



# WHALE TOPICS



Issue **2**

## KAISER | WHALE RULES!

In order for partnership agreements between likeminded businesses to succeed and flourish, it is all about synergy: a coming together of minds. And nowhere is this better exemplified than between two of the world's leading producers of specialist sewer cleaning vehicles - Whale Tankers of Solihull and KAISER AG Fahrzeugwerk of Lichtenstein.

Although in industry terms it is a relationship still in its infancy, it is one that already stands out amongst the best, certainly where such a niche market is concerned. Since Whale Tankers embarked on developing the highly specialised *Kaiser-Whale* in exclusive technical partnership with Kaiser AG in 2005, the relationship

has gone from strength-to-strength.

The sale of some 30 units of the sophisticated Jet-Vac machine with continuous water recycling into the UK marketplace over the last four years bears testimony to this fact. Add into the equation nearly 100 high performance Kaiser KWP liquid ring pumps that Whale Tankers has also supplied over the same period and the success of the relationship becomes even more apparent. And whilst the honeymoon period is now over, Whale and Kaiser are perfectly poised to take the relationship to its next level. It is, after all, proving to be a commercial match made in heaven!



*So what set the relationship in motion in the first place? Who better to set the scene than Whale Tanker's managing director, Mark Warmington. "Kaiser AG is the acknowledged leader in water recycling equipment in Europe and is renowned for producing technically innovative solutions in the sewer cleaning and water recycling sector. It is against this backdrop, coupled with the fact that we at Whale were looking to develop a specialist Jet-Vac recycling vehicle to complement our existing product range, that a dialogue between both organisations began. The rest, as they say, is history.*

*"Not only did the technology that Kaiser has developed fit with our own requirements, so too did their philosophy on recycling. Other key synergies also existed. In addition to being similar size companies, we knew almost instantly that Kaiser had the flexibility to supply the componentry that we could design engineer to meet the subtly different needs of the UK marketplace," he added.*

*Also fundamental to the relationship's early success was the openness that both Kaiser and Whale demonstrated in*



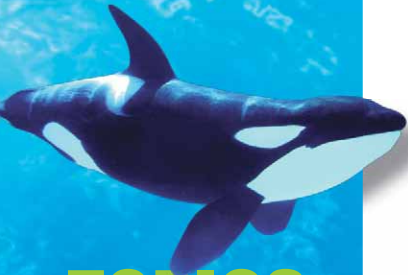
**KAISER WHALE** takes to the streets!

*terms of the transfer of technologies. Add in trust and a desire from both sides to enter into a long-term agreement and the foundations required for a relationship to succeed were evident for all to see.*

*This is something that third generation Markus Kaiser, managing director of the operation today, is keen to endorse.*

*"Across Europe, the Whale Tankers name is widely respected and they are recognised as leaders in their field. It became quickly apparent that by combining our technical expertise with the service and support infrastructure that Whale has in place in the UK, there was great potential for the development of a specialist recycling combination unit."*

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## THE KAISER-WHALE

As an increasing number of UK operators now know, the highly-successful Kaiser-Whale is proving itself as a highly-effective and profitable solution for specialist sewer cleaning applications. So what is it that has made this specialist Jet-Vac with continuous dirty water recycling such a hit here in the UK? Largely, it is the component technology that is involved.

*"It is the sophistication yet simplicity of the technology that is deployed on the Kaiser-Whale that differentiates the product from other*

*recyclers," states Whale's Mark Warmington. "Largely, this centres on a jetting and vacuum pump, both of which are dedicated to recycling, and a single stage filtration system which helps make the vehicle significantly lighter and more durable. In addition to delivering obvious payload benefits, being able to recycle water used during jetting operations not only makes environmental sense given that water is a scarce and increasingly expensive resource, it maximises time spent working on site rather than taking fresh supplies onboard," he adds.*

"The Kaiser-Whale is a high specification unit that leads the field when it comes to continuous water recycling and therefore supports our strategy of investing in next generation plant and equipment. The Kaiser-Whale is already requested by a growing number of our customers, with many more showing an interest in it. Ultimately, therefore, it is our aim to have a Kaiser-Whale type vehicle operating across our entire nationwide network of 23 regional operating centres."

**Simon Nicholls,**  
**Group Transport Manager.**

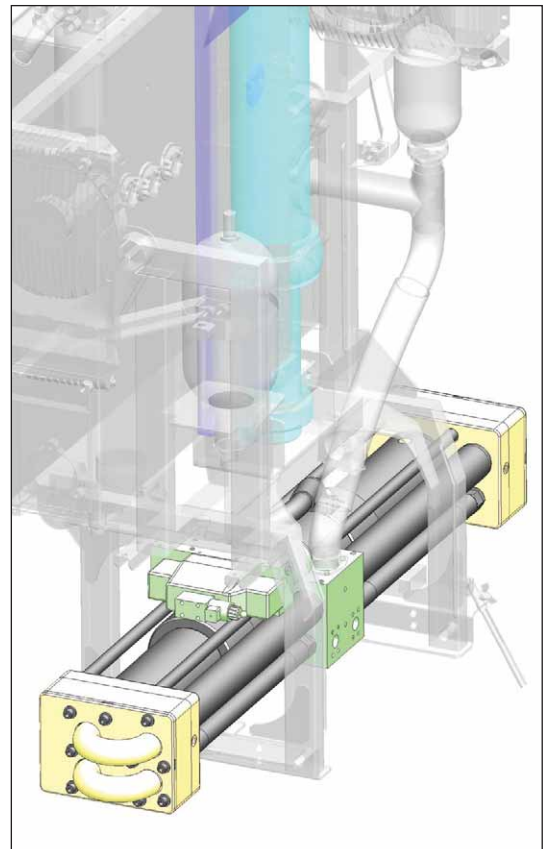
## LANES GROUP



## HIGH PRESSURE PUMP

The Kaiser KDU 148 (opposite) provides significant benefits over conventional water jetting equipment which, rather than being purpose-designed for recycling, is often adapted from standard three cylinder triplex style pumps. The Kaiser KDU has been specifically manufactured to cope with water containing suspended solids. Operating at a much slower speed than traditional units, which reduces wear and operating noise levels, a large pump cylinder capacity delivers high flow and pressure performance, with flow rates of 90 gpm up to 200 bar.

Standing as a fully integrated unit - incorporating the tipping ram housing complete with body prop, jetting pump, pressure accumulator and oil reservoir with high efficiency heat exchanger - weight is significantly reduced. Hydraulically driven and controlled, water pressure and flow are independently adjustable, and low wear and tear is assured as there are no moving piston seals on the water side. The Kaiser KDU high-pressure pump has also been designed for ease of service and maintenance.

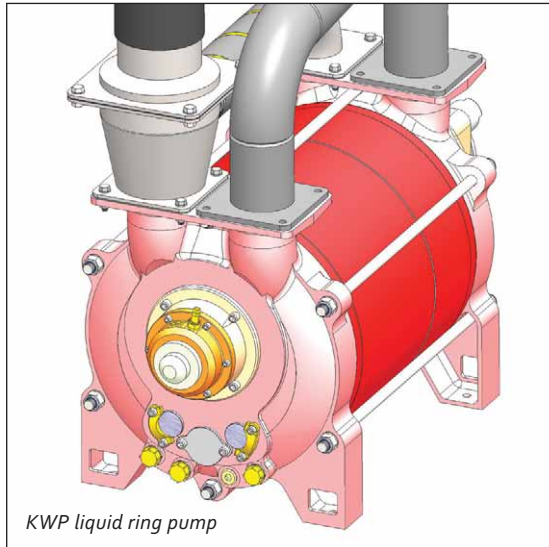


## LIQUID RING PUMP

Equally efficient is the KWP high performance liquid ring pump, available in two sizes to provide an operating range from 940 CFM (1,600M<sup>3</sup>/hr) to 1,800 CFM (3,100M<sup>3</sup>/hr) at 85% vacuum. Compact in design and constructed from lightweight, high strength aluminium alloy - providing a 60% weight saving when compared to cast iron equivalents - the liquid ring pump is Teflon coated to reduce abrasion and corrosion, thereby extending the service life of the pump unit.

Ingeniously, the KWP liquid ring vacuum pump is partially submerged inside a special water compartment that features a dedicated PED compliant access door, allowing the pump to deliver a system pressure of up to 1 bar. In addition to reducing the amount of pipework needed on the vehicle, which in turn improves system performance, submerging the unit in water muffles operating noise whilst dispersing heat in the summer and reducing the likelihood of pipes freezing in the winter. The pump is also fitted with external intercoolers, allowing the pump to run at higher vacuum levels for extended periods.

Specifically designed by Kaiser AG for mobile applications, the KWP vacuum pump has been proving itself in the field since the late 1980s, and there are already some 100 units in operation supplied by Whale here in the UK.



## UNIQUE FILTRATION SYSTEM

Also unique to the Kaiser-Whale is the single stage filtration system, which helps further reduce weight whilst also minimising maintenance. Thanks to the efficiency of the KDU pump, Kaiser AG has been able to deploy the use of a coarse 500-micron stainless steel wedge wire filtration unit located in a large circular-shaped filter drum. The design of the filter maximises surface area, thereby allowing up to 800 litres of water to pass through per minute.

Its constant clockwise to anti-clockwise rotation further reduces the possibility of a blockage, which is also aided by the shape of the wedge wire filter mesh. Additionally, by designing the Rotomax filter so that it can be installed directly in the sludge compartment, the need for additional cyclones and sedimentation compartments has been eliminated.

To help further reduce the incidence of blockages, whilst increasing operating efficiency in the process, the Kaiser-Whale filtration system also incorporates a spray bar. Using recycled water, this feature helps

create a continuous turbulent atmosphere around the filter, thereby maximising the cleaning process. Should blocking of the filter occur in extremely hostile operating environments, operators have the option of using high pressure cleaning at up to 200 bar.

Available as a 26/32 tonne specialist recycler, the Kaiser-Whale also comes complete with a hydraulically operated dividing door located inside the tank. When closed and with its seal inflated, two separate compartments are created, thereby enabling the vehicle to be operated as a traditional Jet-Vac combination. When open, a single compartment provides maximum capacity for debris and sludge. Completing the key features of the Kaiser-Whale are either a telescopic loading boom or 'spiral disc' cassette option, a hydraulically operated Mega Reel capable of housing up to 180m of 1 1/4", or 200m of 1" thermoplastic or rubber hose, and a sophisticated ergonomically designed control panel that is operated using a Whale bespoke PLC (Programmable Logic Controller).

"As Ireland's foremost waste handling solutions provider, it is fitting that we have deployed the first Kaiser-Whale through our established and growing relationship with Dun Laoghaire Rathdown Council. Everyone has high expectations for a product that in terms of its specification and operating criteria is the best money can buy. We see tremendous potential for the Kaiser-Whale within Ireland and aim to help spearhead its uptake amongst our growing customer base."

**Paul Stephens,**  
Group Chief Executive Officer.

## MANVIK IRELAND



# WHALE TOPICS

## GUARANTEED BACK-UP

As with all Whale Tankers equipment, the supply of product forms only one part of the equation. Supporting and maintaining what is a complex piece of capital equipment in the field was, from the outset, high on the agenda for both Whale Tankers and Kaiser AG. As Volker Stark, Regional Sales Director of Kaiser comments: "Not only do Whale have the infrastructure that we knew was essential to support the product here in the UK, they lead the field when it comes to issues such as compliance and the requirements of meeting all relevant regulatory issues."

With full accreditation from UKAS (the United Kingdom Accreditation Service), for example, Whale Tankers is the largest independent vacuum and pressure tanker inspection body in the UK, its WHALEInspection arm carrying out in excess of 2,000 onsite inspections annually.

Additionally, members of Whale's in-house team of service engineers have an intimate knowledge and understanding of the Kaiser-Whale, having received extensive training on-site at Kaiser AG's headquarters and main production facility in Lichtenstein. Additional service support and back-up is coordinated from Whale's Solihull-based manufacturing site, where the company also holds an extensive range of Kaiser-Whale parts.

In the commercial arena, the relationship that Whale Tankers and Kaiser AG have created is something to behold. They have delivered an industry-leading product that is highly engineered, versatile and durable. What's more, they have pulled together the additional ingredients required to make the perfect recipe for success, all of which will ensure it is a relationship that will stand the test of time.

## ENVIROCO HFS



"Given that we service a number of remote locations on land, not to mention the high level of offshore work that we undertake, the Kaiser-Whale represents a truly cost-effective solution as the water it recycles can be used for jetting. As you can imagine, this delivers significant operational, environmental and economic benefits."

**Alister Wait,**  
Industrial Services Manager.

## CLEARFLOW



Experience has shown us that the Kaiser-Whale is the ultimate product when it comes to sewer cleaning, so much so that we would only ever look to specify this type of vehicle in the future. One of the primary concerns within the industry is oil and fat ingress and this is where the Kaiser-Whale excels. The appeal of the product is widened further given the support and back-up that Whale provides."

**Neale Cox,**  
Commercial Director.



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