

Kinetic Special Equipment from Movecat



Movecat equipment was in action at Eurovision 2011 in Düsseldorf via event technology company Cape Cross of Cologne.

For Movecat, one of the world's leading suppliers of kinetic special equipment for use in shows and stage productions, the year 2011 is proving one of the most successful in the company's history. Material from Movecat, which is developed, produced and distributed by Think Abele of Nufringen (near Stuttgart), has been used, amongst many other major events, for the Eurovision Song Contest 2011, the production 'Faust XXL' at the Salzburg Festival, the production of Wagner's Tristan and Isolde at the Ruhr Triennial Arts Festival in Bochum and the world's largest open air heavy-metal festival in Wacken as well as for an installation in the Old Congress Hall in Munich.

The final of the 56th Eurovision Song Contest on the 14th May was watched live by 35,000 people in Düsseldorf's Esprit Arena, re-christened for the occasion the 'Düsseldorf Arena', and a further 120 million on TV. One of the winners of the Eurovision Song Contest was undoubtedly the Cologne-based events technology enterprise Cape Cross. A professional outfit, specialising in equipment and production services, Cape Cross was responsible for the rigging, lighting and

media equipment for ESC 2011 – making the company the principle technical service provider involved in the production. It was Cape Cross that transformed a football stadium in Düsseldorf into the largest television studio in Europe.

To satisfy the very stringent safety guidelines governing this type of event, Movecat equipment from their partner Stage Kinetik of Castrop-Rauxel was employed for the rigging of the vast and complex stage sets. This was a tribute to the exceptionally mature functionality and BGV C1 and SIL 3 safety features of the kinetic equipment from Movecat.

SIL stands for 'Safety Integrity Level' – a measurement of performance based on the EN 61508 and IEC 61508 safety standards. For the Eurovision Song Contest in the Esprit Arena, Stage Kinetik deployed, amongst other equipment, no less than 92 VMK-S 500-24 chain hoists and V-Motion Power Packs compliant with SIL 3, four Expert-T II system controllers, as well as various network distributors and boosters – all from Movecat.

Expert-T II is a systemic controller (SIL1 to SIL3) for kinetic drives with which exceptionally large and complex projects

can be realised. Movecat first presented its Mark II version of the Expert-T at Prolight+Sound 2011 in Frankfurt.

Compared to the earlier model, it features both hardware and software optimisations. The controller now boasts improvements, including a new processor capable of faster 3D representation. With the integrated 3D SpaceNavigator for the control of the WYSIWYG graphic functions, all the functions of the three-dimensional stage display, such as zoom, tilt, pan and rotate, can be controlled simply and intuitively with one hand – without the need to change control levels.

The controller was developed for applications with up to 240 drives. All setups can be supervised and controlled at fixed or variable speeds. Expert-T II makes even the most complex transformations with cross actions possible without imposing any limitations on the various hoists and groups. With the Expert-T II, it is possible to realise both horizontal (hoists as well as platforms) and vertical movements (in all directions) as well as rotational ones (for example turntables).

The equipment was needed at the Eurovision Song Contest for the constant

★ features

and highly complex transformations of the set required by the production. In all, 90 active Movecat VMK-S 500-24 devices were used with a further two held in reserve. The devices in question were position-controlled vario hoists each designed for safe working loads of 500kg, with speeds continuously adjustable between 0 and 400 mm/sec (0 to 24 m/min), two maintenance-free noiseless brakes with contact-free group control, independent high-resolution incremental and absolute encoders, a dynamic real load measurement system with function supervision, a four-way geared limit switch and temperature supervision.

The implementation of this complex production even involved new technical developments due to the size of the venue, which required the controllers and drives to be separated by over 350 metres. To resolve the problem, Movecat developed, manufactured and commissioned within the space of only three weeks a redundant fibre-optic transmission system between the control consoles and the first network distributors as well as high-performance network masters. The hoists were tested and approved in the factory and then again at the arena by a qualified expert in accordance with BGG-912.

Aside from the technical imperatives of safety, those responsible for the project considered other details important. They wanted specifically a complete system that had been tested in practice with a modular, service-friendly structure, redundant implementation of significant components, group and collision supervision, show-optimised programming of way- and time-synchronous group and object runs, show-optimised recall by means of cue buttons, and network functionality over extreme distances.

The construction of the stage and the installation of the events equipment took three weeks. A further three weeks were given over to a marathon series of rehearsals for the 43 nations competing, who had to complete several prior and dress rehearsals ahead of the first show. From 1st May onwards, the show programming for the performances of the individual acts was completed and tested in alternating shifts. In all, the production involved the hoisting of over 40 tons of equipment, more than 6,000 movements, over 60 presets and separate show parts for each of the 43 nations competing. The implementation was the work of programmers Jan Kleinenbrands, Guido Wydra, Niko Rösch and Jens Gerhardt.

Not on quite the same scale but nonetheless highly demanding from a technical standpoint was the production 'Faust 1 + II' at the Salzburg Festival. For this production, a mobile SIL 3 system with eight VMK 500 chain hoists and a Basic Show Controller were shipped in cases



Thomas and Andrew Abele.

to Perner Island at Hallein. The system, including four personnel carriages, was initially a fixed installation, though unlimited mobile use was subsequently possible.

At the world's largest heavy metal festival, which drew 86,000 fans to Wacken from 3rd - 6th August 2011, 18 VMK-S 500-24 chain hoists were used along with a Movecat Expert-T controller. They were used to move and make the most effective use of nine trusses heavily laden with moving lights. The festival, which has been running now for over 20 years, featured headline acts like Apocalyptica, Motörhead and Ozzy Osbourne. The challenge here was to reduce to a minimum the changeovers between acts, so the complex

transformations required for each new band were programmed simultaneously in offline mode using 3D WYSIWYG technology. Offline mode makes it possible to program and simulate realistically complex shows and scene changes.

German company Think Abele of Nufringen is one of the leading names in the industry when it comes to stage and events equipment. This year, Andrew Abele, who founded the company in 1986 together with Thomas Abele, is celebrating the firm's 25th jubilee. The enterprise, which is based near Stuttgart in Germany, has as its most important product group the kinetic solutions of Movecat, which comprise chain-hoists as well as the corresponding



More Cape Cross technology at Eurovision.

controllers and accessories – all of them ‘Made in Germany’. Think Abele is the exclusive distributor worldwide of Movecat equipment.

Think Abele was originally founded as a distribution company. In 1996, however, with ten years of experience in the industry to draw upon, the company began to develop and produce devices of its own, these being the chain hoists and chain-hoist controllers that make up the Movecat range – a proprietary brand belonging to Think Abele – the products of which have been manufactured ever since at the



The Movecat Expert-T II.



The Wacken 2011 open-air heavy metal festival.

company's headquarters. Among the salient characteristics of these products are the wealth of safety features with which they are endowed in order to equip them for compliance with such standards as BGV D8, D8 Plus, BGV C1 and DIN EN 61508 SIL1-SIL3. All the requirements and standards have

been strictly complied with, and yet these systems, which can be used in a modular fashion, are flexible, freely scalable and exceptionally user-friendly and can therefore be expanded to suit the greatest variety of show sizes. It is also possible to integrate this equipment seamlessly into pre-existing systems.



The German entry "Lena" at the Eurovision Song Contest 2011.