



The Royal League in ventilation, control and drive technology

Movement by Perfection

ZIEHL-ABEGG 

Assembling the world's best

Despite the advantages a global marketplace offers, procuring equipment from international manufacturers can be challenging. To eliminate the vagaries of international shipping and improve the quality of its product, the local arm of a leading international HVAC&R manufacturer is now assembling to international standard here in Australia.

Well known for its world-class fans internationally, Ziehl-Abegg Australia has reinvented the way it supplies its Australian customers by investing in a state-of-the-art assembly line at its new headquarters in Derrimut, west of Melbourne.

The \$250,000 assembly line has been designed to mirror those of Ziehl-Abegg's other international facilities and supports the local HVAC&R market by supplying the same range and standard of products, while better meeting local lead time requirements.

It is an important step for the German-based company, which has enjoyed significant growth in Australia since establishing operations here seven years ago.

According to Managing Director Michael Kelleher, the new facility and assembly line has been a few years in planning and was put together under the watchful eye of Ziehl-Abegg's German engineers.

He expects this facility to give the company a significant edge over its competition.

“By assembling fans for our local market here, we can guarantee quality, performance and ensure lead times are met.”

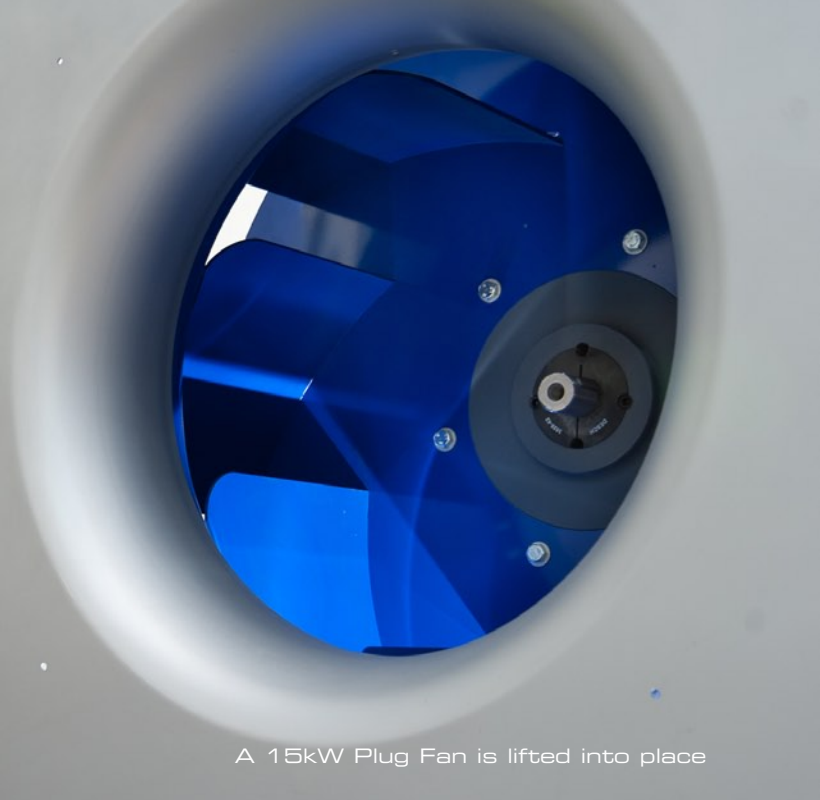
“The trouble with importing fans from overseas is that despite their size and seeming robust nature, they are in fact delicate items of equipment, finely tuned for efficiency and performance,” Kelleher says.

“With energy efficiency so important in today's world, any unbalancing that occurs through transport can result in performance being dramatically reduced and product life eroded. By assembling fans for our local market here, we can guarantee quality, performance and ensure lead times are met.”

To prepare for the introduction of the local assembly line, local staff members have undergone training at other Ziehl-Abegg facilities around the world. Two of the company's German-based engineers have also provided training at the new facility.

All instrumentation and precision benches used in the assembly line have been specified and shipped from Germany, while the two overhead cranes and hand tools were sourced locally to Ziehl-Abegg's global specifications.

The facility's VFD switchboard was manufactured in house by Ziehl-Abegg AG in Germany.



A 15kW Plug Fan is lifted into place

Finding balance

An important element of Ziehl-Abegg's local assembly line is the balancing process, integral in guaranteeing fan performance and efficiency.

In the case of Ziehl-Abegg's popular Plug Fan, the complete fan and motor assembly are balanced on-site as an integral unit, ensuring the balance characteristics of the motor are taken into account.

The balance is carried out at the maximum speed the motor can operate the fan impeller, thereby maximising bearing life while limiting vibration to a minimum.

"As fan speeds increase the effects of unbalance become more detrimental, as the force caused by unbalance increases by the square of the speed," explains Sales Manager Mark Jones.

"Due to this effect, if you balance a fan at half speed to the same displacement level, and then operate it at full speed, the unbalance will be increased thus reducing bearing life."

Jones says the company's current procedure is to balance the fan at partial speed to the calculated balance grade that will provide the required displacement results at full speed.

"Once this is achieved, the fan is then operated at full speed and the balance is checked to ensure the maximum balance displacement is within tolerance."



Ziehl-Abegg's popular Plug Fans



Technician carries out Wheel balancing at VFD control

“As fan speeds increase the effects of unbalance become more detrimental”

This process meets Ziehl-Abegg’s global procedures as well as ISO standards, providing security to customers.

To meet with local requirements, MEPS Australian motors are supplied with options to upgrade to MEPS premium efficiency motors.

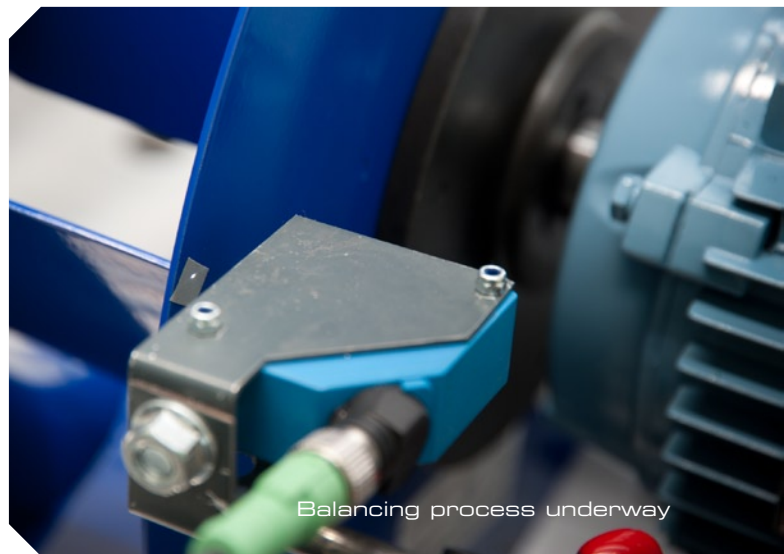
All balancing is conducted within a purpose-built balance room, with appropriate health and safety procedures in place. Given it can test fans with motors up to 55kw or 100amp, such precautions are necessary to protect both staff and the facility from the effects of fans operating at full speed.

Taking stock

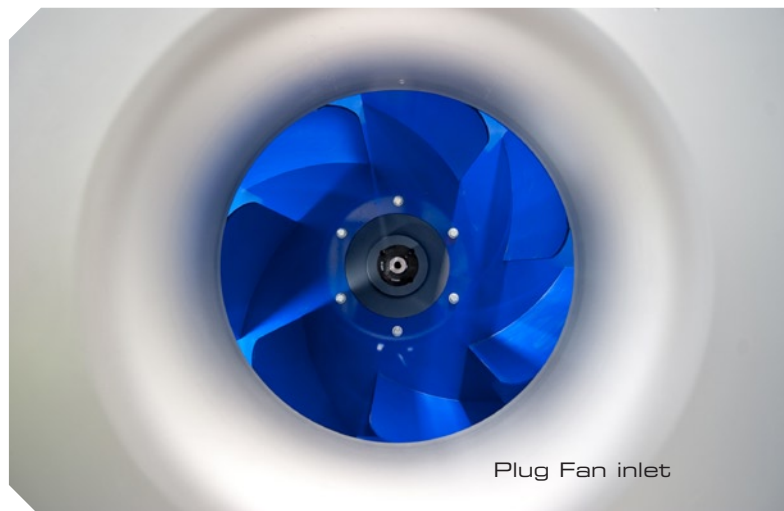
Along with the specialised assembly line, Ziehl-Abegg Australia’s new headquarters features over 1,800m² of warehouse space, giving the company the ability to hold significant stock levels of all fan assembly components.

This means the company can now assemble to customer’s requirements, as opposed to the process used by many other fan suppliers where customers are at the mercy of international shipping times to receive fully assembled units.

“This facility provides us with greater flexibility in prioritising our workload and utilising freight benefits to maximise shipment capacity, rather than shipping completed assemblies that take up much greater space,” asserts Kelleher.



Balancing process underway



Plug Fan inlet

“This opens an exciting new chapter in Ziehl-Abegg’s Australian operations”

“Now we can offer a more price-competitive product, guaranteed to operate as intended from the minute it is commissioned on site.”

Ziehl-Abegg Australia expects its new facility to assemble approximately 1000 fan units this financial year, with the annual figure to increase as efficiencies in the assembly line are achieved.

“This opens an exciting new chapter in Ziehl-Abegg’s Australian operations, and we are convinced customers will see the benefits of this investment,” says Kelleher.



A large Plug Fan is worked on within the confines of the balance room



Ziehl-Abegg Australia
warehouse facility, Derrimut Victoria