm pair of hands to steady the ship, and Kim Bach Jensen has been chosen to take on that role.

Jensen joined Versalift, part of US-based Time Manufacturing, in 2009 and since then has been in a range of roles at the company.

Based in Denmark, over the eight years before taking on his latest post, Jensen was managing director of Versalift International, concentrating his efforts in Denmark, the UK and France, which were the key markets of the utility-based van and vehicle mounts that the company produces.

One of the key achievements that Jensen oversaw in this period was the introduction of the VTL-Series in 2018, produced primarily in Denmark, whereas in the past much of the lifts had been brought in from the US. In less than three years, production was increasing tenfold annually, and in 2021 Versalift celebrated the production of 1,000 units.

Produced in Denmark, the VTL-series was designed to push the boundaries of the industry and provide the best possible vehicle mounted platform, tailored specifically for the European market.

Since then there has been a flurry of activity, which saw Time complete the acquisition of Germany-based Ruthmann in early 2021, along with its Bluelift spider lift line.

Then in June 2022 it was announced Time had acquired FE Group, which incorporates France Elévateur and Spanish producer Movex, along with subsidiaries FE Benelux and FE Deutschland.

**Time Manufacturing has been on the acquisition trail in recent times, seeing its European employee numbers rising more than four-fold in a couple of years. The president of Time's Europe wing explains the company's vision for the future and the plans it has in place.**

In conjunction with this latest buyout Jensen was named as the president of Time Manufacturing Europe, a role in which he is now responsible for the management and oversight of European manufacturing and distribution for the group, including Versalift, Ruthmann, Bluelift, France Elévateur and Movex.

## Rapid expansion

The changes at Versalift have come quickly, with the number of employees at the company rocketing from 350, before the investment in Ruthmann, to 1,300 after taking on the 500 employees at the company, plus France Elévateur and Movex's combined 400 workforce.

It also means that between 50% and 60% of Time's business now comes from Europe, while the US branch oversees its own Versalift, Aspen Aerials and BrandFX products.

As fortune would have it, Jensen describes himself as a people

person. "I love the people management side of things and a lot of this is about management of people across countries."

As Jensen points out, even though the company is owned by the 'mother ship' in North America, geographically speaking the European enterprise is a long way from the US, and therefore it is a relatively standalone entity.

Developing existing major markets, like France, where Versalift now puts itself as third behind Klubb and France Elévateur, is important and not aided by a current drop in the core market there. "There's a downturn to the [France] telecoms market, so the competition will not be less in the short-term."

However, it is the long-term goal to grow international markets that will be key to the success of the group's growth. "With these acquisitions, our route to growth will not be France, but the possibilities in the export and new markets."

While one might imagine that many of

The Versalift VTX-240.





the products brought together by those recent acquisitions are quite similar – for example a significant part of Versalift, France Elévateur and Movex’s output is van mounts, Jensen explains that in fact each brand has a unique place in the market.

“There are some overlaps in the van markets, but they are different products. The features are different and some are more cost effective to gain market share in different markets.”

**Brand recognition**

As Jensen explains, with Versalift being a premium product and attractive to certain European markets, it may be easier to bring France Elévateur products into a new market, where customers would not choose to invest in a Versalift at this stage.

One thing that unites the group is its quality levels. “All our brands are synonymous with quality and reliability, and all the brands have a long history, and the overlaps of the brands are pretty strong.

“When you look at those brands together with their solid distribution, not just in Europe but globally, you have a good footprint to be the preferred choice - the one stop shop.”

As part of the move to adopt that one stop shop strategy, the group will revise its infrastructure, starting in Germany and France, so that all the brands are integrated into the same distribution network. “When we spoke to major customers this is what they want in the future.”

However, while distribution will be brought together, the brands will remain separate in their offerings in the foreseeable future.

Jensen provides an example, “What surprised

me with FE Group is that I thought Movex was a small company making 50 units a year or so, but was surprised to learn they sold 400 units in Spain, and history shows that neither FE or Versalift have sold much in Spain historically. Spain is a big market so we now have the opportunity there with people who understand the Spanish market.”

France-based FE Group acquired Movex in 2021 as part of its own goal to move into the Spanish market.

There are also opportunities internationally with individual brand recognition, says Jensen. “They all have a strong and robust history in their areas and we could make them even stronger on a global level. So, we can take Movex and introduce it as a global product with Movex specification and features. We will retain that brand strategy.”

Likewise, all the existing production facilities, including in Denmark, Germany, France and Spain will be retained. “And we are looking to expand our facilities in all the manufacturing bases. We need all the capacity that we have at present. Of course, we also have the new products coming online and we have to continue our business development.”

As with every manufacturer, the supply chain crisis has been a thorn in the side for Time with microchips being a common issue, alongside the availability of chassis.

“The main problem has been the delivery of trucks and chassis. Every week it’s the same, all over Europe and the US as well.”

In addition, says Jensen, the war in Ukraine long-term has uncertain implications. “How long will this affect us, alongside the rising energy costs? We are all affected at different levels in Europe, some more, some less.

However, every month we look at our cost base, and some of these extraordinary expenses will end up with the customer in the end - I’m sorry to say it but this is the reality.”

“ When you look at the brands together, with their solid distribution, you have a good footprint to be the preferred choice - the one stop shop. ”



**TIM BACH**  
JENSEN, Time Manufacturing Europe, president.

**Market variation**

A very interesting export market for Versalift Europe is North America. Describing the US as an export market when your parent company is based there, might seem like an anomaly, but all those who deal in vehicle mounts will know that the product types vary greatly between those in Europe and their counterparts on the other side of the Atlantic Ocean.

Nevertheless, the potential of Ruthmann truck mounted products and its Bluelift spiders have shown significant potential in the US, with spider lifts seeing major growth there.

Both product types have been represented in the US by distributor ReachMaster for a number of years - ReachMaster was also acquired by Time in early 2021.



Time Manufacturing Company had a strong presence in Bauma with all its brands on show, including Ruthmann Bluelift.





# The world's largest rental fleet. Now available for purchase.

Equipment from the world's largest rental fleet is also available for purchase. With over 1,300 locations and approximately 4,500 classes of equipment, United Rentals can help you grow your own fleet.

To learn about buying and exporting our used equipment, visit us at [unitedrentals.com/export-sales](https://www.unitedrentals.com/export-sales).

**UnitedRentals.com** | 800.UR.RENTS

© 2022 United Rentals, Inc.





“The market is very different but we have looked to implement growth through ReachMaster. And we are currently focused on Ruthmann and Bluelift in the US.

“The new (US) ANSI standards are now closer to the (European) EN280 standards but we need to be sure we can meet requirements.

“Bluelift is a big success in the US, we want to bring in more products from Europe but want to do it in a smart way.”

Further to this, Jensen believes Europe can bring a lot to the US market through Versalift's other products, even the compact 3.5 tonne GVW truck mount, which has traditionally been set at that weight to allow

people with standard European driving licences to drive the vehicles on the road.

**Planning ahead**

Looking ahead five to ten years, Jensen says, “The main target in Europe was to get a lift on a 3.5 tonne. That has not been an issue yet in the US but in states like California and New York they have started to look at these things and Europe has a lot of good solutions to bring to the US market.”

The one arguably standalone product type in the Time portfolio is the Bluelift spider range, which is obviously different to the rest of the group's range of vehicle mounted

products. Nevertheless, there is a tradition for truck mount OEMs to offer spiders as a complementary product and the same is true at Time.

“It's still new for us but we would like to expand this area. Five years ago Bluelift was an Italian company, (before it was acquired by Ruthmann), now the Ruthmann team has gained it more market share across European markets, including Scandinavia and UK and hopefully we will expand that business.”

Ultimately, Jensen would like to see the company focus on all areas of potential, including taking the initiative in its traditional core markets, “In European markets that includes gaining market share from Klubb in France and CPL in the UK.”

And apart from the premium products that Versalift traditionally makes, along with its global ambitions, there is a realisation that gains can be made in the lower cost vehicle mount sector. “There is still room for new models in the markets where we are not today. We may use the low cost model but rather than calling them low cost, start using ‘smart cost’. This is a new area to develop but we will do it.”

Of course, Ruthmann already has the Ecocline, which was introduced by its Italian subsidiary some years ago and the plan is to develop that.

AI



**CONCRETE**  
results you'll see all year

Other shows may talk a big game, but only World of Concrete speaks concrete and masonry. We know that a solid foundation isn't just part of the structures you build — it's also the key to a more profitable business. That's why you'll find everything you need to strengthen your operation here, from new products, innovative solutions, and new technologies to help you capitalize on emerging opportunities.

**We Speak Your Language:** [worldofconcrete.com](http://worldofconcrete.com)

**WORLD OF CONCRETE**  
informa markets

**EXHIBITS: JANUARY 17-19, 2023**  
**EDUCATION: JANUARY 16-19**  
**LAS VEGAS CONVENTION CENTER**

**WORLD OF CONCRETE 360**  
Get the latest industry news at [WOC360.com](http://WOC360.com)

**U.S. COMMERCIAL SERVICE**  
United States of America  
Department of Commerce



# Inclusive education

**T**he International Powered Access Federation (IPAF) launched its Women in Powered Access initiative in May.

Inspired by IPAF President Karin Nars, who became the first woman elected to the role when confirmed at the IPAF Annual General Meeting in London in March, the initiative aims to open up opportunities for women; both those already working in roles in powered access and those considering joining it.

In her inaugural address to the IPAF Summit, Nars said, "Inclusion is important because it enables people to share different perspectives in a supportive environment.

Safety is a joint effort to which everybody can and should contribute – we cannot afford to exclude anybody from the conversation surrounding safety. While we may work in a male-dominated business, there is more to the story than that."

## Inspired stories

With the Women in Powered Access initiative, women of all ages and different professional roles were invited to share their stories of inclusivity. Through these stories and role models, Nars seeks to communicate the broad opportunities the industry can offer women.

"We do not want to compare or exclude anyone," adds Nars. "We are inviting everybody with a passion for our industry, and a passion for safety in powered access, to be heard and

**The skills shortage is a key challenge, writes IPAF's Matt Brereton, and an initiative to encourage more women to access is seeing positive results.**

to contribute. It is all about cooperation and bringing different perspectives to the table – for the good of our industry."

The response to IPAF's initiative has been encouraging, says the Federation, with women from across the industry reaching out to share their stories about what inspires them in their roles and to impart advice to others seeking to follow in their footsteps.

In this article we hear from women working specifically within training and learn how their experiences chime with one another, and the enthusiasm and passion for the work they do clearly come across.

## Career paths

Adele Coupe is Training Manager at Certora Training, a UK company with centres in



locations including Bromsgrove, Chesterfield and Livingston. She is also currently serving a second term on IPAF's Training Committee. She was one of the first people to get in touch with IPAF when the Women in Powered Access initiative was launched.

"I recently celebrated 22 years in the industry," she says. "I got involved in June 2000, working for a Manchester company that was selling IPAF training. I moved to Derbyshire in 2002 after meeting my husband – incidentally, we met when I sold him some IPAF training and the rest, as they say, is history!"

"Following this relocation, I joined Mentor in 2010 [the company has since rebranded as Certora Training] as a training coordinator, and quickly became access equipment account manager, responsible for expanding IPAF training sales and developing this side of the business.

"I have since become the training manager and part of my role includes arranging standardisation meetings for instructors, measuring the quality performance of our services, and ensuring the business is up to date on industry changes."

## Varied roles

Adele also invited Emily Bonsall, Certora's Managing Director, to share her story as part of the initiative. Hers is certainly an inspirational story of a rapid rise from industry entrant to someone in a position of seniority. "I joined Mentor Training in 2003 as a marketing assistant for a year's work placement from university," she recounts. "As a 20-year-old, I wasn't even really aware of the industry, let alone considering working in it – I soon realised it had so much to offer.

"In 2005 when I graduated, I returned to Mentor as a marketing coordinator. I have been



Adele Coupe.





**Karin Nars (centre) launches the IPAF WiPA initiative at Vertikal Days 2022 with apprentice MEWP engineers Megan Campbell (right) and Catherine McCreedy.**

the end goal is to raise the bar on safety. Coupe says, “I try to make a real impact with my work and help others. I’ve been an ambassador for training for a long time, coupled with a passion for safety in the industry. I’ve been lucky enough to work with inspirational people at Certora Training, who continue to encourage and support me to achieve my goals.

“I hope to continue to make a difference and contribute towards helping people get home safely after working at height,” she adds, in an echo of Bell’s words.

Bonsall says, “Seeing people develop their skills, knowledge and behaviours and creating an environment where they can be successful. Whether they be learners attending one of our training courses, instructors and assessors delivering training, or members of my team. I am inspired when I see how our services and the industries that we operate in have such a positive impact on the capabilities and safety of others.”

Lewis also finds fulfilment in helping people overcome their fears to boost their skills and confidence, “I try my best each day to give my training delegates confidence through gaining a qualification that helps them in their workplace. I also enjoy helping them overcome their fear of heights and try to make the day as enjoyable as possible for them.”

**Sound advice**

When it comes to offering a few sage words of advice to other women in the industry or those plotting a new career path, all are full of encouragement for those who would follow in their footsteps.

Bell says, “If you are thinking about joining the industry and are looking for a diverse, challenging and rewarding career, just do it. For those who are already within the industry and are wanting to progress their career further – set yourself some goals, and arrange a structured feedback session with your line manager. Don’t be afraid to ask what you need to do to progress those goals; self-awareness and the willingness to evolve is key. Above all, always be yourself, stay focused and be inspired! Gender should not determine your success, only you can do that!”

Likewise, Bonsall is keen to convey her enthusiasm to potential new entrants into the world of powered access, “Get involved – it is a great industry to work in and one I can honestly say I’ve never struggled in, regardless of the demographic split.”

Lewis and Coupe are also resounding in their advice to not let the perceived gender imbalance put women off. “If you have good communication skills and enjoy meeting lots of different people, this is an excellent career choice.” **AI**

*For more information please see: [www.ipaf.org/en/ipafs-women-powered-access-initiative](http://www.ipaf.org/en/ipafs-women-powered-access-initiative)*



**Debbie Lewis.**



**Emily Bonsall.**

lucky enough to work in an organisation that allows individuals to grow and develop with no limits on their aspirations, regardless of their gender, hence my role today! Working in all departments and gaining experience directly associated to training delivery, course creation, developing standards and the associated marketing – I can honestly say that I have never been bored!”

The sheer variety of the work in powered access is a theme that many women have mentioned. As Debbie Lewis, an IPAF Independent Instructor, comments, “This is a very rewarding job and there are lots of opportunities to gain new skills and pass this knowledge on to your training delegates. Every day is different – no two days are the same!”

Lewis’s sentiments are echoed nearly word-for-word by Kate Bell, Head of UK Training for Nationwide Platforms, part of the Loxam Group: “What I love about this industry are

the hard-working people that you meet and the challenges we face – no two days are ever the same. I get to play a part in assisting our customers from personal and professional development through to fulfilment and completion of a project – with safety being paramount, so everyone goes home safe to their families and loved ones at the end of each day. The customers we work with are fantastic, really safety-conscious owing to their high-risk working environments. This creates agile and innovative thinking, which in turn inspires me.”

**Positive impact**

This focus on safety being the key driver of a passion for quality training is another recurring theme. All those we spoke to in training roles are acutely aware that



**Kate Bell.**





FIND OUT MORE

# It's back!



**Join the access sector in Maastricht to view  
the latest equipment and technology**



CO-LOCATED WITH APEX: INTERNATIONAL RENTAL EXHIBITION | EUROPEAN RENTAL ASSOCIATION ANNUAL CONVENTION | EUROPEAN RENTAL AWARDS

Sponsored by



Supported by



To find out more visit

[www.apexshow.com](http://www.apexshow.com)



# Turning point

**H**ydrogen is increasingly seen as a viable power source that can be used independently or in conjunction with electric equipment. There are always challenges but the industry, it seems, is now at a turning point that will be taken.

Speaking at the Europlatform conference in Rome, during September, James Cadman head of consultancy & carbon at Action Sustainability, shared some goals, explaining there is a stated aim of 78% reduction of diesel use across all the UK's Construction Leadership Council (CLC) sites by 2035. For example, the UK's National Highways want all sites to use zero-carbon plant by 2030 and the HS2 high speed rail project wants all sites diesel-free by 2029.

## Onsite refuel

So, how do we get there? Electric power is the much-touted option and a realistic one at the moment. Manitou is already on the 100% electric route with its MEWPs and telehandlers, and is promising to introduce a

“ The issue is the cost of the fuel cell. However, that cost is reducing and the volume [will follow]. ”

**LAURENT BONNAURE,**  
Executive vice president, Manitou Group.

## AI assesses the future of hydrogen power and how the wider industry is now pushing the agenda.

hydrogen-powered telehandler prototype by the end of this year as part of its ongoing major hydrogen project.

As Laurent Bonnaure, the executive VP of Manitou Group, says, the supply of hydrogen to jobsites is the major sticking point at present, but that is set to change.

To bring about the French telehandler's vision, says Bonnaure, “We took an electric machine and instead of having a battery feeding the electric drive line, we use a fuel cell.

“One of the issues is how do we get a supply of hydrogen to the jobsite - that's why we now have our hydrogen load station.”

The company is also looking at a more traditional concept of using hydrogen power in the same way an internal combustion engine would be used, for example in the form of a range extender – diesel versions of which are found on many electric MEWPs today.

“The beauty is that because our machines are going electric, the source that you use to power the electricity is a fuel cell, rather than a range extender, which uses fossil fuels to create electricity.”

Of course, the current industry approach to zero emissions is electricity generation, which Bonnaure concedes is the case but points out

that the electric engine feeds far more easily into a hydrogen future than a traditional combustion engine alternative.

“Going back to internal combustion, hydrogen could be the answer and at prototype stage we are looking at these two solutions.

“The other advantage of electric is that the efficiency is very high. An electric driveline is very effective.

“However, the second step will be hydrogen – the issue is the cost of the fuel cell, which is very expensive, however the cost is reducing and when the volume is there for fuel cells that will be the way we go.”

## Mobile option

To answer the onsite supply question, JCB has unveiled a mobile hydrogen refueller which it says will allow on-site refuelling of hydrogen powered machines in the same way that fuel bowzers are used for diesel powered equipment.

The UK manufacturer said the refueller was part of its £100 million investment in hydrogen engines, which has so far created working prototypes of a backhoe loader and Loadall telescopic handler.

The mobile hydrogen refueller aims to provide an easy way >

The new hydrogen refueller between JCB's hydrogen powered telehandler and backhoe loader.





## FUTURE FOCUS

for customers to refuel machines, the vast majority of which have fuel delivered to them while working on site, said the company. JCB said customers are already used to a transportable fuel.

The OEM has 100 engineers working on the hydrogen project. Its first hydrogen powered machine was a backhoe loader followed a year ago by a telescopic handler.

A hydrogen future is less certain for MEWPs, particularly the smaller varieties. Nevertheless, once the technology reduces in cost and is safe enough to use widely, the potential is certainly there.

Hydrogen is already a reality in some quarters. The world's largest rental company United Rentals is adding a range of hydrogen zero emissions EODev generators to its North American rental fleet.

The company confirmed it expects to deploy the generators during the fourth quarter of 2022 and in 2023.

### Zero emissions

United said that by adding hydrogen generators in the coming months, it will be able to offer customers “a zero-emissions power solution to charge electric vehicles and tools, and other equipment, advancing worksite electrification strategies.”

“The EODev GEH2 fuel cell electro-hydrogen generators bring companies the energy they need, without emissions of carbon dioxide (CO<sub>2</sub>), hydrocarbons (HC), nitrogen oxides (NO<sub>x</sub>) or other particulate matter (PM).”

They have a compact footprint of about 4 feet (1.2 m) by 11 feet (3.4 m), and deliver instant power up to 110 kVA (88 kW).

“They are equipped with the latest hydrogen fuel cells, and provide exceptional durability and reliability. In addition to the sustainability benefits, they also run much quieter than traditional generators,” United said.

The generators join units including emissions-free aerial lifts, trucks, vans, compact excavators, e-dumpsters and battery systems in the United Rentals portfolio of environmentally-friendly rental equipment.

### Rome ideas

Back to the Europlatform conference in Rome, and Douglas McLuckie, managing director of ESG at Ashtead Group, talked about changing fuel sources, such as hydrogen – “that infrastructure is coming”, he said, as part of creating integrated energy solutions.

“We were at the forefront of battery technology from the very beginning, but not because of environmental concerns, rather because we needed machines that could work indoors,” he said. “People like us to be able to



**Barrie Lindsay,**  
director of  
engineering at JLG.

report on the benefits we can have through battery technology.”

He talked about embodied carbon, thinking about everything “from cradle to grave” in the lifecycle of rental assets. By renting a typical asset to around 20 different clients per year

**A drawing of Manitou's  
concept hydrogen  
telehandler, soon  
to be introduced.**



effectively saves the embodied carbon of any given asset when compared to if that client had gone out and bought the machine rather than hired it.

Barrie Lindsay, director of engineering at JLG, gave an overview of how the manufacturer is trying to help meet global net zero targets, recently recommitted to by many nations at the COP26 summit in Glasgow, UK. “There has been a long-standing strategy to drive towards zero emissions. Interestingly, the pressure is not just from legislation, but from customers measuring and improving their own carbon emissions.

“Almost 70% of the carbon footprint can be attributed to steel and cast-iron components. So reducing the weight of these in each machine can significantly reduce carbon footprint. As a business, reducing carbon footprint is becoming mission critical.”

### Charging points

He touched on the challenges of electrification across the portfolio of JLG's products and looked at the implications and limitations of the current charging infrastructure. “For a construction site, the charging points pose more of a challenge than for automotive applications. Equipment needs to be working during the day and charging overnight.

“New charging solutions are aiming at replacing diesel generators, so the ideas need to be scalable, and batteries need to have sufficient capacity to charge multiple machines. We have seen solar panel technology, but these are unlikely to be sufficient as larger battery technology develops. Charging points need to be standardised, including connector designs. Manufacturers need to combine efforts to overcome the charging infrastructure hurdle.”

The issue still, of course, applies to hydrogen and how to supply it on worksites. The debate rolls on but the industry appears to be a few significant steps closer. **AI**

**United is  
adding  
hydrogen  
powered  
zero  
emissions  
EODev  
generators  
from  
Generac.**





**“ATTENDING CONEXPO-CON/AGG  
FOR 50 YEARS HAS GIVEN US A  
DISTINCT COMPETITIVE ADVANTAGE.”**

— SILVI CONCRETE, PHILADELPHIA, PA



**TAKING CONSTRUCTION  
TO THE NEXT LEVEL.**

**CONEXPO  
CON / AGG**

**MARCH 14-18 / 2023 / LAS VEGAS / NEVADA**

- › **250,000 sqm of Exhibits**
- › **130,000 Attendees**
- › **1,800 Exhibitors**
- › **150 Education Sessions**

**REGISTER** at [conexpoconagg.com](https://conexpoconagg.com)  
Save 20% with promo code **SHOW20**





# THE POWER OF precision

The electric version of the **Snorkel A46JRT** articulating boom lift, the A46JRTE offers clean performance with zero emissions and quiet operation from lithium-ion batteries. Designed to be versatile, the A46JRTE has superb maneuverability and is highly suitable for work indoors.

**100%**  
ZERO  
EMISSIONS

**93%**  
SERVICE COST  
REDUCTION

**62%**  
NOISE  
REDUCTION

**4x4**  
ELECTRIC FAMILY  
FROM 5.79M - 16.3M

**2-IN-1**  
WORK INDOORS  
AND OUTDOORS



## A46JRTE

HELPING YOU GO ABOVE AND BEYOND

**snorkel**<sup>TM</sup>  
snorkelnetzero.com



JANUARY 17-19, 2023  
LAS VEGAS, NV  
SILVER LOT BOOTH  
#O30099



FOR MORE INFORMATION CALL  
Snorkel<sup>TM</sup> at +1 (785) 989-3000  
or visit [www.snorkellifts.com](http://www.snorkellifts.com)

**snorkel**<sup>TM</sup>