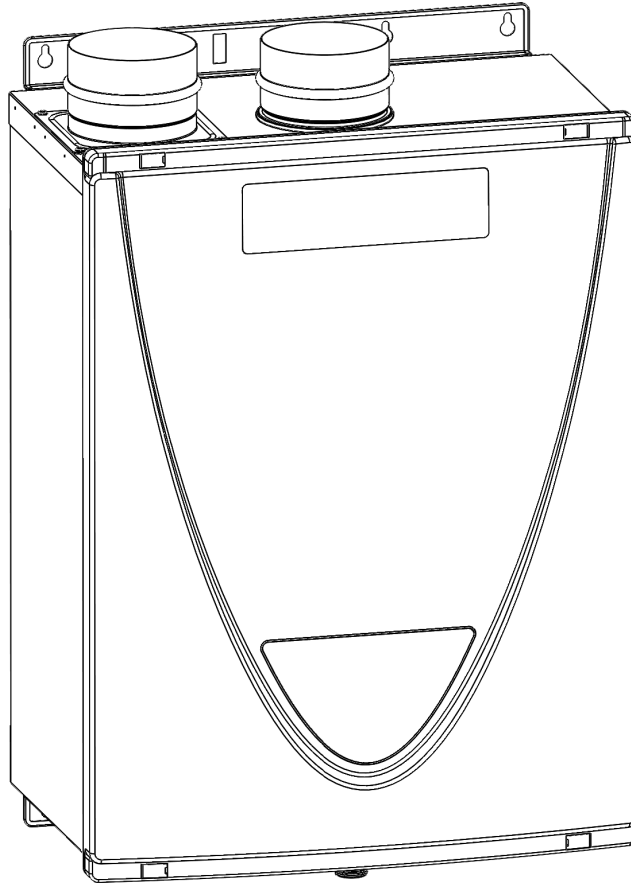


HS199Con Gas Boiler

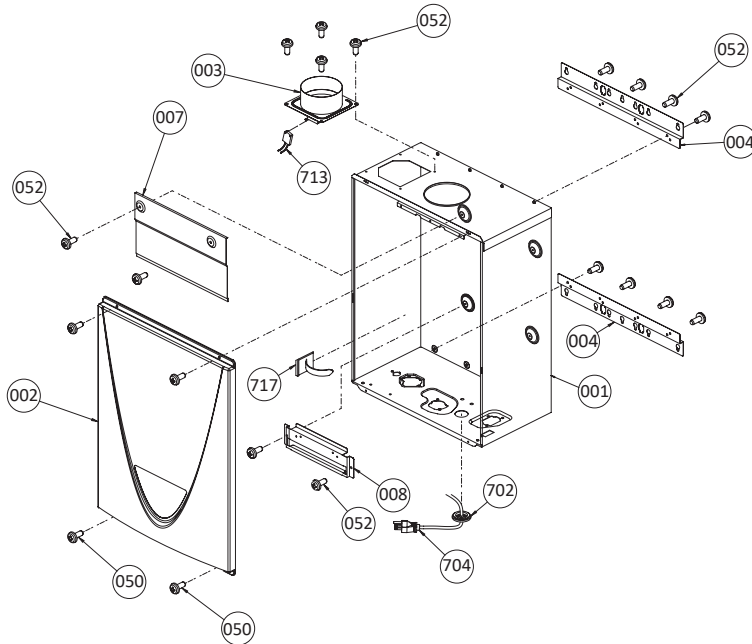
Components Diagram & Spare Parts List



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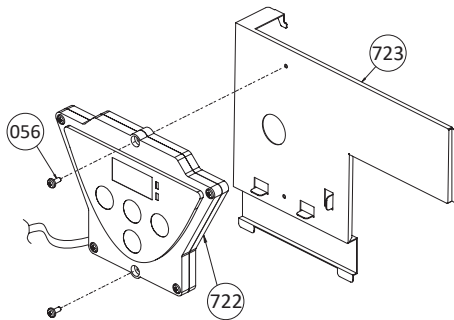
Spare Parts Diagram

Case Assembly

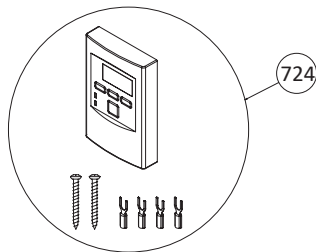


Item #	Part #	Description
001	EK159	Case Assy
002	EK158	Front cover
003	EK170	Intake air port assy
004	EK162	Bracket
007	EK161	Back guard panel
008	EK160	Chamber fixing plate
050	EW000	Screw M4x12 (W/Washer)
052	EW002	Screw M4x10 (Coated)
702	EX008	Rubber grommet
704	EK146	120 Vac wire
713	EK184	Switch wire with thermostat
717 - NA	EX13C	Cable clamp

Temperature Controller

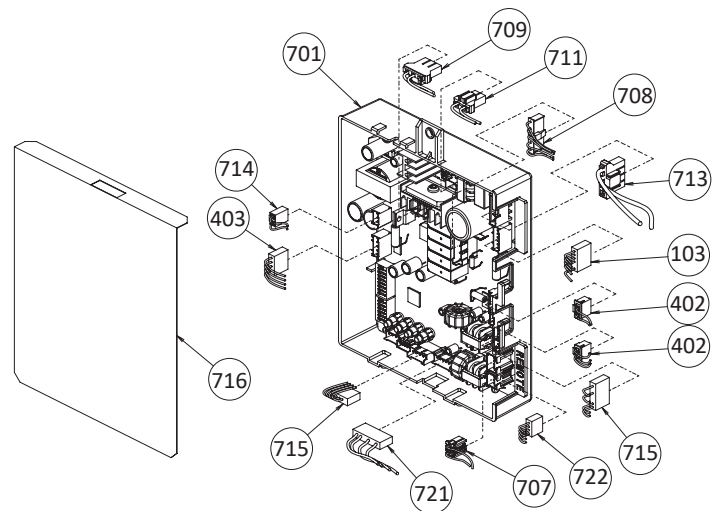


Temperature Remote Controller



Item #	Part #	Description
056 - NA	EW018	Pan screw M4x20
722	EK173	Temperature controller
723	EK178	Temperature controller fixing plate
724	ER014	Temperature remote controller

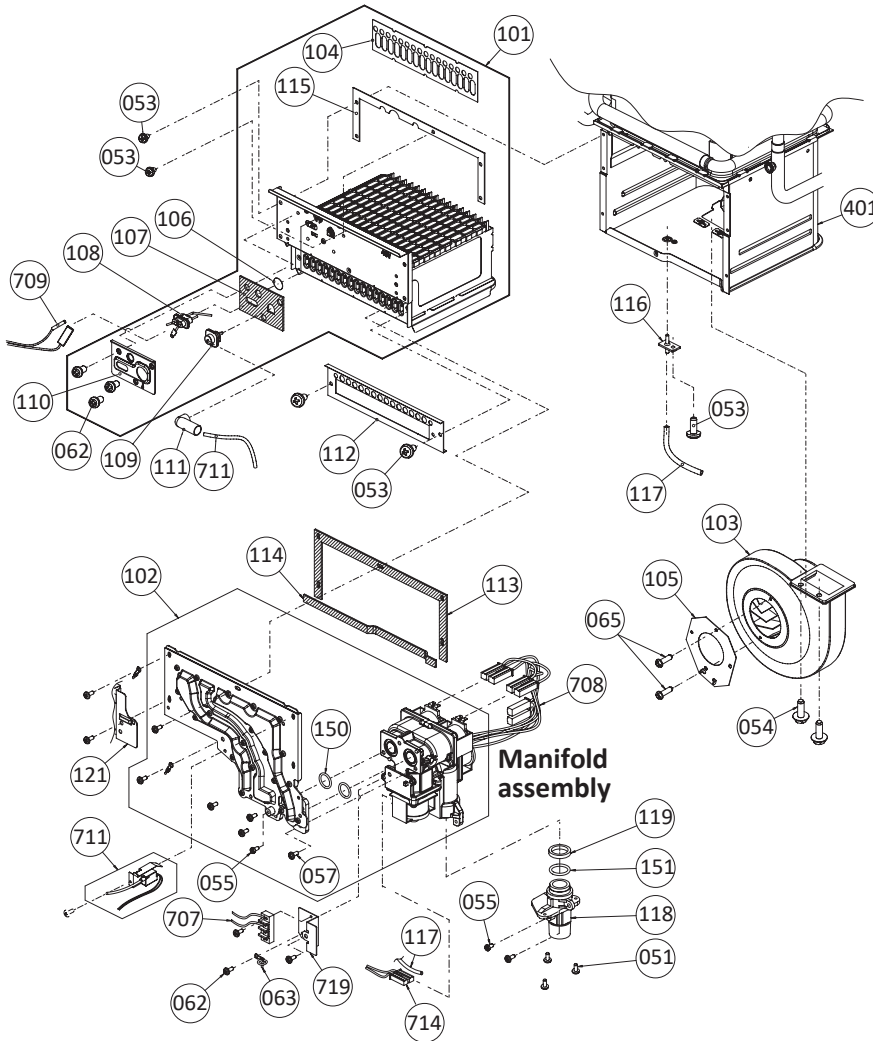
Computer Board Assembly



Item #	Part #	Description
103	EK109	Fan motor
402	EK129	Flow adjustment valve/Flow sensor
403	EKD58	Bypass valve
701	EK176	Computer board
707	EK165	Remote control wire
708	EK168	Gas valve wire
709	EK166	Flame rod wire
711	EK153	Igniter Assy
713	EK184	Switch wire with thermostat
714	EK167	Proportional gas valve wire
715	EK179	24V cables
716	EKK1M	Computer board cover
721	EK180	Exhaust High-limit switch wire
722	EK173	Temperature controller

Spare Parts Diagram

Burner Assembly

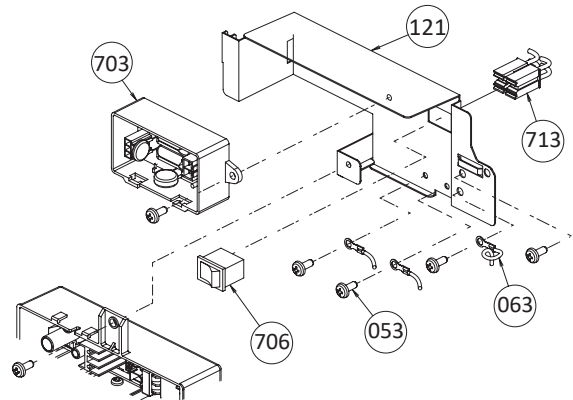


Item #	Part #	Description
053	EW003	Screw M4x10
054 - NA	EW004	Hex head screw M4x12 (W/Washer)
062 - NA	EW00D	Pan screw M4x8
065 - NA	EW00B	Screw M3x6 SUS3
101	EK192	Burner Assy
103	EK109	Fan motor
104	EKK2X	Burner Gasket
105	EM381	Fan damper
106	EKK2V	Burner window
107	EKK2W	Rod holder gasket
108	EK193	Flame rod
109	EKK0F	Igniter rod
110	EKK32	Rod holder
111	EKN61	Rod cap
112	EK183	Burner damper LP
112	EK169	Burner damper NG
115	EKK0G	Burner holder gasket
116	EKK2D	Pressure port
117 - NA	EX019	Combustion chamber tube
401	EK250	Primary heat exchanger assy
709	EK166	Flame rod wire
711	EK153	Igniter Assy

Manifold assembly

Item #	Part #	Description
051 - NA	EW001	Screw M4x10 (W/Washer)
055 - NA	EW005	Hex head screw M4x8
057 - NA	EKK31	Tap tight screw M4x12 FEZN
062 - NA	EW00D	Pan screw M4x8
063	EM167	Wire clamp 60
102	EK181	Manifold with gas valve Assy LP
102	EK182	Manifold with gas valve Assy NG
113	EKK2Y	Manifold gasket A
114	EKK2K	Manifold gasket B
118	EK117	Gas inlet
119	EX00D	Gas inlet ring
121	EK163	Surge box plate
150	EZP18	O-ring P18 NBR (Black)
151	EK042	O-ring P20 NBR (Black)
707	EK165	Remote control wire
708	EK168	Gas valve wire
711	EK153	Igniter Assy
719	EK152	Remote fixing plate

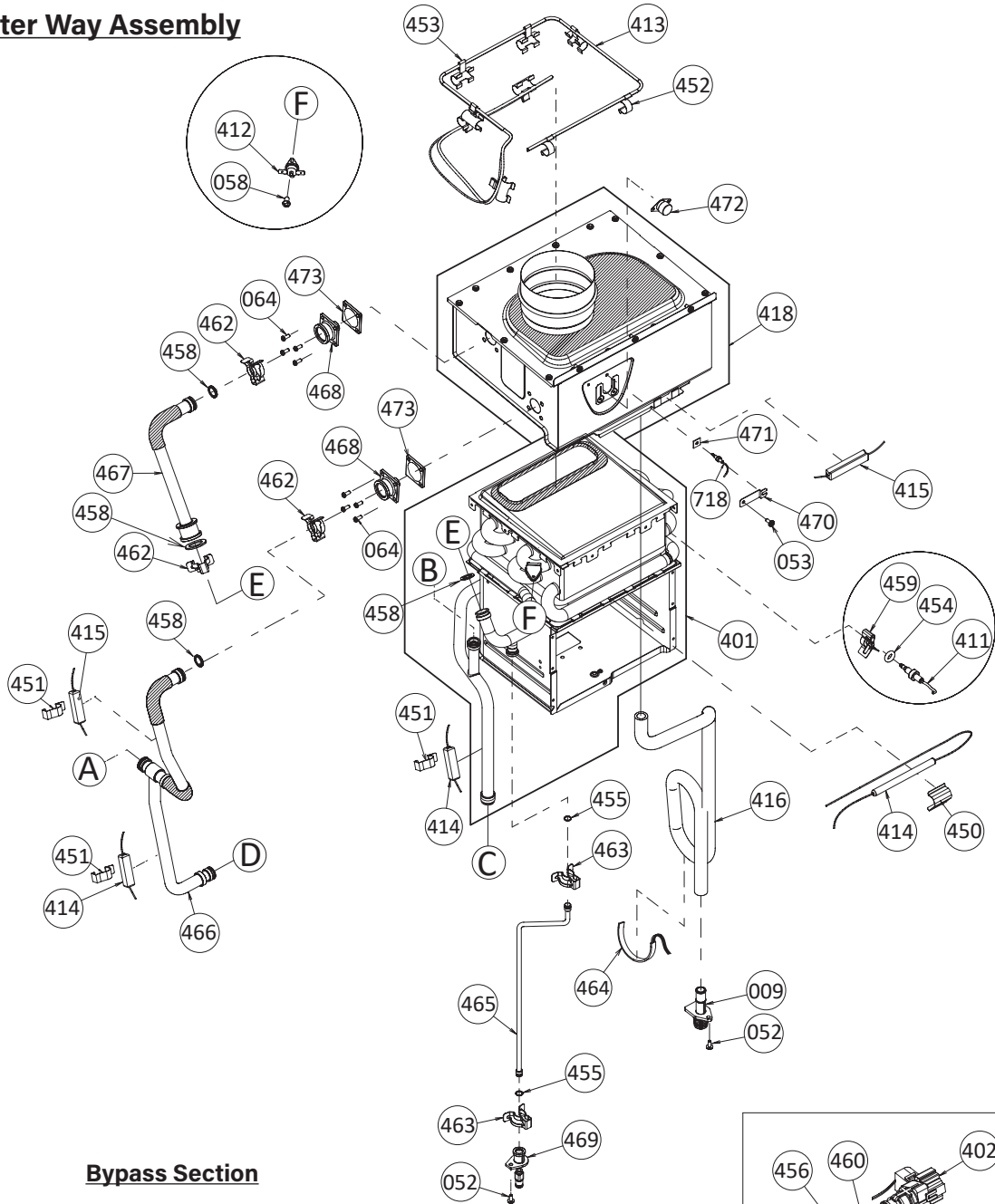
Surge Box



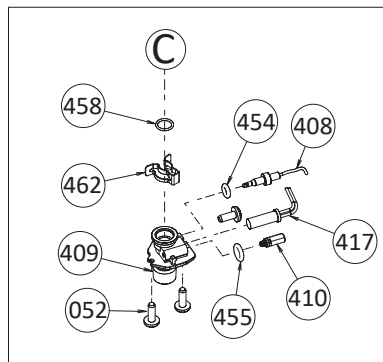
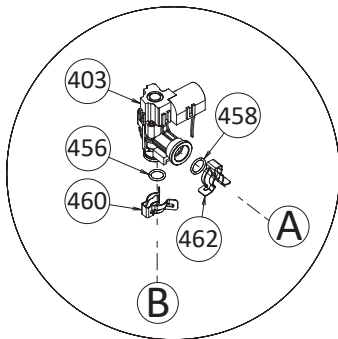
Item #	Part #	Description
053	EW003	Screw M4x10
063	EM167	Wire clamp 60
121	EK163	Surge box plate
703	EK280	Surge box
706	EKK4V	120 Vac power on/off switch
713	EK184	Switch wire with thermostat

Spare Parts Diagram

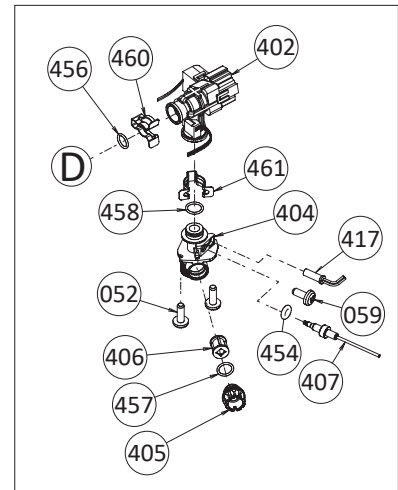
Water Way Assembly



Bypass Section



Water Outlet Section



Water Inlet Section

Water Way Assembly

Item #	Part #	Description
009	EKH23	Condensate drain port
052	EW002	Screw M4x10 (Coated)
053	EW003	Screw M4x10
058 - NA	EW00A	Screw M3x6
064	EK230	Screw M4x10
401	EK250	Primary heat exchanger assy
411	EKK2T	Heat exchanger thermistor
412	EKN34	Hi-Limit switch
413	EK333	Overheat-cut-off fuse
414	EK209	Pipe heater
415	EK210	Inlet heater
416	EK231	Drain tube
418	EK251	Secondary heat exchanger
450	EKK27	Pipe heater fixing plate
451	EK031	Heater fixing plate 16
452	EKK26	Fuse fixing plate 18
453	EK029	Fuse fixing plate 14
454	EZM04	O-ring P4 FKM
455	EZM06	O-ring P6 FKM
458	EZM16	O-ring P16 FKM
459	EKH30	Fastener "4-11"
462	EKK39	Fastener "16-25A"
463	EX12K	Fastener "6-15"
464	EK217	Flat heater
465	EK218	Drain pipe
466	EK220	Cold pipe
467	EK222	Stainless steel heat exchanger out pipe
468	EK226	Header connection
469	EK228	Drain port
470	EX13H	Thermistor fixing plate
471	EK13L	Exhaust thermistor gasket
472	EKH6G	High-limit switch for exhaust
473	EK229	Gasket
718	EKH6E	Exhaust thermistor

Water Inlet Section

Item #	Part #	Description
052	EW002	Screw M4x10 (Coated)
408	EKK1A	Outlet thermistor
409	EK208	Water outlet
410	EKK2E	Outlet drain plug
417	EK105	Inlet heater
454	EZM04	O-ring P4 FKM
455	EZM06	O-ring P6 FKM
458	EZM16	O-ring P16 FKM
462	EKK39	Fastener "16-25A"

Water Outlet Section

Item #	Part #	Description
052	EW002	Screw M4x10 (Coated)
059	EW009	Screw M4x6
402	EK129	Flow adjustment valve/Flow sensor
404	EKK1U	Water inlet
405	EKK2B	Inlet drain plug
406	EKK2C	Inlet water filter
407	EK137	Inlet thermistor
417	EK105	Inlet heater
454	EZM04	O-ring P4 FKM
456	EZM14	O-ring P14 FKM
457	EZM15	O-ring P15 FKM
458	EZM16	O-ring P16 FKM
460	EKK24	Fastener "14-22"
461	EM192	Fastener "16A"

Bypass Section

Item #	Part #	Description
403	EKD58	Bypass valve
456	EZM14	O-ring P14 FKM
458	EZM16	O-ring P16 FKM
460	EKK24	Fastener "14-22"
462	EKK39	Fastener "16-25A"

Spare Parts Items List

Item #	Part #	Description	
001	EK159	Case Assy	
002	EK158	Front cover	
003	EK170	Intake air port assy	
004	EK162	Bracket	
005	EK190	Junction box	
006	EK171	Power supply cord assy	
007	EK161	Back guard panel	
008	EK160	Chamber fixing plate	
009	EKH23	Condensate drain port	
050	EW000	Screw M4x12 (W/Washer)	
051	EW001	Screw M4x10 (W/Washer)	N/A
052	EW002	Screw M4x10 (Coated)	
053	EW003	Screw M4x10	
054	EW004	Hex head screw M4x12 (W/Washer)	N/A
055	EW005	Hex head screw M4x8	N/A
056	EW018	Pan screw M4x20	N/A
057	EKK31	Tap tight screw M4x12 FEZN	N/A
058	EW00A	Screw M3x6	N/A
059	EW009	Screw M4x6	
060	EKK37	Screw M4x12	N/A
061	EK191	Screw M3x6	
062	EW00D	Pan screw M4x8	N/A
063	EM167	Wire clamp 60	
064	EK230	Screw M4x10	
065	EW00B	Screw M3x6 SUS3	N/A
101	EK192	Burner Assy	
102	EK181	Manifold with gas valve Assy LP	
102	EK182	Manifold with gas valve Assy NG	
103	EK109	Fan motor	
104	EKK2X	Burner Gasket	
105	EM381	Fan damper	
106	EKK2V	Burner window	
107	EKK2W	Rod holder gasket	
108	EK193	Flame rod	
109	EKK0F	Igniter rod	
110	EKK32	Rod holder	
111	EKN61	Rod cap	
112	EK183	Burner damper LP	
112	EK169	Burner damper NG	

Spare Parts Items List

Item #	Part #	Description	
113	EKK2Y	Manifold gasket A	
114	EKK2K	Manifold gasket B	
115	EKK0G	Burner holder gasket	
116	EKK2D	Pressure port	
117	EX019	Combustion chamber tube	N/A
118	EK117	Gas inlet	
119	EX00D	Gas inlet ring	
121	EK163	Surge box plate	
150	EZP18	O-ring P18 NBR (Black)	
151	EK042	O-ring P20 NBR (Black)	
401	EK250	Primary heat exchanger assy	
402	EK129	Flow adjustment valve/Flow sensor	
403	EKD58	Bypass valve	
404	EKK1U	Water inlet	
405	EKK2B	Inlet drain plug	
406	EKK2C	Inlet water filter	
407	EK137	Inlet thermistor	
408	EKK1A	Outlet thermistor	
409	EK208	Water outlet	
410	EKK2E	Outlet drain plug	
411	EKK2T	Heat exchanger thermistor	
412	EKN34	Hi-Limit switch	
413	EK333	Overheat-cut-off fuse	
414	EK209	Pipe heater	
415	EK210	Inlet heater	
416	EK231	Drain tube	
417	EK105	Inlet heater	
418	EK251	Secondary heat exchanger	
450	EKK27	Pipe heater fixing plate	
451	EK031	Heater fixing plate 16	
452	EKK26	Fuse fixing plate 18	
453	EK029	Fuse fixing plate 14	
454	EZM04	O-ring P4 FKM	
455	EZM06	O-ring P6 FKM	
456	EZM14	O-ring P14 FKM	
457	EZM15	O-ring P15 FKM	
458	EZM16	O-ring P16 FKM	
459	EKH30	Fastener "4-11"	
460	EKK24	Fastener "14-22"	
461	EM192	Fastener "16A"	
462	EKK39	Fastener "16-25A"	
463	EX12K	Fastener "6-15"	

Spare Parts Items List

Item #	Part #	Description	
464	EK217	Flat heater	
465	EK218	Drain pipe	
466	EK220	Cold pipe	
467	EK222	Stainless steel heat exchanger out pipe	
468	EK226	Header connection	
469	EK228	Drain port	
470	EX13H	Thermistor fixing plate	
471	EK13L	Exhaust thermistor gasket	
472	EKH6G	High-limit switch for exhaust	
473	EK229	Gasket	N/A
701	EK176	Computer board	
702	EX008	Rubber grommet	
703	EK280	Surge box	
704	EK146	120 Vac wire	
706	EKK4V	120 Vac power on/off switch	
707	EK165	Remote control wire	
708	EK168	Gas valve wire	
709	EK166	Flame rod wire	
711	EK153	Igniter Assy	
713	EK184	Switch wire with thermostat	
714	EK167	Proportional gas valve wire	
715	EK179	24V cables	
716	EKK1M	Computer board cover	
717	EX13C	Cable clamp	N/A
718	EKH6E	Exhaust thermistor	
719	EK152	Remote fixing plate	
721	EK180	Exhaust High-limit switch wire	
722	EK173	Temperature controller	
723	EK178	Temperature controller fixing plate	
724	ER014	Temperature remote controller	