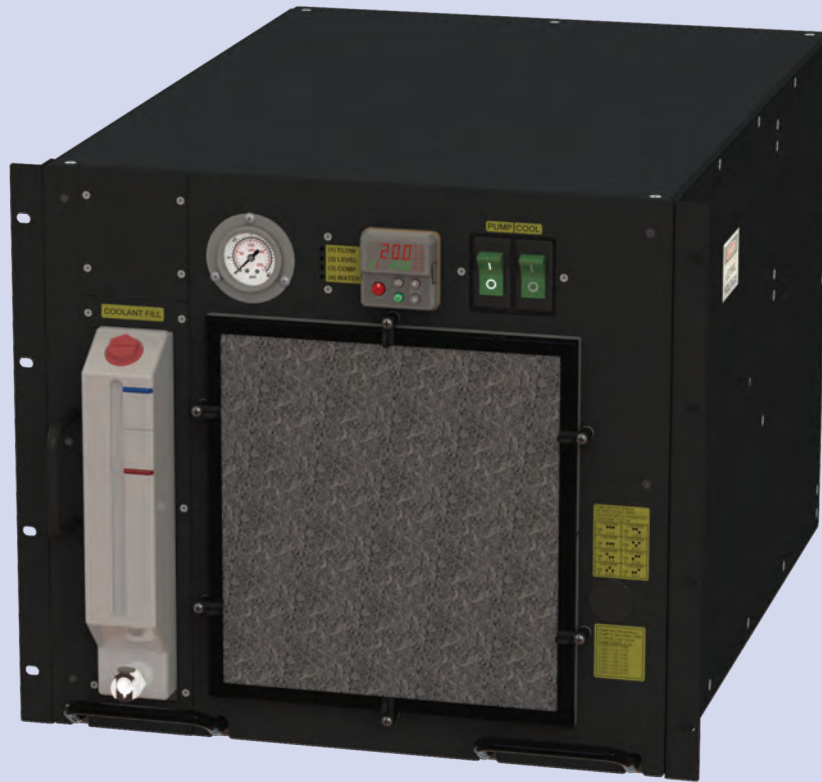




Largest Capacity Rack - Mounted Chillers On This Planet

Front Panel



Back Panel



3,200 watts (10,900 BTU's)

K-O Model DMC-30-G2

Ideal for Demanding Laser, Medical, Industrial, & Aerospace Applications

CHILLER MODULE FEATURES

K-O Concepts Model DMC-30-G2

- **K-O Model DMC-30-G2**

SECOND GENERATION (G-2) rack-mounted coolant chiller. Standard 19 inch, rack mounted configuration allows the cooling module to be integrated with the equipment to be cooled. Fully enclosed cabinet is equipped with handles for ease of installation. Weighs 94 lbs. / 42.7 kg. The chiller is air-cooled for portability.

- **Standard 19 inch Enclosed Rack-Mount Chassis**

All models: 15.72 H x 17.12 W x 24.35 D inches (cabinet dimensions)

Front panel dimensions: 15.72 H x 19.0 W (9U height cabinet)

Request interface control drawing (ICD) number 25432600 for detailed dimensions.

- **Accurate Process Coolant Temperature Control**

The “PID” multi-loop controller accurately maintains the desired process coolant temperature to within 0.1°C of set temperature. The dual digital readout on the User Interface module displays both set and actual process coolant temperatures.

- **Heating**

Waste heat is harvested from the system’s compressor to quickly raise the temperature of the process coolant. Approximately 40% of the BTU rating of the chiller unit is available for heating the process coolant up to 50°C without any external heat load.

- **Communication Options**

Standard RS-485 communications or optional RS-232, Modbus RTU or TCP, USB 2.0, DeviceNet or Profibus DP. Optional 6 Digital Input/Output alarm signals via communications.

- **CFC Free Refrigerant**

All models use R134a (HFC-134a) refrigerant for mobile applications.

- **Process Coolant Pumps**

Standard positive displacement (sliding vane) style process coolant pump with eight (8) speed settings

provides flow from 3-10 liters per minute @ 70 psi (4.8 bar) available pressure. Optional positive displacement (sliding vane) style process coolant pump with seven (7) speed settings provides flow from 6-16 liters per minute.

- **Optional Deionized (DI) Water Package**

Includes nickel-brazed heat exchanger, ion (DI) cartridge assembly, water filter, and upgraded 316 stainless steel fittings. Easy service to the DI cartridge is accomplished from the rear panel.

- **Easy To Service & Maintain**

Chillers are designed for easy service and maintenance. Convenient process coolant fill & drain features on all models. Access panels for ease of electrical service.

- **End-User Printed Circuit Board**

The EU-PCB monitors and reports interface signals via front panel LED’s, audible alarms and/or power down on any or all fault signals.

- **Optional Digital Pressure Gauge**

The DPG is an upgrade to the mechanical pressure gauge. The transducer operates from 0-145psi and has a 0.25% BFSL accuracy rating. The transducer has all stainless steel parts with no o-rings. The controller displays “in-range” pressure values in green and “out-of-range” pressure values in red.

Chiller Module Specifications & Options

K-O Concepts Model DMC-30-G2

MODEL NUMBERS		DMC-30-G2
Cooling Capacities ¹	Watts	3,200
	BTU/hour	10,900
Cooling Process	Compressor	All models use refrigerant based compressors.
Refrigerant Type	R134a	All models use R134a (HFC-134a) / CFC-free.
Heat Dissipation Note: Air flows from front to rear of cabinet.	Air (air cooled)	All models dissipate heat to ambient air via fan.
Process Coolant Temperature Range	°C / °F	Standard Feature: 5-35 / 41-95
Ambient Temperature Range (OPERATING) Note: Coolant performance is degraded above 30°C ambient.	°C / °F	15-35 / 59-95
Process Coolant Temperature Stability ²	°C	±0.1°
Process Coolant Tank Capacity	Gallons / liters	1.3 / 4.9
Process Coolant Maintenance	Fill / drain	All models feature fill & drain via front panel.
Process Coolant Pump Performance Standard & Optional Pump: Positive displacement type.	Gallon / liters per minute	Standard (Model PDM / 3-10): 0.75-2.63 GPM / 3-10 LPM Optional (Model PDM / 6-16): 1.4-4.4 GPM / 6-16 LPM
Process Coolant Pump Pressures	PSI / bar	Standard Pump: 70 / 4.8 available pressure. Optional Pump: 58 / 4.0 & 70 / 4.8 available pressure.
Process Coolant Pump Head Materials Standard & Optional Process Coolant Pumps.	Model(s) PDM	Stainless steel w/ graphite vanes.
Process Coolant Connections (FNPT)	Inches	Standard Feature: ½
Input Power Requirements	Volts AC Single Phase	Standard 208-230VAC 60 Hz or 220VAC 50 Hz Optional 115VAC 60Hz or 100VAC 50Hz
Full Load Amperage (typical) Note: Typical line current @ 60Hz.	Amps @ 230 VAC	6.0
	Amps @ 115 VAC	10.0
Circuit Breakers	DPST	Lighted circuit breakers (2x) located on front panel.
Weight	Dry lbs. / kg.	94 / 42.7
Cabinet Dimensions (W x D x H) Note: Standard 19 inch rack-mount configuration, fully enclosed, w/ 15.72 inch / 9 unit (U) high front panel.	Width: in / mm	17.12 / 434.9
	Depth: in / mm	24.35 / 618.5
	Height: in / mm	15.72 / 399.3
	Panel: in / mm	19.0 W x 15.72 H / 482.6 W x 399.3 H
Process Coolant Temperature Controller		Standard Feature: PID multi-loop controller with User Interface display
Electrical Interface Signals Note: All interface signals are contact closures & are normally closed (N.C.) in the passed condition. Interface signals accessed via (DA 15S) connector located on the back panel.		Standard Feature: Process coolant flow signal (reed switch). Standard Feature: Process coolant level signal (reed switch). Optional Feature: Secondary process coolant level signal (reed switch). Standard Feature: Process coolant temperature alarm (relay contact). Standard Feature: Compressor temperature warning (bi-metal switch).
Condenser Fan		Standard Feature: Speed-controlled for quiet operation.
Air Filter		Standard Feature: Front panel mounted air filter assembly.
Communications Note: Communication ports located on back panel. RS-485, RS-232, Profibus DP and USB 2.0 via COMM port. CAT6 & DeviceNet via optional communications port.		Standard: RS-485 serial communication. Optional: RS-232, Modbus RTU, TCP, USB 2.0, DeviceNet, Profibus DP. Optional: 6 Digital Input/Output alarm signals via communications.
Process Coolant Types Note: Coolant additives (including glycol) available.		Standard Feature: Demineralized (steam distilled) water compatible. Optional Feature: Deionized (DI) water compatible. Optional Feature: PAO synthetic coolant oil compatible.
Coolant Particle Filter		Optional Feature: Canister or cartridge style, coolant particle filters.
Deionized (DI) Water Package		Optional Feature: Materials upgrade for DI water compatibility.
End-user printed circuit board		Optional Feature: Monitors and reports interface signals via front panel LED's/audible alarm and/or power down on any/or all fault signal(s).
Digital Pressure Gauge		Optional Feature: 0-145psi, SS Pressure transducer w/ digital controller.

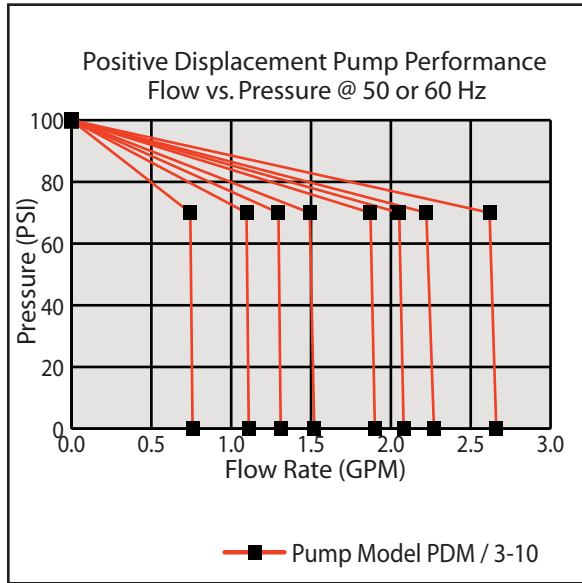
Notes:

- ¹ Cooling capacity ratings are with process coolant @ 20°C / 68°F.
- ² Temperature stability performance requires a stable heat load input.
- * Data shown is with 27°C / 81°F (unrestricted) ambient air.
- * See Thermal Performance chart for cooling capacities @ other process temperatures.
- * Specifications are subject to change without notice.

CHILLER MODULE PERFORMANCE DATA

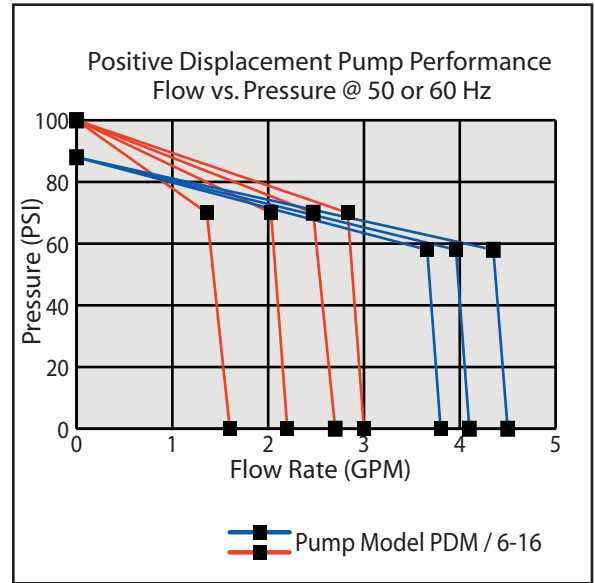
K-O Concepts Model DMC-30-G2

Process Coolant Pump Performance



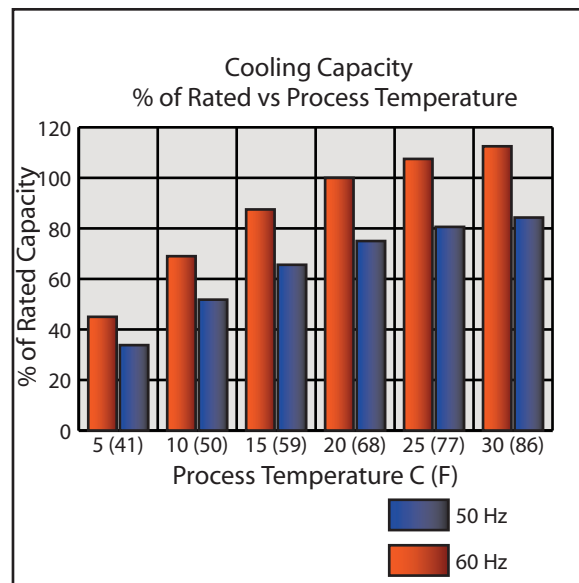
Note: Pump Model "PDM / 3-10" provides eight "8" selectable flow vs. pressure curves as shown. Internal valve setting shown starts coolant bypass @ 70 PSI / 4.8 bar & dead heads @ 100 PSI / 6.8 bar. Other pump curves & bypass values available upon request.

Optional Coolant Pump Performance



Note: Pump Model "PDM / 6-16" provides seven "7" selectable flow vs. pressure curves as shown. Internal valve settings shown with red lines starts coolant bypass @ 70 PSI / 4.8 bar & dead heads @ 100 PSI / 6.8 bar. Internal valve settings shown with blue lines starts coolant bypass @ 58 PSI / 4 bar & dead heads @ 88 PSI / 6 bar.

Thermal Performance



INTERFACE CONTROL DRAWING #: 25432600 AVAILABLE UPON REQUEST

K-O Concepts, Incorporated
4375 South Street
Titusville, Florida, 32780
Phone: 407/296-7788 • Fax: 321/567-0046
E-Mail: Sales@K-OConcepts • Web: www.K-OConcepts.com

