

Datasheet - MCS

Modular Cooling System



Ambient Cooling System with Cooling Capacities up to 3.5 kW



A Modular Cooling System (MCS) is a cost-effective and reliable alternative to refrigerated chillers for applications where precise temperature control and cooling below ambient temperature are not required. It consists of a high performance Boyd heat exchanger integrated with a fan, pump, and tank in a durable metal chassis.

- **Extremely efficient:** All components are performance-matched for maximum cooling capacity. Boyd has more than 50 years of experience in thermal design, so you can be sure that the most critical component of the MCS, the heat exchanger, is designed for optimum performance.
- **Easy-to-operate:** This easy-to-use, turnkey cooling package takes the guesswork and effort out of building a cooling loop. All you need to do is fill the tank and flip the switch.
- **Extremely reliable:** All components in the MCS have been designed for long life and high reliability-a Boyd MCS will provide years of trouble-free operation.
- ITSNA tested to UL 61010A-1 and CE certified

Performance Specifications

Category	Value	MCS20	MCS30	MCS40	MCS50
Cooling capacity using water, 25°C initial temperature difference	W BTU/Hr	1300 4,450	2100 7,150	2400 8,200	3500 12,000
Fluid inlet connections	-	1/2" FNPT	1/2" Barb	1/2" FNPT	1/2" FNPT
Fluid outlet connections	-	1/2" FNPT	1/2" Barb	1/2" FNPT	1/2" FNPT
Reservoir capacity	-	0.75 gal / 2.8 liters			
Maximum liquid temperature	-	131°F / 55°C			
Dimensions (W x D x H)	inches mm	17.3 x 15.1 x 13.3 439 x 384 x 338		15 x 15 x 24 381 x 381 x 610	
Rack Mount Dimensions (W x D x H)	inches mm	19 x 15.1 x 12.3 482 x 384 x 312		NA	
Weight - stand alone	lbs (kg)	35 (16)	37 (17)	60 (27)	65 (29)
Weight - rack mount	lbs (kg)	23 (10)	25 (11)	NA	NA
Recommended coolant		Water	Oil, EGW	Water	Water

Available electrical configurations and full load amperage³

G01: 115V, 60Hz, 1ph	Amps	5.3	5.3	NA	NA
G02: 115V, 60Hz, 1 ph	Amps	NA	NA	5.6	5.8
H01: 230V, 50/60 Hz, 1 ph	Amps	2.5	2.5	NA	NA
J02: 230V, 50/60 Hz, 1 ph	Amps	NA	NA	2.7	2.8

Pump options

BB: PDP ⁴ , Brass, 1.3 gpm/4.9 lpm	•	•		
BC: PDP ⁴ , Brass, 1.8 gpm/6.8 lpm	o	o	•	•
BE: PDP ⁴ , Brass, 2.3 gpm/8.7 lpm	o	o	o	o
CB: PDP ^{4,5} , Stainless steel, 1.3 gpm/4.9 lpm	o			
CC: PDP ^{4,5} , Stainless steel, 1.8 gpm/6.8 lpm	o			
CE: PDP ^{4,5} , Stainless Steel, 2.3 gpm / 8.7 lpm	o			
AB: Centrifugal, 1/16 HP ⁶	o	o		
DA: Centrifugal, 1/4 HP ⁶	o	o	o	o

Package Options

Package 1: Ambient package	•	•	•	•
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Additional options

M002: Heavy duty casters	o	o	o	o
M062: Rack mount configuration	o	o		
M004: High purity plumbing stainless steel heat exchanger, nickel plates bulkhead fittings	o			
M063: Rack mount configuration and high purity plumbing	o			

• = standard

o = available option

¹ Oil @ 70°F, 50/50 EGW

² Includes pressure drop through system

³ With standard pump

⁴ PDP = Positive Displacement Pump

⁵ Only available with high purity plumbing

⁶ Actual flow rate depends on system pressure drop

MCS20 G01 BB 1

MCS20, 115V, 60 Hz operation, with BB pump and no additional options

or

MCS40 G02 BC 1 M002

MC540, 115V, 60 Hz operation, with BC (brass) pump, and heavy duty casters

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