FK31-SL Calibration Bath

The calibration baths are perfectly suitable for applications in calibration laboratories and conform to the requirements specified by DIN ISO 9001. The instruments provide highest temperature stability and temperature uniformity. An optional precision reference sensor with integrated measuring electronics and RS232 connection is available.

Your advantages

- VFD COMFORT DISPLAY
- LCD DIALOG DISPLAY backlit for convenient interactive operation
- · Keypad for setpoints, warning/safety values and menu functions
- ICC (Intelligent Cascade Control), self-optimizing temperature control
- TCF Temperature Control Features to optimize the control behavior
- ATC3 3-Point-Calibration
- Pt100 External sensor connection for measurement and control
- SMART PUMP, electronically adjustable pump stages
- Early warning system for low liquid level (DBGM 203 06 059.8)
- · Adjustable high temperature cut-out, visible via display
- RS232/RS485 interface for online communication
- Integrated programmer for 6 x 60 program steps
- Highest temperature stability to ±0.005 °C (±0.02 °C at +200 °C)
- Temperature uniformity better than ±0.01 °C
- Optional Pt100 sensor for reference temperature measurements
- Temperature chamber with overflow at maximum liquid level
- Active Cooling Control

Technical Data

Order No.	9352628
Model series	HighTech
Category	Calibration Baths
Working temperature range (°C)	-30 +200
Temperature stability (°C)	±0.005
Setting / display resolution	0.01
Integrated programmer	6x60 steps
Temperature Display	VFD, LCD
Heating capacity (kW)	2
Cooling capacity (Medium Ethanol)	°C 20 0 -20 kW 0.46 0.34 0.15
Pump capacity flow rate (I/min)	22-26
Pump capacity flow pressure (bar)	0.4-0.7
Pump capacity flow suction (bar)	0.2-0.4
Bath opening / bath depth (W x L / D cm)	Ø = 12 / 31 cm
Filling volume liters	24
Refrigerant stage 1	R134a
Filling volume refrigerant stage 1 (g)	163





Global Warming Potential for R134a	1430
Carbon dioxide equivalent stage 1 (t)	0.233
External Pt100 sensor connection	integrated
Digital interface	RS232 Optional: Profibus
Ambient temperature	540 °C
Dimensions W x L x H (cm)	32 x 45 x 91
Weight (kg)	51
Classification according to DIN12876-1	Classification III (FL)
Included with each unit	Including bath cover with 7 openings.
Bath cover	integrated
Cooling of compressor	Air
Available voltage versions	230 V / 50 Hz 115 V / 60 Hz

Characteristics

Display

A perfect view saaa

Ample, easy to read VFD Comfort display for simultaneous display of 3 values, warning functions, high temperature cut-off, pump stages (resolution 0.01 °C)

Additional plain text information Comfortable LCD dialog display for interactive operation with plain text display

👦 📲 Pump stage and liquid level Backlit indicator for selected pump stages and filling volume on Presto® PLUS, Magnum 91 & Forte HT

Operation

Comfortable and detailed Comfortable keypad with additional menu functions for pump stages, calibration, control parameters, programmer, warnings, etc.

Temperature Control

ICC For perfect results 'Intelligent Cascade Control', automatic & self optimizing adjustment of PID control parameters, temperature stability ±0.005 °C internal, <±0.05 °C external

Full control TCF

'Temperature Control Features' for individual optimization, access to all important control parameters, additional settings for band limit, limits, Co-Speedfactor etc.



ATC³ Highest measuring accuracy 'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration

Refrigeration Technology



Consistent cooling capacity Easily removable venting grid for quick and easy cleaning

ACC 100 % Cooling capacity 'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures

Condensation and ice protection A heated cover plate prevents condensation or ice build-up in the bath

Technical Features



Clever pump system Reliable and consistent pump capacity, electronically adjustable pump stages

Pt 100 Control from the external application

External Pt100 sensor connection for precise measurement and control directly in the external application



Connection compliant to standard RS232/RS485 dual-interface for serial data transmission according to EIA-485 industry standard (2-wire bus technology), upgradable with Profibus DP



Optimal program control

For the execution of time and temperature dependant profiles, 6 temperature profiles with 60 steps max., with real time clock



Automatic control of operating time

Electronic countdown-timer function for timer-programmed unit shut-down, standby mode after programmed time expires

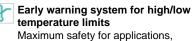
Warning & Safety Functions



Early warning system for low liquid level Maximum safety for applications,

optical and audible alarm, allows user to refill bath fluid before the unit shuts down





optical and audible alarm, convertible to automated cut-off function



Enhanced protective functions Maximum safety, adjustable high

temperature cut-off or dry-running protection, additional display of setpoints permits easy and precise adjustments

For flammable bath fluids

Classification III (FL) according to DIN 12876-1