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TPI Corporation
America's Comfort Conditioning Company

5100 Series Stratification thermostat

Data Sheet

General Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

Heavy 18 gauge welded steel cabinet with powder coated finish and control compartment housing a master terminal board with a hinged and latched access door, simplifying wiring, installation & maintenance.

Copper clad steel sheath element with continuously brazed steel fins formed to allow side draw through air flow.

All units come equipped with automatic reset type limit controls to de-energize the heater should an over-temperature situation occur. Totally enclosed, 1-speed, 1-phase, permanently lubricated, thermally protected motors with unit bearings on 3 KW - 20 KW models. Totally enclosed, 2-speed, 1-phase, permanently lubricated, thermally protected motors with sleeve bearings on 25 KW - 50 KW models. Fan over-ride purges unit of residual heat at shutdown.

Louvers are individually adjustable for directional control of air flow up to 15° from straight horizontal. Optional diffusers available for down flow (vertical discharge) applications.

Optional low voltage and line voltage thermostats available with an adjustable temperature range of 40°F to 110°F. Units with model numbers ending in CA1 are factory wired for low voltage controls. 25 KW through 50 KW units are designed for two stage heating operation. Unit Heaters can be mounted for horizontal or vertical discharge. Applications up to 6000 ft. See UH Series above 6000 ft.

Includes Thermostat.

Made in U.S.A.

Product Applications 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

Recommended for all industrial, commercial, and residential. For indoor and outdoor use.

Warranties 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

Manufacturer's Limited Warranty: 1 Year.

Specific Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

Item #	Watts	BTU's	Volts	PH	Amps	Control voltaje	Temp Rise (°F)	Air Throw	CFM	Recom'd mounting ht.		Weight and Dimensions With Packaging (CM)	
										Horizontal	Vertical	Lbs	W, H, D
USVMF-001	3.3	11.2	208	1	15.9	208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-002	3.3/2.5	11.2/8.5	240/208	1	13.7/12	240/208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-003	3.3	11.2	208	1/3	15.9/9.17	208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-004	3.3	11.2	208	1/3	15.9/9.17	208	26°F	12´	400	9´	9´	25	45,17,37

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Specific Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater													
Item #	Watts	BTU's	Volts	PH	Amps	Control voltaje	Temp Rise (°F)	Air Throw	CFM	Recom'd mounting ht.		Weight and Dimensions With Packaging (CM)	
										Horizontal	Vertical	Lbs	W, H, D
USVMF-005	3.3/2.5	11.2/8.5	240/208	1/3	13.7/11.9	240/208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-006	3.3/2.6	11.2/8.6	240/209	3	7.9/6.9	240/209	26°F	12´	400	9´	9´	25	45,17,37
USVMF-007	3.3	11.2	277	1	11.9	277	26°F	12´	400	9´	9´	25	45,17,37
USVMF-008	3.3	11.2	480	3	4	24	26°F	12´	400	9´	9´	25	45,17,37
USVMF-009	5	17.1	208	1	24.1	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-010	5/3.7	17.1/12.8	240/208	1	20.9/18.1	240/208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-011	5	17.1	208	1/3	24.1	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-012	5	17.1	208	3	13.9	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-013	5	17.1	240	1/3	20.8/18.1	240	40°F	12´	400	9´	9´	27	45,17,37
USVMF-014	3.7	12.8	208	1/3	17.1/10.4	208	40°F	12´	400	9´	9´	27	45,17,37
USVMF-015	5	17.1	277	1	18.1	277	40°F	12´	400	9´	9´	27	45,17,37
USVMF-016	5	17.1	480	3	6.1	24	40°F	12´	400	9´	9´	27	45,17,37
USVMF-017	7.5	25.6	208	1/3	36.1/20.8	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-018	7.5	25.6	208	1/3	36.1/20.8	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-019	7.5	25.6	240	1/3	27.1/16.04	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-020	5.6	19.2	208	1/3	31.3/27.1	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-021	7.5	25.6	277	1	27.1	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-022	7.5	25.6	480	3	9.1	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-023	9.9	33.8	208	1/3	47.8/27.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-024	9.9	33.8	208	1/3	47.8/27.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-025	10	34.1	240	1/3	41.2/24	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-026	7.5	25.6	208	1/3	36.1/20.7	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-027	10	34.1	277	1	36.1	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-028	10	34.1	480	3	12.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-029	15	51.2	208	3	41.7	24	43°F	32´	1100	11´	20´	64	73,17,55
USVMF-030	15/11.2	51.2/38.4	240/208	3	36.1/31.3	24	43°F	32´	1100	11´	20´	64	73,17,55
USVMF-031	15	51.2	480	3	18.1	24	43°F	32´	1100	11´	20´	64	73,17,55
USVMF-032	19.7/14.8	67.2/50.5	240/208	3	47.8/41.1	24	57°F	32´	1100	12´	18´	65	73,17,55
USVMF-033	20	68.3	480	3	24.1	24	57°F	32´	1100	12´	18´	65	73,17,55
USVMF-034	25	85.3	208	3	69.5	24	40/44°F	45´	2000/1800	12´	22´	120	87,26,75
USVMF-035	25/18.7	85.3/64	240/208	3	60.2/52.1	24	40/44°F	45´	2000/1800	12´	22´	120	87,26,75
USVMF-036	25	85.3	480	3	30.1	24	40/44°F	45´	2000/1800	12´	22´	120	87,26,75
USVMF-037	30	102.4	208	3	83.4	24	47/53°F	40´	2000/1800	12´	20´	120	87,26,75
USVMF-038	30/22.5	102.4/76.8	240/208	3	72.3/62.5	24	47/53°F	40´	2000/1800	12´	20´	120	87,26,75
USVMF-039	30	102.4	480	3	36.2	24	47/53°F	40´	2000/1800	12´	20´	120	87,26,75
USVMF-040	40	136.5	208	3	111.2	24	40/45°F	55´	3100/2800	15´	24´	120	87,26,75
USVMF-041	40/30	136.5/102.4	240/208	3	96.4/83.4	24	40/45°F	55´	3100/2800	15´	24´	120	87,26,75
USVMF-042	39	133.1	480	3	47	24	40/45°F	55´	3100/2800	15´	24´	120	87,26,75
USVMF-043	49.6	169.3	208	3	139	24	51/56°F	50´	3100/2800	15´	27´	120	87,26,75
USVMF-044	50/37.5	170.6/128	240/208	3	120.5/104.3	24	51/56°F	50´	3100/2800	15´	27´	120	87,26,75
USVMF-045	50	170.6	480	3	60.3	24	51/56°F	50´	3100/2800	15´	27´	120	87,26,75
USVMF-046	3.3	11.2	208	1	15.9	208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-047	3.3/2.5	11.2/8.5	240/208	1	13.7/12	240/208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-048	3.3	11.2	208	1/3	15.9/9.17	208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-049	3.3	11.2	208	1/3	15.9/9.17	208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-050	3.3/2.5	11.2/8.5	240/208	1/3	13.7/11.9	240/208	26°F	12´	400	9´	9´	25	45,17,37
USVMF-051	3.3/2.6	11.2/8.6	240/209	3	7.9/6.9	240/209	26°F	12´	400	9´	9´	25	45,17,37
USVMF-052	3.3	11.2	277	1	11.9	277	26°F	12´	400	9´	9´	25	45,17,37
USVMF-053	3.3	11.2	480	3	4	24	26°F	12´	400	9´	9´	25	45,17,37
USVMF-054	5	17.1	208	1	24.1	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-055	5/3.7	17.1/12.8	240/208	1	20.9/18.1	240/208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-056	5	17.1	208	1/3	24.1	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-057	5	17.1	208	3	13.9	208	40°F	12´	400	9´	9´	25	45,17,37
USVMF-058	5	17.1	240	1/3	20.8/18.1	240	40°F	12´	400	9´	9´	27	45,17,37
USVMF-059	3.7	12.8	208	1/3	17.1/10.4	208	40°F	12´	400	9´	9´	27	45,17,37
USVMF-060	5	17.1	277	1	18.1	277	40°F	12´	400	9´	9´	27	45,17,37
USVMF-061	5	17.1	480	3	6.1	24	40°F	12´	400	9´	9´	27	45,17,37
USVMF-062	7.5	25.6	208	1/3	36.1/20.8	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-063	7.5	25.6	208	1/3	36.1/20.8	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-064	7.5	25.6	240	1/3	27.1/16.04	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-065	5.6	19.2	208	1/3	31.3/27.1	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-066	7.5	25.6	277	1	27.1	24	34°F	22´	700	10´	12´	54	62,17,55

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Specific Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater													
Item #	Watts	BTU's	Volts	PH	Amps	Control voltaje	Temp Rise (°F)	Air Throw	CFM	Recom'd mounting ht.		Weight and Dimensions With Packaging (CM)	
										Horizontal	Vertical	Lbs	W, H, D
USVMF-067	7.5	25.6	480	3	9.1	24	34°F	22´	700	10´	12´	54	62,17,55
USVMF-068	9.9	33.8	208	1/3	47.8/27.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-069	9.9	33.8	208	1/3	47.8/27.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-070	10	34.1	240	1/3	41.2/24	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-071	7.5	25.6	208	1/3	36.1/20.7	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-072	10	34.1	277	1	36.1	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-073	10	34.1	480	3	12.4	24	45°F	22´	700	10´	14´	55	62,17,55
USVMF-074	15	51.2	208	3	41.7	24	43°F	32´	1100	11´	20´	64	73,17,55
USVMF-075	15/11.2	51.2/38.4	240/208	3	36.1/31.3	24	43°F	32´	1100	11´	20´	64	73,17,55
USVMF-076	15	51.2	480	3	18.1	24	43°F	32´	1100	11´	20´	64	73,17,55

5100 Series Stratification thermostat

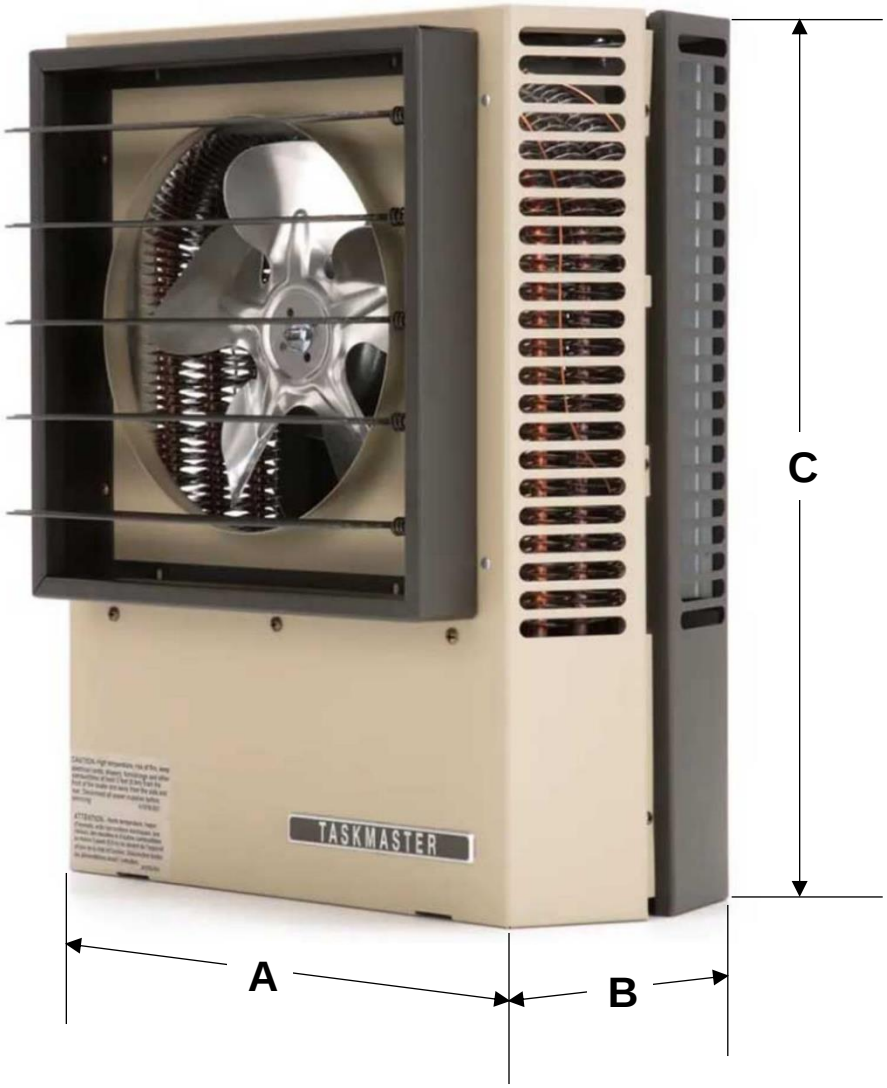
Data Sheet

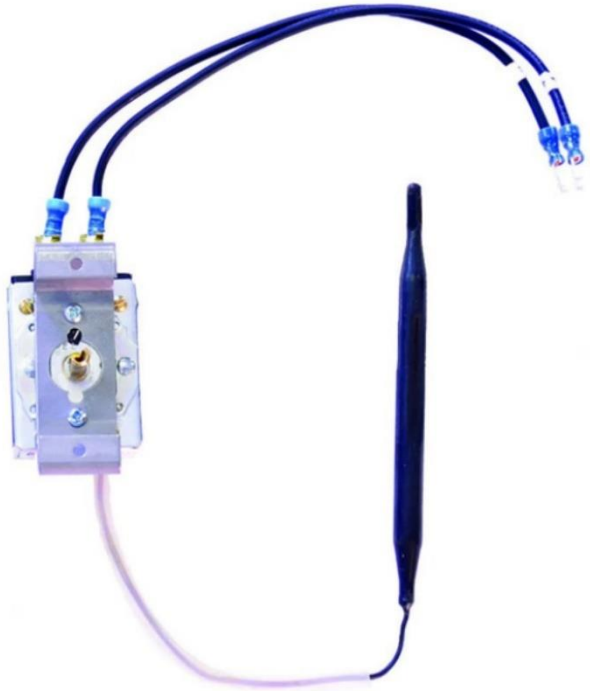
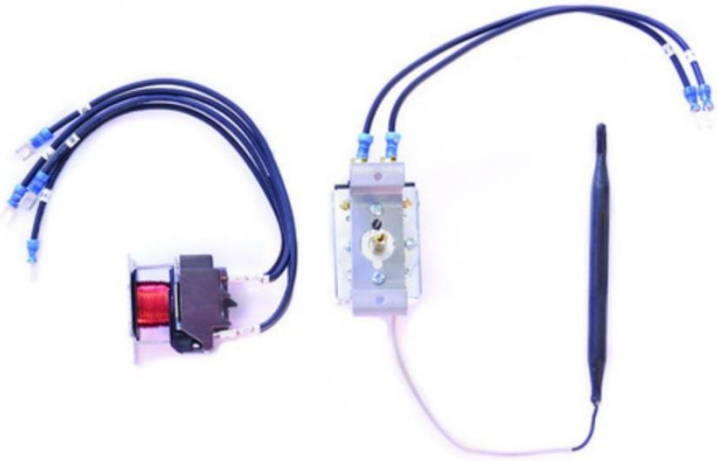
Recommended Control Options, Control Accessory Options, & Control Accessories						
Specific Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater						
Item #	Thermostat		Item #	Thermostat		Lbs
	IN-BUILT	Description		WALL MOUNTED	Description	
USVMF-001	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-042	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-002	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-043	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-003	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-044	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-004	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-045	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-005	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-046	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-006	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-047	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-007	TC5102	SPST; LOW VOLT/PILOT DUTY (W/RELAY) ; 70-130°	USVMF-048	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-008	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-049	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-009	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-050	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-010	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-051	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-011	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-052	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-012	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-053	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-013	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-054	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-014	TC5102	SPST; LOW VOLT/PILOT DUTY (W/RELAY) ; 70-130°	USVMF-055	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-015	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-056	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-016	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-057	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-017	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-058	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-018	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-059	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-019	TC5102	SPST; LOW VOLT/PILOT DUTY (W/RELAY) ; 70-130°	USVMF-060	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-020	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-061	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-021	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-062	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-022	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-063	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-023	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-064	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5

Recommended Control Options, Control Accessory Options, & Control Accessories Specific Characteristics 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater						
Item #	Thermostat		Item #	Thermostat		Lbs
	IN-BUILT	Description		WALL MOUNTED	Description	
USVMF-024	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-065	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-025	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-066	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-026	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-067	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-027	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-068	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-028	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-069	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-029	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-070	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-030	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-071	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-031	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-072	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-032	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-073	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-033	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-074	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-034	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-075	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-035	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	USVMF-076	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	5
USVMF-036	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-
USVMF-037	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-
USVMF-038	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-
USVMF-039	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-
USVMF-040	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-
USVMF-041	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	-	-	-	-

*Disconnect must be rated at 80% of total ampload

Dimensions (in) 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater			
Item #	Wide	Deep	High
	A	B	C
USVMF-001 a USVMF-011	17 3⁄4	14 15⁄32	6 1⁄2
USVMF-012 a USVMF-025	24 5⁄16	21 1⁄2	6 1⁄2
USVMF-026 a USVMF-030	28 11/16	21 1⁄2	6 1⁄2
USVMF-031 a USVMF-045	34	29 1⁄4	10 1⁄16

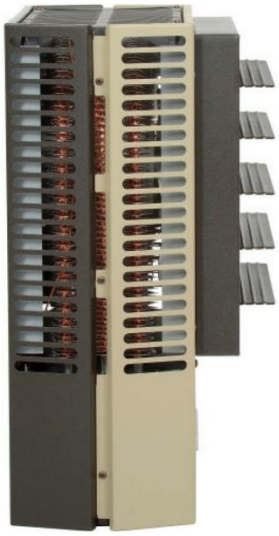


TC5103	TC5102
	

TC1602

5100 Series
Stratification thermostat

Data Sheet



Installing the Taskmaster Series

Installing the Taskmaster Series

DETERMINING HEATER REQUIREMENTS

Calculate the heating loads using the NEMA handbook or ASHRAE guide. Then determine the quantity and size of unit heaters to be used. To maintain uniform heat and reduce stratified air, it is recommended that the total CFM of the units turn the air over approximately 3 times per hour. In instances where a large group of people are located and normally in the same area, use a large number of lower KW unit heaters. In warehouse areas or storage rooms where heat distribution and constant temperatures are less important, use fewer heaters of higher capacity

HORIZONTAL MOUNT

Small rooms can be heated by one unit heater. Where two walls are exposed, heaters should be mounted as shown in Figure A. In larger rooms, units should he located so their air streams wipe exposed walls without blowing at them. Units should be located so that the air stream of one supports that of another thus setting up a circulatory air movement shown in Figure B. (Distance between units to be approximately 1-1/2 times published air throw.) Units should not be mounted horizontally in areas having ceiling heights in excess of 15-18 ft.

VERTICAL MOUNT

Units should be mounted vertically in high bay areas, or where heater location would not interfere with plant operationor traffic, Heaters should be situated to provide free air circulation. Size and selection of units should be based on recommended mounting height. Optional diffusers may best be employed to reduce high air velocity and at the same time disperse heated air in a uniform pattern. When unit heaters are used to combat cold air inrush from opened loading dock doors, one or more units should be arranged to blow warm air across opening (Figure C).

DUAL MOUNTING

Where square footage is large and comfort essential, both horizontal and vertical installations may best serve your requirements as Figure D demonstrates.

Note: Products in this section with factory installed controls are subject to 100% cancellation/restocking charges.

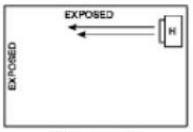


Figure A

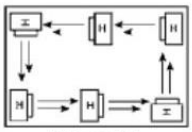


Figure B

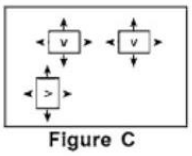


Figure C

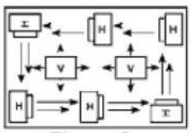


Figure D

ID	Author	Description Error	Description Update	Supervisor Name
V1	Angelica Romero	New Data Sheet	New Data Sheet	Jessica Lorenzo