



ACROSS INTERNATIONAL

Controller Atmosphere Muffle Furnace Series Specification

Model	GCF1200
Electrical requirements	208-240V, 50/60Hz, single phase
Heating element type	Kanthal (Sweden) A1 2.0 resistance coil wire
Min/max/constant temperature	Ambient/1200°C/1100°C
Temperature controller	Eurotherm 3204 Controller (5 Programs – Each program has 8 segments) Or Shimaden fp93 (Japan) with 4 patterns and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)
Maximum heating rate	15°C / min
Furnace cavity	Mitsubishi (Japan) high quality 1500 grade polycrystalline alumina fiber
Thermocouple type	K
Gas inlet/outlet	1/4" hose barb with 1/4" BSPT (British Standard Pipe Thread)
Positive pressure	Not to exceed 0.02 MPa / 150 torr / 3 psi
Temperature controller precision	+/- 1°C
Working environments	Air, N ₂ , Ar, NO ₂ , CO, CO ₂ , He, Ne, rough vacuum, etc. (Hydrogen, up to 5%)
Certification	ETL tested to UL and CSA standards (Standard), CE (Standard)

Chamber size (DxWxH)	12x8x8"	16x12x12"	20x16x16"
Chamber capacity (cu ft)	0.44	1.33	2.96
Usable chamber space (DxWxH)	10x7x7"	14x11x11"	18x15x15"
Maximum output	4 kW (19 amp)	9 kW (41 amp)	15 kW (69 amp)
Shipping dimensions (LxWxH)	38x26x44"	40x30x48"	49x44x61"
Net weight (Lb)	350	400	800
Shipping weight (Lb)	420	470	950

Maximum Temperatures

Maximum working temperature GCF1200/GCF11B	
Working Environment	Temperature
Air	1200°C /1100°C
Helium (He), Neon (Ne), Argon (Ar)	1200°C /1100°C
Nitrogen (N ₂)	1200°C /1100°C
Hydrocarbon Gas	1200°C /1100°C
Hydrogen (H ₂) up to 5%	1200°C /1100°C
Rough Vacuum	1200°C /1100°C



ACROSS INTERNATIONAL

Model	GCF1200.32.24.24
Electrical requirements	480V, 50/60Hz, three phase
Heating element type	Kanthal (Sweden) A1 2.0 resistance coil wire
Min/max/constant temperature	Ambient/1200°C/1100°C
Temperature controller	Eurotherm 3204 Controller (5 Programs – Each program has 8 segments)
Maximum heating rate	30°C / min
Furnace cavity	Mitsubishi (Japan) high quality 1500 grade polycrystalline alumina fiber
Thermocouple type	K
Gas inlet/outlet	KF40/25
Positive pressure	Not to exceed 0.02 MPa / 150 torr / 3 psi
Temperature controller precision	+/- 1°C
Working environments	Air, N ₂ , Ar, NO ₂ , CO, CO ₂ , He, Ne, rough vacuum, etc. (Hydrogen, up to 5%)
Certification	ETL tested to UL and CSA standards (Standard), CE (Standard)

Chamber size (DxWxH)	12x8x8''
Chamber capacity (cu ft)	10.7
Maximum output	45 KW (55A)

Maximum Temperatures

Maximum working temperature GCF1200/GCF11B	
Working Environment	Temperature
Air	1200°C /1100°C
Helium (He), Neon (Ne), Argon (Ar)	1200°C /1100°C
Nitrogen (N ₂)	1200°C /1100°C
Hydrocarbon Gas	1200°C /1100°C
Hydrogen (H ₂) up to 5%	1200°C /1100°C
Rough Vacuum	1200°C /1100°C



ACROSS INTERNATIONAL

Model	GCF1400
Electrical requirements	208-240V, 50/60Hz, single phase
Heating element type	Silicon carbide
Min/max/constant temperature	Ambient/1400°C/1300°C (depends on gas environment)
Temperature controller	Eurotherm 3204 Controller (5 Programs – Each program has 8 segments) Or Shimaden fp93 (Japan) with 4 patterns and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)
Maximum heating rate	15°C / min
Furnace cavity	Mitsubishi (Japan) high quality 1600 grade polycrystalline alumina fiber
Thermocouple type	S
Gas inlet/outlet	1/4" hose barb with 1/4" BSPT (British Standard Pipe Thread)
Positive pressure	Not to exceed 0.02 MPa / 150 torr / 3 psi
Temperature controller precision	+/- 1°C
Working environments	Air, N ₂ , Ar, NO ₂ , CO, CO ₂ , He, Ne, rough vacuum, etc. (Hydrogen, up to 5%)
Certification	ETL tested to UL and CSA standards (Standard), CE (Standard)

Nominal vs usable chamber size (DxWxH)	6x6x6"/4x5x5.5"	12x8x8"/10x7x7.5"	16x12x12"/14x11x11.5"
Chamber capacity (cu ft)	0.13	0.44	1.33
Installed heating element	4	8	12
Maximum output	3 kW	7 kW	13 kW
Unit/shipping dimensions (WxDxH)	23x28x35"/28x33x45"	26x30x40"/33x34x50"	31x33x44"/43x35x55"
Unit/shipping weight (Lb)	290/400	450/580	590/720

Maximum Temperatures

Maximum working temperature GCF1400	
Working Environment	Temperature
Air	1400°C
Helium (He), Neon (Ne), Argon (Ar)	1400°C
Nitrogen (N ₂)	1270°C
Hydrocarbon Gas	1250°C
Hydrogen (H ₂) up to 5%	1200°C
Rough Vacuum	1200°C



ACROSS INTERNATIONAL

Model	GCF1700
Electrical requirements	208-240V, 50/60Hz, single phase
Heating element type	Molybdenum silicide
Min/max/constant temperature	300 °C /1700°C/1600°C (depends on gas environment)
Temperature controller	Eurotherm 3204 Controller (5 Programs – Each program has 8 segments) Or Shimaden fp93 (Japan) with 4 patterns and 40 segments (ie. 4 x 10 segments or 2 x 20 segments)
Maximum heating rate	15°C / min
Furnace cavity	Mitsubishi (Japan) high quality grade 1800 morgan polycrystalline alumina fiber
Thermocouple type	B
Gas inlet/outlet	1/4" hose barb with 1/4" BSPT (British Standard Pipe Thread)
Positive pressure	Not to exceed 0.02 MPa / 150 torr / 3 psi
Temperature controller precision	+/- 1°C
Working environments	Air, N2, Ar, NO2, CO, CO2, He, Ne, rough vacuum, etc. (Hydrogen, up to 5%)
Certification	ETL tested to UL and CSA standards (Optional), CE (Standard)

Nominal vs usable chamber size (DxWxH)	6x6x6"/4x5x5.5"	12x8x8"/10x7x7.5"	16x12x12"/14x11x11.5"
Chamber capacity (cu ft)	0.13	0.44	1.33
Installed heating element	4	8	10
Maximum output	3 kW	7 kW	13 kW
Unit/shipping dimensions (WxDxH)	30x24x45"/33x30x51"	31x26x50"/37x31x55"	34x29x60"/40x36x70"
Unit/shipping weight (Lb)	430/510	620/720	880/1050

Maximum Temperatures

Maximum working temperature GCF1700	
Working Environment	Temperature
Air	1700°C
Helium (He), Neon (Ne), Argon (Ar)	1650°C
Nitrogen (N2)	1500°C
Hydrocarbon Gas	1550°C
Hydrogen (H2) up to 5%	1500°C
Rough Vacuum	1400°C



ACROSS INTERNATIONAL

Model	GCF1750
Electrical requirements	208-240V, 50/60Hz, single phase or 480V 3-Phase
Heating element type	Molybdenum silicide
Min/max/constant temperature	300 °C /1750°C/1650°C (depends on gas environment)
Temperature controller	Eurotherm 3204 Controller (5 Programs – Each program has 8 segments)
Maximum heating rate	15°C / min
Furnace cavity	Mitsubishi (Japan) high quality grade 1850 morgan polycrystalline alumina fiber
Thermocouple type	B
Gas inlet/outlet	1/4" hose barb with 1/4" BSPT (British Standard Pipe Thread)
Positive pressure	Not to exceed 0.02 MPa / 150 torr / 3 psi
Temperature controller precision	+/- 1°C
Working environments	Air, N2, Ar, NO2, CO, CO2, He, Ne, rough vacuum, etc. (Hydrogen, up to 5%)
Certification	ETL tested to UL and CSA standards (Optional), CE (Standard)

Nominal vs usable chamber size (DxWxH)	12x8x8"/10x7x7"	16x12x12"/14x11x11.5"	20x16x16
Voltage	208-240V, 50/60Hz, single phase	208-240V, 50/60Hz, single phase	480V – 3-Phase
Chamber capacity (cu ft)	0.44	1.33	2.96
Installed heating element	4	13	31.5
Maximum output	7 kW	13	31.5
Unit/shipping dimensions (WxDxH)	26x31x44/32x37x52	34x36x63"/37x42x70"	36x40x72"/43x46x81"
Unit/shipping weight (Lb)	628/752	914/1131	1620/1830

Maximum Temperatures

Maximum working temperature GCF1750	
Working Environment	Temperature
Air	1750°C
Helium (He), Neon (Ne), Argon (Ar)	1700°C
Nitrogen (N2)	1550°C
Hydrocarbon Gas	1600°C
Hydrogen (H2) up to 5%	1550°C
Rough Vacuum	1400°C