



CAST IRON ATMOSPHERIC BOILERS



ATR

**gas-fired, central heating only,
electronic ignition**

High efficiency boilers designed heating large domestic application. Ideal for installation in any boiler room. Cast-iron boiler body with stainless steel atmospheric burner, stabilised flame and ionisation control. Total shutdown function and completely protected control panel. For the production of domestic hot water, the boiler can be combined with the ATRB calorifier or any other calorifier; a kit can be fitted to use an electronic temperature controller. Available in 4 open flue versions. Duties from 43.6 to 71.1 kW. The ATR boilers can be installed in modules of two or three boilers: this solution ensures high-efficiency capacity control and division of the thermal load on each boiler.

PRODUCT ADVANTAGES

- Ideal for the heating requirements of large utilities.
- Can satisfy domestic hot water requirements in combination with Riello ATRB calorifier
- Management of (up to three) multi-zone systems using the special accessory kit.
- Boiler cascade operation available as optional.
- Built-in panel for temperature control functions.
- LPG kit, available as optional.

INSTALLATION/MAINTENANCE ADVANTAGES

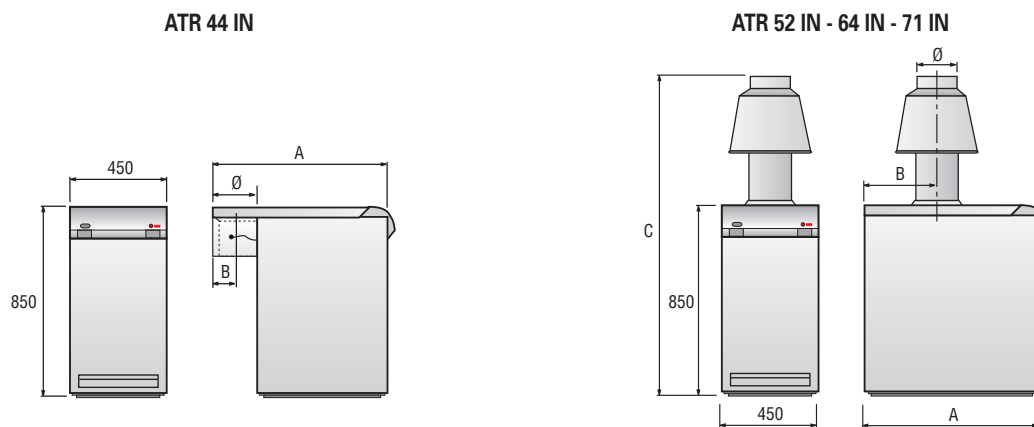
- Control panel connected using the special kit to any calorifier or regulation temperature controller.
- Electrical maintenance from the front: wiring on the terminal block that is easily removable from the new control panel.
- Index of protection of control panel IP40.
- Reset function and alarm messages directly on the control panel.
- Gas cock supplied. Built-in gas pressure stabilizer. Completely protected control panel.
- Ready for connection to a room thermostat and a central heating system pump.



CHARACTERISTICS		ATR 44 IN	ATR 52 IN	ATR 64 IN	ATR 71 IN
Input	kW	48,3	57,9	70,5	79
	Mcal/h	41,55	49,8	60,6	67,95
Output	kW	43,6	52,2	63,5	71,1
	Mcal/h	37,5	44,9	54,6	61,15
Efficiency at maximum output	%	90,3	90,2	90,1	90
Efficiency at 30% load	%	90,1	90,1	90	90
Heat losses through flue gas burner lock-out	%	0,24	0,25	0,5	0,25
Heat losses through flue gas 100 % load	%	7,35	8,5	7,79	8,38
Heat losses through insulation gas burner lock-out	%	0,84	0,82	0,76	0,8
Heat losses through insulation gas 100 % load	%	2,35	1,3	2,11	1,62
Flue gas temperature	°C	~110	~110	~120	~130
Flue gas mass flow rate	kg/sec	0,041	0,048	0,053	0,06
CO ₂ *	%	5,00	4,80	5,75	5,70
CO * less than	ppm	26	22	31	52
NO _x	mg/kWh	<260	<260	<260	<260
Water-side pressure drop (ΔT 10°C)	mbar	28	32	41	60
	Pa	2800	3200	4100	6000
Water-side pressure drop (ΔT 15°C)	mbar	13	14	18	22
	Pa	1300	1400	1800	2200
Water-side pressure drop (ΔT 20°C)	mbar	7	8	10	12
	Pa	700	800	1000	1200
Resistance of flue (draught required)	mbar	0,05	0,05	0,05	0,05
	Pa	5	5	5	5
Air flow-rate	Nm ³ /h	113,16	132,12	143,96	152,49
Boiler capacity	l	24	28,5	33	38
Max. working pressure (central heating)	bar	3	3	3	3
	kPa	300	300	300	300
Power supply	V/50 Hz	230	230	230	230
Power input	W	27	27	27	27
Index of protection	IP	XOD (40)	XOD (40)	XOD (40)	XOD (40)
Weight	kg	166	190	225	251

* With parameters referred to 0% residual O₂ in the exhaust gases and with atmospheric pressure at sea level.

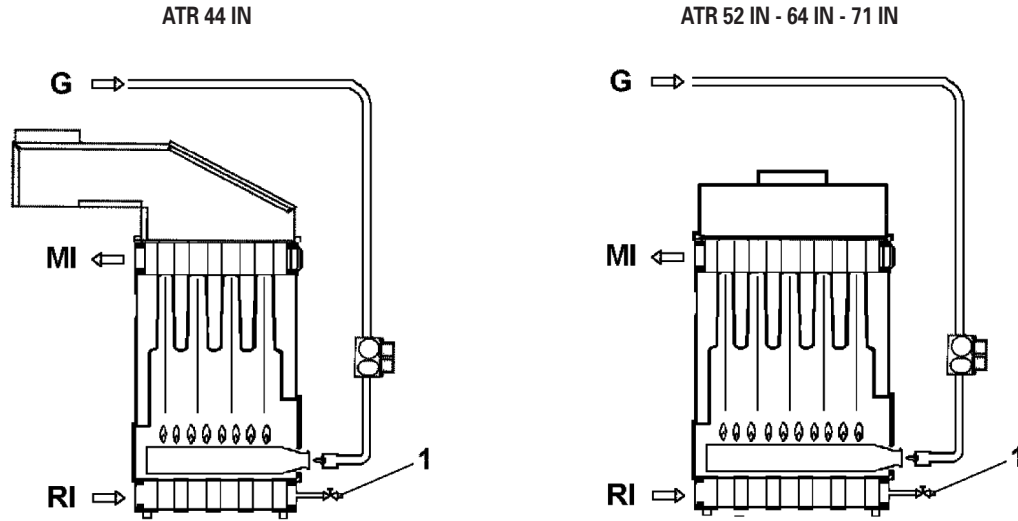
DIMENSIONS (mm)



Models		ATR 44 IN	ATR 52 IN	ATR 64 IN	ATR 71 IN
A	mm	780	701	784	867
B	mm	98	260	302	342
C	mm	-	1475	1475	1700
Flue gas outlet diameter	mm	180	180	180	200



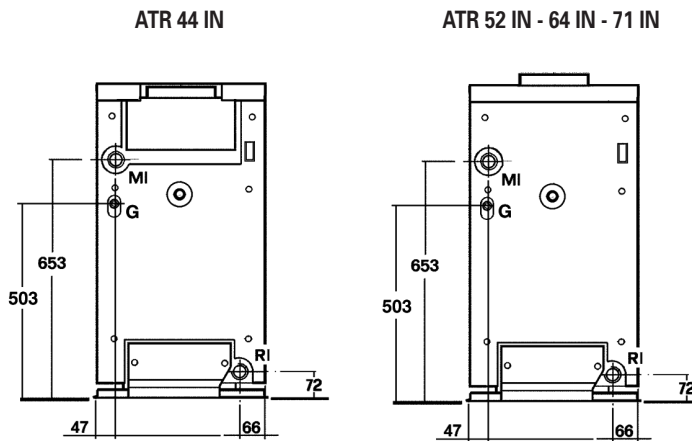
WATER CIRCUIT



- 1 CH system drain cock
- G Gas mains fitting
- MI Central heating flow
- RI Central heating return

Water and gas connections

The ATR IN packaged boilers are designed and developed to be installed in central heating systems and for the production of domestic hot water if connected to suitable appliances.

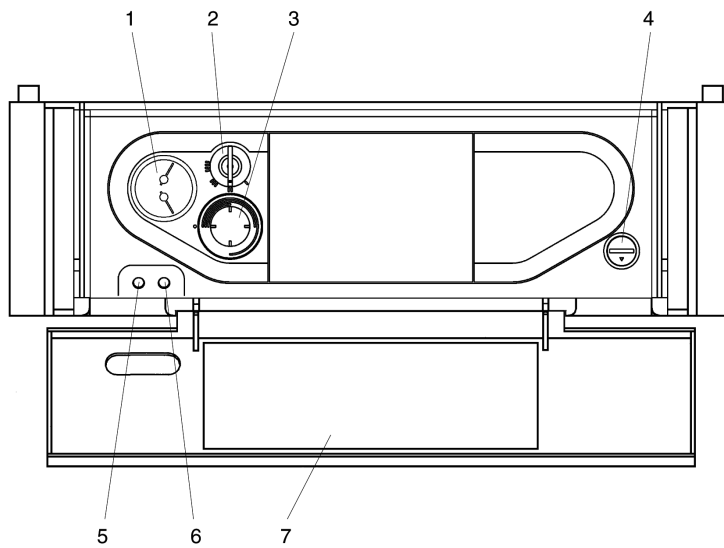


Models	44 IN	52 IN	64 IN	71 IN
MI - central heating flow	ø 1"1/4	1"1/4	1"1/4	1"1/4
RI - central heating return	ø 1"1/4	1"1/4	1"1/4	1"1/4
G - gas mains	ø (M) 1/2"	1/2"	3/4"	3/4"

A shunt (by-pass) pump must be fitted to avoid damage to the boiler on first ignition and on re-ignition after idle periods. The pump must ensure, during the operation of the system, a flow-rate between 20 and 30% of the total. It must guarantee a water return temperature > 50°C and it should shut down with a delay of at least three minutes, at the beginning of long boiler shutdown (overnight, on weekends etc.).



CONTROL PANEL



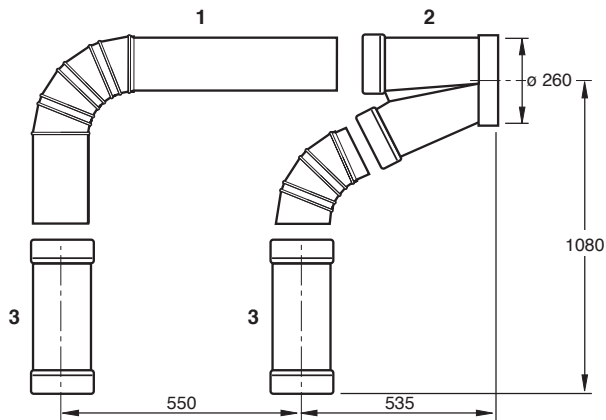
Key

- 1 System thermometer
- 2 Function selector:
 - I Boiler off
 - II Boiler on
 - III Reset electronic flame control device
 - IIII Automatic mode selector (*)
- 3 Boiler thermostat
- 4 Manual high limit thermostat reset
- 5 Power signal (green)
- 6 Burner lockout signal (red)
- 7 Function indicators

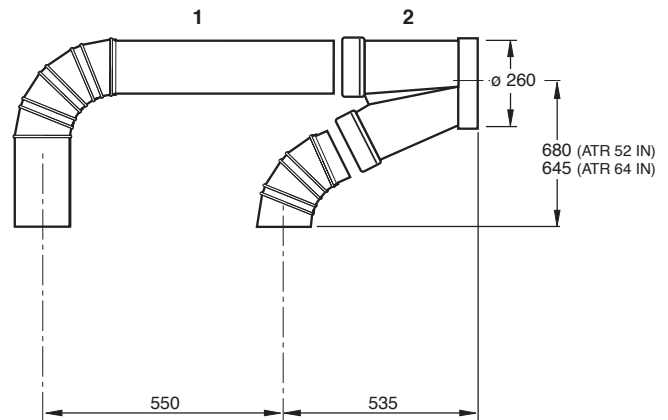
(*) Select only if using the temperature control kit.

FLUE ACCESSORIES

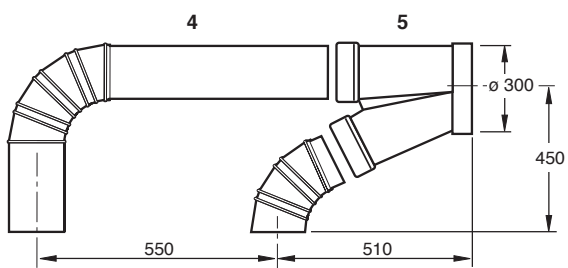
FLUE HEADER TO CONNECT 2 ATR 44 IN BOILERS



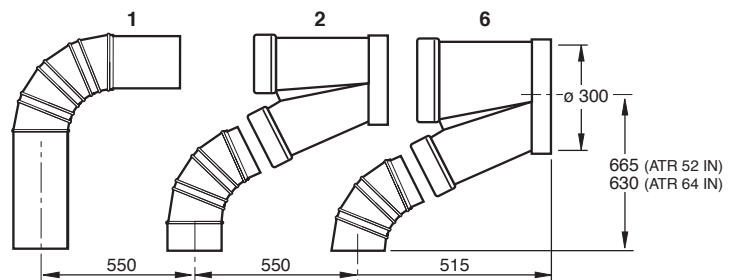
FLUE HEADER TO CONNECT 2 ATR 52 IN OR 2 ATR 64 IN BOILERS



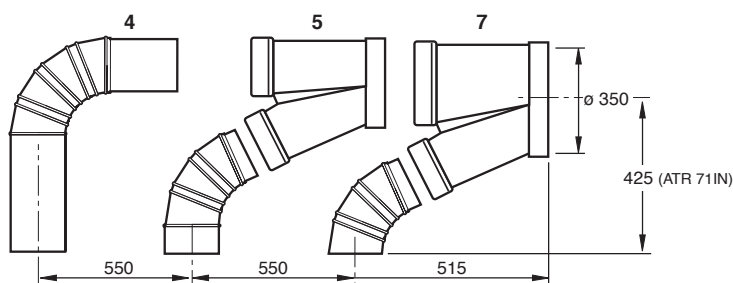
FLUE HEADER TO CONNECT 2 ATR 71 IN BOILERS



FLUE HEADER TO CONNECT 2 ATR 44 IN OR 2 ATR 64 IN BOILERS



FLUE HEADER TO CONNECT 3 ATR 71 IN BOILERS



Key

- 1 90° bend fitting diam.180mm
- 2 Fitting dia. 180/260
- 3 Pipe dia. 180x700
- 4 90° bend fitting dia 200mm
- 5 Fitting dia. 200/300
- 6 Fitting dia. 260/300
- 7 Fitting dia. 300/350

The flue can be fitted with the outlet on the right or on the left.



RIELLO ATR 44-52-64-71 IN

DESCRIPTION FOR SUMMARY SPECIFICATIONS

High efficiency floor standing hot water boiler manufactured from cast-iron elements.

Natural draught open flue combustion chamber with stainless steel, stabilised flame atmospheric gas burner with electronic ignition.

Maximum working pressure 3.5 bar.

DESCRIPTION FOR SPECIFICATIONS

The high efficiency hot water generator, type B11BS and category II 2H3+, is made up of:

- Light grey steel external casing panels, assembled with quick fit couplings, removable for servicing
- high density fibre-glass wool lagging, protected by aluminium sheet
- boiler body manufactured from assembled cast-iron elements
- low pressure drop combustion chamber designed to generate a highly turbulent motion in order to produce an efficient gas to water heat transfer for higher efficiency
- stainless steel atmospheric gas burner with stabilised flame
- ignition and flame ionisation control device
- instrument panel protected by fold-back cover to prevent accidental tampering, including: control devices, on/off switch, power indicator, exhaust safety indicator, burner lockout signal and connectors for the electrical connections, which must be completely wired, ready for connection to the mains power supply, the room thermostat and the central heating system pump
- control thermostat and safety thermostat with manual reset for boiler water temperature, connected to separate lines
- Boiler thermometer
- gas valve assembly, including: safety valve, control valve, pressure regulator and gas filter
- gas pressure switch (ATR 64 IN - ATR 71 IN)
- rear draught diverter system with vertical flue gas outlet
- flue outlet thermostat with manual reset
- operation with total shutdown logic
- system drain cock
- probe well
- maximum working pressure 3.5 bar
- compliant with CEI standards
- index of protection IP40
- compliant with 90/396/EEC directive (gas) - CE mark
- compliant with 89/336/EEC directive (electromagnetic compatibility)
- compliant with 72/23/EEC directive (low voltage)
- compliant with 92/42/EEC directive (efficiency)



MATERIAL SUPPLIED

- LPG Kit
- draught diverter for ATR 52 IN - 64 IN - 71 IN
- lifting eyes
- installation, use and maintenance manual
- hydraulic test certificate
- product identification plate

ACCESSORIES

The following accessories are available separately, upon request.

Gas valve kit for LPG

Electrical interface kit for ATRB calorifier

Temperature control interface kit

Water connection kit for ATRB 120

Multi-zone electrical kit

Total shutdown kit (*)

(*) Only if installed with separate calorifier