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## Calderas

Instrucciones de Instalación,  
Montaje y Funcionamiento  
para el **INSTALADOR**

GB

## Boilers

Installation, Assembly  
and Working Instructions  
for the **INSTALLER**

F

## Chaudières

Instructions d'Installation,  
de Montage et de Fonctionnement  
pour l'**INSTALLATEUR**

D

## Heizkessel

Installations-, Montage-  
und Betriebsanleitung  
für den **INSTALLATEUR**

I

## Caldaie

Istruzioni per l'Installazione,  
il Montaggio e il Funzionamento  
per l'**INSTALLATORE**

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## Caldeiras

Instruções de Instalação,  
Montagem e Funcionamento  
para o **INSTALADOR**

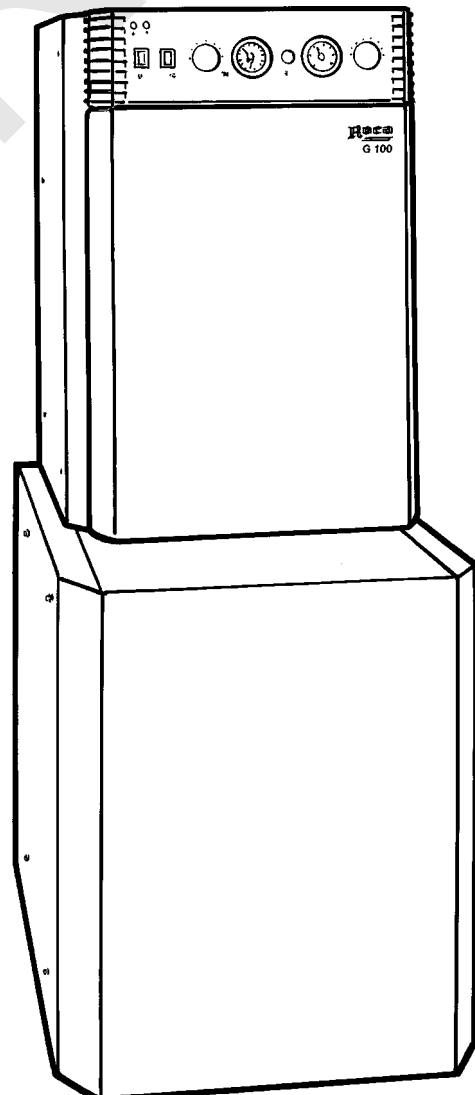
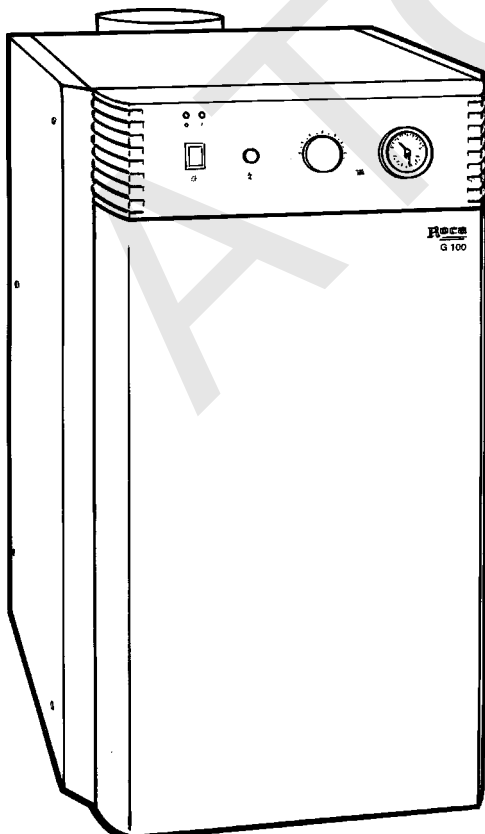


Fig.1

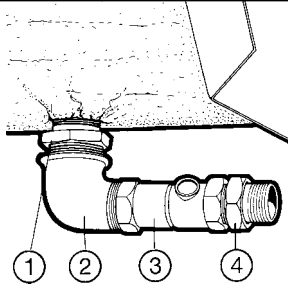


Fig.2

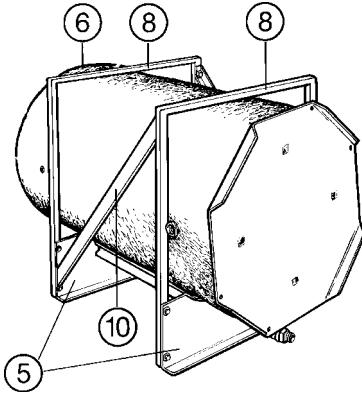


Fig.3

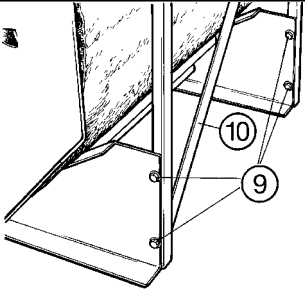


Fig.4

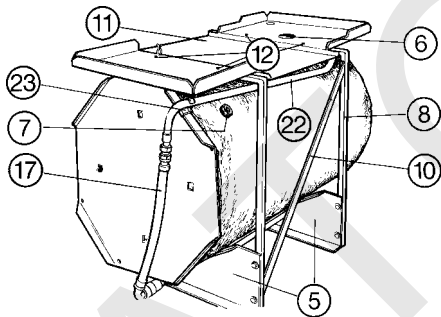


Fig.5

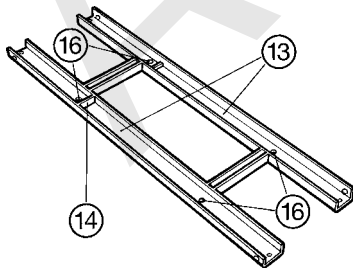


Fig.6

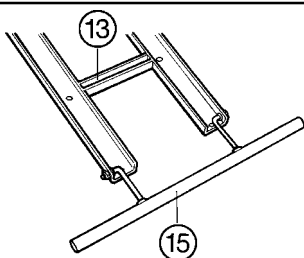


Fig.7

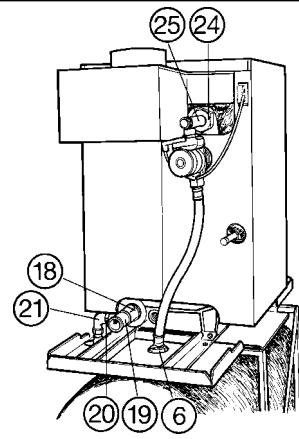


Fig.8

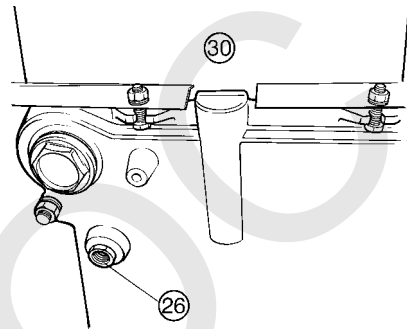


Fig.9

Instalación en circuito cerrado  
 Sealed system installation  
 Installation en circuit fermé  
 Montage des geschlossenen Kreislaufes  
 Impianto a circuito chiuso  
 Instalação em circuito fechado

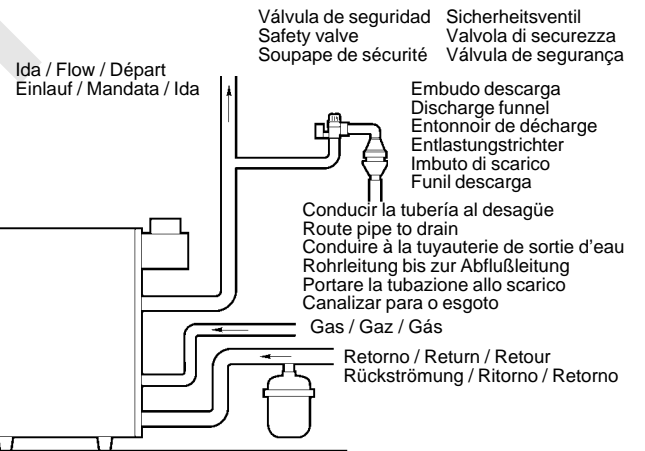


Fig.9

Instalación en circuito abierto  
 Open vented installation  
 Installation en circuit ouvert  
 Montage des offenen Kreislaufes  
 Impianto a circuito aperto  
 Instalação em circuito aberto

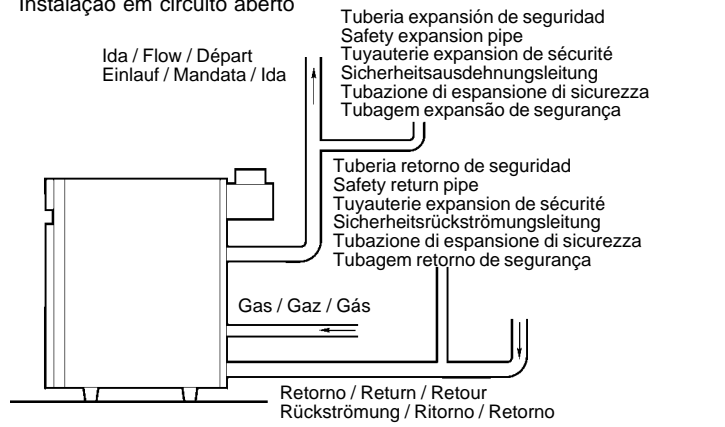


Fig.10

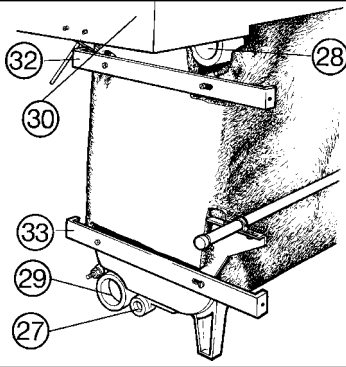


Fig.14

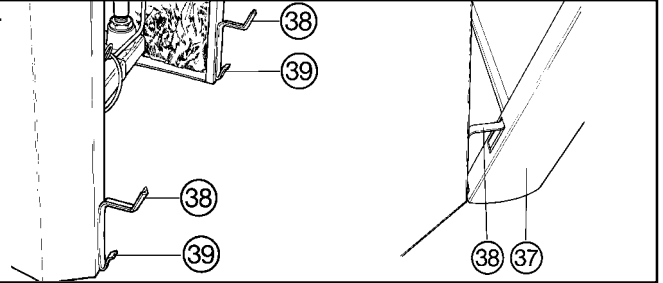


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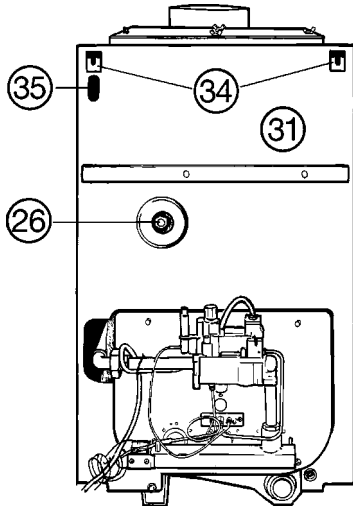


Fig.15

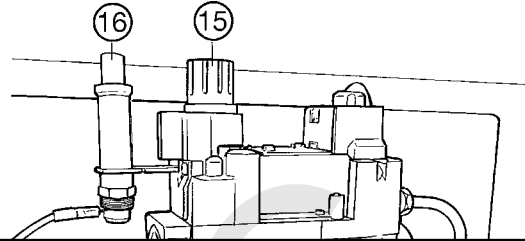


Fig.16

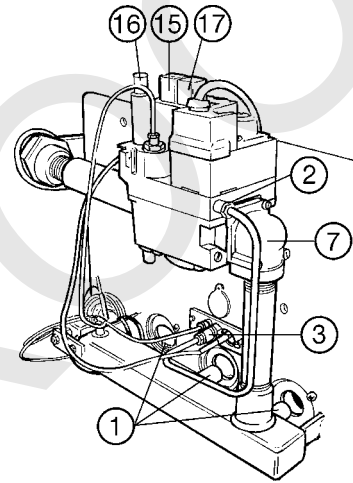


Fig.12

Recirculación  
Recirculation  
Recirculation  
Wiederumlauf  
Ricircolazione  
Recirculação

Vaina  
Pocket  
Gaine  
Hülse  
Guaina  
Bainha

Entrada agua de red  
Mains water supply  
Entrée d'eau du reseau  
Heiz- und  
Leitungswasserzfluss  
Entrata acqua dalla rete  
Entrada água de rede

Salida A.C.S.  
DHW outlet  
Sortie E.C.S.  
Heisswasserauslauf  
Uscita A.C.S.  
Saída A.Q.S.

Fig.17

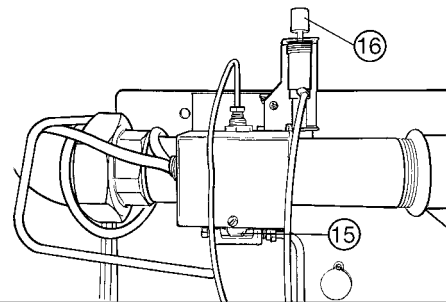


Fig.18

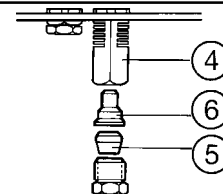


Fig.13

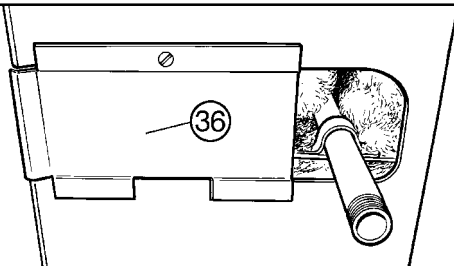
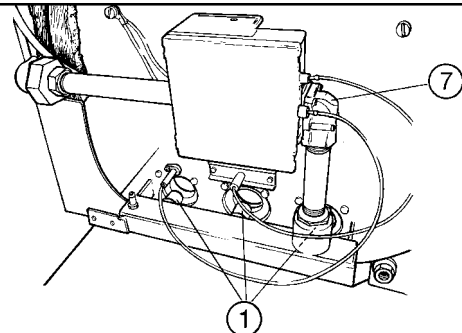


Fig.19



## Características principales / Main features / Principales caractéristiques / Hauptmerkmale / Principali caratteristiche / Características principais

Características eléctricas:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)
Electrical data:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)
Caractéristiques électriques:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)
Elektrische Kenndaten:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)
Caratteristiche elettriche:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)
Características eléctricas:	220-230V - 50Hz 10W (G100 y G100IE) 220-230V - 50 Hz 90W (G100/GTA y G100IE/GTA)

Potencia nominal máxima: 2.800 W / Max. Electrical Output: 2.800 W / Puissance nominale maximale: 2.800 W.  
Maximale Nennleistung: 2.800 W. / Potenza massima nominale: 2.800 W. / Potência nominal máxima: 2.800 W.

Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	Potencia útil nominal Nominal Heat Output Puissance utile Nutzleistung Potenza utile nominale Potência útil nominal		Rendimiento útil Net Efficiency Rendement utile Nutzungsgrad Rendimento utile Rendimento útil	Nº de elementos No. of sections Nbre. d'éléments Anzahl der Elemente Nº di elementi Nº de elementos	Nº de quemadores No of burners Nbre. de brûleurs Anzahl der Brenner Nº di bruciatori Nº de queimadores
	kcal/h	kW			
<b>G100/20 &amp; G100/20IE</b>	20.300	23,6	90	3	3
<b>G100/30 &amp; G100/30IE</b>	28.100	32,7	90,3	4	3
<b>G100/30IT &amp; G100/30IE IT</b>	27.000	31,4	90,2	4	3
<b>G100/40 &amp; G100/40IE</b>	38.200	44,4	90,5	5	3
<b>G100/50 &amp; G100/50IE</b>	48.350	56,2	90,8	6	3
<b>G100/70 &amp; G100/70IE</b>	68.800	80	91,3	8	3
<b>G100/90 &amp; G100/90IE</b>	88.200	103	91,5	10	3
<b>G100/110 &amp; G100/110IE</b>	108.300	126	91,6	12	3

Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	Potencia útil nominal Nominal Heat Output Puissance utile Nutzleistung Potenza utile nominale Potência útil nominal		Rendimiento útil Net Efficiency Rendement utile Nutzungsgrad Rendimento utile Rendimento útil	Nº de elementos No. of sections Nbre. d'éléments Anzahl der Elemente Nº di elementi Nº de elementos	Nº de quemadores No of burners Nbre. de brûleurs Anzahl der Brenner Nº di bruciatori Nº de queimadores
	kcal/h	kW			
<b>G100/20 &amp; G100/20IE</b>	20.300	23,6	90	3	3
<b>G100/30 &amp; G100/30IE</b>	28.100	32,7	90,3	4	3
<b>G100/30IT &amp; G100/30IE IT</b>	27.000	31,4	90,2	4	3
<b>G100/40 &amp; G100/40IE</b>	38.200	44,4	90,5	5	3
<b>G100/50 &amp; G100/50IE</b>	48.350	56,2	90,8	6	3
<b>G100/70 &amp; G100/70IE</b>	68.800	80	91,3	8	3
<b>G100/90 &amp; G100/90IE</b>	88.200	103	91,5	10	3
<b>G100/110 &amp; G100/110IE</b>	108.300	126	91,6	12	3

Presión gas (mbar)/Gas Inlet Pressure (m bar)/Pression gaz (mbar)/Gasdruck (mbar)/Pressione gas (mbar) / Pressão gás (mbar)				
Ciudad*	Natural	Butano	Propano	
Town Gas*	Natural Gas	Butane Gas	Propane Gas	
De ville*	Naturel	Butane	Propane	
Stadgas*	Erdgas	Butan	Propan	
Di Citta*	Naturale	Butano	Propano	
Cidade	Natural	Butano	Propano	
G110 (8)	G20 (20) G25 (25)	G30 (28-30)	G31 (37)	

\*Las caldera G100IE no se comercializan para Gas Ciudad. / \* Please note that G100IE boilers are not available for Town Gas  
\*Les chaudières G100IE à Gas de Ville ne sont pas commercialisées. / \*Die Heizkessel G100IE sind nicht für Stadtgas verfügbar  
\* Le caldaie G100IE non vengono fornite per gas di città. / \* As caldeira G100IE não se comercializam para gás cidade.

Caldera / Boiler type Chaudière / Heizkessel Caldaia / Caldeira	Consumo m <sup>3</sup> (st)/h 15°C - 1013 mbar / Consumption in m <sup>3</sup> (st)/h 15°C - 1013 mbar Consommation m <sup>3</sup> (st)/h 15°C - 1013 mbar / Verbrauch m <sup>3</sup> (st)/h 15°C - 1013 mbar Consumo m <sup>3</sup> (st)/h 15°C - 1013 mbar / Consumo m <sup>3</sup> (st)/h 15°C - 1013 mbar				
	<b>G110</b>	<b>G20</b>	<b>G25</b>	<b>G30</b>	<b>G31</b>
<b>G100/20 &amp; G100/20IE</b>	6,77	2,77	3,23	0,81	1,06
<b>G100/30 &amp; G100/30IE</b>	9,36	3,83	4,45	1,12	1,47
<b>G100/30IT &amp; G100/30IE IT</b>	9	3,68	4,28	1,06	1,41
<b>G100/40 &amp; G100/40IE</b>	12,69	5,2	6,04	1,52	1,99
<b>G100/50 &amp; G100/50IE</b>	16	6,55	7,62	1,91	2,51
<b>G100/70 &amp; G100/70IE</b>	22,64	9,27	10,78	2,71	3,56
<b>G100/90 &amp; G100/90IE</b>	28,98	11,87	13,8	3,47	4,55
<b>G100/110 &amp; G100/110IE</b>	35,54	14,56	16,92	4,25	5,57

Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	Capacidad del acumulador (l) Storage Cylinder (l) Capacité du ballon (l) Kapazität des Speichers (l) Capacità dell'accumulatore (l) Capacidade do acumulador (l)	Resistencia eléctrica (W) Electric Heater Element (W) Résistance électrique (W) Heziderstand (W) Resistenza elettrica (W) Resistência eléctrica (W)	Peso aproximado (kg) Approx. Weigth (kg) Pods approx. (kg) Gewixht ca. (kg) Peso approssimativo (kg) Peso aproximado (kg)
<b>G100/20 GTA &amp; G100/20IE GTA</b>	150	2.500	236
<b>G100/30 GTA &amp; G100/30IE GTA</b>	150	2.500	262
<b>G100/30 GTA IT &amp; G100/30IE GTA IT</b>	150	2.500	262
<b>G100/40 GTA &amp; G100/40IE GTA</b>	150	2.500	291

Caldera / Boyler type / Chaudière / Heizkessel Caldaia / Caldeira	Cotas (mm) / Dimensions (mm) / Cotes (mm) Abmessungen (mm) / Quote (mm) / Cotas (mm)											
	Gas Ciudad*/Town Gas* Gaz de ville*/Stadgas* Gas di Città*/Gas Cidade*						Gas Nat. y GLP / Nat. Gas and LPG Gas Nat. et GLP / Erdgas und GLP Gas Nat. e GLP / Gas Nat. GLP					
	A	B	C	D	E	F	F'	g (")	F	H	I	g (")
<b>G100/20 &amp; G100/20 IE</b>	850	800	110	127	551	651	-	3/4 ext.	651	275	275	1/2 ext.
<b>G100/30 &amp; G100/30 IE</b>	850	918	113	155	638	738	-	3/4 ext.	738	255	295	1/2 ext.
<b>G100/30 IT &amp; G100/30IE IT</b>	850	918	113	155	638	738	-	3/4 ext.	738	255	295	1/2 ext.
<b>G100/40 &amp; G100/40 IE</b>	850	1026	113	155	725	845	-	1 ext.	825	255	295	1/2 ext.
<b>G100/50 &amp; G100/50 IE</b>	953	1084	120	202	812	932	-	1 ext.	912	275	275	1/2 ext.
<b>G100/70 &amp; G100/70 IE</b>	953	1260	120	202	986		1316	1 1/2 int.	1086	275	275	3/4 ext.
<b>G100/90 &amp; G100/90 IE</b>	1005	1483	144	254	1160		1490	1 1/2 int.	1260	275	275	3/4 ext.**
<b>G100/110 &amp; G100/110 IE</b>	1005	1659	144	254	1334		1664	1 1/2 int.	1434	275	275	3/4 ext.**

D = Diámetro interior collarin (diámetro exterior máximo admisible entronque chimenea)

\*\* 1" para G100IE

D = Inside diameter of smokehood flue socket collar (maximum allowable outside diameter of boiler flue connection).

\*\* 1" for G100IE

D = Diamètre intérieur collorette (diamètre extérieur maximum admissible branchement cheminée).

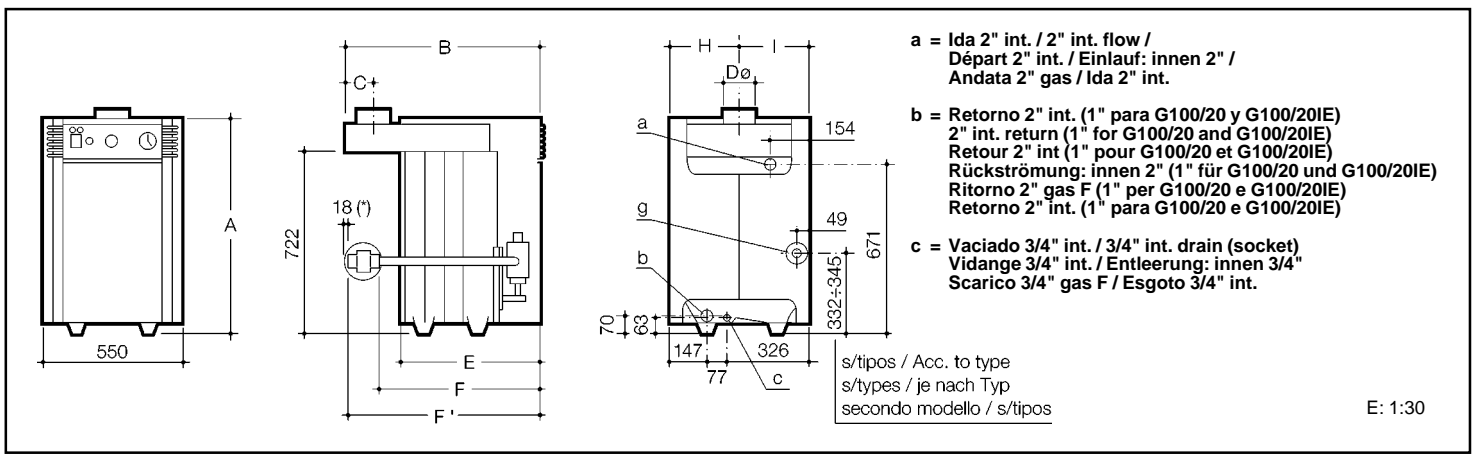
\*\* 1" pour G100IE

D = Innendurchmesser Kesselstutzen (Maximal zulässiger Innendurchmesser Rohrabzweigung Schornstein).

\*\* 1" per G100IE

D = Diâmetro interior da gola (diâmetro exterior máximo admissível da conducta de evacuação de fumos).

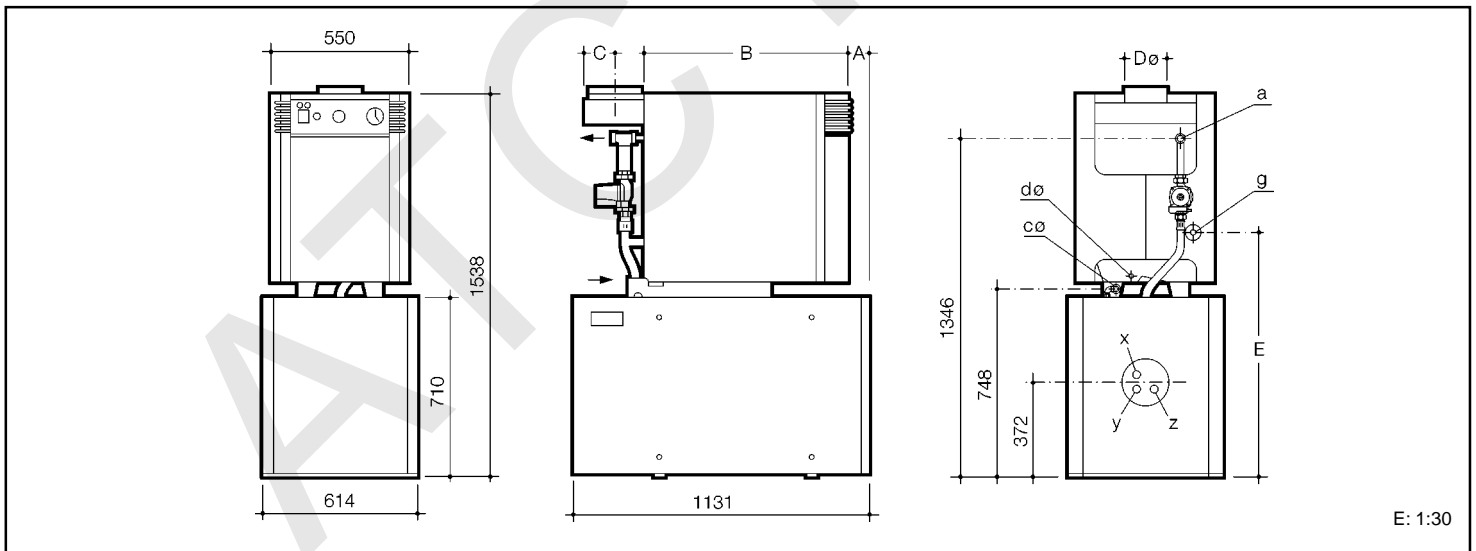
\*\* 1" para G100IE



\* G100/70-90-110 gas ciudad. \* G100/70-90-110 Tow Gas (see drawing). \* G100/70-90-110 gz de ville.  
\* G100/70-90-110 Stadtgas. \* G100/70-90 e 110 a gas di città. \* G100/70-90 e 110 gás cidade.

Caldera Boylor type Chaudière Heizkessel Caldaia Caldeira	Cotas (mm) Dimensions (mm) Cotes (mm) Abmessungen (mm) Quote (mm) Cotas (mm)				Gas Ciudad* Gas Natural y GLP Town Gas* Natural Gas and LPG Gas de Ville* Gas Natural et GLP Stadtgas* Erdgas und GLP Gas di Città* Gas Naturale e GLP Gás Cidade* Gás Natural e GLP			
	A	B	C	D	E	g (")	E	g (")
<b>G100/20 GTA &amp; G100/20IE GTA</b>	265	551	110	127	1014	3/4 ext.	1011	1/2 ext.
<b>G100/30 GTA &amp; G100/30IE GTA</b>	175	638	113	155	1014	3/4 ext.	1011	1/2 ext.
<b>G100/30 GTA IT &amp; G100/30IE GTA IT</b>	175	638	113	155	1014	3/4 ext.	1011	1/2 ext.
<b>G100/40 GTA &amp; G100/40IE GTA</b>	90	725	113	155	1017	1 ext.	1011	1/2 ext.

\* Las calderas G100IE/GTA no se comercializan para Gas Ciudad. / \* Please note that G100IE/GTA boilers are not available for Town Gas.  
\* Les chaudières G100IE/GTA à Gaz de Ville ne sont pas commercialisées. / \* Die Heizkessel G100IE/GTA sind nicht für Stadtgas verfügbar  
\* Le caldaie G100IE/GTA non vengono fornite per gas di città. / \* As caldeiras G100IE/GTA não se comercializam para Gás Cidade.



Presión máxima de trabajo calderas G100: 4 bar  
 Maximum working pressure of G100 boilers: 4 bar  
 Pression maximale de travail des chaudières G100: 4 bar.  
 Maximaler Arbeitsdruck der Heizkessel G100: 4 bar.  
 Pressione massima di lavoro delle caldaie G100: 4 bar.  
 Pressão máxima de trabalho das caldeiras G100: 4 bar.

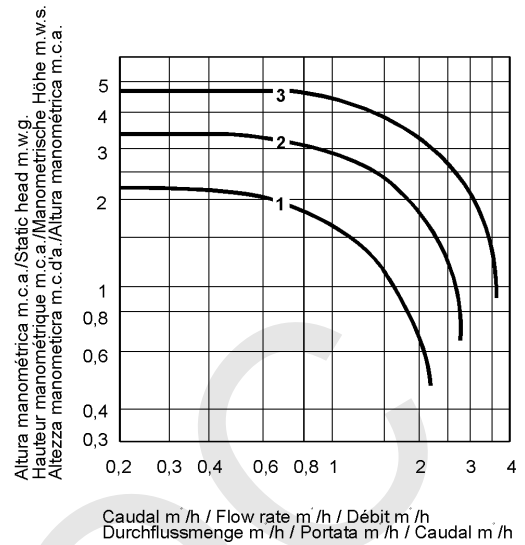
Presión máxima de trabajo circuito calefacción calderas G100/GTA: 3 bar  
 Maximum heating circuit working pressure of G100/GTA boilers: 3 bar.  
 Pression maximale de travail circuit chauffage des chaudières G100/GTA: 3 bar.  
 Maximaler Arbeitsdruck des Heizkreislafs der Heizkessel G100/GTA: 3 bar.  
 Pressione massima di lavoro del circuito di riscaldamento delle caldaie G100/GTA: 3 bar.  
 Pressão máxima de trabalho circuito aquecimento caldeiras G100/GTA: 3 bar.

Presión máxima de trabajo circuito sanitario calderas G100/GTA: 7 bar  
 Maximum DHW circuit working pressure of G100/GTA boilers: 7 bar  
 Pression maximale de travail circuit sanitaire des chaudières G100/GTA: 7 bar  
 Maximaler Arbeitsdruck des Heißwasserkreislaufs der Heizkessel G100/GTA: 7 bar.  
 Pressione massima di lavoro del circuito sanitario delle caldaie G100/GTA: 7 bar  
 Pressão máxima de trabalho circuito sanitario caldeiras G100/GTA: 7 bar.

Temperatura máxima de trabajo: 95°C  
 Maximum working temperature: 95°C  
 Température maximale de travail: 95°C  
 Maximaler Betriebstemperatur: 95°C  
 Temperatura massima di lavoro: 95°C  
 Temperatura máxima de trabalho: 95°C

Caudal específico calderas G100/GTA: 24 l/m para  $\Delta t = 30$  K  
 Specific Flow Rate of G100/GTA boilers: 24 l/min, for a  $\Delta t = 30$  K.  
 Débit spécifique des chaudières G100/GTA: 24 l/min. pour  $\Delta t = 30$  K  
 Spezifische Durchflußmenge der Heizkessel G100/GTA: 24 l/m bei  $\Delta t=30$  K.  
 Portata specifica delle caldaie G100/GTA: 24 l/m per  $\Delta t = 30$  K.  
 Caudal específico caldeiras G100/GTA: 24 l/m para  $\Delta t=30$  K.

Curva característica del circulador circuito sanitario  
 DHW pump performance graph  
 Courbe caractéristique du circulateur du circuit sanitaire  
 Kennlinie der Heißwasser-Umlaufpumpe  
 Curva Caratteristica della pompa di circolazione del circuito sanitario  
 Curva Característica do circulador circuito sanitário



	Diámetro inyector quemador (mm) Size of burner injector (mm) Diamètre injecteur brûleur (mm) Durchmesser Brennerdüsen (mm) Diametro dell'iniettore del bruciatore (mm) Diámetro inyector quemador (mm)		
Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	Gas natural Natural Gas Gas naturel Erdgas Gas naturale Gás natural	GLP LPG GLP GLP GLP GLP	Gas ciudad Town Gas Gaz de ville Stadtgas Gas di città Gás cidade
<b>G100/20</b>	2,3	1,53	4,5
<b>G100/30</b>	2,95	1,82	5,8
<b>G100/30 IT</b>	2,89	1,78	5,69
<b>G100/40</b>	3,4	2,1	6,25
<b>G100/50</b>	3,8	2,35	7,5
<b>G100/70</b>	4,5	2,75	10
<b>G100/90</b>	5,1	3,2	10,9
<b>G100/110</b>	5,8	3,7	12,6

Diámetro inyector quemador piloto (mm) Size of pilot burner injector (mm) Diamètre injecteur brûleur pilote (mm) Durchmesser Pilotbrennerdüsen (mm) Diametro dell'iniettore del semprevivo (mm) Diámetro do diafragma (mm)		
Gas natural/Natural Gas Gas naturel/Erdgas Gas naturale/Gás natural	GLP / LPG GLP / GLP GLP / GLP	Gas ciudad/Town Gas Gaz de ville/Stadgas Gas di città/Gás cidade
	2 x 0,29	1 x 0,24
		2 x 0,55

Diámetro del diafragma (mm) Size of diaphragm (mm) Diamètre du diaphragme (mm) Membrandurchmesser (mm) Diametro del diaframma (mm) Diámetro do diafragma (mm)		
Caldera / Boiler type Chaudière/Heizkessel Caldaia / Caldeira	Gas natural/Natural Gas Gas naturel/Erdgas Gas naturale/Gás natural	GLP / LPG GLP / GLP GLP / GLP
<b>G100/20</b>	8	-
<b>G100/30</b>	7	9
<b>G100/30 IT</b>	7	9
<b>G100/40</b>	8	-
<b>G100/50</b>	10,4	-
<b>G100/70</b>	10,5	-
<b>G100/90</b>	12	10,3
<b>G100/110</b>	14	11,5

Caldera / Boiler type Chaudière / Heizkessel Caldaia / Caldeira	Presión en inyectores (mbar) / Burner Setting Pressure (m bar) / Pression dans les injecteurs (mbar) Düsendruck (mbar) / Pressione negli iniettori (mbar) / Pressão nos injectores (mbar)				
	<b>G 110</b>	<b>G 20</b>	<b>G 25</b>	<b>G 30</b>	<b>G 31</b>
<b>G100/20</b>	4,5	15,6	19,5	27,7	35,4
<b>G100/30</b>	3,5	11	13,7	26,3	33,6
<b>G100/30 IT</b>	3,5	11	13,7	26,3	33,6
<b>G100/40</b>	4,5	11	13,7	27,5	35,1
<b>G100/50</b>	3,5	12,4	15,5	26,02	33,2
<b>G100/70</b>	2,7	11,1	13,9	26,1	33,3
<b>G100/90</b>	4	11	13,7	23,5	30,0
<b>G100/110</b>	4	10,9	13,6	22,65	28,9

Diámetro inyector quemador (mm) Size of burner injector (mm) Diamètre injecteur brûleur (mm) Durchmesser Brennerdüsen (mm) Diametro dell'iniettore del bruciatore (mm) Diâmetro injector quemador (mm)		
Caldera / Boiler type Chaudière / Heizkessel Caldaia / Caldeira	Gas natural / Natural Gas Gas naturel / Erdgas Gas naturale / Gás natural	GLP / LPG GLP / GLP GLP / GLP
<b>G100/20IE</b>	2,3	1,53
<b>G100/30IE</b>	2,95	1,82
<b>G100/30IE IT</b>	2,89	1,78
<b>G100/40IE</b>	3,4	2,1
<b>G100/50IE</b>	3,8	2,35
<b>G100/70IE</b>	4,5	2,75
<b>G100/90IE</b>	5,1	3,2
<b>G100/110IE</b>	5,8	3,7

Diámetro del diafragma (mm) Size of diaphragm (mm) Diamètre du diaphragme (mm) Membrandurchmesser (mm) Diametro del diaframma (mm) Diâmetro do diafragma (mm)		
Caldera / Boiler type Chaudière / Heizkessel Caldaia / Caldeira	Gas natural / Natural Gas Gas naturel / Erdgas Gas naturale / Gás natural	GLP / LPG GLP / GLP GLP / GLP
<b>G-100/20IE</b>	7,25	12
<b>G100/30IE</b>	6,7	8
<b>G100/30IE IT</b>	6,7	8
<b>G100/40IE</b>	8	-
<b>G100/50IE</b>	11,5	10,3
<b>G100/70IE</b>	12	-
<b>G100/90IE</b>	6,7 / 10,5*	4,7 / 9,5*
<b>G100/110IE</b>	7,5 / 13,5*	5,3 / 11*

(\* ) 1ª válvula / 2ª valv. (\* ) 1 st valve / 2 nd valve (\* ) 1ère vanne / 2ème vanne (\* ) 1. Ventil / 2. Ventil (\* ) 1ª valvola / 2ª valvola (\* ) 1ª válvula / 2ª válvula

Presión en inyectores (mbar) / Burner Setting Pressure (m bar) / Pression dans les injecteurs (mbar) Düsensdruck (mbar) / Pressione negli iniettori (mbar) / Pressão nos injectores (mbar)				
Caldera / Boiler type Chaudière / Heizkessel Caldaia / Caldeira	<b>G 20</b>	<b>G 25</b>	<b>G 30</b>	<b>G 31</b>
<b>G100/20IE</b>	15,6	19,5	27,7	35,4
<b>G100/30IE</b>	11	13,7	26,3	33,6
<b>G100/30IE IT</b>	11	13,7	26,3	33,6
<b>G100/40IE</b>	11	13,7	27,5	35,1
<b>G100/50IE</b>	12,4	15,5	26,02	33,2
<b>G100/70IE</b>	11,1	13,9	26,1	33,3
<b>G100/90IE</b>	11	13,7	23,5	30,0
<b>G100/110IE</b>	10,9	13,6	22,65	28,9

Cantidad de aire mínima en m <sup>3</sup> (n)/h / Minimum air flow rate m <sup>3</sup> (n)/h / Quantité minimale d'air, en m <sup>3</sup> (n)/h Minimale Luftmenge in e m <sup>3</sup> (n)/h / Minima quantità d'aria in e m <sup>3</sup> (n)/h / Quantidade de ar mínima em e m <sup>3</sup> (n)/h						
Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	<b>G 20</b>	<b>G 25</b>	<b>G 30</b>	<b>G 31</b>	Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	<b>G 110</b>
<b>G100/20 &amp; G100/20 IE</b>	32,56	32,59	30,98	31,24	<b>G100/20</b>	30,62
<b>G100/30 &amp; G100/30 IE</b>	44,94	44,94	42,65	42,99	<b>G100/30</b>	42,31
<b>G100/40 &amp; G100/40 IE</b>	61,05	61,02	57,95	58,46	<b>G100/40</b>	57,38
<b>G100/50 &amp; G100/50 IE</b>	76,88	76,89	72,83	73,61	<b>G100/50</b>	72,36
<b>G100/70 &amp; G100/70 IE</b>	108,82	108,84	103,42	104,23	<b>G100/70</b>	102,36
<b>G100/90 &amp; G100/90 IE</b>	139,27	139,30	132,39	133,31	<b>G100/90</b>	131,03
<b>G100/110 &amp; G100/110 IE</b>	170,84	170,83	162,17	163,31	<b>G100/110</b>	160,70

Volumen de humos en gr/s / Flue gas volume in gr/sec. / Volume de fumées, en g/sec. Rauchdurchsatz in gr/s / Volume di fumi in g/s. / Volume de fumos em gr/s.						
Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	<b>G 20</b>	<b>G 25</b>	<b>G 30</b>	<b>G 31</b>	Caldera Boiler type Chaudière Heizkessel Caldaia Caldeira	<b>G 110</b>
<b>G100/20 &amp; G100/20 IE</b>	21,14	21,28	20,16	19,79	<b>G100/20</b>	20,31
<b>G100/30 &amp; G100/30 IE</b>	29,18	29,35	27,75	27,23	<b>G100/30</b>	28,06
<b>G100/40 &amp; G100/40 IE</b>	39,63	39,85	37,70	37,03	<b>G100/40</b>	38,06
<b>G100/50 &amp; G100/50 IE</b>	49,92	50,22	47,39	46,62	<b>G100/50</b>	48,00
<b>G100/70 &amp; G100/70 IE</b>	70,66	71,08	67,28	66,02	<b>G100/70</b>	67,90
<b>G100/90 &amp; G100/90 IE</b>	90,44	90,98	86,13	84,43	<b>G100/90</b>	86,91
<b>G100/110 &amp; G100/110 IE</b>	110,93	111,57	105,50	103,44	<b>G100/110</b>	106,59

Temperatura media de los humos: 120 K sobre la temperatura ambiente.  
Average temperature of flue gases: 120 K over the ambient temperature.  
Température moyenne des fumées: 120 K ou-dessus de la température ambiante.

Mittlere Rauchttemperatur: 120 K über der Umgebungstemperatur.  
Temperatura media dei fumi: 120 K al di sopra della temperatura ambiente.  
Temperatura média dos fumos: 120 K sobre a temperatura ambiente.



## Delivery

- The G100/20-30-40-50 and G100/20-30-40-50IE boilers are delivered fully assembled in a single package.
- The G100/70-90-110 and G100/70-90-110IE boilers are delivered in four packages which contain:
  - Fully assembled boiler, burners and gas train assembly.
  - Outer casing.
  - Smoke hood.
  - Control panel
- The G100/GTA and G100IE/GTA boilers are delivered in three packages which contain:
  - Fully assembled G100 or G100 IE boiler.
  - Storage cylinder.
  - Cylinder casing and boiler support framework.

## Installation

- Observe current regulations applicable with regard to access to the boiler for future start-up operations, monitoring and servicing.
- Ensure there is a 220/230V-50 Hz single-phase earthed power point as well as a water supply and a drain near the final installation location of the boiler.
- It is advisable to install a non-thermosiphonic valve in the "heating flow" pipe to prevent the radiators from warming up when there is no demand for heating.

## Assembly

### Location

- Locate the boiler in accordance with the layout and position of the Flow, Return and Gas inlet pipes, flue duct, drain, etc.
- The boiler should be installed at least 0.5 m away from any flammable material.
- If there is a wooden, cork, or similar heat-sensitive floor, protect the supporting surface in an area of 0.5 m around the boiler with 20 mm-thick (minimum) glass fibre.
- The G100/70-90-110 and G100/70-90-110IE boilers may only be installed outdoors (protected) or in a room separate from the inhabited rooms, suitably ventilated directly to the outside air.
- For G100/GTA and G100IE/GTA boilers, ensure there is enough room at the back so that future water connections and the assembly of the cylinder casing can be performed without difficulty.

### Boiler support framework, optional electric heater and hydraulic unit (GTA version only)

- In the cylinder "Return" tapping screw in the 1" x 3/4" reducing nipple (1), the 3/4" m-f elbow (2), the check valve (3) -with the arrow pointing towards the flexible tube adaptor- and finally screw in the adaptor itself (4). Fig. 1.
- Put the cylinder cradle in its final location, with the angle irons (5) facing the viewer. Fig. 2.
- Rest the cylinder on the cradle, with its metal base facing the viewer and the prepared assembly in the lower section, properly centred and against the front supporting plate.
- Screw the 1/2" plug into the rear tapping on the left-hand side of the cylinder (viewed from its metal base) and the nipple (6) into the top tapping.
- As an option, when required, insert the electric heater element into the cylinder and screw it in the plug tapping (7). Wire it to the terminals marked on the wiring diagrams shown in the Instructions that come with the relevant control panel.
- Place the two vertical brackets (8), which are identical, such that the hole which is closest to the end of the top profile stays on the right, as viewed from its metal base.
- Place the above vertical brackets behind the angle irons (5) and fasten them by introducing the M6 x 15 bolts (9) through the angle irons

by screwing them to the brackets. At the time the brackets (8) are being screwed in, install the tie-rods (10) – one on either side. Fig. 3 and 4.

- Rest the boiler supporting base (11) on the brackets (8) and secure it with the M6 x 15 bolts (12) and nuts provided.
- Put the unpacked boiler and its support ("U" shapes) (13) on the floor so that the U-shaped profiles come into contact with the rear legs. The rear left leg will coincide with the U-shape which has a hole in the welded stop (14). Fig. 5.
- Raise the back side of the boiler and slide the support (13) under it until the U-shaped profiles come into contact with the back side of the boiler's front legs.
- Raise the boiler through the front and slide it over the U-shaped profiles until its rear legs come into contact with the welded stops.
- Fasten the rear left leg of the boiler to the drilled stop, using a nut and bolt. – Insert the rods of both handles (15) into the end holes in the U-shaped profiles of the boiler support (13) and secure them with the nuts provided. Fig. 6.
- Lift both the support (13) and the boiler through the handles (15) and rest them on the boiler supporting base (11). The front of the boiler should face in the same direction as the metal base of the cylinder, while the hex heads of the bolts (12) that fasten the supporting base (11) to the vertical brackets (8) should coincide with the holes (16) in the boiler support (13). Figs. 4 and 5.
- Disassemble the handles (15) and keep them for future use (for instance, under the cylinder).
- Fasten the support (13) to the supporting base (11) with the four nuts and bolts provided.
- Screw the adaptor (4) onto the 500 mm flexible tube union (17). Fig. 4.
- Screw the cone piece (18) on the reducing T (19). The side port should be horizontal and facing out. Fig. 7.
- Screw the nipple (20) to the elbow (21).
- Screw the elbow (21) to the side port of the reducing T(19).
- Insert a 3/4" gasket into the union adaptor on the "Return connection" pipe (22) Fig. 4 and screw it to the elbow (21) through the slotted hole in the supporting base (11).
- Place a 3/4" gasket between the 500 mm flexible tube (17) and the nut on the "Return connection" pipe (22) and join them together.
- Fix the pipe (22) to the cylinder metal base with the aid of the clamp (23) as shown in figure 4.
- Screw the reducing nut (24) into the "Flow" tapping. Fig. 7.
- Screw the nut (24) into an end of the "boiler outlet pipe" (25). The T with union should be facing the floor.
- Install the safety valve. Where appropriate.
- Place a gasket in the vertical T union and screw it to the pump. The arrow on the pump body should point to the floor and the terminal box be at the top.
- Screw the 520 mm flexible tube to the nipple (6) on the cylinder through the hole provided in the supporting base (11) and screw the union adaptor on the other end of the flexible tube to the pump, having put a gasket beforehand.

### Watertight Test

For G100/70-90-110 and G100/70-90-110IE boilers:

- Unscrew the non-return valve sensor (26) from the control panel hydrometer and screw it into the tapping in the front section. Fig. 8.
- Fill the system with water and check the hydraulic circuit for leaks.

In all boilers:

- Install the specific safety devices as shown in Fig. 9. The size of the safety conduits must conform to the dimensions given for them in the current Regulations.
- Install a drain cock in the tapping (27), or fit a plug if the drain cock is located elsewhere; then make the connection of the FLOW and RETURN circuits, i.e. tappings (28) and (29)\*

respectively. Fig. 10.

- \* The assembled boilers have a 2" x 1" cone, while G100/90-110 and G100/90-110IE are equipped with a 2" x 2" distributor.
- With GTA version boilers, connect the cylinder to the mains water supply and to the system through the screwed nipples, observing their destination as shown in Fig. 12; then in the "mains water inlet" connection before the cylinder, install the Flexbrane safety unit in accordance with the instructions that come with it. Route the discharge to the general drain.
- Fill the system\* with water and check the hydraulic circuit for leaks.
- \* With GTA version boilers, it is essential to fill the DHW circuit (storage cylinder) before the heating circuit and, when appropriate, empty the latter first.

### Final Assembly

For G100/70-90-110 and G100/70-90-110IE:

- Rest the smoke hood (30) on the boiler and secure it to the front and back sections by means of the nuts and bolts provided. Fig. 8.
- Place the insulating blanket over the boiler body so that its ends overlap at the front of the boiler.
- Fasten the bracket-casing (31) to the front section: with M8 x 10 screws through the top; with M12 nuts and washers through the lower right-hand side; and with MS nuts and washers fasten it to the spacer which has been previously screwed to the leg – through the lower left-hand side. Fig. 11.
- Fasten the side bracket (32) onto the bosses at the top of the back section by means of M8 x 20 bolts. The angles should face inwards and the slotted hole to the right. Fig. 10.
- Secure the other side bracket (33) to the holes in the back section cover using two M8 x 40 bolts. The angles should face inwards and the slotted hole to the right.
- Temporarily hang the control panel from the hooks (34) on the bracket casing (31). Fig. 11.
- Insert the thermostat and thermometer probes through the slotted hole (35) in the top left-hand side of the bracket-casing (31).
- Screw the hydrometer sensor to the non-return valve situated on the front section. – Insert the thermometer, control (2 in the G100/90-110IE) and safety limit thermostat(s) into the pocket in the back section and fasten the capillaries with the clip provided for this purpose. Fig. 12.
- Remove the control panel from the casing bracket hooks.
- Fix the casing side panels to the brackets (31), (32) and (33) using the black Allen screws and washers provided (four each).
- Rest the left-hand casing extension piece (36) on its bottom side and secure it through the top with a screw. Fig. 13.
- Hang the control panel to the front of the casing panels and secure it through the bottom with the two screws provided.

In all boilers:

- Insert the end of the flue duct down into the smokehood collar and ensure that the joint is air-tight by applying pipe jointer material, ceramic fibre gasket or putty which does not set hard.
- Connect the end of the boiler gas train to the gas supply pipe and with soapy water check that the gas train is air-tight.

### Electrical connections

- In boilers which are delivered disassembled, make the connection between the control panel and the boiler gas valve by means of the connectors situated at the bottom left hand-side of the control panel and at the end of the valve wiring.
- Wire the heating pump, the optional ambient thermostat and the mains power supply to the terminals marked on the wiring diagrams that come with the Instructions for the control panel. For boilers which are delivered fully assembled, please note that before proceeding as indicated

above, the two screws that fasten the top casing panel and this panel should be removed beforehand.

- The left-hand casing panel incorporates a cable entry and a cable tie for securing the wiring coming from the various devices external to the boiler.

## Top and Front Casing Panels

- For boilers which are delivered disassembled:
- Support the top cover on the side profiles, slightly slide it over them until the three control panel locating lugs engage the front slots in the cover plate; then secure it through the rear with the two self-tapping screws.
- Fit the front cover (37) so that the limit stops (38) at the bottom of the side panels engage in the slots of the cover and rest it on the lower hooks (39) so that they coincide with the notches in the cover. It can be fastened to the sides through the top by means of the snap-on locks provided for this purpose. Fig. 14.

## Storage cylinder casing (GTA version only)




- Suspend the front cover from the boiler supporting base (11).
- Bolt together the rear half-covers and hang them from the boiler supporting base.
- Fit the side panels (with the bevel at the front) introducing in its slots the locating lugs in the front cover and rear half-covers and fasten them to the vertical brackets (8) using the black screws and washers provided. Figure on the front cover.
- Rest the top covers. The front top one against the front panel and the rear panel so that the folded rim covers the rim on the rear half-covers.

## Operation

### Operations prior to the first lighting

- Check that the installation is full of water and move the fixed pointer on the combined temp./altitude gauge to the position which corresponds to the system static head.
- Bleed the air in the system and radiators.
- In installations with a sealed expansion vessel, top up with water, if necessary, until the adjustable pointer on the combined temp./altitude gauge is slightly above the fixed one. With an open expansion vessel, top up until the adjustable pointer levels with the fixed one.
- Bleed the gas train by loosening the pressure test point screw on the gas valve.
- With GTA version boilers also ensure that the cold water inlet cock on the Flexbrane safety unit is open; likewise, open a tap to bleed the DHW circuit.
- Open the boiler gas service cock.



### First lighting of G100 and G100/GTA boilers (dual service with no electric heater). Control panels CC-138, CC-139 and CC-143

- 1 - Turn ON the main On/off switch (3) and in the GTA version move the service selector switch (13) to the position  marked and check if the heating pump is running\*. Change the position of the above-mentioned switches to isolate all power supply to the boiler. Refer to the Instructions for the Control Panels.
- 2 - Press the knob or lever (15) right down for 15 seconds. Figs. 15, 16 and 17.
- 3 - Press the piezoelectric button (16).
- 4 - Hold the knob (15) down for about 20 seconds. If the pilot flame snuffs out, repeat the lighting process.
- 5 - Set the control thermostat knob  (5) to the operating temperature wanted. If an ambient thermostat is installed, set it to the desired comfort temperature.
- 6 - Turn ON the main On/off switch (3) and in the GTA version move the service selector switch (13) to the position marked . Check if the burners light up and if the pump is running\*. Also check if the thermostats

operate correctly.

- 7 - Bleed the air in the system and ensure that the radiators reach the correct working temperature.

With GTA version boilers, also:

- 8 - Move the service selector switch (13) to the position marked  and check whether the DHW pump is running\*.
- 9 - Set the control thermostat knob  (5) to between 30°C and 55°C.
- 10 - Bleed the air in the DHW circuit and ensure that it reaches the preset temperature.


### Note:

Should the pilot flame accidentally snuff out, wait one minute before lighting up again.



### Stop:

- With G100/20 to 50 and G100/20 to 40 GTA boilers for use with natural/propane gas, turn (15) in the direction of the arrow. With G100/20-30, G100/20-30 GTA boilers for use with town gas and G100/70 to 110 boilers for natural/propane gas, press (17).
- Turn ON the On/off switch (3). With G100/40 to 110 and G100/40 GTA boilers for use with town gas, close the gas inlet cock, otherwise the pilot flame will remain alight.
- Turn OFF the On/off switch (3) in order to isolate all power supply to the boiler, while keeping the pilot flame alight.



### First lighting of G100/GTA boilers (DHW only with no electric heater). Control panel CC-143.

- Turn ON the main On/off switch (3) and move the service selector switch (13) to the position marked . Check if the DHW pump is running\* and reverse the position of the above-mentioned switches to isolate all power supply to the boiler. Refer to the Instructions for the Control Panel.
- Press the knob or lever (15) right down for 10 seconds and follow the lighting up operations described in steps 3, 4, 8, 9 and 10, or to stop it, as explained in the previous paragraphs. Figs. 15, 16 and 17.

### First lighting of G100/GTA boilers (DHW only with electric heater). Control panel CC-143.

- Turn ON the main On/off switch (3) and move the service selector switch (13) to the position marked . Refer to the Instructions that come with the Control Panel.
- Set the control thermostat knob  (5) to between 30°C and 55°C.
- Bleed the air in the DHW circuit and ensure that it reaches the pre-set temperature.

### First lighting of G100IE and G100IE/GTA boilers (dual service with no electric heater). Control Panels CC-140, CC-141, CC-142 and CC-144.

- Turn ON the main On/off switch (3) and in the GTA version move the service selector switch (13) to the position marked . The heating pump is running\* and the burner features fully automatic spark ignition, with the control thermostat  (5) on demand. Please refer to the Instructions that come with the Control Panels.
- Check the mentioned controls and thermostats for correct operation.
- Once the limit thermostat has been triggered, remove the protective cover (9) and reset it by pressing the button inside.
- If it goes into a "lock-out" condition due to pilot flame failure, the red LED (7) will light up. Press the reset button (8).
- If an ambient thermostat is installed, set it to the desired comfort temperature.
- Carry out step 7 and with G100IE/GTA boilers also follow steps 8, 9 and 10 (see section under "First lighting of G100 and G100/GTA boilers - dual service with no electric heater").

### Stop:

- Turn OFF the On/off switch (3).



### Firs lighting of G100IE and G100IE/GTA boilers with time clock (dual service with no electric heater). Control Panels CC-140R, CC-141R, CC-142R and CC-144R

- Carry out the operations described for the "First lighting of G100IE and G100IE/GTA boilers (with no electric heater)" and also establish the desired programme on the clock (11) in accordance with the Instructions that are supplied for this purpose.



### First lighting of G100IE and G100IE/GTA boilers with electronic control centre (dual service with no electric heater). Control Panels CC-140C, CC-141C and CC-144C

- Carry out the operations described for the "First lighting of G100IE and G100IE/GTA boilers (with no electric heater)", bearing in mind that both the burner and the heating pump are running\* in accordance with the outside temperature and the settings established in the Control Centre (12). Please refer to the relevant Instructions supplied.

### First lighting of G100IE/GTA boilers (DHW only with no electric heater). Control Panels CC-144, CC-144R and CC-144C

- Turn ON the main On/off switch (3) and move the service selector switch (13) to the position marked . Refer to the Instructions that come with the Control Panel. The DHW pump is running\* and the burner features fully automatic spark ignition, with the control thermostat  (5) on demand.
- Establish the desired programme on the time clock (11) or settings on the Control Centre (12). Please refer to the relevant Instructions supplied.
- Check the mentioned controls for correct operation, bleed the air in the DHW circuit and ensure that it reaches the pre-set temperature.

### First lighting of G100IE/GTA boilers (DHW only with electric heater). Control Panels CC-144, CC-144R and CC-144C

- Turn ON the main On/off switch (3) and move the service selector switch (13) to the position marked . Refer to the Instructions that come with the Control Panel.
- Set the control thermostat knob  (5) to between 30°C and 55°C.
- Establish the desired programme on the time clock (11) or settings on the Control Centre (12). Please refer to the relevant Instructions supplied.
- Bleed the air in the DHW circuit and ensure that it reaches the pre-set temperature.

- \* If necessary, unlock the pump as follows: a) unscrew the turn and bleed plug and b) press a screwdriver against the slot on the shaft- end and turn it.

### Changing the type of gas (except Belgium)

- I must always be carried out by a qualified professional.
  - From town gas to natural gas (G100 only).
  - From natural gas to propane/butane gas.
  - From propane/butane gas to natural gas.
- Please note that any adjusted components must be sealed.

### G100 boilers:

- Remove the three injectors (1) from the burner holder manifold using a 22AF spanner and replace them with the appropriate ones for the new gas. Fig. 16.
- Loosen the fixing nuts (2) and (3) on the gas supply pipe to the pilot flame.
- From inside the pilot flame assembly (4) remove the compression ring (5) and the pilot injector (6). Replace the pilot injector with the one suitable for the new gas. Fig. 18.

- For natural gas and LPG, remove the screws that hold the elbow (7) and fit in the suitable diaphragm.
- Reat all the components in reverse order.
- Please note that in boilers which have been converted from town gas to natural gas, the valve pressure governor must be sealed. Turn the screw clockwise to increase pressure and vice-versa.
- Stick on the label corresponding to the new gas on the burner holder manifold.

### G100IE boilers

- Remove the three injectors (1) from the burner holder manifold using a 22AF spanner and replace them with the appropriate ones for the new gas. Fig. 19.
- Remove the screws that hold the elbow (7) and replace the diaphragm with a suitable one.
- Refit all the components in reverse order.
- Stick on the label corresponding to the new gas on the burner holder manifold.

### Important Recommendations

- If the boiler is located in a frost-risk area, some anti-freeze product should be added to the water in proportion to the minimum outside temperature of the place.
- We recommend that the properties of the water in the system be:  
pH: 7.5 ÷ 8.5  
Hardness: 8 ÷ 12 French degrees\*  
(\* One French degree is equivalent to 1 gram of calcium carbonate per 100 litres of water.
- Should it become absolutely necessary to add water to the system, wait until the boiler is completely cold before doing so.
- Flue limit thermostat for the products of combustion (G100/20 to 50, G100/GTA, G100/20 to 50IE and G100IE/GTA boilers).

The boiler incorporates a safety system which detects an inadequate evacuation of flue gases. It includes a thermostat which is triggered when overheated flue gases go through the draught diverter, thus causing the gas valve to shut off. Before starting up the boiler again, remember to reset the corresponding thermostat manually.

This device should never be out of service.

Please note that only original parts from the manufacturer should be used in replacement of faulty components.

Should the boiler "lock out" repeatedly, the evacuation fault should be rectified accordingly and then a test run carried out.

- Limit the noise level of the system.

Should the risk of nuisance noise level exist, the following steps could be adopted:

- Insulate the pump.
- Insulate the boiler, if necessary.
- Lay the pipes with vibration isolation stays/ mounts.
- Re-size the pipes.
- Limit the number of elbows and non-insulated built-in pipes.

### Note:

Characteristics and performance qualities subject to change without notice.

### CE Marking

The G100, G100IE, G100/GTA and G100IE/GTA boilers comply with the European Directives 89/336/EEC on Electromagnetic Compatibility, 90/396/EEC on Gas Appliances, 73/23/EEC on Low Voltage and 92/42/EEC on Efficiency.