



SUSSMAN
ELECTRIC BOILERS

2014 PARTS LIST

Series ES, HU and MBA Electric Steam Boiler

Effective June 1, 2014; updated July 1, 2014



ES Boiler



MBA Boiler

TYPICAL ARRANGEMENT

A Division of Sussman-Automatic Corporation

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PUR 101166-A Rev 6.14

ES & HU PARTS LIST

PART #	DESCRIPTION
STEAM SAFETY VALVES	
99136	100 PSIG 1/2" NPT (ES12 to ES72)
99137	100 PSIG 1" NPT (ES100 to ES180)
99132	15 PSIG 1/2" NPT
99297V	15 PSIG 3/4" NPT
99141	15 PSIG 1" NPT
99142	15 PSIG 1-1/2" NPT
PRESSURE CONTROLS	
99113R	PRESSURE CONTROL 0-15 PSIG
99128R	PRESSURE CONTROL 0-90 PSIG
99130R	PRESSURE CONTROL 0-90 PSIG W/RESET
99373	PRESSURE CONTROL PROPORTIONAL 5-150 PSIG
99374	PRESSURE CONTROL PROPORTIONAL 0-15 PSIG
99969R	PRESSURE CONTROL 0-15 PSIG W/MANUAL RESET
FB023	PIGTAIL 1/4" NPT 180°
MOTORS & PUMPS	
103535	1/3 HP MOTOR/PUMP 120/1(ES12-ES72)
103535C	1/3 HP MOTOR/PUMP 240/1
99157	1/2 HP MOTOR/PUMP 15V or 230V 60 HZ (ES100 to ES180)
99160	1/3 HP MOTOR/PUMP for use with Condensate Return System 115V or 230V 60 HZ (ES12 to ES72)
PARTS FOR CONDENSATE RETURN	
39011-FB	FLOAT FOR 17 GALLON TANK (C.R.S.)
39010-F	FLOAT VALVE
38083V-TANK	CONDENSATE TANK ONLY - 17 GALLON
SOLENOIDS	
99031	WATER SOLENOID COMPLETE 1/2" 120V 50/60 HZ
99032	WATER SOLENOID COMPLETE 1/2" 240V 50/60 HZ
MISCELLANEOUS VALVES & PRESSURE GAUGES	
99123	1/2" STRAINER
99162	CHECK VALVE - SPRING 3/8"
99167	CHECK VALVE - SPRING 1/2"
99169	CHECK VALVE - SPRING 3/4"
99178	BALL VALVE 1/2" STEAM
99178B	GATE VALVE 1/2" STEAM
99806	BALL VALVE 1/4" STEAM
99182	GATE VALVE 3/4" STEAM
99184	GATE VALVE 1" STEAM
99197	PRESSURE GAUGE 0-160 PSIG
99290	PRESSURE GAUGE 0-30 PSIG

ES & HU PARTS LIST

PART #	DESCRIPTION
TERMINAL BLOCK & FUSES	
99207	TERMINAL BLOCK, 3 POLE 150 AMP (ES12 to ES18)
99264-6	FUSE - 10 AMP 250V
99209B	FUSE CUT OUT 1 POLE
99314	POWER CIRCUIT FUSE 250V 60 A (ES72 to ES180)
99315	FUSE BLOCK for 99314
99316	POWER CIRCUIT FUSE 600V 60 A (ES72 to ES180)
99317	FUSE BLOCK for 99316
99545	TERMINAL BLOCK for CONTROL CIRCUIT
99593	TERMINAL BLOCK (215A) for 5 CONTACTORS
99594	TERMINAL BLOCK (325A) for 6 CONTACTORS
99596	TERMINAL BLOCK (575A) for 10 CONTACTORS
MISCELLANEOUS	
92827	TOGGLE SWITCH
92829	PILOT LIGHT
92830	BOILER ON/OFF SWITCH W/PILOT LIGHT
100442-6	6 STEP SEQUENCER
99348	MANUAL BLOWDOWN SWITCH
99363	RELAY DPDT - 120V
BOILER GASKET, FLANGE & BOLTS	
99095	BLANK FLANGE 4-1/2 x 4-1/2 (ES Series)
99096	GASKET
99547B	ELEMENT BOLT (QTY of 1)
99547	ELEMENT BOLT (QTY of 6)
99088	SLIC TITE
99524-6T	18" #6 WIRE W/TERMINAL END
99524	#6 WIRE (per ft.)
97116	RING TERM
103540	BOILER GASKET KIT
AUTOMATIC BLOWDOWN SYSTEM	
103662	TIME CLOCK - 120V, 60 HZ
99353	DELAY TIMER RELAY 130 BOARD
103661	MOTOR DRIVEN BALL VALVE - 120V 1" NPT

ES & HU PARTS LIST

PART #	DESCRIPTION
PARTS FOR MM150 AUTOMATIC FEED CONTROL & LOW WATER CUTOFF	
103914	MICRO SWITCH ASSEMBLY
SA150-11	FLOAT & ROD
SA150-14	HEAD GASKET
SA150-106R	BELLOW ASSEMBLY WITH GASKET
99114	LOW WATER CUTOFF & AUTOMATIC WATER FEEDER, MM150 RAINGE 0-100 PSIG (ES SERIES)
SOLID STATE PROBE TYPE LOW WATER CUTOFF & WATER FEED CONTROLS	
90229	SPARK PLUG
90229-1	ELECTRODE
99807B	STAINLESS STEEL PROBE ROD
99807C	STAINLESS STEEL PROBE ROD
100378	PROBE ISOLATOR
103127	DUAL PROBE PC BOARD
90225E	THREE PROBE PC BOARD
90243	RELAY FOR 9-242A
90241MRT	AUXILIARY LWCO BOARD - MRT
99807-11	STAINLESS STEEL PROBE ROD - 11 INCH

ES, HU & MBA HEATING ELEMENTS

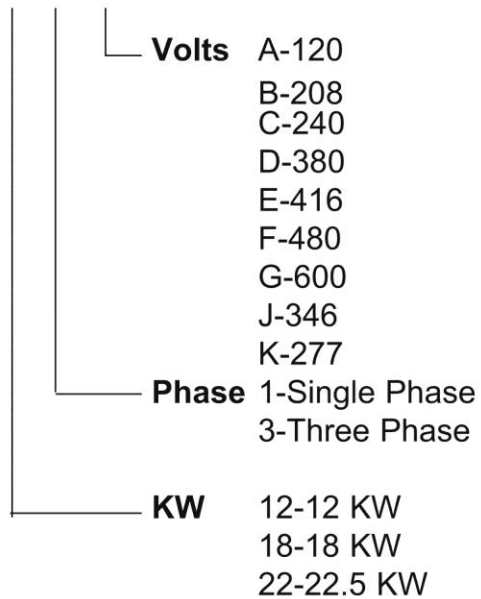
PART #	KW	VOLTAGE/PHASE
29031A	3	120/1
29031C	3	240/1
29063B	6	208/3
29063C	6	240/3
29063F	6	480/3
29093B	9	208/3
29093C	9	240/3
29093F	9	480/3
39121B	12	208/1
39121C	12	240/1
39123B	12	208/3
39123C	12	240/3
39123D	12	380/3
39123E	12	415/3
39123F	12	480/3
39123G	12	600/3
39181B	18	208/1
39181C	18	240/1
39183B	18	208/3
39183C	18	240/3
39183D	18	380/3
39183E	18	415/3
39183F	18	480/3
39183G	18	600/3
39201B	20	208/1
39201C	20	240/1
39203B	20	208/3
39203C	20	240/3
39203D	20	380/3
39203E	20	415/3
39203F	20	480/3
39203G	20	600/3
39223B	22.5	208/3
39223C	22.5	240/3
39223F	22.5	480/3
39223G	22.5	600/3
39243B	24	208/3
39243C	24	240/3
39243F	24	480/3

Elements shipped with gasket, bolts and sealing compound.

ES & HU ELEMENT SELECTION CHART

MODEL #	TOTAL KW	ELEMENTS			
		QTY	KW	QTY	KW
ES-12	12	1	12		
ES-18	18			1	18
ES-24	24	2	12		
ES-30	30	1	12	1	18
ES-36	36			2	18
ES-48	48	1	12	2	18
ES-60	60	2	12	2	18
ES-72	72			4	18
ES-85	85			5	18
ES-100	102			6	18
ES-135	136			8	18
ES-160	158			7	22
ES-180	180			8	22

ELEMENT PART NO. 39 X X X



Example: 39183B – 18KW, 3 Phase, 208 Volts

ES & HU CONTACTOR SELECTION CHARTS

QUANTITY AND AMPS

VOLTS/PH	208/1	240/1	208/3	240/3	346/3	380/3	415/3	480/3	600/3
ES-12	1-75	1-60	1-50	1-50	1-50	1-50	1-50	1-50	1-50
ES-18	*	*	1-60	1-50	1-50	1-50	1-50	1-50	1-50
ES-24	2-75	2-60	2-50	2-50	1-50	1-50	1-50	1-50	1-50
ES-30	—	—	2-60	2-50	1-60	1-50	1-50	1-50	1-50
ES-36	—	—	2-60	2-50	1-75	1-60	1-60	1-50	1-50
ES-48	—	—	3-60	3-50	2-60	2-50	2-50	2-50	2-50
ES-60	—	—	4-60	4-50	2-60	2-50	2-50	2-50	2-50
ES-72	—	—	4-60	4-50	2-75	2-60	2-60	2-50	2-50
ES-100	—	—	6-60	6-50	3-75	3-60	3-60	3-50	3-50
ES-135	—	—	8-60	8-50	4-75	4-60	4-60	4-50	4-50
ES-160	—	—	7-75	7-60	7-50	4-75	4-75	4-60	4-50
ES-180	—	—	8-75	8-60	8-50	4-75	4-75	4-60	4-50

* For ES-18, single phase, 208-240V use P/N 99006B, 50 A-4 Pole Contactor

NOTE: 20 KW P/N 99075

VOLTS	208 / 240 / 480 / 600	346 / 380 / 415
AMPS	CONTROL CIRCUIT 120V COIL	240V COIL
50	99003	99001
60	99075	99007
75	102206-1	102206

Example: For ES-72 240V 3 Phase there are 4 contactors, 50 amps each (Part # is 99003, 120V Coil)

CONTACTOR PART #	DESCRIPTION
103834	PUMP CONTACTOR 120V 1 POLE
103834C	PUMP CONTACTOR 240V 1 POLE
99001	CONTACTOR 50 AMP RATING 230V 50/60 HZ
99003	CONTACTOR 50 AMP RATING 120V 50/60 HZ (208 AND 480)
99006B	CONTACTOR 50 AMP RATING 4 POLE 120V 50/60 HZ
99007	CONTACTOR 60 AMP RATING 240V 50/60 HZ
102206-1	CONTACTOR 75 AMP RATING 120V 50/60 HZ
102206	CONTACTOR 75 AMP RATING 240V 50/60 HZ
99075	CONTACTOR 60 AMP RATING 120V 50/60 HZ

ES & HU GAUGE GLASS USAGE CHART

MODEL #	VALVE ASSEMBLY	GLASS TUBE	LENGTH
ES12-ES18	99173C	99074-1	7-7/8
ES24-ES72	99173C	99080-1	9-7/8
ES100-ES180	99173C	99081-1	11-7/8
CRS	99173C	99074-1	7-7/8
BDT	99173C	99082-1	10-1/4

NOTE:

1. Gauge glass tube and valve assembly is sold separately
2. Glass tube includes 2 (washer) gaskets P/N 99174CV
3. Glass tube is 5/8 in. diameter Pyrex

PART #	DESCRIPTION
GAUGE GLASS	
99074-1	7-7/8" GLASS WITH (2) O-RINGS GASKETS (ES12 to ES18, ES24A)
99080-1	9-7/8" GLASS WITH (2) O-RINGS (ES-24 to ES-72, MBA)
99081-1	11-3/4" GLASS WITH (2) O-RINGS (ES-100 to ES-180)
99082-1	10-1/2" Pyrex GLASS WITH (2) O-RINGS (BDT)
99173C	GAUGE GLASS ASSEMBLY 1/2" x 1-3/4" (MBA, ES, HU Series)
99174CV	GAUGE GLASS VITON O-RING GASKET
99174B	GAUGE GLASS BRASS WASHER

MBA PARTS LIST

PART #	DESCRIPTION
90229	SPARK PLUG
92830	ON-OFF SWITCH WITH PILOT LIGHT
99042	WATER SOLENOID 1/4" 120V
99042C	WATER SOLENOID 1/4" 240V
99080-1	9-7/8" GAUGE GLASS WITH (2) O-RINGS
99173C	GAUGE VALVE SET
99136	SAFETY VALVE 100 PSI, 1/2" NPT
99197	PRESSURE GAUGE 160 PSI
99130R	PRESSURE CONTROL HI-LIMIT W/RESET BUTTON 0-90 PSI
99128R	PRESSURE CONTROL OPERATING 0-90 PSI
100706-1	FUSE 10 AMP
99807F	1/4" PROBE ROD 5-INCH
99075	CONTACTOR 60 AMP 3 POLE, 120V
99007	CONTACTOR 60 AMP 3 POLE, 240V
100412A	LIQUID LEVEL CONTROL BOARD, 120V
100412C	LIQUID LEVEL CONTROL BOARD, 240V
100378	PROBE ISOLATOR
103540	BOILER GASKET KIT 99096, 99547B, 99088 GASKETS, BOLTS & COMPOUND
102188	RELAY FOR 100412A & 100412C