

TECHNICAL DATA SHEET

ALab™ DCP-5 Low-Temperature Cooling Circulator

Low-temperature cooling circulator • -20 to 40 °C • 700 W at 20 °C • 4.5 L tank • intelligent PID



ACS Material ALab™ DCP-5 Low-Temperature Cooling Circulator

CONTENTS

- 01 Product Overview
- 02 Core Advantages
- 03 Specifications
- 04 Applications

ACS MATERIAL, LLC

959 E Walnut St., Suite 100
Pasadena, CA 91106, USA
Phone +1 (866) 227-0656
Fax +1 (781) 518-0284

contact@acsmaterial.com

Revision Date **08/13/2026**

SECTION I

Product Overview

The ALab™ DCP-5 Low-Temperature Cooling Circulator regulates temperature by pumping low-temperature cooling fluid through connected equipment. It covers a setpoint range of -20 to 40 °C with ± 0.3 °C control accuracy under intelligent PID control with a PT 100 sensor, delivers a cooling capacity of 700 W at a 20 °C setpoint, and circulates from a 4.5 L tank with a stated maximum circulation flow of 22 L/min and a maximum pump pressure of 0.3 bar (separate limits). It suits laboratory, pharmaceutical, chemical and semiconductor work where a stable low-temperature environment is required — including condenser cooling on rotary evaporators.

SECTION II

Core Advantages

- **Wide setpoint range** — -20 to 40 °C with ± 0.3 °C control accuracy
- **700 W cooling capacity** — manufacturer figure at a 20 °C coolant temperature
- **Intelligent PID control** — PT 100 sensor, LED display resolving 0.1 °C
- **Continuous-duty circulation** — 100% duty; max. flow 22 L/min and max. pressure 0.3 bar are separate limits

SECTION III

Specifications

Technical data

Specifications	
Temperature Range	-20 to 40 °C
Temperature Control Accuracy	± 0.3 °C
Temperature Control Method	Intelligent PID
Control Temperature Sensor	PT 100
Temperature Display	LED · display accuracy 0.1 °C
Cooling Capacity at 20 °C	700 W
Refrigerant	R-404A
Maximum Pump Pressure	0.3 bar
Maximum Circulation Flow	22 L/min
Tank Capacity	4.5 L
Internal Diameter of External Pipe Mouth	8 mm
Instrument Fixing Method	Floor standing

Specifications	
Continuous Operation	100%
Permissible Ambient	5 to 40 °C · 80% RH
Dimensions [W×D×H]	230 × 490 × 450 mm
Power Supply	100–120 V / 200–240 V, 50/60 Hz
Power / Current	700 W max. / 3.5 A max.

The 700 W figure is published at a 20 °C coolant temperature; capacity at lower setpoints is not published and is lower. Maximum circulation flow and maximum pump pressure are separate limits; no pump curve is published.

Ordering and availability

- Supply as listed: 100–120 V / 200–240 V, 50/60 Hz
- Lead time confirmed at quotation
- Cools condensers on rotary evaporators
- Cooling capacity published at a 20 °C setpoint
- External pipe mouth internal diameter 8 mm
- Also DCP-17 and DCP-20 for larger duties

SECTION IV

Applications

Typical applications for the ALab™ DCP-5 Low-Temperature Cooling Circulator include:

- **Laboratory cooling** — stable low-temperature supply for condensers and rotary evaporators
- **Chemical reaction cooling** — supporting controlled reaction cooling and process heat load
- **Pharmaceutical and biotech** — freeze drying and enzyme reactions, subject to required temperature and capacity
- **Semiconductor and food processing** — process stability and constant low-temperature storage conditions

Product value: a compact standalone circulator with ± 0.3 °C control from –20 to 40 °C, 700 W of cooling at a 20 °C coolant temperature and 100% continuous-duty circulation. Match the circulator to the condensing duty of your process; capacity at lower setpoints is not published and is lower than the 20 °C figure.

Revision Date: 08/13/2026

DISCLAIMER

ALab™ is a trademark of ACS Material, LLC. ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties, either express or implied, regarding the suitability of the equipment for any application or the accuracy of the information contained within this document. Specifications are typical and may vary; confirm product details and application suitability at the time of quotation. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.