

HPLC & UHPLC

Vanquish Refractive Index Detector

Universal detector for routine isocratic analysis

Vanquish platform benefits

- Integrated detector in Thermo Scientific™ Vanquish™ LC Systems for best user experience
- Extending the wide range of detection capabilities
- Delivering universal detection with reliability to meet your application demands
- Simple method transfer from legacy methods by having intelligent tools
- Easier set-up with module drawer concept and Thermo Scientific™ Viper™ Fingertight Fitting Systems

Keywords

Vanquish Horizon, Vanquish Flex, Vanquish Core, HPLC, UHPLC, Refractive Index Detection, isocratic, normal phase, universal detection

Reliable refractive index detection

The Thermo Scientific™ Vanquish™ Refractive Index Detector (RID) is a universal detector for routine isocratic analysis of substances that lack UV chromophores, such as carbohydrates, lipids, and polymers. The Vanquish RID can be easily integrated into Vanquish HPLC and UHPLC systems working with analytical flow while saving bench space and simplifying the overall instrument handling. The detector enables sample throughput by supporting fast separations with high data collection rates. It features excellent reproducibility.

- Stable baselines with low baseline drift (0.2 μ RIU/h) and noise (≤ 2.5 nRIU)
- Thermostatted optical bench and active flow cell heating for high reproducibility
- Extended flow rate range (up to 10 mL/min) and operating range (1.00–1.75 RIU) ensuring compatibility with a wide range of applications
- Smart start-up function automates purging, equilibration, autozero, and the control of baseline stability and noise
- Full compatibility with reversed and normal phase solvents
- Vanquish HPLC and UHPLC systems with Vanquish RID provide a highly integrated solution with optimized fluidic connections and single-point intelligent control through Thermo Scientific™ Chromeleon™ Chromatography Data System (CDS) Software



Specifications

Vanquish Refractive Index Detector	
Specified type	Specified value
Measuring method	Deflection type
Polarity	Positive and negative
Refractive index range	1.00–1.75 RIU
Measuring range	±600 µRIU
Response time (RT)	0.05 s, 0.10 s, 0.25 s, 0.50 s, 1.0 s, 1.5 s, 2.0 s, 3.0 s, 6.0 s
Data collection rate (DCR)	Up to 50 Hz
Noise	≤2.5 nRIU
Drift	≤0.2 µRIU/hour
Linearity range	<5.0% RSD at 600 µRIU
Temperature control	30–55 °C
Flow cell type	2 chambers
Flow cell volume	8 µL
Internal volume	Inlet port/flow cell: approx. 50 µL, flow cell/outlet port: approx. 480 µL
Maximum flow rate	10 mL/min (with water)
Fluidics pressure limit	0.05 MPa (0.5 bar, 7 psi)
Autozero	Optical and electrical
Autozero resolution	≤1 nRIU at 8 mV/µRIU, 4 nRIU at 2 mV/µRIU
Offset range	0–500 mV
Integrator output (sensitivity)	0–1 V DC (2 mV/µRIU, 8 mV/µRIU)
PC connection	USB 2.0
I/O interfaces	Analog I/O
System interlink	2 system interlink connectors (RJ45-8 connectors)
Safety features	Leak detection and safe leak handling
Control	<ul style="list-style-type: none">• Chromeleon CDS 7.2 SR5, Chromeleon CDS 7.2.10 or later• Keypad with 2 buttons
GLP features	All system parameters are logged in the Chromeleon Audit Trail
Biocompatible	No
Normal phase compatible	Yes, without hardware modifications
pH	1–13
Buffer concentration	≤1 mol/L
Chloride concentration	≤0.1 mol/L
Wetted parts	Stainless steel, PTFE, quartz glass
Environmental conditions	<ul style="list-style-type: none">• Operating: 5–35 °C, 20% to 80% RH (non-condensing), Max. altitude 2000 m above sea-level• Storage: –20 to 45 °C, Max. 60% RH (non-condensing)
Power requirements	100–240 V AC ±10%; 50/60 Hz; max. 250 W/560 VA
Dimensions (h × w × d)	159 × 420 × 620 mm (6.3 × 16.5 × 24.4 in)
Weight	16.5 kg (36 lbs)

Ordering information

Description	Part number
Refractive Index Detector C	VC-D60-A-01

For more information on Vanquish Refractive Index Detector click [here](#)

 Learn more at thermofisher.com/HPLC

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