

**Solution:** Remote Management**Country:** India**Company:** Frick India Ltd

Benefits

- Online access to compressor parameters such as temperatures, energy consumption or runtime
- Remote access to configure Allen Bradley PLC
- Lowered costs for service trips and maintenance.

"We can now see all the parameters from the compressors displayed online – trends, logged data from the plant, error diagnostics plus alarms if something is wrong."

Surender Pal Korpai
Frick India Ltd.

Keeping it cool with Netbiter

Many manufacturers of industrial equipment need to keep track of their machinery also after it has left the factory. But service trips to the machines in the field can be costly and time-consuming and if a machine needs repair, it may take a long time to find out what is wrong with it.

Through the Netbiter Remote Management solution, Frick India Ltd has found a way to keep track of their machinery via the web and always be on top of the state of the equipment. Frick India Limited is the largest manufacturer of industrial refrigeration and air-conditioning equipment in India. The company, which has been in business since 1962, has a long history of producing compressors, coils, pressure vessels, evaporative condensers and other cooling equipment for the vast Indian market. They also export to 40 countries abroad. Frick equipment is used in dairy cooling, ice factories, fisheries, marine applications, petrochemicals, food & beverages, breweries etc.

In a recent project, Frick compressors were installed in a potato cold storage in Hapur, located in the Uttar-Pradesh region in Northern India. The temperature variations in Uttar-Pradesh can be extreme and in the summer, temperatures can go as high as 50 °C. Consequently, efficient cooling is of utmost importance if you want to store foodstuff.

On top of all parameters from the compressors

In the potato storage, there is a glycol chilling system with two screw compressors from Frick. Connected to the compressors is a Netbiter gateway which is able to detect operating values from the compressors such as temperatures, energy consumption, running hours etc. The Netbiter gateway sends this data to a cloud-based server called Netbiter Argos.

The data is sent via Ethernet, but Netbiter gateways can also send data wirelessly via GSM/GPRS/3G. Frick and their customers can log in to Netbiter Argos at www.netbiter.net where they can view all parameters in an online dashboard. They can also view trends over time and download statistics on equipment behavior.

Also very important is the possibility to get alarms via email or SMS text messages



Netbiter Argos

The Netbiter gateway sends data from the compressors to Netbiter Argos in the cloud.



User access at www.netbiter.net

notifying Frick and their customers if something is wrong with the machines or if service is needed. This saves a lot of time and money when it comes to maintenance and also significantly increases the up-times for the cold storage as a whole.

The setup

Surender Pal Korpala at Frick's Electrical Department was the project manager for installing the cooling system. He explains the setup: "We used an Allen Bradley SCADA system for whole plant and installed a Netbiter gateway in the main PLC panel. We used a 16 point Dlink switch, where we connected all the remote I/Os of the plant. All our PLCs are connected via the Dlink switch as are the network connection and the Netbiter gateway."

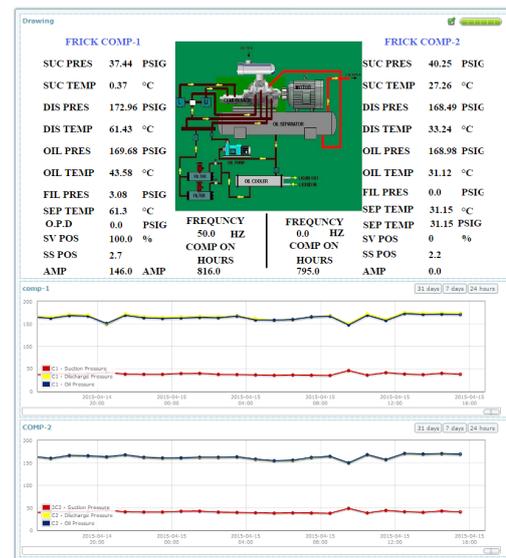
Connection via Modbus

The Netbiter gateway can communicate with all types of equipment which uses Modbus, Modbus-TCP or EtherNet/IP. This has been a great advantage for Frick since they have standardized on Allen Bradley PLCs which offer Modbus RTU communication.

Remote configuration of the PLCs

A very useful feature of the Netbiter system is the functionality called "Remote Access." This means that Frick can connect to their PLCs remotely and do configuration using the usual Rockwell RSLogix software. It is just like being connected on site. This means that changes, upgrades and debugging can be done from any location, saving a lot of service and maintenance costs. Surender Pal Korpala at Frick concludes: "We can now see all the parameters from the compressors displayed online – trends, logged data from the plant, error diagnostics plus alarms if something is wrong.

All this is available right on our computers or even on our mobile phones. We can also configure our PLCs online which is very helpful. Our client in Hapur is very satisfied with this system which saves them a lot of maintenance time and money and also improves the operation of the potato cold storage."



Dashboard from Netbiter Argos. This is what Frick and their customers see when they log in to monitor their compressors online.



Compressor assembly at the Frick factory.