Gas Range

SOLAR

MICRO 24N - 24F - 28F
SYSTEM 24F - 28F

Wall mounted compact boilers

ICI CALDAIE

high technology boiler manufacturers

SOLAR MICRO - SYSTEM

Wall mounted compact boilers

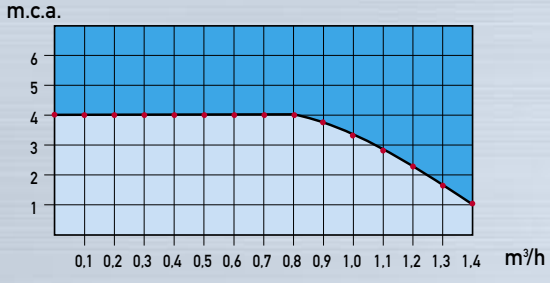
SOLAR MICRO - SYSTEM:
High quality miniaturised boilers.

Solar MICRO and Solar SYSTEM are a wall mounted series of small boilers for limited space application. Designed to satisfy heating and domestic hot water from either the 25.3 kW or 29.3 kW models.
An expansion vessel of 7 litres allows these boilers to be fitted into a large volume heating circuit.

Hydraulic circuit.
The hydraulic circuit utilises brass fittings.
A heating circuit by-pass valve is fitted along with a mains filling valve (mains filling loop for UK market). The plate heat exchanger secondary circuit temperature is carefully controlled by the boiler's electronic management system.

Electronic management.
The electronic controller modulates the boiler firing rate in response to the demands of the heating and domestic hot water. Frost protection and adjustable pump overrun time are features of this boiler. A series of indicator sequencing lights assist with a diagnostic fault finding system. The boiler ABS control panel cover is self extinguishing and the controls are to IP44.

Energy saving.
High efficiencies are obtained using electronic ignition and high quality water/gas exchanger, along with modulating control.
Under the European efficiency directive 92/42/CEE, the SOLAR MICRO has 3 star rating, the highest in its category.



Pump characteristics (with by-pass)

Optional digital thermostatic timer.
A digital thermostatic timer is available to control the boiler on a hourly and weekly basis, thereby reducing the fuel consumption.

Optional gas leak detection.
A gas leak detector sensor is available to detect gas leakage to give audible alarm and close gas solenoid valve.

Digital weekly thermostat timer

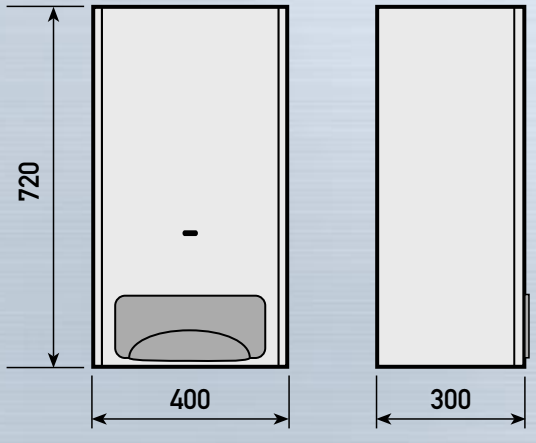

Gas leak detector

Technical specifications

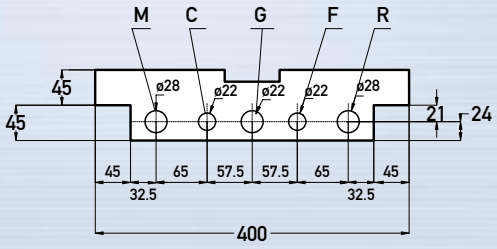
Technical data		SOLAR	MICRO 24 N	MICRO 24 F	MICRO 28 F	SYSTEM 24 F	SYSTEM 28 F
Type			B11	C12-C32-C42-C52	C12-C32-C42-C52	C12-C32-C42-C52	C12-C32-C42-C52
Nominal input	kW		27	27	31.5	27	31.5
Nominal input	kcal/h		23220	23220	27090	23220	27090
Nominal output	kW		24.7	25.3	29.3	25.3	29.3
Nominal output	kcal/h		21200	21734	25194	21734	25194
Efficiency	%		91.3	93.6	93	93.6	93
Minimum input	kW		10.5	10.5	12.4	10.5	12.4
Minimum output	kW		9.4	9.6	11.3	9.6	11.3
Efficiency at 30% of load	%		89.5	91.8	91.2	91.8	91.2
Gas consumption							
Natual gas G20 (2E+)	m3/h		2.855	2.855	3.331	2.855	3.331
Natual gas G25 (2ELL)	m3/h		3.32	3.32	3.874	3.32	3.874
LPG G30 (3+)	kg/h		2.128	2.128	2.482	2.128	2.482
LPG G31 (3P)	kg/h		2.096	2.096	2.445	2.096	2.445
Inlet natual gas pressure							
Natual gas G20 (2E+)	mbar		20/25	20/25	20/25	20/25	20/25
Natual gas G25 (2ELL)	mbar		20	20	20	20	20
LPG G30 (3+)	mbar		29	29	29	29	29
LPG G31 (3P)	mbar		37	37	37	37	37
Flue gas temperature	°C		115.3	126.7	131.4	126.7	131.4
CO2 (G20)	%		6	7.7	7.6	7.7	7.6
Heat lost through the chimney with burner running			6.8	6.1	6.5	6.1	6.5
Heat lost through the chimney with burner stopped			0.2	0.2	0.1	0.2	0.1
Heat lost through the casing (ΔT=50 °C)			1.9	0.3	0.5	0.3	0.5
Flue gas mass	Nm3/h		58.7	47.0	55.5	47.0	55.5

Main specifications

Technical data	SOLAR	MICRO 24 N	MICRO 24 F	MICRO 28 F	SYSTEM 24 F	SYSTEM 28 F
Type		B11	C12-C32-C42-C52	C12-C32-C42-C52	C12-C32-C42-C52	C12-C32-C42-C52
Heating circuit						
Minimum heating circuit set point	°C	35	35	35	35	35
Maximum heating circuit set point	°C	90	90	90	90	90
Boiler water content	l	1.2	1.2	1.2	1.2	1.2
Expansion vessel water content	l	7.5	7.5	7.5	7.5	7.5
Expansion vessel pressure	bar	0.7	0.7	0.7	0.7	0.7
Minimum primary circuit pressure	bar	0.4	0.4	0.4	0.4	0.4
Maximum primary circuit pressure	bar	3	3	3	3	3
Maximum heating circuit water content	l	150	150	150	150	150
Available heating circuit pump pressure at a flow rate of Q=1000 l/h	mbar	230	230	230	230	230
Domesti hot water						
Minimum DHW set point	°C	30	30	30	-	-
Maximum DHW set point	°C	60	60	60	-	-
Continuos DHW production Δt = 25 °C	l/min	14.1	14.5	16.8	-	-
Continuos DHW production Δt = 35 °C	l/min	10.1	10.3	12.0	-	-
Water volume Δt = 30 °C first 10'	l	117.8	120.7	140	-	-
Minimum DHW flow rate	l/min	2.5	2.5	2.5	-	-
Maximum DHW pressure	bar	8	8	8	-	-
Minimum DHW pressure	bar	0.5	0.5	0.5	-	-
Expansion vessel water content	l	-	-	-	-	-
Main supply	V/Hz	230/50	230/50	230/50	230/50	230/50
Power consumption	W	90	120	120	120	120
Fittings						
Heating circuit fittings	Inch	3/4"	3/4"	3/4"	3/4"	3/4"
DHW fittings	Inch	1/2"	1/2"	1/2"	-	-
Gas connections	Inch	1/2"	1/2"	1/2"	1/2"	1/2"
Height	mm	720	720	720	720	720
Depth	mm	300	300	300	300	300
Width	mm	400	400	400	400	400
Maximum flue pipe length						
Coaxial ø 60 x 100 mm	m	3	3	4	3	4
Twin ø 80 mm	m	16	16	30	16	30
Twin ø 60 mm	m	-	-	-	-	-
Weight	Kg	43	43	45	38	40
Insulation class	IP	44	44	44	44	44
CE approval number		0068★★★	0068★★★	0068★★★	0068★★★	0068★★★



EXTERNAL DIMENSIONS OF BOILER CASING



Legend

- **G** Gas connection Ø 1/2"
- **C** Domestic hot water flow Ø 1/2"
- **F** Cold water supply Ø 1/2"
- **M** Heating circuit flow Ø 3/4"
- **R** Heating circuit return Ø 3/4"

Company fully registered with Quality Assurance to ISO 9001

ICI CALDAIE Ltd

The Works - 5 Union Street
Ardwick - Manchester - M12 4JD U.K.
Tel +44 161 277 7950 - Fax +44 161 277 7954
salesuk@icicaldaie.com - www.icicaldaie.com

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