



K-Kontrol™ on Polivinil



- ▶ Adjust for changes in ambient
- ▶ Control & automate process
- ▶ Identify faults
- ▶ Save energy costs
- ▶ Reduce reject parts



K-Kontrol™ on Alan Yorke



K-Kontrol™ on Caccia



K-Kontrol™ on Ferry

Permanent mould temperature measurement

New build or retrofit installation

Install on one or all arms

Comprehensive control software

493K

What is K-Kontrol?

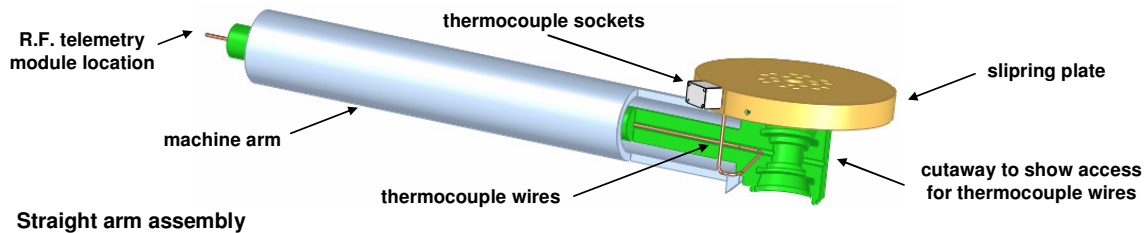
K-Kontrol continuously measures mould temperature, 24/7. It is permanently fixed to the rotational moulding machine and does not require cyclic maintenance. K-Kontrol measures the exact temperatures of a number of moulds on all arms simultaneously (up to 16 temperatures on a four arm machine), giving an overview of the process for the purposes of production scheduling, diagnostics or R&D.

How is it installed?

K-Kontrol is installed on the plate of the machine by 493K Limited or one of our distributors. Through prior arranged preparation of the machine, installation times take between 2-3 days. Once installed it is generally not moved from machine to machine. The slirings are bolted onto the plate and add less than 50mm to the height and the same to the radius of the plate. If additional height is not desirable then in most cases the machine plate can be replaced with our K-Kontrol plate.

Thermocouple wire runs from the head of the plate down through the centre of the arm and exit at the end of the arm where the rotary air joints are positioned. Radio telemetry is used to avoid wiring in and around the rotomoulding machine and to keep on-site installation time to a minimum. The telemetry is powered by batteries, which have a life of up to 4 months when operating under correct conditions.

The following diagram shows the general tracking of the thermocouples.



Can it control our machine?

Yes, K-Kontrol can provide temperature information for the machine controls, via an RS232 Serial link. The machine will require programming to fully integrate K-Kontrol into the controls and this is done in collaboration with the machine manufacturer. If a full data integrated system is not used then K-Kontrol temperatures can be viewed and recorded as normal via the supplied software. In this case process control can be achieved through manual interruption of the cycle based on the K-Kontrol temperatures.

Software.

The XP compatible software comes with recording, displaying and data exporting facilities. There are further add-on modules that can be used with the software to expand functionality:

- Machine control - controls the outputs for machine integration.
- Database - query data from same time minus one year; analysis effect of ambient.
- Reporting - Daily/weekly/monthly production statistics (average cycle times/delays).
- Curve Analysis - Curve areas/rates of rise & fall/differences.
- Alarms - set time/temperature alarms on all channels.

Temperature Measurement.

K-Kontrol uses K-type thermocouples to measure the temperature. These types of thermocouples are robust and stable at typical rotomoulding temperatures. Their flexibility means that they can measure the mould temperature or the polymer temperature or indeed any point in and around the mould which is accessible to a wire. The thermocouples can be hardwired directly to the mould wall using stainless steel sheathed arrangements that have proven to be the most reliable under industrial conditions.

K-Kontrol™ - High Temperature Slip Ring Module			
Mechanical Specification		Technical Specification	
Contact Life	10,000 hrs (300C (572°F) at 2rpm)	Measurement Temperature Range	0C (32°F) to +350C (+572°F)
Enclosure Nominal Dimensions:	100mm on Plate Radius; <50mm on Plate Height	Accuracy:	+/- 4.0C (7.20°F)
Enclosure Material	Stainless Steel	Resolution:	0.5C (0.90°F)
Protection Rating	IP65 (protection against dust ingress and water jets)	Operating Temperature Range	0C (32°F) to +350C (+572°F)
Weight	25 – 45kg (Depending on size)	No. of Channels	2 or 4 Thermocouples

493K

Distributor:

Taking Control of Rotational Moulding

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