

# Durachill



*DCA180 shown with optional conductivity meter.*

## DCA180 Series 1.75 HP Low Profile Chiller

### Featuring

- 6 kW cooling at 86°F (30°C)
- Process temperatures from 41° to 95°F (5° to 35°C)
- Extremely compact size
- NEMA 12 control enclosure
- Coolant level dual alarms
- Extra-large digital displays for temperature, flow rate and pressure
- One-touch temperature set and controller lockout

The Durachill DCA180 Chiller provides reliable heat removal for lasers, EDM equipment, and other precision devices that utilize deionized (DI) water or other coolants with high dielectric properties.

Capable of maintaining process temperatures from 41° to 95°F (5° to 35°C) with  $\pm 0.9^\circ\text{F}$  (0.5°C) stability, it incorporates PolyScience's advanced Cool Command™ refrigeration technology to provide effective cooling even at elevated temperatures without excessive energy consumption. A choice of either a centrifugal or turbine pump helps further optimize cooling efficiency and performance.

For operational and process safety, the DCA180 features alarms that alert you instantly when operating parameters — such as fluid temperature, flow rate, fluid pressure, or ambient temperature — exceed pre-set limits. There are even user-adjustable high and low temperature limits to help prevent unauthorized set point changes plus built-in compressor and pump protection.

This compact unit features an easy-to-use calibration function that allows you to adjust the chiller's temperature display to match a traceable temperature standard, heavy-duty locking casters, and a power phase monitor on 3-phase models. Options include interfaces for various control functions such as remote control, remote ambient temperature tracking, or an optional conductivity control system.

### Available Options:

- Choice of centrifugal or turbine pumps
- Conductivity control and display
- DI water compatible wetted parts
- Multiple interfaces available for serial and analog outputs
- Ambient tracking probe
- Consult factory for additional options

# Durachill™ DCA180 Low Profile Chillers

Controller Specifications	
Temperature Set Point Resolution	±1.0°C
Temperature Stability	±0.9°F / ±0.5°C
Temperature Units	°F or °C
Pressure Units	PSI or kPa
Pressure Display Resolution	1 PSI / 0.1 kPa
Flow Rate Units	GPM or LPM
Flow Rate Display Resolution	0.1 GPM / 1 LPM

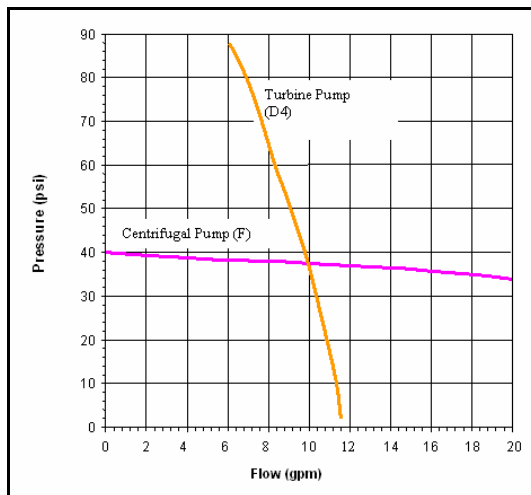
General Specifications			
Model		DCA180F	DCA180D4
Pump Type		Centrifugal	Turbine
Temperature Range	°F °C	41° to 95°F 5° to 35°C	41° to 95°F 5° to 35°C
Temperature Stability	°F °C	±0.9°F ±0.5°C	±0.9°F ±0.5°C
Compressor	Nom. HP	1.75	1.75
Cooling Capacity <sup>(1)</sup>	Tons	1.70	1.70
	Watts	6000	6000
	BTU/hr	20,460	20,460
Nominal Evaporator Flow <sup>(2)</sup>	US GPM	4.1	4.1
Pump HP	H.P.	1	¾
Pressure <sup>(3)</sup>	PSIG	35	75
Fan @ HP	H.P.	1 @ ¾	1 @ ¾
Condenser Discharge Air Flow	CFM	1600	1600
Process Connections (In and Out)	Inches NPT	1	1
Reservoir Capacity	US Gallons	3.5	3.5
Dimensions (d x w x h)	Inches	42 x 27 x 26.5	42 x 27 x 26.5
Shipping Weight	Pounds	440	440
Nominal Rated Amps	460V/3/60	6.5	6.2
	230V/3/60	12	11.6
	230V/1/60	19	18.5

(1) Capacity based on 86°F (30°C) ambient air temperature and 68°F (20°C) leaving water temperature.

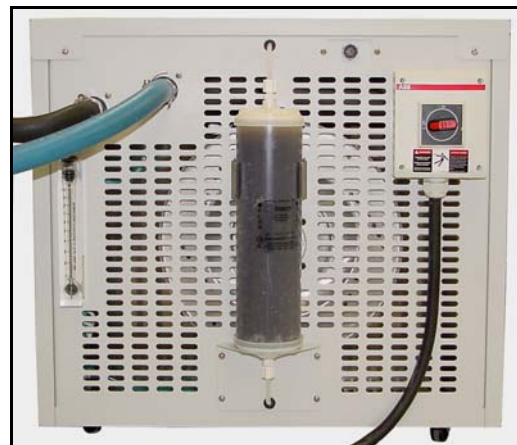
(2) Chiller flow rate based on 2.4 US GPM/ton (0.54m<sup>3</sup>/hr/ton).

(3) See pump performance curves. Pressure is adjustable on models with turbine pumps.

## Pump Performance



DCA180 shown with optional mixed bed DI water filter.



Specifications subject to change without notice.

 **PolyScience** An ISO 9001:2000 Certified Company

[www.polyscience.com](http://www.polyscience.com) - Toll-Free 800-229-7569 - 847-647-0611 - fax 847-647-1155 email - [information@polyscience.com](mailto:information@polyscience.com)  
6600 West Touhy Avenue, Niles IL 60714, Established 1963