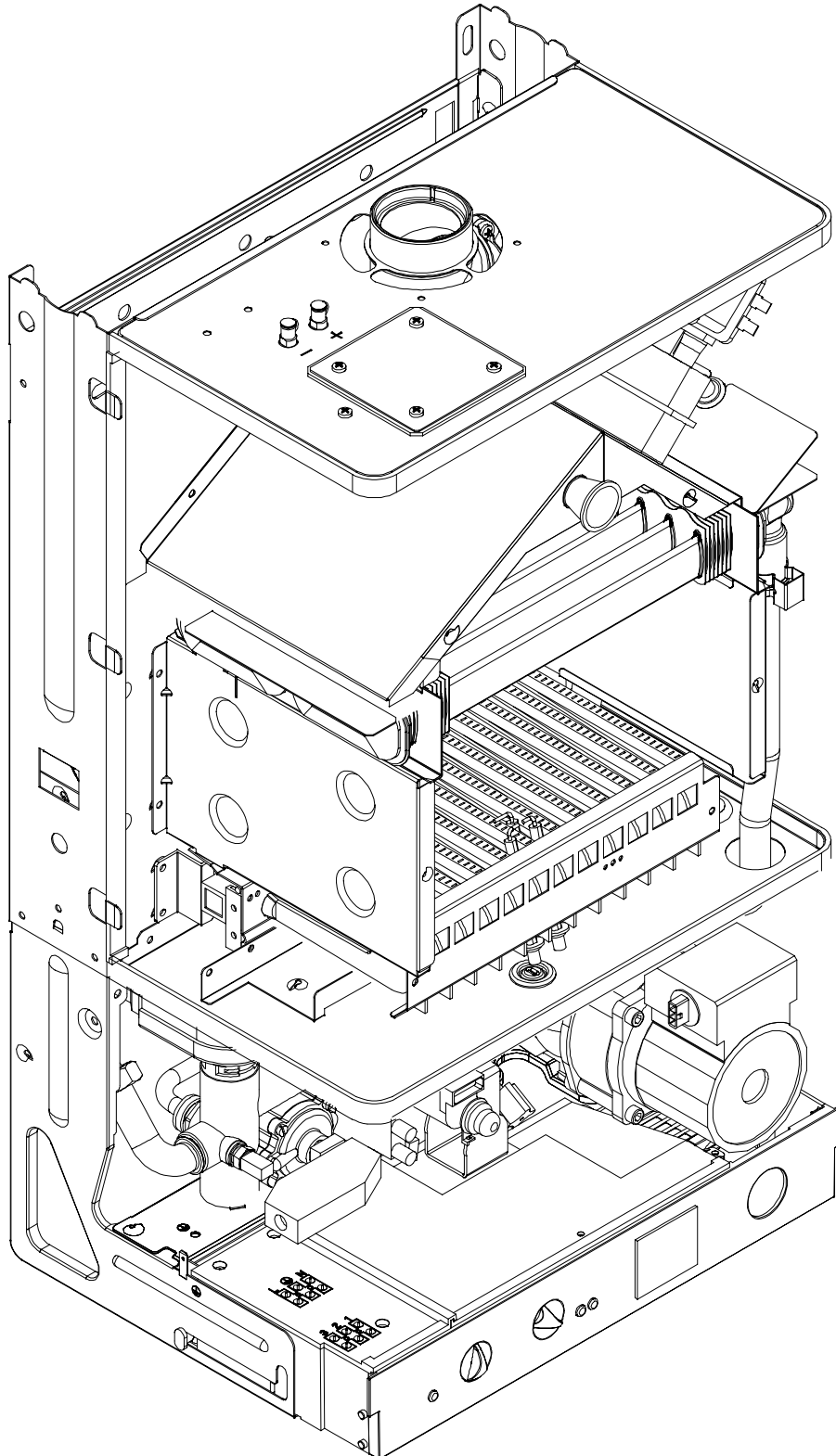


M90.24S
M90.28S

47-970-13
47-970-14

Overall view

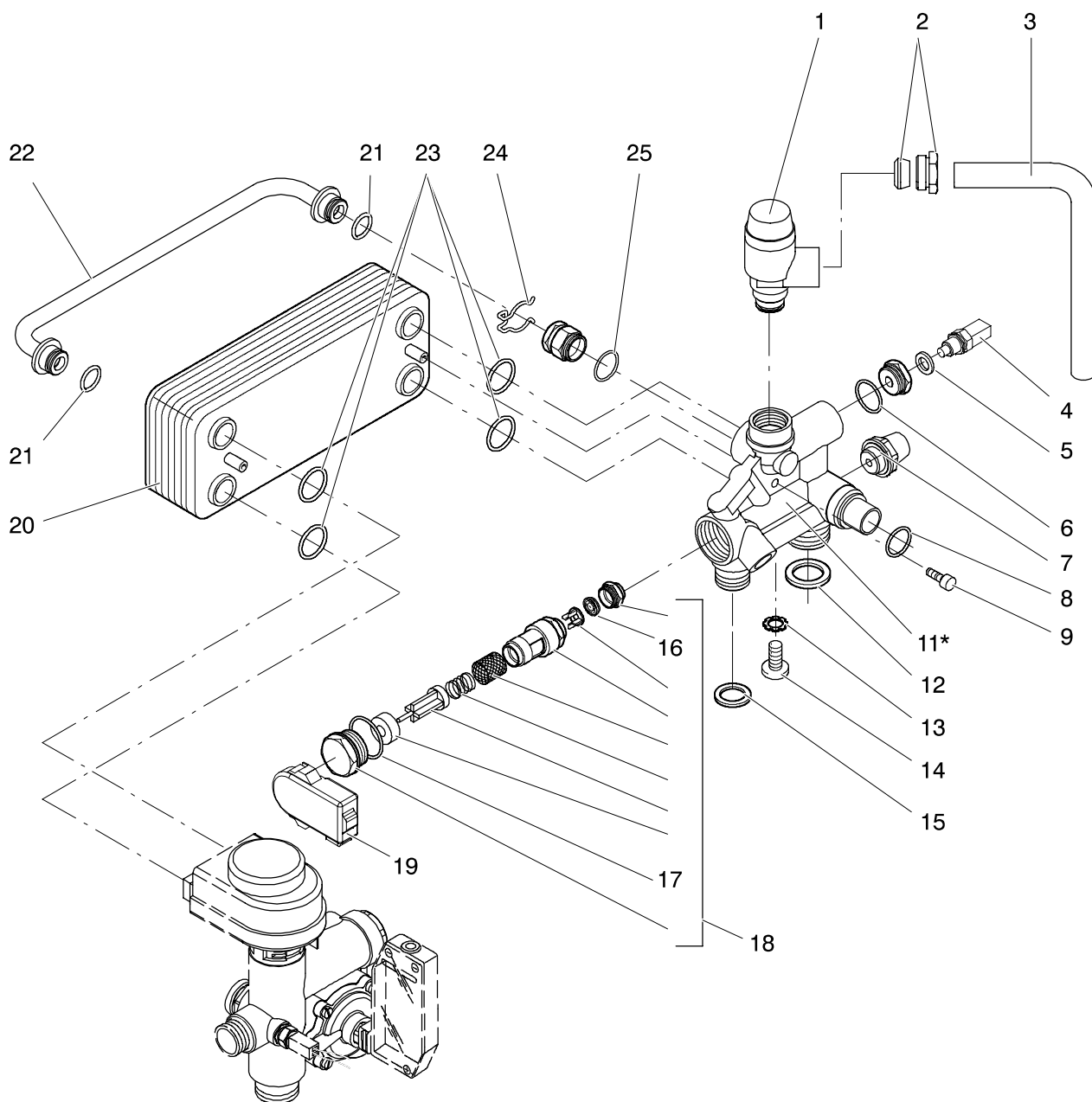
DATA BADGE: inner side of left case panel



M90.24S
M90.28S

47-970-13
47-970-14

C.h. return group and d.h.w. heat exchanger

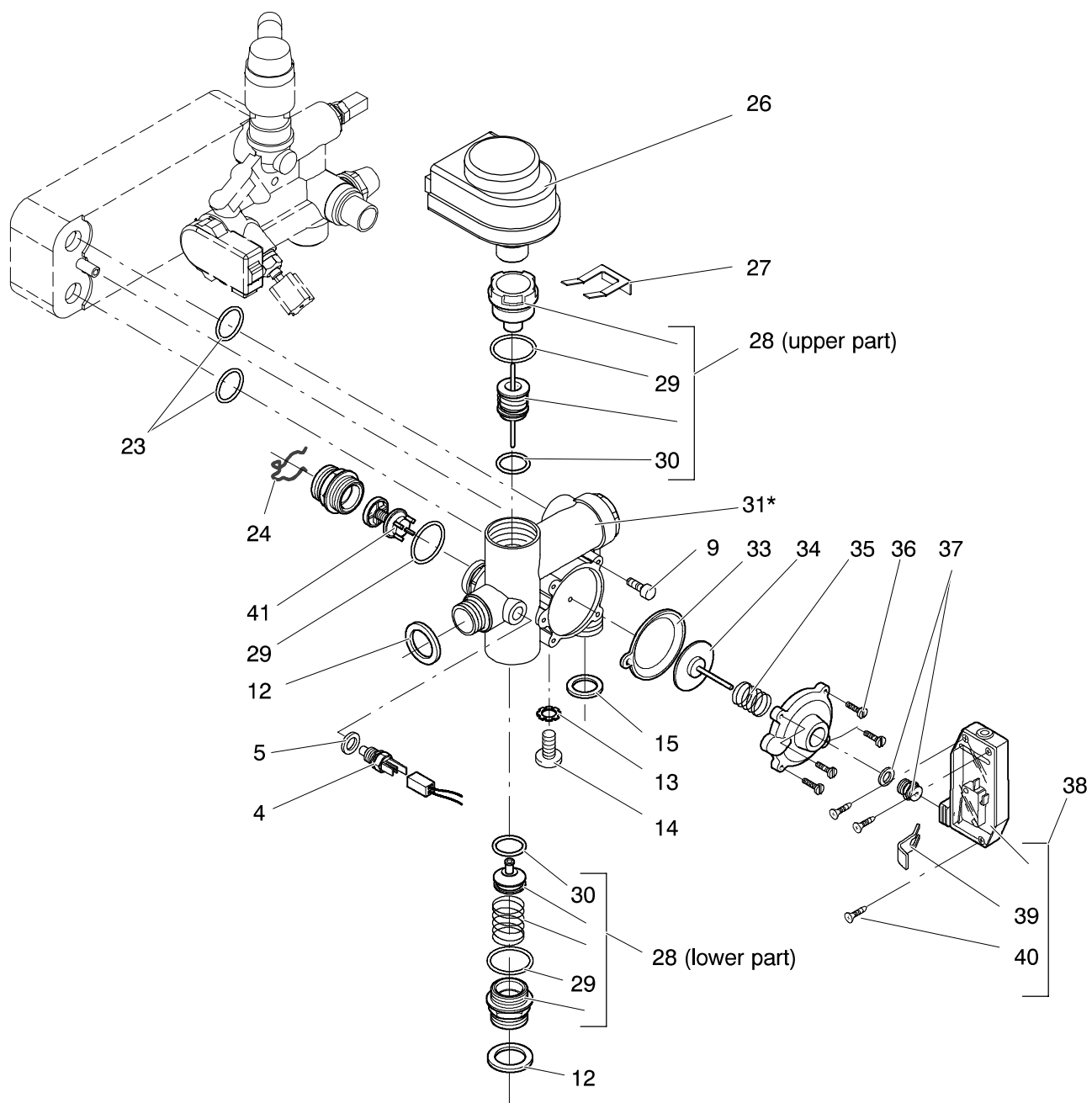


* Includes items 6, 18, 25

M90.24S
M90.28S

47-970-13
47-970-14

C.h. flow group and three way diverter valve

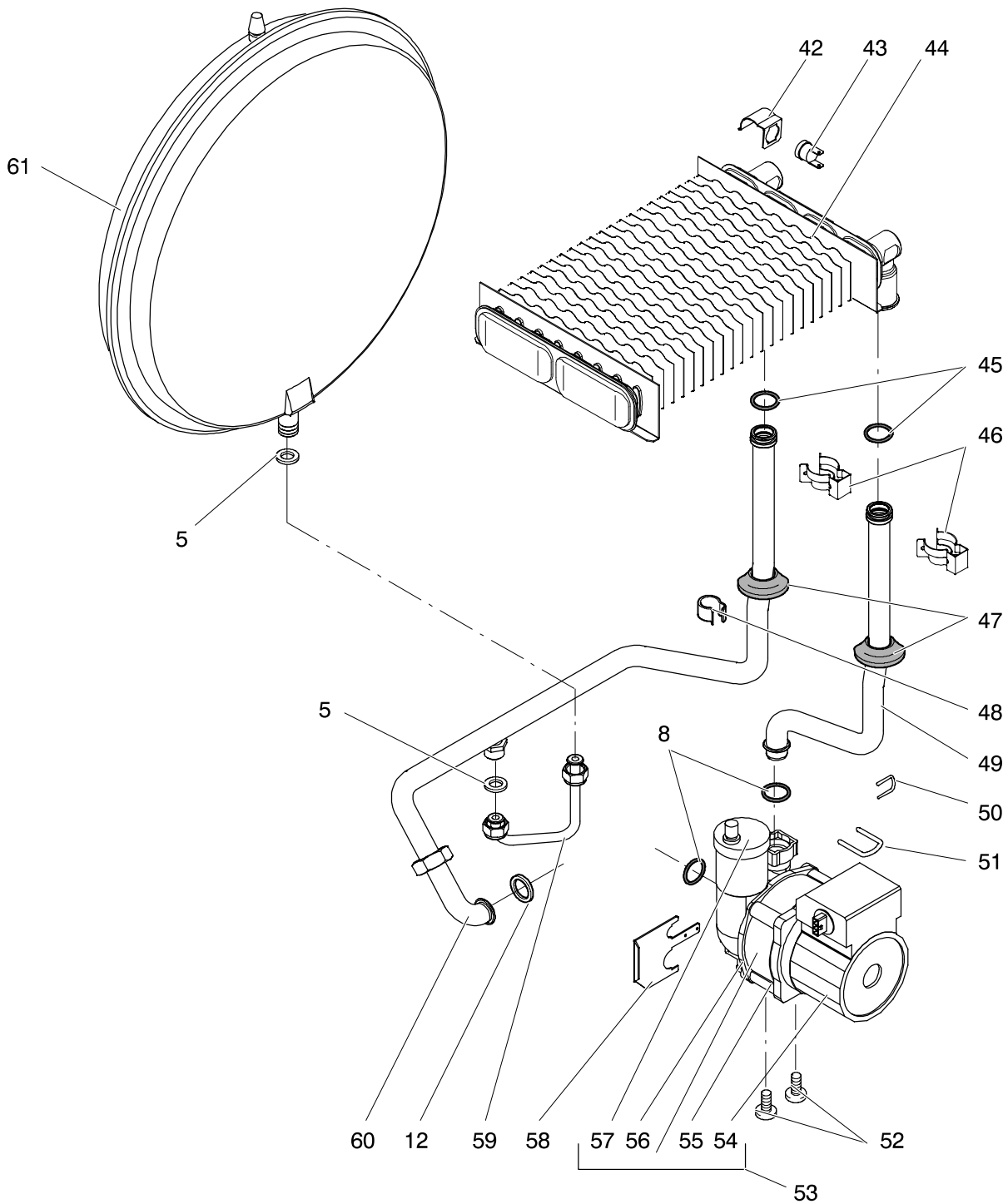


* Includes items 28, 33, 34, 35, 36, 37, 29, 41

M90.24S
M90.28S

47-970-13
47-970-14

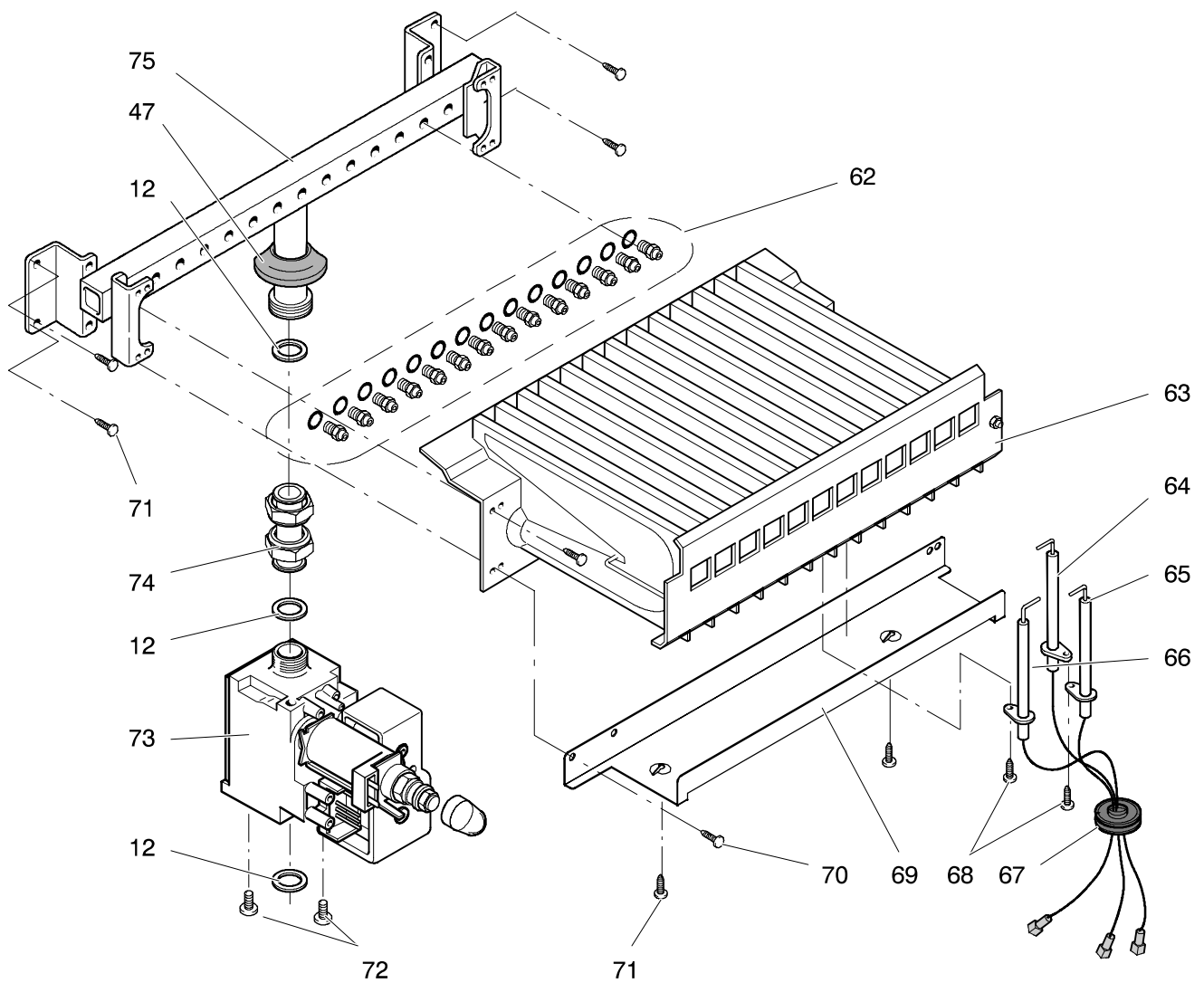
Pump and main circuit assembly



M90.24S
M90.28S

47-970-13
47-970-14

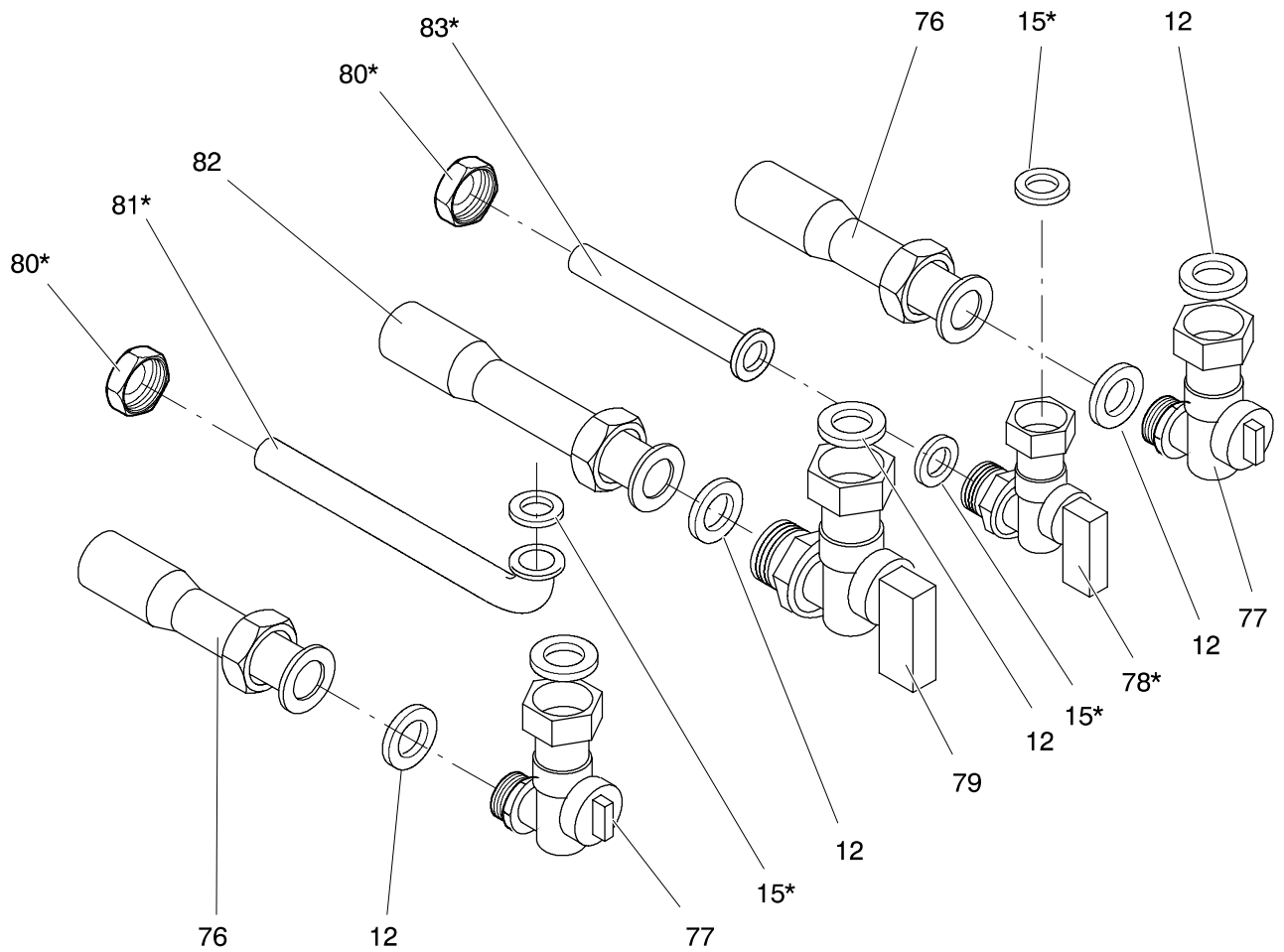
Gas assembly



M90.24S
M90.28S

47-970-13
47-970-14

Valves and connection pipes

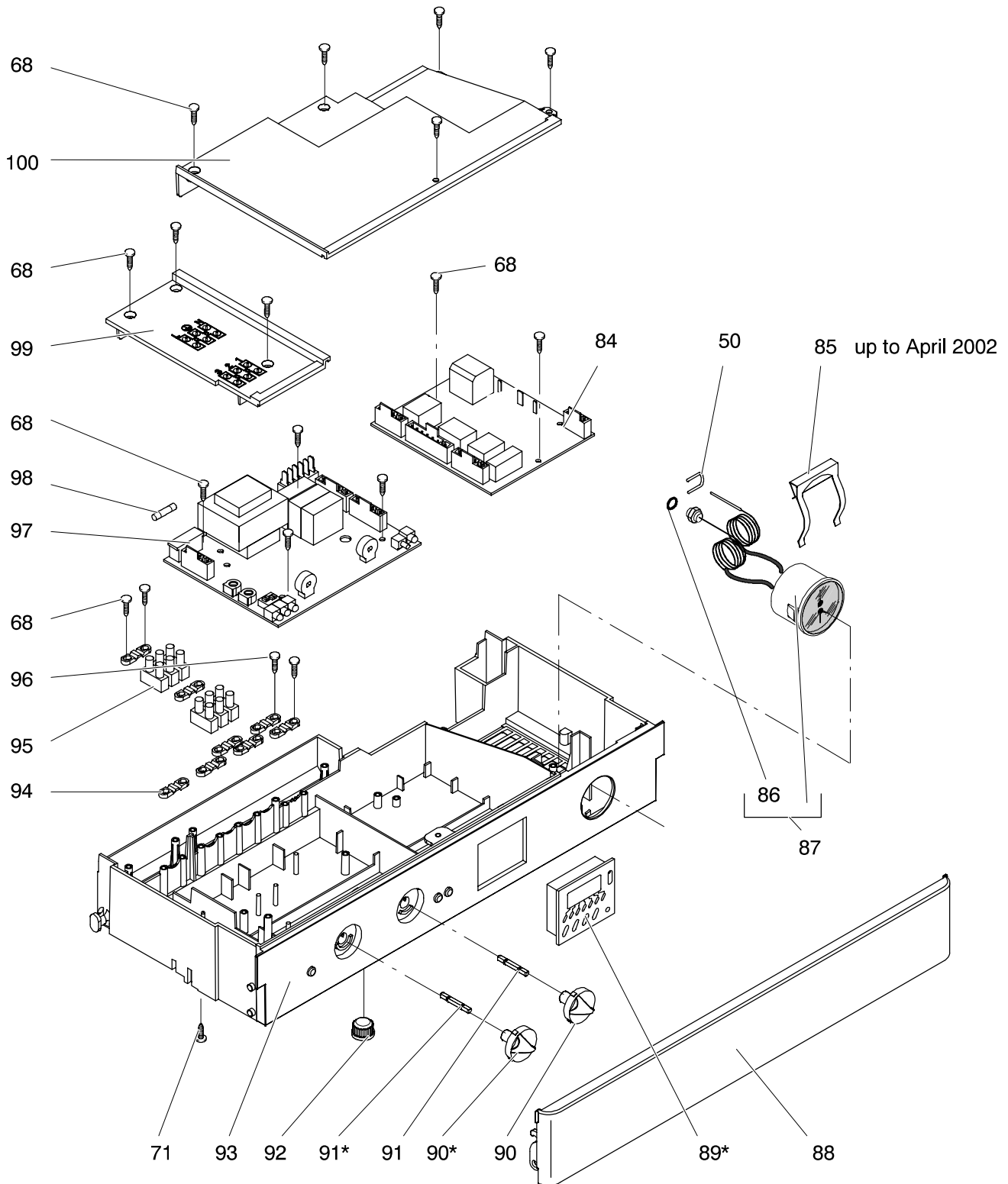


* Not for models M90.24SR, M90.28SR

M90.24S
M90.28S

47-970-13
47-970-14

Control panel and ignition device

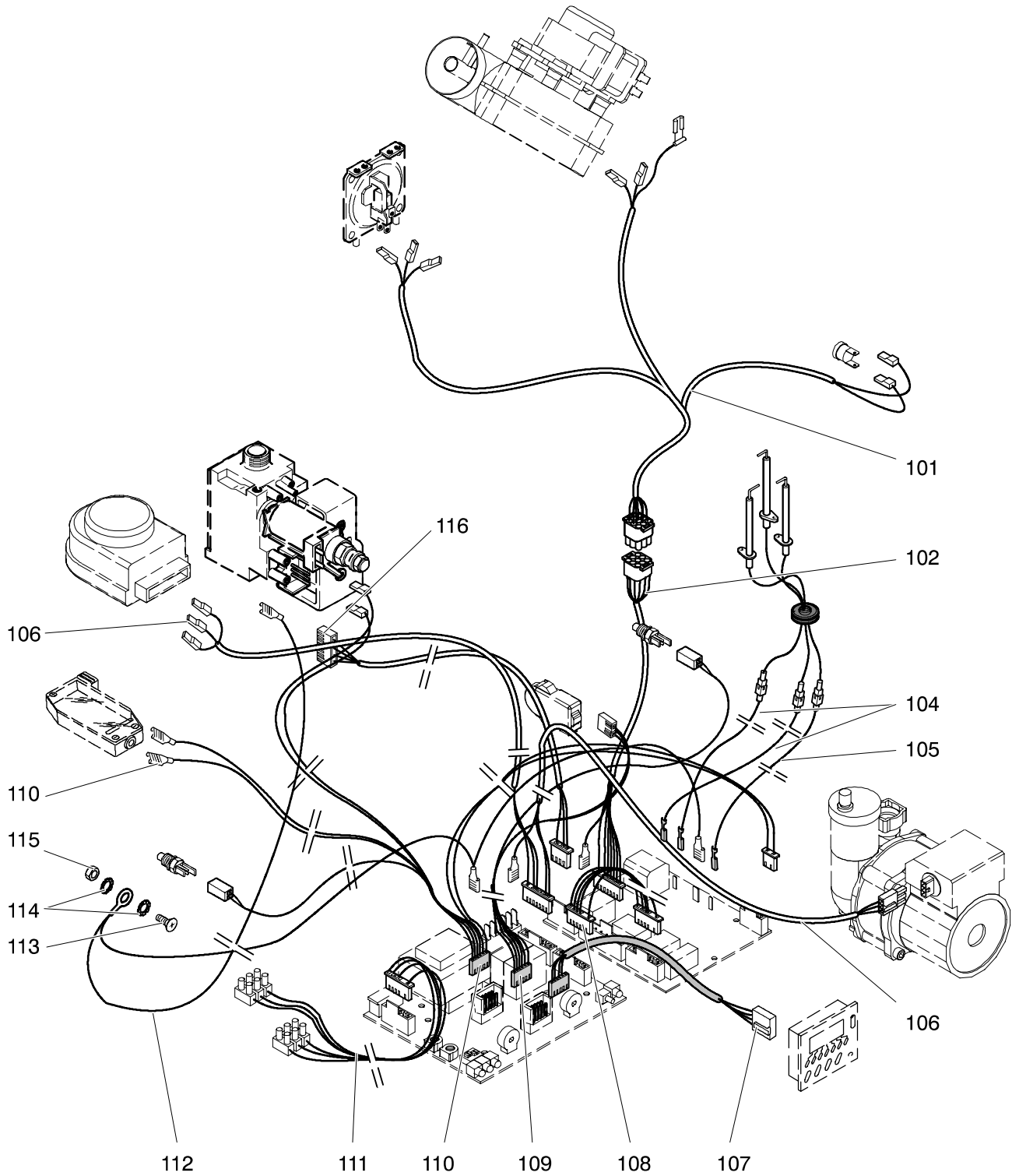


* Not for models M90.24SR, M90.28SR

M90.24S
M90.28S

47-970-13
47-970-14

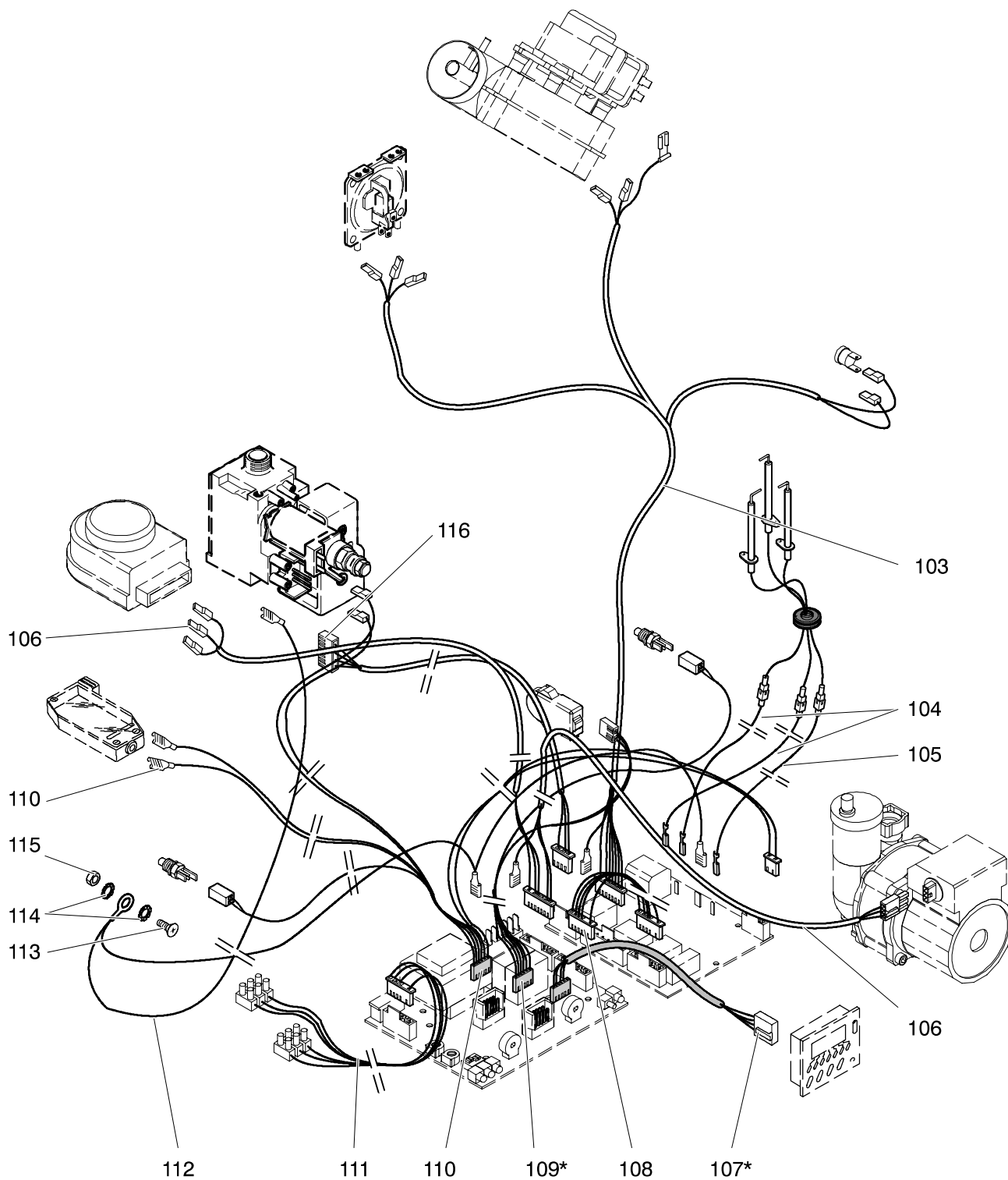
Wiring
(up to serial no. N245030701)



M90.24S
M90.28S

47-970-13
47-970-14

Wiring
(from serial no. N245040701)

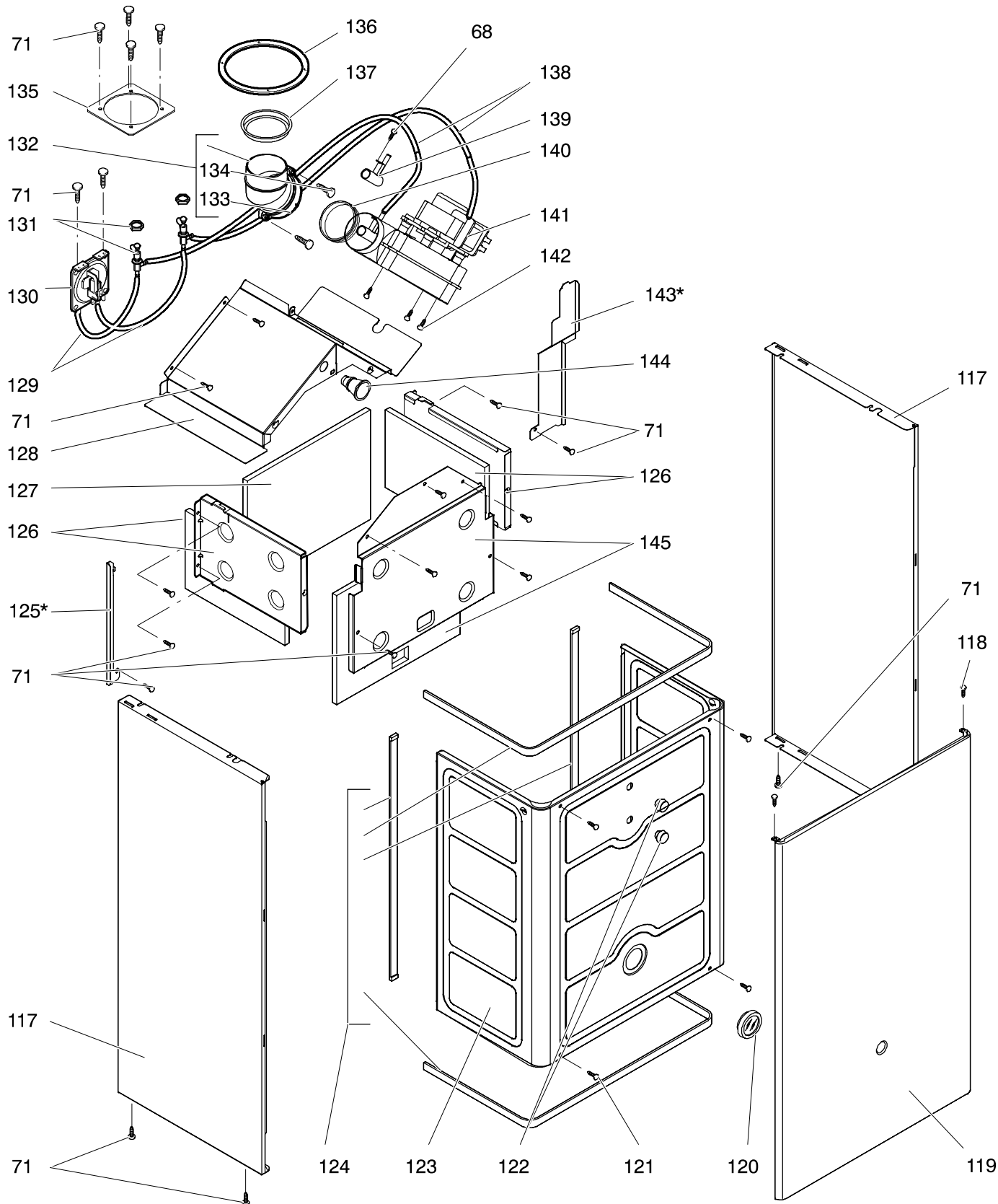


* Not for models M90.24SR, M90.28SR

M90.24S
M90.28S

47-970-13
47-970-14

Fan, combustion chamber and case panels



* For models M90.28S, M90.28SRonly

Date _____
 Sheet 1 of 7
 Manufacturer Biasi SpA – Italy
 Appliance(s) M90.24S M90.28S,
 GC Appliance Number(s) 47–970–13 47–970–14,
 Contract Name _____
 Telephone Number _____

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
		Position of data badge: inner side of left case panel								
	E83–012	Instructions booklets set		BI1911 500			M			
1	E83–013	Safety valve 3 bar	1	BI1131 100			B	Watts Interme – Caldaro Italy	3 bar	
								Orkli (alternative)	3 bar	
2	E83–014	Safety valve connection	1	BI1001 127			M			
3	E83–015	Safety valve connection pipe	1	BI1131 102			M			
4	164–026	Temperature probe (special)	2	BI1001 117			M			
5	164–025	Flat gasket 3/8"	4	BI1001 109			M			
6	E00–679	O–ring gasket 1,78x15,6	1	BI1001 131			M			
7	E00–669	Drainage valve	1	BI1011 104			B	Watts Interme – Caldaro Italy	RSR8 1/4"	
8	169–025	O–ring gasket 17,04x3,53	3	KI1043 114			M			
9	E00–671	Screw M5x16 – Hexagon socket cap	2	BI1001 125			F			
11	E83–016	Return group kit	1	BI1131 501			M			
12	169–033	Flat gasket 3/4"	9	BI1001 108			M			
13	E83–017	Toothed lock washer external 6,4 mm	2	BI1001 124			F			
14	E00–670	Screw M6x8 – BZP RPH	2	BI1001 123			F			
15	169–141	Gasket 1/2"	3	BI1001 106			M			
16	E83–018	Flow limiter 10 Litres/min	1	BI1091 102			B	Acqua Flow		
16 A	E83–019	Flow limiter 12 Litres/min	1	BI1091 103			B	Acqua Flow		
17	E00–678	O–ring gasket 2,62x20,63	1	BI1001 130			M			
18	E83–081	Magnetic flow switch and filter kit	1	BI1091 502			M			
19	E83–082	D.h.w. flow switch	1	BI1091 104			M			
20	E01–204	Exchanger DHW – M90.24S	1	BI1001 101			M			
20 A	E01–205	Exchanger DHW – M90.28S	1	BI1001 102			M			
21	E00–668	O–ring gasket 1,78x12,42 by–pass pipe	2	BI1001 115			M			

Sheet 2 of 7Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
22	F83-083	By-pass pipe	1	BI1131 101			M			
23	169-060	O-ring gasket 18,64x3,53	4	KI1043 144			M			
24	E00-672	By-pass pipe fixing fork	2	BI1001 111			M			
25	F00-676	O-ring gasket 1,78x14	1	BI1001 129			M			
26	F83-086	Diverter valve actuator	1	BI1101 102			B	Elbi International SpA Collegno italy	1650/6/0	
27	F83-090	Diverter valve actuator fixing spring	1	BI1101 101			M			
28	F83-091	Diverter valve kit	1	BI1141 501			M			
29	E00-680	O-ring gasket 2,62x23,47	3	BI1011 107			M			
30	F83-092	O-ring gasket 2,7x13,6	2	BI1011 117			M			
31	F83-095	Flow group kit	1	BI1141 500			M			
33	E00-688	Central heating pressure switch membrane	1	BI1011 103			M			
34	E00-687	Central heating pressure switch disk	1	BI1011 111			M			
35	F00-686	Central heating pressure switch spring	1	BI1011 110			M			
36	E00-685	Screw M4x12 mm Stainless steel SCH	4	BI1011 109			F			
37	E00-681	Microswitch guide bush	1	BI1011 502			M			
38	E00-684	Microswitch kit	1	BI1011 505			M			
39	F00-683	Microswitch box fixing clip	1	BI1011 105			M			
40	E00-682	Screw 2,9x13 mm AB self tapping BZP - RCH	3	BI1011 108			F			
41	E00-689	By-pass kit	1	BI1011 501			M			
42	F83-099	Overheat thermostat fixing clip	1	BI1172 102			M			
43	F83-101	Overheat thermostat	1	BI1172 105			B	Elth	261 105°C	
44	F83-103	Main exchanger M90.24S, M90.24SR	1	BI1172 100			M			
44 A	F83-106	Main exchanger M90.28S, M90.28SR	1	BI1172 106			M			
45	169-038	O-ring gasket 17,13x2,62	2	KI1001 105			M			
46	F83-108	Main exchanger connection clip	2	BI1172 101			M			

Sheet 3 of 7Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
47	169-104	Grommet	3	BI1002 113			M			
48	169-045	Probe holder	1	BI1105 108			M			
49	E83-109	Main exchanger inlet pipe	1	BI1172 108			M			
50	169-040	Fork	1	KI1042 115			M			
51	169-039	Fork	1	KI1042 120			M			
52	402-325	Screw M6x10 - BZF RPH	2	BI1172 115			F			
53	E83-111	Pump (complete)	1	BI1172 104			M			
54	E83-113	Pump (motor)	1	BI1172 114			B	Wib	NFHUL 15/5	
55	E83-114	Pump gasket (front)	1	BI1172 113			M			
56	E83-116	Pump gasket (rear)	1	BI1172 112			M			
57	E83-117	Automatic air purger valve	1	BI1172 111			M			
58	E83-118	Pump connection fork	1	BI1172 110			M			
59	F83-119	Expansion vessel connection pipe	1	BI1172 109			M			
60	E83-120	Main exchanger outlet pipe	1	BI1172 107			M			
61	E83-121	Expansion vessel	1	BI1172 103			B	CIMM Srl - Castello di Godego Italy	CP387 6L	
62	169-069	Injectors with gaskets 130 - NG	15	KI1064 505			B	Folidoro		
62 A	169-070	Injectors with gaskets 77 - LPG	15	KI1064 506			B	Folidoro		
63	173-148	Burner M90.24S , M90.24SR	1	KI1004 102			B	Folidoro		
63 A	173-149	Burner M90.28S, M90.28SR	1	KI1004 147			B	Folidoro		
64	E83-112	Detection electrode	1	BI1123 102			M			
65	E83-126	Ignition electrode - right	1	BI1123 103			M			
66	E83-127	Ignition electrode - left	1	BI1123 101			M			
67	169-125	Grommet	1	BI1002 115			M			
68	409-736	Tapping screw 3,5x9,5 recessed pan head	24	BI1013 115			F			
69	E83-128	Air deflector	1	BI1183 102			M			

Sheet 4 of 7

Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
70	409-531	Taptite screw M4x8 Recessed pan head Hardened steel	4	BI1013 111			F			
		Bright Zinc Plated BS3382 Clear passivated and lanolin								
		Dipped								
71	409-722	Tapping Screw ISO No8 B 4,2x9,5 Recessed Pan Head	32	BI1013 110			F			
		Hardened Steel BS4174 Bright Zinc plate BS1706 Clear								
		Passivated								
72	402-124	Machine Screw M4x8 mm Recessed pan head Mild steel	2	BI1013 114			F			
		BS4183 Bright zinc plate BS3382 Clear passiv.								
73	E83-129	Gas valve	1	BI1093 104			B	Sit	845 Sigma	
74	E83-130	Gas pipe to the manifold	1	BI1183 101			M			
75	E83-131	Gas manifold with injectors NG M90.24S, M90.24SR	1	BI1183 103			B	Folidoro		
75 A	E83-132	Gas manifold with injectors LPG M90.24S, M90.24SR	1	BI1183 104			B	Folidoro		
75 B	E83-133	Gas manifold with injectors NG M90.28S, M90.28SR	1	BI1183 105			B	Folidoro		
75 C	E83-134	Gas manifold with injectors LPG M90.28S, M90.28SR	1	BI1183 106			B	Folidoro		
76	E83-135	C.h. connection pipe	2	BI1084 110			M			
77	E83-136	Tap 3/4" - c.h.	2	BI1084 105			B			
78	E83-137	Tap 1/2" - d.h.w.	1	BI1084 101			B			
79	E83-138	Tap 3/4" - gas	1	BI1084 100			B			
80	E01-226	Nut 1/2"	2	BI1004 101			M			
81	E83-139	Pipe 15 mm dia (bent) d.h.w.	1	BI1084 109			M			
82	E83-140	Pipe 22 mm dia gas	1	BI1084 111			M			
83	E83-141	Pipe 15 mm dia (straight) d.h.w.	1	BI1084 107			M			
84	E83-142	Full sequence control device	1	BI1305 101			B	Bertelli & Partners	FM30	
85	E83-143	Temperature-pressure gauge spring up to April 2002	1	BI1475 107			M			
86	E83-144	O-ring gasket 1,78 x 6,75	1	BI1475 119			M			

Sheet 5 of 7Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
87	E83-145	Temperature-pressure gauge	1	BI1475 108			M			
88	E83-146	Cover panel	1	BI1475 106			M			
89	E83-147	Time switch	1	BI1475 118			B	Flash	Monotron 200	
90	E83-148	Knob	2	BI1475 102			M			
91	E89-149	Shaft	2	BI1475 105			M			
92	E83-150	Control panel plug	1	BI1475 110			M			
93	E83-151	Control panel box	1	BI1475 117			M			
94	E83-152	Cable holder	8	KI1066 102			B	Fastpoint S.r.l.	1207.BB01 XS	
95	E83-153	Terminal block	2	BI1475 109			B	Elettrogibi	FA27	
								Odoardo Korner (alternative)	OK-433-FV	
96	409-727	Screw 3,5x16 mm self tap RPH	4	BI1165 101			F			
97	E83-154	Electronic control p.c.b.	1	BI1475 116			M			
98	169-083	Fuse 1.6A	1	BI1005 105			B			
99	E83-155	Service panel cover	1	BI1475 111			M			
100	E83-156	Control panel cover	1	BI1475 112			M			
101	E83-157	Fan cable - upper section (up to serial no. N245030701)	1	BI1485 100			M			
102	E83-158	Fan cable - lower section (up to serial no. N245030701)	1	BI1485 110			M			
103	E83-159	Fan cable (from serial no. N245040701)	1	BI1485 112			M			
104	E83-160	Ignition electrode cable	2	BI1485 101			M			
105	E83-161	Flame detection electrode cable	1	BI1485 102			M			
106	E83-162	Pump-diverter valve cable	1	BI1485 103			M			
107	E83-163	Time switch cable	1	BI1485 111			M			
108	E83-164	Electronic control p.c.b.-ignition device connection cable	1	BI1485 104			M			
109	E83-165	D.h.w. flow switch and temp. probe cable	1	BI1485 105			M			
110	E83-166	C.h. flow switch, temp. probe cable and modulator cable	1	BI1485 106			M			

Sheet 6 of 7

Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
111	E83-168	Power supply and external control cable	1	BI1485 107			M			
112	E83-169	Earth wiring	1	BI1485 108			M			
113	402-225	Machine Screw M5x10 Recessed Pan Head Mild steel		BI1035 109			F			
		BS4183 Bright zinc plate BS3382 Clear Passivated								
114	164-133	Toothed lock washer external 5,3x10 mm stainless	2	BI1035 110			F			
115	404-609	Full nut M5 Hexagon Steel grade 8 BS3692 Bright zinc plate BS3382 clear passivated	1	BI1035 111			F			
116	E83-170	Gas valve cable	1	BI1485 109			M			
117	E83-171	Side case panel	2	BI1326 105			M			
118	409-702	Screw 4,2x13 mm AB self tapping RPH BZP	2	BI1336 115			F			
119	E83-172	Front case panel	1	BI1326 104			M			
120	E83-173	Window (glass + rubber frame)	1	BI1206 118			M			
121	409-747	Screw 4,8x13 mm AB self tapping RPH BZP	4	BI1336 114			F			
122	E83-174	Sampling point plug	2	BI1336 110			M			
123	E83-175	Sealed chamber lid	1	BI1336 100			M			
124	E83-176	Sealed chamber gaskets kit	1	BI1336 500			M			
125	E83-177	Air deflector left M90.28S	1	BI1336 112			M			
126	E83-178	Combustion chamber side panel	2	BI1326 100			M			
127	E83-180	Combustion chamber rear panel M90.24S, M90.24SR	1	BI1326 107			M			
127 A	E83-181	Combustion chamber rear panel M90.28S, M90.28SR	1	BI1326 108			M			
128	E83-182	Flue hood M90.24S, M90.24SR	1	BI1336 101			M			
128 A	E83-183	Flue hood M90.28S, M90.28SR	1	BI1336 102			M			
129	E01-187	Flue pressure switch tube	2	BI1016 107			M			
130	E05-422	Air pressure switch M90.24S, M90.24SR	1	BI1036 102			B	Yamatake-Honeywell	C6065 1,4 mbar	
130 A	169-127	Air pressure switch M90.28S up to serial no. N276860901	1	KI1267 103			B	Yamatake-Honeywell	C6065 0,8 mbar	

CONTINUATION SHEET

Sheet 7 of 7Appliance number(s) 47-970-13 47-970-14,

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Key no.	GC Part Number	Description	No. Off	Makers part number which have a CG number	Maker's old part number which have since been changed	Maker's new part number which DO NOT have a GC number	M B F	Original Supplier	Original Supplier part number	Retail price excl. VAT
130	A E83-184	Air pressure switch M90.28S, M90.28SR from serial no. N276870901	1	BI1256 114			B	Yamatake-Honeywell	C6065 1,6 mbar	
131	E05-424	Air switch pressure test point	2	BI1036 101			M			
132	E83-185	Flue elbow (complete)	1	BI1336 108			M			
133	E83-186	Flue elbow clamp	1	BI1336 113			M			
134	402-127	Screw M4x16 mm BZP - RPH	2	BI1015 115			M			
135	E01-184	Gasket - Air intake twin kit	1	BI1016 101			M			
136	169-110	Flue pipe gasket	1	BI1016 104			M			
137	E83-187	Flue restrictor M90.24S., M90.24SR M90.28S from serial no. N276870901	1	BI1336 106			M			
138	E83-188	Venturi device tube	2	BI1256 101			M			
139	E83-189	Venturi	1	BI1036 108			M			
140	E83-190	Flue elbow gasket	1	BI1336 103			M			
141	E83-191	Fan M90.24S, M90.24SR	1	BI1336 104			B	LN di Natalini - Montecassiano Italy		
141	A E83-192	Fan M90.28S up to serial no. N276860901	1	BI1336 105			B	LN di Natalini - Montecassiano Italy		
141	A E83-193	Fan M90.28S, M90.28SR from serial no. N276870901	1	BI1336 116			B	LN di Natalini - Montecassiano Italy		
142	409-720	Screw 3,5x6,5 mm AB self tapping BZP - RPH	3	KI1267 104			F			
143	E83-194	Air deflector right M90.28S	1	BI1336 111			M			
144	E83-195	Flue sampling point connection	1	BI1336 109			M			
145	E83-196	Combustion chamber front panel M90.24S, M90.24SR	1	BI1326 101			M			
145	A E83-197	Combustion chamber front panel M90.28S, M90.28SR	1	BI1326 102			M			