



APPLICATION STORY

Indispensable tools for detecting damp spots and structural defects

Paul Sevink of Klussenbedrijf Contact relies on the FLIR MR160 imaging moisture meter and FLIR C2 compact thermal imaging camera.

Paul Sevink's handyman service, based in Soest (NL), can handle most any job. Sevink sees making good use of the available technology to get the job done right as simply a matter of professionalism and customer service. The new test and measurement equipment from FLIR, the MR160 moisture meter and C2 thermal imaging camera, have already become indispensable to him.

There are few jobs Paul Sevink will not take on. In addition to providing general maintenance and renovation services, Sevink also installs and maintains vacuum cleaning systems and infrared heat panels and he is a certified wood refurbishment specialist. Sevink says you can recognize a professional handyman by his tools. In his case, he really depends on them to be able to offer his wide range of services. In addition, he is also an editorial assistant for trade journal KlusVisie, a magazine specifically aimed at handyman and maintenance companies.

Indispensable technology

'I often have the opportunity to use new tools so I can review them for KlusVisie,' said Paul Sevink. 'So I regularly have the opportunity to discover new things I can use for my handyman service too. This is how I learned about the latest test and measurement equipment from FLIR. In the past, equipment like thermal imaging cameras were generally unattainable for most people, but today they have actually become very accessible and even indispensable.'

Sevink is referring to the continuing trend for thermal imaging technology to get ever smaller, easier to use and therefore also less expensive. And

that has led more and more handymen to add these cameras or test and measurement devices to their toolbox. Paul Sevink is completely convinced of the benefits of his latest acquisitions, namely the FLIR MR160 moisture meter with thermal imager and the pocket-sized FLIR C2 thermal imaging camera.

Reliable moisture measurement

Construction professionals typically use moisture meters that measure electrical resistance between two pins set a fixed distance apart. The lower the resistance, the higher the moisture content of the measured surface. A potential problem with the use of these devices is that it often takes a bit of searching to locate the spot where the moisture measurement should be taken. This is a problem for which the FLIR MR160 imaging moisture meter offers an excellent solution.

The FLIR MR160 combines a moisture meter with a thermal imaging camera in a single unit and can clearly see where the problem must be measured. Making use of Infrared Guided Measurement (IGM) technology, the FLIR MR160 visually guides the user to the location where reliable moisture measurements can be taken. Moisture in floors or walls can then be detected and examined further with the built-in sensors.



Top: The FLIR MR160 combines a moisture meter with a thermal imaging camera, making it the first of its kind.

Bottom: The FLIR C2 is the first pocket-sized thermal imaging camera specially designed for construction and industry.

Tracking down 'accumulated moisture'

'The FLIR MR160 served me well on a job where the laminate flooring on a landing had suddenly bulged up,' said Sevink. 'Because there was no way to get a good look without causing damage, I chose to have a leak detection performed. It turned out there was no leaking water pipe or drain. Poor caulking and grouting proved to be the cause. The FLIR MR160 showed me a pattern that appeared to indicate water was present that had not been found during the leak detection. My first thought was an 'old moisture' problem.'



Making use of Infrared Guided Measurement (IGM) technology, the FLIR MR160 visually guides the user to the location where reliable moisture measurements can be taken.



Moisture spots in the wall are clearly visible in the thermal image.

Accumulated moisture is moisture that wicks into a wall through a joint and is then virtually unable to evaporate because the surface is mostly covered with tiles and 3 mm thick grout. The problem with poorly sealed grout lines and/or caulked seams only becomes apparent once the wall is saturated with water. As it turned out in this case, some tiles had also developed cracks caused by stress that built up in the wall as the moisture caused it to expand.

'After removing a few tiles at the client's request, the FLIR MR160 again confirmed my suspicion. It was clearly accumulated moisture, and not a leak. Based on this information, I could advise my client to run a construction dehumidifier for few days, after which I would replace the damaged tiles.'

Moisture meters for wood renovation

Paul Sevink has also already used his FLIR MR160 for detecting moisture spots in a wooden door frame: 'Sometimes wood rot is not so easy to see with the naked eye, but the MR160 gives you a clear picture of the situation, both with and without measuring pins.'



'What I really appreciate about the FLIR MR160 is that you can save and transfer your measurements and results. With the supplied FLIR Tools you can create beautiful reports that you can offer as proof to your clients, which in my case are often insurance companies. It is also handy to be able to show your client the moisture problem while on site, based on the thermal image.'

Looking for pipes with the thermal imager

Paul Sevink also uses the FLIR C2, the world's first full-featured, pocket-sized thermal camera specifically designed for experts in construction and industry. With this camera tucked in a pocket, users can take a thermographic recording any time. You can easily detect structural defects, find hidden heat patterns that may indicate energy loss, check underfloor heating and much more.

'After the moisture measurements with the MR160 I used also as my FLIR C2 to confirm my findings. The C2 showed me the bathroom pipes very clearly in the thermal image. Particularly the MSX function, which displays the visual contours as a line drawing on the thermal image, is very convenient. Everything was beautifully displayed on the thermal image. I saw no hidden do-it-yourself pipes or drains, which was very reassuring to me.'

For Paul Sevink, using FLIR cameras and measuring equipment is also a matter of saving time. 'FLIR equipment not only makes a professional impression, it also saves you lots of time. You can use it to quickly make contactless measurements. The devices require little explanation – you can get started with them straight away and begin taking measurements in no time – and they also fit perfectly in your pocket. So there is no reason not to always have the FLIR MR160 and FLIR C2 with you.'

A FLIR C2 camera fits perfectly in the inside pocket and enables the user to create a thermographic recording any time.

INFRARED GUIDED MEASUREMENT (IGM™)

Many industry and building professionals today rely on test and measurement tools for electrical and mechanical repairs, industrial plant maintenance, HVAC troubleshooting and moisture detection. With the new Infrared Guided Measurement (IGM) technology from FLIR, these jobs will become safer and a lot more productive.

Although many test and measurement products have become indispensable for today's maintenance professional, using a tool to find and pinpoint a problem quickly can be hard. Moisture and electricity problems don't always show up clearly to the naked eye, and therefore, finding the exact location of a moisture problem or electricity problem might require quite some guesswork.

IGM adds thermal imaging technology FLIR and allows maintenance professionals to work smarter and more efficiently by visually guiding them to temperature problems invisible to the naked eye. This way, IGM allows them to focus on troubleshooting and see which spot may require further testing and investigation.

IGM makes use of FLIR Lepton®, a revolutionary longwave infrared (LWIR) sensor. The portfolio of IGM featured test & measurement tools includes IGM moisture meters, clamp meters, multimeters and spot meters.

[For more information about thermal imaging cameras or this application:](#)

www.flir.com/instruments

The thermal images shown may not be representative of the depicted cameras' resolution. Images are only used for illustration.

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