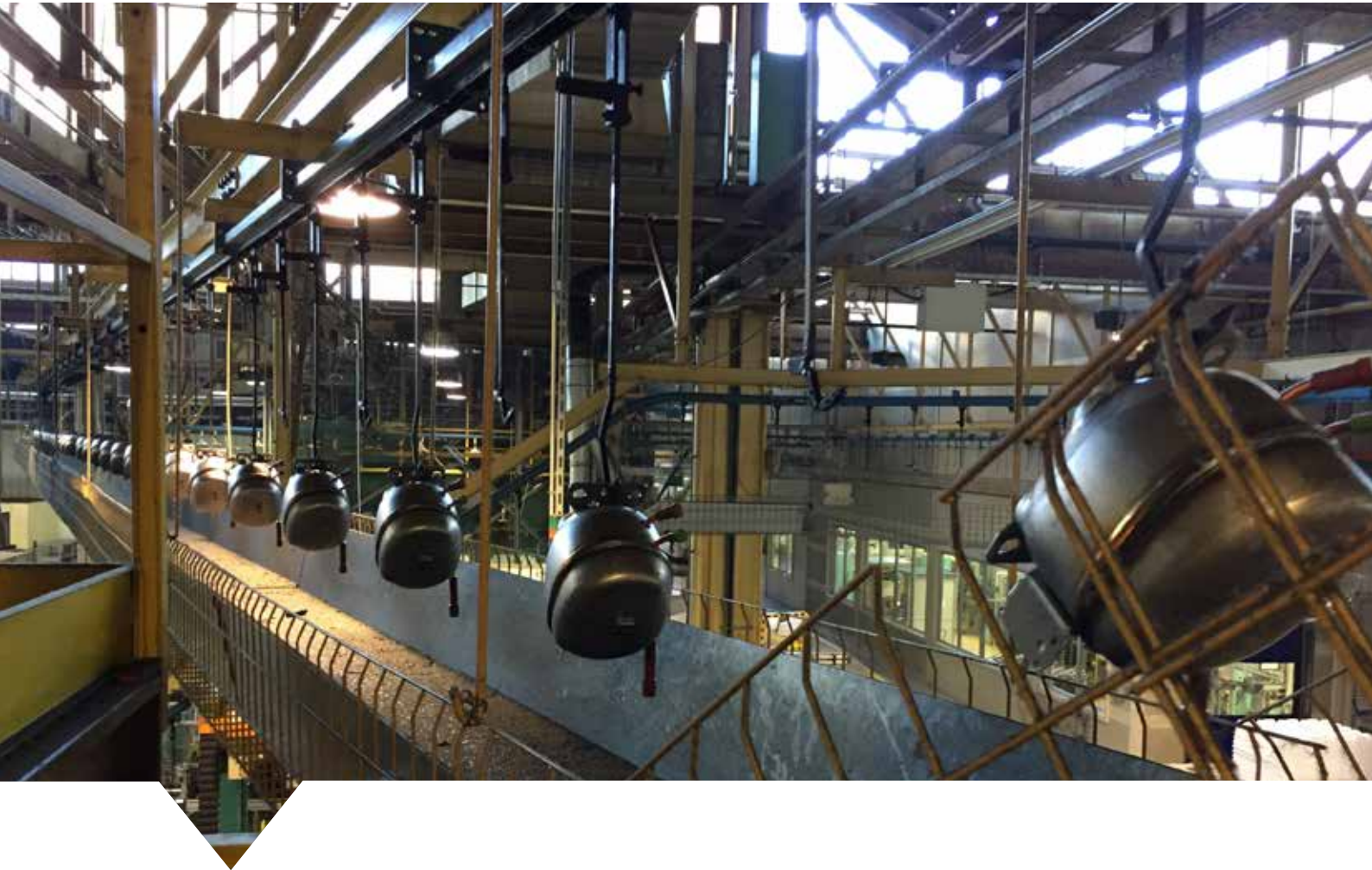


## Compressor Manufacturing



# Application Spotlight

Coating line in refrigerant compressor manufacturing

## COATING LINE IN REFRIGERANT COMPRESSOR MANUFACTURING

### Technical data

<b>Medium:</b>	Water-based coating on deionized water basis
<b>Temperature:</b>	95 °F (35 °C)
<b>Pressure:</b>	15 to 44 psi (1 to 3 bar)
<b>Measuring range:</b>	230 to 300 l/min (14 to 18 m <sup>3</sup> /h)
<b>Density:</b>	Approx. 1.1 kg/l
<b>Viscosity:</b>	Approx. 1 cSt

### Application

A leading, globally operating company develops, produces, and distributes compressors for cooling circuits. The compressors are used in refrigeration and freezing engineering, for private applications, in commercial small cooling systems, and as direct current compressors for mobile applications. Sustainability, resource conservation to the greatest possible extent, and reliability are important considerations for the company's manufacturing operations – including the in-house paint shop.

### KEM Product

A KEM Turbine Flow Meter (HM F Series) with flange connections, tungsten carbide hard metal bearings, and stainless steel housing as well as a Local Display with carrier frequency pickup (VTC).

### Challenge

The final black coating is applied to the compressors in the paint shop. In this process, the contents of the coating bath are permanently circulated through a filter system. A flowmeter used for precise coating bath monitoring checks the system state and plugging of the filter. The existing measuring equipment was to be replaced by a highly reliable and durable flowmeter with a better measuring accuracy. Specific challenges included fitting the device to the existing flange connections and the relatively short up and downstream sections in the piping system. An easy to read display suitable for the installation situation and an electrical interface for the process control connection were also required.

### Solution

The chosen Turbine Flow Meter with robust hard metal bearings and integrated flow straighteners is easy to fit into the local installation situation thanks to its flange connections. Volume flows are recorded with no contact and evaluated by the compact Local Display VTC with carrier frequency pickup. Relevant measurement results are shown on the rotatable graphical display and can be read directly on site by production employees.

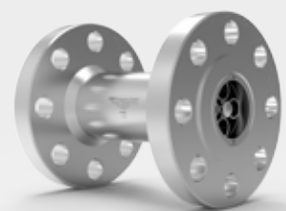


### Benefits

- *Reliable, highly robust and durable measuring system*
- *High measuring accuracy*
- *Direct readout of measuring data on the digital, scalable Local Display*
- *Interface for connection to production process control*



*Local Display with carrier frequency pickup (VTC)*



*Turbine Flow Meter (HM F Series)*