

Coolmate™ Series

Issued Oct. 2008 • Index No. AY/7.2

Coolant
Systems 

Quick Specs



Light/Heavy Industrial Applications

Manufacturing
Aerospace
Automotive
Tube Mills
Automation

Processes

TIG (GTAW)
MIG (GMAW)
Plasma Cutting
Resistance Welding

Input Power Single-Phase

Input Voltage 115 VAC or 230 VAC, 50/60 Hz

Max. Cooling Capacity 9,700–18,000 BTU/hr

The Power of Blue.®



Coolant



Coolmate 1

Coolmate 3

Coolmate V3

Coolmate 3.5

Coolmate 4

Closed-loop design with radiator reduces coolant temperatures and prevents the system from overheating. Closed-loop design also recirculates the coolant through a fan-cooled heat exchanger.

Rustproof coolant reservoir molded of polyethylene for durability and corrosion resistance.

Standard inlet/outlet torch fittings are compatible with TIG and MIG torches having standard 5/8-18 left-hand fittings.

10 ft (3 m) power cords with plugs are longer than most power cords in the industry — providing the extra length when required.

Compatible with Miller coolants and are ideal for warm and cold weather conditions, while providing HF or corrosion protection.



Coolant systems are warranted for 1 year, parts and labor.

MADE IN **USA**
APPLETON, WI



Miller Electric Mfg. Co.
An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

International Headquarters
Phone: 920-735-4505
USA FAX: 920-735-4134
Canadian FAX: 920-735-4169
International FAX: 920-735-4125

Web Site
www.MillerWelds.com



Specifications (Subject to change without notice.)


1
Phase

Model	Motor Input Voltage 50/60 Hz	Maximum Current Draw		Maximum Cooling Capacity*	Rated Cooling Capacity**	Tank Capacity	Dimensions	Net Shipping Weight
		50 Hz	60 Hz					
Coolmate 1 Coolmate 1 CE	115 VAC, 60 Hz	—	2.1 A	2,850 W (9,700 BTU/hr) 1.8 qt/min (1.7 L/min)	1,210 W (4,120 BTU/hr) 1.1 qt/min (1 L/min)	1 gal (3.8 L)	H: 8 in (203 mm) W: 7-1/2 in (191 mm) D: 23-3/4 in (603 mm)	29 lb (13 kg)
	230 VAC, 50/60 Hz	0.65 A	0.55 A					
Coolmate 3 Coolmate 3 CE	115 VAC	5.9 A	4.7 A	3,820 W (13,000 BTU/hr) 4.2 qt/min (4.0 L/min)	1,420 W (4,840 BTU/hr) 1.1 qt/min (1 L/min)	3 gal (11.4 L)	H: 13-1/4 in (337 mm) W: 12-1/4 in (311 mm) D: 23-1/4 in (584 mm)	43 lb (20 kg)
	230 VAC	2.5 A	3.0 A					
Coolmate V3 Coolmate V3 CE	115 VAC	5.9 A	4.7 A	3,820 W (13,000 BTU/hr) 4.2 qt/min (4.0 L/min)	1,420 W (4,840 BTU/hr) 1.1 qt/min (1 L/min)	3 gal (11.4 L)	H: 33 in (838 mm) W: 9-1/4 in (235 mm) D: 9-1/4 in (235 mm)	54 lb (24 kg)
Coolmate 3.5	115 VAC	5.9 A	4.7 A	4,140 W (14,000 BTU/hr) 5.0 qt/min (4.7 L/min)	1,660 W (5,660 BTU/hr) 1.1 qt/min (1 L/min)	3.5 gal (13.2 L)	H: 11-3/4 in (298 mm) W: 15-3/4 in (400 mm) D: 26 in (660 mm)	70 lb (32 kg)
Coolmate 4 Coolmate 4 CE	115 VAC	5.9 A	4.7 A	5,500 W (18,000 BTU/hr) 5.9 qt/min (5.6 L/min)	1,780 W (6,070 BTU/hr) 1.1 qt/min (1 L/min)	4 gal (15 L)	H: 16-1/4 in (413 mm) W: 15-1/4 in (387 mm) D: 18-3/4 in (476 mm)	40 lb (18 kg)
Coolmate 3X	115 VAC	5.9 A	4.7 A	4,140 W (14,000 BTU/hr) 5.0 qt/min (4.7 L/min)	1,660 W (5,660 BTU/hr) 1.1 qt/min (1 L/min)	3 gal (11.4 L)	H: 17 in (432 mm) W: 27 in (686 mm)*** D: 39 in (991 mm)	158 lb (72 kg)

*Maximum cooling capacity is based on a 25°C (77°F) environment at maximum flow with a 65°C (149°F) coolant temperature rise.

**Rated IEC standard cooling capacity is based on a 25°C (77°F) environment at a flow of 1 L/min with a 40°C (104°F) coolant temperature rise.

***Width measurement includes rear wheels and axle. Cooler width without rear wheels and axle is 22-1/4 in (565 mm).

 All models are certified by Canadian Standards Association to both the Canadian and U.S. Standards.

 All CE models conform to the applicable parts of the IEC 60974 series of standards.

Product Descriptions

Coolmate™ 1



#300 360 115 VAC, 60 Hz
 #300 360-00-1 115 VAC, 60 Hz CE
 #300 459 230 VAC, 50/60 Hz
 #300 459-00-1 230 VAC, 50/60 Hz CE

Light industrial, 1-gallon cooler designed for water-cooled torches on power sources rated up to 200 A*.

- Designed to integrate with smaller Dynasty and Maxstar models and Syncrowave 200
- Compact horizontal design allows stacking and convenient mounting
- Lightweight at 25 lb (11 kg) dry
- Equipped with lighted on/off power switch on front panel
- Filter and coolant filling spout are conveniently located for easy access
- Fluid level sight window
- Polyethylene-molded coolant tank and filler spout are rustproof
- Thermally protected piston pump guards against overheating
- Stainless steel oscillating piston pump provides consistent coolant flow and pressure rating with long pump-life expectancy

Coolmate™ 3



#043 007 115 VAC, 50/60 Hz
 #043 007-01-2 115 VAC, 50/60 Hz CE
 #043 008 230 VAC, 50/60 Hz
 #043 008-01-2 230 VAC, 50/60 Hz CE

Economical, 3-gallon cooler designed for water-cooled torches rated up to 500 A*.

- Compact horizontal design allows stacking and convenient mounting
- Midsize cooler weighs 40 lb (18 kg) dry
- On/off power switch, “paddle wheel” coolant flow indicator, filter and coolant filling spout are all conveniently located on front panel
- Polyethylene-molded coolant tank, fan shroud and filler spout are rustproof
- Factory-set pressure relief valve (55 PSI) maintains consistent pressure during operation
- Thermally protected 1/4 HP motor guards against overheating
- Efficient fin and tube heat exchanger
- Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

*May vary with torch design and cable length.

Product Descriptions

Coolmate™ V3



#043 009 115 VAC, 50/60 Hz
#043 009-01-2 115 VAC, 50/60 Hz CE

Vertical, 3-gallon cooler designed for water-cooled torches rated up to 500 A*.

- Distinct, vertical design allows mounting onto a power source running gear or gas cylinder rack
 - Weighs only 48 lb (22 kg) dry
 - On/off power switch, “paddle wheel” coolant flow indicator, filter and coolant filling spout are all conveniently located on front panel
 - Polyethylene-molded coolant tank, fan shroud and filler spout are rustproof
 - Factory-set pressure relief valve (55 PSI) maintains consistent pressure during operation
- Thermally protected 1/4 HP motor guards against overheating
 - Efficient fin and tube heat exchanger
 - Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

Coolmate™ 3.5



#300 245 115 VAC, 50/60 Hz

Industrial, 3.5-gallon cooler designed for water-cooled torches rated up to 600 A*.

- Designed to integrate with Dynasty 350/700 and Maxstar 350/700
- Horizontal design allows stacking or convenient mounting onto a MIGRunner™ cart
- Weighs only 64 lb (29 kg) dry
- Polyethylene-molded coolant tank, fan shroud and filler spout are rustproof
- Factory-set pressure relief valve (55 PSI) maintains consistent pressure during operation
- Thermally protected 1/4 HP motor guards against overheating
- Efficient fin and tube heat exchanger
- Equipped with internal check valves to prevent coolant flow when torch is disconnected
- Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

Coolmate™ 4



#042 288 115 VAC, 50/60 Hz
#042 288-01-5 115 VAC, 50/60 Hz CE

The best performer in its class — industrial, 4-gallon cooler designed for water-cooled torches rated up to 600 A*.

- Patented circular design available only from Miller
- Weighs only 38 lb (17 kg) dry
- Tough, one-piece case is portable and rustproof
- Convenient carrying handle and filler spout are molded into case
- Easily accessible coolant filter
- Factory-set pressure relief valve (60 PSI) maintains consistent pressure during operation
- Thermally protected 1/4 HP motor guards against overheating
- Efficient fin and tube heat exchanger
- Coolant system has a constant flow of coolant inside to keep the pump primed and to reduce algae buildup in the tank
- Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

Coolmate™ 3X



Includes wheels and handles.



#300 419 115 VAC, 50/60 Hz

Industrial, 3-gallon cooler designed for water-cooled torches rated up to 500 A*.

- Includes easy load dual cylinder rack, running gear and handles for Syncrowave 250 DX/350 LX
- “Paddle wheel” coolant flow indicator, filter and coolant filling spout are all conveniently located on front panel
- Polyethylene-molded coolant tank, fan shroud and filler spout are rustproof
- Factory-set pressure relief valve (55 PSI) maintains consistent pressure during operation
- Thermally protected 1/4 HP motor guards against overheating
- Efficient fin and tube heat exchanger
- Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

**May vary with torch design and cable length.*

Genuine Miller Accessories

Water-Cooled TIG Torch Adapters



50 mm International with Water Return Line #195 377

For Maxstar 200, 300 and 350, Dynasty 200, 300 and 350, and Syncrowave 250 and 350. Used with (WP125, WP24W, WP25, WP20, WP18, WP12, CS310, CS410, WP22, WP27) water-cooled torch. Order from Miller Service Parts.



With gas and water return line

50 mm International Flow Thru #195 380

For Econotig and Syncrowave 180 and 200. Used with (WP125, WP24W, WP25, WP20) water-cooled torch. Order from Miller Service Parts.



50 mm Thread Lock-Style #225 028

For Dynasty 700 and Maxstar 700. Used with (WP125, WP24W, WP25, WP20, WP18, WP12, CS310, CS410, WP22, WP27) water-cooled torch. Order from Miller Service Parts.



Water-Cooled TIG Block Adapter #45V11

For Miller power sources with stud-type output terminals. Order from Miller Service Parts.



Replacement Water Hose for Dinse Adapter #222 809

18 in (457 mm). Order from Miller Service Parts.

Water Hoses and Connectors



Water Hose Extension

- #40V83R-3 3 ft (0.9 m)
- #40V76R6 6 ft (1.8 m)
- #40V76R 12-1/2 ft (3.8 m)

Hose with two male 5/8 in 18 LH thread connections. Order from Miller Service Parts.



Water Coupler #057 020

Brass hose fitting with 5/8 in 18 LH thread. Order from Miller Service Parts.

Coolants



Sold in multiples of four in 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37°F (-38°C) or boiling to 227°F (108°C).

Low-Conductivity Coolant (Clear, Pre-Mixed) #043 810

For TIG and MIG applications. NOT for use in push-pull systems or systems where aluminum is in coolant path/circuit.

Aluminum-Protecting Coolant (Green, Pre-Mixed) #043 809

Primarily used in push-pull systems where aluminum is in coolant path/circuit and high frequency is NOT used.

Replacement Filter Assemblies



#166 564 Filter



#215 667 Filter

Filter Assemblies

#166 564 For Coolmate 1, 3, V3 and 3X

#215 667 For Coolmate 3.5

Order from Miller Service Parts.



Filter Strainer

#146 249 For Coolmate 4

Located inside pump assembly. See owner's manual. Order from Miller Service Parts.

Genuine Miller Accessories

Torch Kits



250 A with WP20 Water-Cooled Torch #300 185

- 25 ft (7.6 m) Weldcraft® WP20 torch
- Torch cable cover
- AK4C torch accessory kit includes shielding cups, collets, collet bodies and 2% cerium tungsten electrodes (1/16, 3/32 and 1/8 in)
- Smith® regulator/flowmeter HM2051A-580
- 12 ft (3.7 m) rubber gas hose (regulator to machine)
- Water-cooled Dinse torch adapter
- 15 ft (4.6 m) 1/0 work cable with clamp and Dinse connector



300 A with CS310 Water-Cooled Torch #300 183

- 25 ft (7.6 m) Weldcraft® CS310 torch
- Torch cable cover
- CS310AKC torch accessory kit includes shielding cups, collets, collet bodies and 2% cerium tungsten electrodes (1/16, 3/32 and 1/8 in)
- Smith® regulator/flowmeter HM2051A-580
- 12 ft (3.7 m) rubber gas hose (regulator to machine)
- Water-cooled Dinse torch adapter
- 15 ft (4.6 m) 1/0 work cable with clamp and Dinse connector

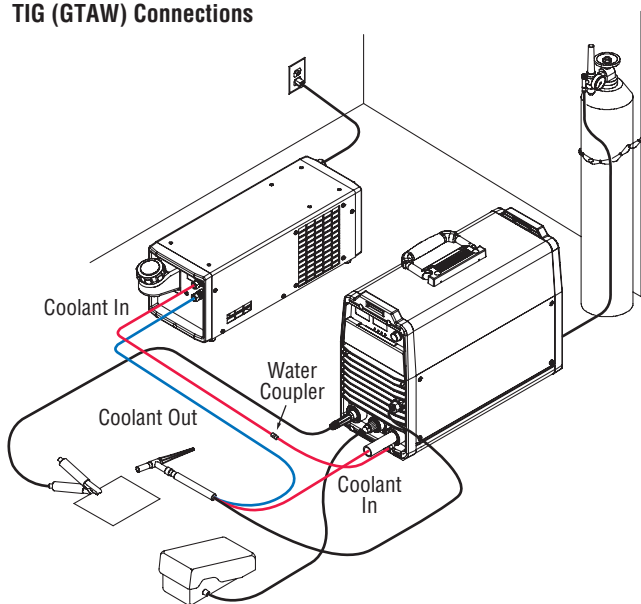


400 A with WP18SC Water-Cooled Torch #300 186

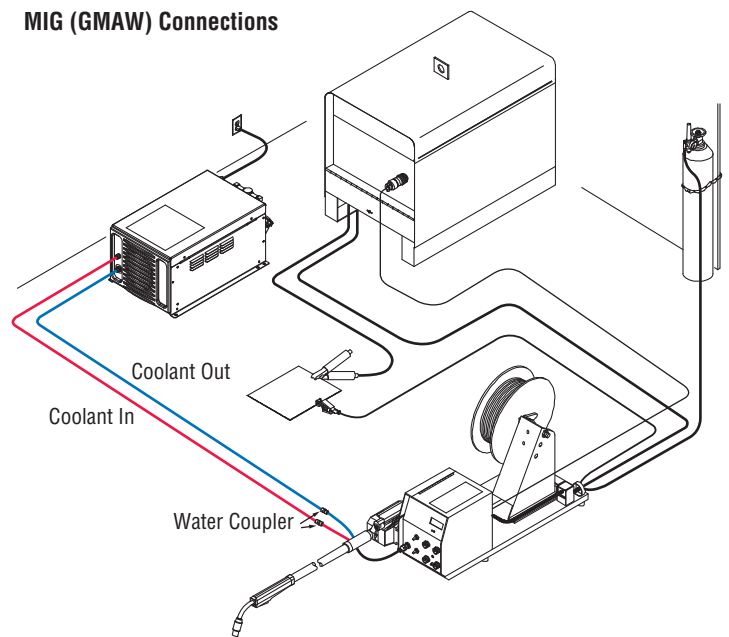
- 25 ft (7.6 m) Weldcraft® WP18SC torch
- Torch cable cover
- AK18C torch accessory kit includes shielding cups, collets, collet bodies and 2% cerium tungsten electrodes (3/32, 1/8 and 5/32 in)
- Smith® regulator/flowmeter H1954D-580
- 12 ft (3.7 m) rubber gas hose (regulator to machine)
- Water-cooled thread lock torch adapters
- 12 ft (3.7 m) 4/0 work cable with clamp

Typical Coolmate™ Connections

TIG (GTAW) Connections



MIG (GMAW) Connections



Typical Coolmate™ Usages



Coolmate 1 shown with Maxstar® 200 DX TIGRunner®



Coolmate 3.5 shown with Dynasty® 350 and 700 TIGRunners®



Coolmate 1 shown with Syncrowave® 200 Runner



Coolmate 3X shown with Syncrowave® 250 DX TIGRunner®

Typical Coolmate™ Usages



Coolmate 3 shown with XMT® 350 MIGRunner™



Coolmate 3.5 shown with XMT® 350 MIGRunner™



Coolmate V3 shown with stationary spot welder



Coolmate 4 shown with 70 Series Swingarc™

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Coolmate™ 1	#300 360	115 VAC, 60 Hz		
	#300 360-00-1	115 VAC, 60 Hz with CE		
	#300 459	230 VAC, 50/60 Hz		
	#300 459-00-1	230 VAC, 50/60 Hz with CE		
Coolmate™ 3	#043 007	115 VAC, 50/60 Hz		
	#043 007-01-2	115 VAC, 50/60 Hz with CE		
	#043 008	230 VAC, 50/60 Hz		
	#043 008-01-2	230 VAC, 50/60 Hz with CE		
Coolmate™ V3	#043 009	115 VAC, 50/60 Hz		
	#043 009-01-2	115 VAC, 50/60 Hz with CE		
Coolmate™ 3.5	#300 245	115 VAC, 50/60 Hz with CE		
Coolmate™ 4	#042 288	115 VAC, 50/60 Hz		
	#042 288-01-5	115 VAC, 50/60 Hz with CE		
Coolmate™ 3X	#300 419	115 VAC, 50/60 Hz		
Accessories				
Water-Cooled TIG Torch Adapters <i>Order from Miller Service Parts</i>	#195 377	50 mm International with water return line		
	#195 380	50 mm International flow thru with gas and water return line		
	#225 028	50 mm thread lock-style		
	#45V11	Water-cooled TIG block		
	#222 809	18 in (457 mm) replacement water hose		
Water Hose Extensions <i>Order from Miller Service Parts</i>	#40V83R-3	3 ft (0.9 m) hose with two male 5/8 in 18 LH thread connections		
	#40V76R6	6 ft (1.8 m) hose with two male 5/8 in 18 LH thread connections		
	#40V76R	12-1/2 ft (3.8 m) hose with two male 5/8 in 18 LH thread connections		
Water Coupler	#057 020	Brass hose fitting with 5/8 in 18 LH thread		
Low-Conductivity Coolant (Clear, Pre-Mixed)	#043 810	For TIG and MIG applications. NOT for push-pull systems or where aluminum is in coolant path/circuit.		
Aluminum-Protecting Coolant (Green, Pre-Mixed)	#043 809	For push-pull systems where aluminum is in coolant path/circuit and high frequency is NOT used.		
Filter Assemblies <i>Order from Miller Service Parts</i>	#166 564	For use with Coolmate 1, 3, V3 and 3X		
	#215 667	For use with Coolmate 3.5		
Filter Strainer	#146 249	For use with Coolmate 4. <i>Order from Miller Service Parts</i>		
Torch Kits	#300 185	250 A with WP20 water-cooled torch		
	#300 183	300 A with CS310 water-cooled torch		
	#300 186	400 A with WP18SC water-cooled torch		

Date:

Total Quoted Price:



Distributed by: