

Company: Applied Automation Ltd

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Subject: Modular safety guards prove most viable

When faced with the need for a machine safety guard that is modular, simple to install, able to be adapted for various sizes of machine without compromising the aesthetics of the machine and readily available, where do you look? Well the production engineers at UPM Machinery Sales Ltd have recently been through this cycle of decision making, so I went to investigate how this problem was approached and of course solved.

UPM, manufacturers and suppliers of machinery for the plastics industry and specialising in infrared drying systems, have recently launched a range of dryers using existing infrared technology, but have applied this technology in a pioneering fashion. Founded in 1975, UPM have many years experience and significant knowledge to draw on, enabling them to pursue industrial ideals both in their solutions and also solutions they employ on their machines allowing them to meet the needs for today's industry.

These new infrared dryers (IRD's) have reduced drying times of Virgin PET granules from the traditional 6 hours to a staggering 1 hour (for 450kg load based on an IRD1000). The UPM infrared drier will also dry and crystallise PET granules in one pass. In order to meet the needs of industry these IRD's are built in various frame sizes which determines the volume / speed of drying, providing the customer with a choice based on their application needs.

Due to the pioneering technology these IRD's are using, a problem that faced the design and production team when they started out on the development program was the guarding of the machine. The options open to them were either to use, what is seen as traditional, fabricated and welded construction guards or to use a flexible guarding solution based around an aluminium profile system. With the machine base being constructed using a fabricated solution this would have been an obvious choice, however the engineers at UPM felt this route may not be ideal due to potential alignment problems of the guard and aesthetics ensuring each size of machine had the same appearance. Therefore wanting the right solution they involved Applied Automation, the UK distributor for the MayTec aluminium profile system, to provide an alternative solution to a fabricated guard.

With Applied Automation recognising that there is more to delivering customer service than just the supply of product, and knowing that it includes listening to the customer, understanding their needs and providing a programmed solution on time every time, they set about providing the most viable solution to the UPM problem.

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The Applied Automation team were given various criteria that had to be fulfilled in order to come up with the right solution, these included:

- i) The system had to be modular so it could easily be adapted to various sizes of IRD – keeping the aesthetics of all the machines the same.
- ii) Had to be simple and quick to assemble - thus reducing machine assembly time.
- iii) And had to be easily removed to aid machine maintenance.

Taking these points into account the applications team at Applied Automation set about finding the solution, helped by their understanding of machine technology thanks to many years experience.

One benefit that helps Applied Automation stand out amongst their peers is not only the design service, which is free-of-charge, it is the build service. This design and build service was used in full to meet all the needs of this application where the chosen result was to supply part assembled panels to UPM. Applied Automation supply an adaptable “kit of parts” to UPM, each comprising of 4 assemblies. These kits are all part built and include 2 side panels, a rear panel which includes an integral access door and a front panel construction.

When the kit arrives on site at UPM the real magic of this modular approach is seen. The production engineers are able to easily fit the 4 panels together using the simply MayTec jointing system and then a final cross member to provide suitable rigidity, allowing the complete guard to be assembled within 3 hours. This brings in the question of cost saving. Steve Wicks, the production manager in charge of this project, said “it is more cost effective to ship the large assemblies to their factory and then fit to the machine, than it would be to build the complete assembly from scratch on site”, this is, of course, due to the speed of the final assembly when the kit arrives.

The bringing together of expertise is key to successes like these, with UPM knowledgeable in the plastics industry and driving new technologies coupled the perfect execution of the team at Applied Automation in delivering the most viable safety guard solution, the IRD system is now aggressively being promoted.

To learn more about the infrared dryers from UPM visit www.upm.co.uk, and for further information on the guarding solutions available from Applied Automation visit www.maytec-uk.co.uk.

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More information

Applied Automation is a privately owned company, founded in 1986, which prides itself on delivering high standards in customer service. There are three facets to the business covering manufacturing of control systems and machine design & build, the supply of automation & industrial control products and also the application and supply of the MayTec aluminium profile system. They are proud to have successfully built up a reputation in providing an excellent level of service. This has been achieved through a combination of excellence, including the product range on offer allowing exceptional build quality, the availability of product ensuring prompt delivery times and the help available from their friendly experienced team of Engineers. The Applied Automation customers come from all sectors of industry including Automotive, Aerospace, Nuclear, Chemical & Pharmaceutical from machine builders to manufacturers and end users, with this level of experience it is no accident that our knowledge is so extensive!

For further information

Applied Automation (UK) Ltd, Meadow Close, Langage Industrial Estate,
Plymouth, Devon, PL7 5EX
Phone: 01752 343300 Fax: 01752 331199
Email: maytec@appliedautomation.co.uk Web: www.maytec-uk.co.uk

News Provided by: B2Bi, T 0789 1127 333, F 07092 808375, E stephen@b2bi.co.uk

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