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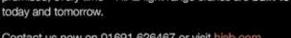
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# **A** new market leader?



Our review of the loader crane sector a year ago concentrated on the 'big three' manufacturers -Palfinger, Hiab and Fassi - and their varying fortunes over the past few years. This month we take a closer look at the company vying to break into this select group, Denmark-based HMF.

Since the last feature the fortunes of the top three continue to vary. Palfinger - which has been market leader in recent years, helped in part by Hiab losing its way through a number of misplaced corporate strategies - reported mixed results for 2017 which included record revenues but lower profits, as it restructured parts of the business. Its 'Land' sector - loader cranes and aerial work platforms which makes up almost 84 percent of its total revenues - did well increasing profits by more than 14 percent thanks to strong business in Germany and Southern Europe in particular. It also included the acquisition of Palfinger Danmark and a satisfactory performance in Asia and CIS countries.

However Palfinger does have a few problems. The 24 acquisitions over the past seven years in its Sea sector have boosted revenues, but losses in the sector have quadrupled to almost €15 million. In this aspect Palfinger is almost mirroring its arch rival Hiab in that

it appears to be struggling as it diversifies both geographically with ventures in Russia and China and its heavy investment in various marine businesses. Thankfully its core 'Land' market in Europe continues to grow and it has further potential in North America.

In April Palfinger appointed a new chief executive - 53 year old Andreas Klauser - following an extensive search. It will be interesting to see what he makes of the disparate performance of the divisions and what he does to solve it? It is perhaps surprising to see Palfinger is in this situation given its main rival also went through a similarly sticky patch as its parent Cargotec progressed a centralisation strategy which damaged its main brand -Hiab - more than anyone could have imagined. Since 2014 the strategy has been reversed and together with new managing director Roland Sundén, appointed at that time, there has been a tremendous turnaround with the group now recognising and building on Hiab's strong



brand identity which is once again growing with new innovations and products.

Hiab is of course the originator of the articulated loader crane producing the first model in 1947 and was not all happy relinguishing its market leadership of the sector to Palfinger. As if to proclaim its new strategy it showed off its largest and most modern loader crane multi assembly plant in Stargard near Szczecin in Northern Poland at the end of last year. The massive facility alone produces 7,000 loader cranes and when combined with around 4.000 units produced at its other loader crane facilities in Zaragoza, Spain and Chungbuk, South Korea it may well be pushing for market leadership in terms of units.

Rankings based on the number of units produced can be misleading in that many loader crane companies produce small capacity cranes such as those mounted on wind turbines - in large numbers. Danish company HMF for example does not have 'large' capacity cranes but produces thousands of small units for wind turbines.

Hiab has also been making tremendous financial progress over the past five years. Between 2014 and 2016 it has grown revenues

from €840 million to just over €1 billion, and more than doubled its profits. In 2017 revenues increased by a further five percent with the order book up 10 percent.

Whether the market leader is Palfinger or Hiab, both are a country mile ahead of the third and fourth manufacturers The 'big two' have revenues about seven times greater than the third largest loader crane manufacturer Fassi at about €145 million and fourth placed HMF which is closing the gap with last year's sales of around €134 million.

As can be seen on Page 38, HMF also has had its fair share of problems after the recession but is now a fully focussed loader crane manufacturer. Three of its associated companies were either closed or sold and by concentrating on its core business and products and labour-saving automation it has been able to continue and grow its manufacturing operation in Denmark.

Fassi has also entered expansion mode by acquiring various companies over the past few years. At the end of last year Fassi took full total control of Swedish timber crane and grapple manufacturer Cranab purchasing the remaining shares since buying a minority



### loader cranes

interest four years' earlier. Chief executive Giovanni Fassi said: "Our ambition is to develop Cranab to become a crane supplier with a wider product range, in which truck mounted timber and recycling cranes become new products. The continuous development of off road cranes for forest machines will further improve Cranab's already strong position."

In 2016 Fassi purchased a third share in Italian spider and mini crane manufacturer Jekko from owner Ormet. Jekko had been a brand of Ormet which developed the business from the original Imai custom-built spider cranes. The first fruits of this move is the new range of Jekko articulated tracked cranes - the JF545, JF40 and JF30 - which use Fassi loader cranes mounted onto a tracked chassis. Jekko believes that over the next five to 10 years this type of crane will greatly increase in popularity. Germany has already taken almost 20 units of the larger JF545 with other units going to the Netherlands and the first in the UK just sold at Vertikal Days. In the meantime, Fassi has also acquired a majority stake in French manufacturing and distribution group CTELM which owns Fassi France, Miltra and Marrel. As part of the move Fassi says it will use the distribution business to sell its Swedish built Cranab forestry cranes and Jekko spider cranes.

#### Muck away/tipper grab sector

As with all equipment, the demand for loader crane products and capacities varies around the world. The UK for example is almost alone in liking the 10 to 12 tonne metre 'muck away' grab cranes purchasing up to 500 a year.

Germany likes a long arm crane mounted behind the cab, specifically for building/construction and the brick and block sector and North America has its wallboard crane.

The UK's muck away grab cranes are hard working - often abused - cranes that handle general waste - concrete, asphalt, gravel etc from road workings and general construction work - as well as loading/delivering sand and gravel. For many years Atlas was the dominant player but then lost out to HMF's1144 K model. With the demise of the 1144, Palfinger spotted a gap in the market and launched an adapted B4 Epsilon forestry crane in the late 1990s which has gone on to become the undisputed market leader. Tipper body manufacturer Thompsons teamed up with Palfinger UK distributor T H White and by 2015 had supplied more than 1,000 cranes. Perhaps anticipating the new competition in the sector T H White has recently offered a five year extended warranty package and two year parts and labour cover on its Epsilon M125LC68 or M125LC82 Classic grab cranes.

Mark Rigby, director of the lorry cranes division at T H White said: "The M Series Classic Epsilon has become a product of choice in the tipper grab market and this enhanced product offer demonstrates a real belief in the strength and integrity of the product in a very tough market application to give customers even more confidence to continue buying Epsilon cranes now and in the future."

In an effort to regain a slice of the market HMF has launched its new 1310 R-MC and 1510R-RCS which are also joined by Hiab with its new Jonsered 1200RS.





HMF's two new 12 tonne metre muck away cranes are essentially the same crane, the main difference is that the 1310 uses hydraulic controls with the 1510 using radio remote. The 1510 also has slightly more lift capacity but this is achieved by using a feature called HDL - Heavy Duty Lifting which uses the remote control and electronics to increase the capacity but at the expense of some speed in the last segment, Lifting capacity at the same 8.1 metres maximum reach is 1,350kg for the 1310 and 1,510kg for the 1510 - the difference purely down to the HDL system and working at a slightly higher pressure of 320 bar compared to 290 bar.

HMF relinquished the market when it stopped the 1144 and unsuccessfully tried to regain its share with its successor the 1244. It says it has high hopes for the new cranes and with potential UK sales up to 500 units year the sector is

big enough to justify manufacturing a specific crane.

"Many years ago we were selling 200 muck away cranes in the UK," says Keld Frank Jensen, HMF's regional export manager, "The cranes generally have a hard life. Being rental machines and with many users they are not maintained as well as an owner operator crane and this has to be taken into consideration in the design - they have to be reliable, rugged and fast."

"The top of the range Danfoss PVG 32 control valve is used on the manual versions with hose routing inside columns for protection. Max flow is between 60 and 110 litres per minute depending on whether a fixed or variable pump is used. The new units are the only cranes in the HMF range that use a combination of a cylinder on the first extension and chain on the second giving it double the speed by moving the two extensions simultaneously."







"The 1310 has dual controls - one on each side of the vehicle - with a cat walk in between. The manual control crane is probably more expensive but many customers do not like electronics which they think are more complicated and therefore more to go wrong. As the manufacturer we would always recommend the remote version as it is more versatile and safer with the

Hiab ePTO HiPro 192

operator in a better position to when picking up and placing the load."

The Jonsered 1200RS from Hiab also builds on its forestry heritage to produce a strong model for muck away applications. Speed results from a high oil flow hydraulic system of 120 and 160 litres a minute with fixed and variable pumps. The variable pump gives reduced fuel consumption and longer oil life due

> to lower oil temperatures. The crane also features the latest Safety+RS control system with VSL increased stability, overload protection, load holding valve and operator protection system with virtual safety cage when operating from the new dual stand-up operator platform which allows the operator to move from one side to the other for a better vantage point.



#### Other recently introduced cranes

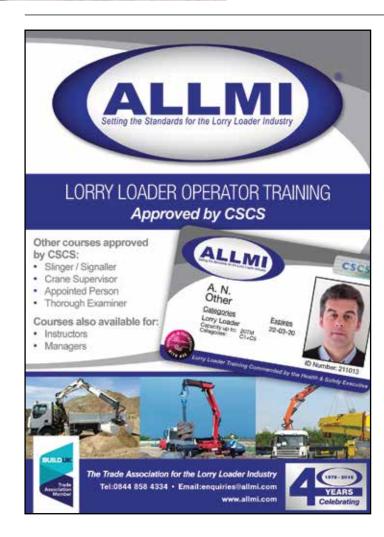
**Dutch loader crane manufacturer** Hyva launched three new cranes at the end of last year - the 95 tonne/ metre HC951, 115 tonne/metre HC1151 and the largest in the range, the 165 tonne/metre HC1651. The cranes feature auto set stabilisers with rotating front jacks for more compact stowage and 360 degree continuous slew.

Features include the company's Extra Extension Speed and Smart Extension Sequence which it says enables faster operating speeds, shorter load/unload cycle times and more precise and operation. Its Liftrod Articulating System is said to make it possible to operate the

cranes more easily in confined or restricted spaces. All are equipped with multi-function radio remote controls. The integral base allows an installer to mount the crane directly to the truck frame reducing the total height of the installation and lowering the centre of gravity of the vehicle. All cranes are available in CE or non CE versions.

Director Davide Catellani said: "The new models are ideal for the rental sector for multipurpose loading activities with specialist driver operators. They also meet the requirements for heavy equipment and materials lifting in the oil & gas, mining, logistics, defence and construction sectors."

Founded in 1979 Hyva also







produces hydraulic cylinders, tipping gear, container hook and skip loaders as well as waste compactors and refuse collection bodies designed and marketed under the brands Hyva, Kennis, F.Ili Ferrari and Amco Veba. It has manufacturing facilities in Brazil, China, Germany, India and Italy with more than 2,000 employees worldwide.

#### **HMF launches largest cranes**

HMF has also launched its two largest cranes, the 7020 and 9520 which replace the 6020 and 8520. At a radius of 20.1 metres the 9520 K8-RCS can lift 2,860kg, while the 7020K8-RCS can take 2,050kg to 20.4 metre radius. Features include dual slew motors - a first for HMF giving a high, nine tonne/metre slew torque and help eliminate sideways movement. Cranes have up to eight main boom hydraulic extensions and six section jibs.

Aimed at the global markets they have been designed using ultrahigh tensile steel for low weight and therefore more payload. The new wider hexagonal boom profiles also help reduce side flexing. New features include Progressive Crane Control (PCC) which smooths out the motions of the crane, improves efficiency and reduces wear, and Progressive Flow Control (PFC) which regulates the flow of oil when using various functions at the same time. Electronic Vehicle Stability - which uses just one sensor - is also fitted to monitor the vehicle's stability and maximise the crane's working range. If using an aerial work platform - operated by remote control - the EVS has a second backup system. The new remote control now features a colour LCD screen and the swing up stabiliser leg system has been improved.

#### **New Effers**

Effer has recently launched its new flagship model - the 2255 - which using the KJ feature can add two additional sections when needed

changing the configuration from 8s to 10s giving an articulation height of 35 metres. In its maximum configuration the 2255 has a height of 55 metres. The crane also has a second articulated jib which can shift the articulated point to 49 metres. Designed for four and five axle chassis, the 2255 has a maximum lift of 18.7 tonnes at 7.33 metres and can lift 170kg at 55 metres.

The company has also added two new light range crane models - the 7.6 tonne/metre 80.2 and the 11.5 tonne/metre 125. The 80.2 has a maximum reach/radius of 10.79 metres with a 4S jib configuration at which it can lift 530kg. The 125 has a maximum horizontal reach of 19.9 metres and up to 23 metres of tip

height at which it can lift 205kg.

#### Palfinger adds PK 135.002

Palfinger's latest crane is the 109 tonne/metre loader crane, the PK 135.002 TEC 7 adding to its heavy duty crane product range. The crane has a maximum capacity of 30 tonnes at around 3.5 metres, or more practically 22.7 tonnes at 4.5 metres. It has a maximum reach of 22 metres with 3.8 tonnes capacity. Maximum reach with the new PJ 190 jib is 32.2 metres at which it can lift 1,200kg, and a maximum tip height of 36 metres. Other iibs are available and can offset from 25 degrees above horizontal to around 70 degrees below. The PK 135.002 has a total all up weight of 10,200kg - around 2,000kg lighter than its predecessor the PK 150002 - yet

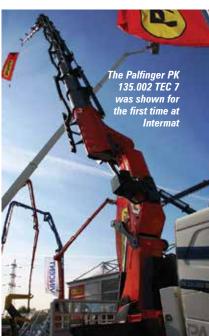
offers up to 35 percent more jib capacity.

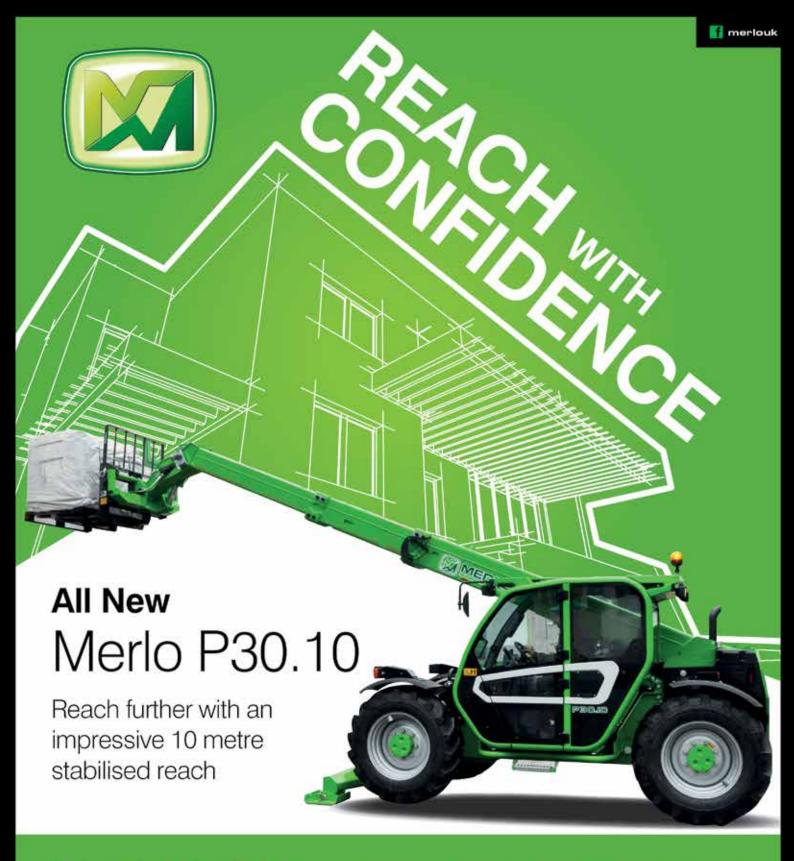
Features include standard 360 degree continuous slew and an outrigger spread of 10 metre. It can be mounted on a four axle, 32 tonne chassis for a payload of 3,000kg or a five axle, 40 tonne chassis for an 8,000kg payload. Other features include HPSC - High Performance Stability Control, SRC- Synchronised Rope Control, which automatically maintains a constant distance between the boom tip and hook block, automatic rope tension and the P-Fold boom stowage function.

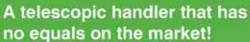
New overload related devices include 'Mext', which allows one or two manual boom extensions to be monitored by sensors integrated into the overload protection system. 'Tool' which allows additional devices connected via the multifunctional adapter to be included in the stability calculation and load limiter and 'Weigh' which allows operators to weigh the load directly with the crane, thereby getting an overview of the positions which can be reached.















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# Back on track

Shortly after our last visit to Danish loader crane manufacturer HMF in 2008, the company was badly affected by the global financial crisis. After several rocky years the company has managed to regroup and is now on the back of a five year run of increased sales and revenues. Mark Darwin revisited its headquarters in Aarhus to see the latest developments.

The story really starts five years before our first visit in 2003/4 when Ove Trankjaer was appointed managing director and convinced owners the Bundgaard family that investment was needed to streamline the company to ensure that production could remain in Denmark. Approval was given including a new 'state of the art' paint facility as well as increased robotics and automation. Unfortunately, just as it was finalised the recession hit, markets dried up and payback became difficult.

"2009 was a nightmare with sales dropping significantly and the number of employees reduced dramatically," says HMF chief commercial officer Soren Them Kjaer. "Short after a new board and chairman was appointed who instigated a survival plan which in the main refocused on loader cranes. Other subsidiaries such as AMC which made grinding machines, and ACTA manufacturing marine cranes, were sold off while a third company that manufactured trailers was closed."

"However, the previous investment in automation and systems to improve production efficiency played a major part in convincing the major stakeholders to support the company through the difficult times. This support together with improving margins meant that the first positive financial figures were posted in 2012 and since then we have posted record revenues and profits. We are now in a very healthy situation both financially and in terms of new products, most of it based on Trankjaer's initial ideas. Denmark can be an expensive location to produce cranes so we have to be highly efficient. We now produce more cranes than we have ever done with less people which shows that the new system is working."

#### Under new ownership

Trankjaer remained managing director until he retired last year, with Brian Stage taking over as chief executive. Stage knows the company well being a member of the board since 2010 and having worked as CEO for another Danish









company Hvidtved Larsen which manufactures and sells sewer cleaners. In another move last month the Bundgaard Foundation acquired full ownership of HMF with the Bundgaard family donating 70 percent of HMF shares to the Foundation which, subsequently purchased the remaining shares.

The objective of the change is to ensure that HMF takes a long-term strategy to create a strong company for the benefit of customers, partners and employees as well as helping the local area. The Foundation board, which includes Ove Trankjaer, has decided to support local hospitals in the Aarhus area. The HMF board continues as before as does the executive management team.

#### **Forward vision**

The company's vision is to be the world's third largest manufacturer of loader cranes and if its performance over the past five years continues it may well achieve this in the next year or two, at least in revenue terms. New products which should help boost revenues include the new 1310R-MC and 1510R-RCS 'muck away' cranes for the UK market and its two largest cranes, the 7020 and 9520. The company is also planning another new product introduction for later this year.

HMF still fabricates a high content of its cranes at its Aarhus plant,

although finding skilled staff - and welders in particular - is getting harder. In an effort to ease this problem, HMF has started a welding school and is trying to attract young people into the sector.

#### **Exports total 75%**

HMF has four wholly owned sales subsidiaries, Denmark, the UK, Norway and Germany, along with 25 distributors around the world. However, the vast majority of the 75 percent of products exported remain in Europe.

"We are not selling into developing markets such as Brazil, Russia, India and China etc.. because we have a premium product," says Kjaer. "Our main sales areas include France, Holland, Belgium, Switzerland, Finland, Poland, Austria, Sweden and Spain as well as our four direct sales markets."

North America is the only region where HMF badges its products - an agreement with Oshkosh-owned IMT dates back to the 1990s. "We have enjoyed our partnership





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with IMT and it is working well, particularly with the wallboard cranes, of which 100 to 300 a year have been supplied since 2000 and is a big part of our operation. Also in Australia, the HMF brand is well known and we have enjoyed successful sales over the past decades."

"Spain was our biggest export market before the crisis, but it collapsed in weeks, going from the biggest crane market in Europe to almost nothing," says Kjaer. "Worldwide we have about a 10 percent market share but in some key markets in Scandinavia it may be as high as 30 percent. We believe that Germany takes the most loader cranes at the moment - between 4-5,000 in a good year - followed by France which is recovering strongly. We have only a minor share in Germany, while we look for our company stores to reach a critical level and share to be able to be able to give a good national aftersales support."

"The total UK market is around 2,500-3000 units and for many years we have enjoyed the majority of loader sales to our two main

accounts - Saint Gobain and Travis Perkins – as well as growing sales to other sectors. The launch of the muck away cranes will add to this figure. A guarter of our revenues come from Denmark and includes body manufacturers/dealers and wind turbine cranes. When selling a 85 tonne/metre crane for example, the price of the truck is roughly one third of the total, the base crane costs about the same, with the installation taking the final third. The cranes produced require a large volume of parts and materials including 250,000 metres of hoses, 32,000 hydraulic cylinders, 11,000 tonnes of steel and 33,000kg of powder and wet paint."

Competition at the moment is really tough with many very good companies in the market. We have recently extended our range, but we do not make 'large' cranes above

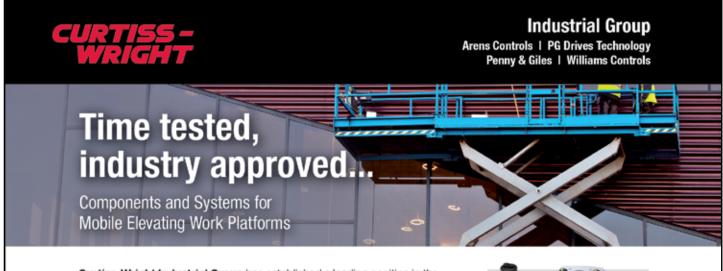




100 tonne metres at present. We are however benefitting from the large and continued investment in systems and automation making production at the Aarhus facility even more efficient. It is the only way we are able to continue supporting our growth ambitions.







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