

SUSSMAN 'ES, HU and MBA' SERIES PARTS
MBA PARTS - PAGES 4, 7 & 8
EFFECTIVE February 1, 2022

PART #	DESCRIPTION
STEAM SAFETY VALVES	
99136	100 PSIG 1/2" NPT (ES12 to ES72)
99137	100 PSIG 1" NPT (ES84 to ES180)
99132	15 PSIG 1/2" NPT (ES12 to ES48, HU40 to HU140)
99297V	15 PSIG 3/4" NPT (ES60 to ES72, HU175 to HU205)
99141	15 PSIG 1" NPT (ES84 to ES100, HU250 to HU310)
99142	15 PSIG 1-1/2" NPT (ES135 to ES180, HU410 to HU550)
PRESSURE CONTROLS	
99113R	OPERATING PRESSURE CONTROL 3-15 PSIG
99969R	HIGH LIMIT PRESSURE CONTROL 3-15 PSIG W/MANUAL RESET
99128R	OPERATING PRESSURE CONTROL 20-90 PSIG
99130R	HIGH LIMIT PRESSURE CONTROL 20-90 PSIG W/ MANUAL RESET
99373	PRESSURE CONTROL PROPORTIONAL 20-150 PSIG - used with Sequencer ES100442
99374	PRESSURE CONTROL PROPORTIONAL 3-15 PSIG - used with Sequencer ES100442-15
FB023	PIGTAIL 1/4" NPT 180°
MOTORS & PUMPS	
103535	1/3 HP MOTOR/PUMP 120/1 (ES12-ES72) for ES38002A
103535C	1/3 HP MOTOR/PUMP 240/1 (ES12-ES72) for ES38002EX
99160	1/3 HP MOTOR/PUMP 120/1 (ES12 to ES72) for ES38083V
99160-15	1/3 HP MOTOR/PUMP 120/1 (ES12 to ES72) for 15 PSIG ES38083V
99157	1/2 HP MOTOR/PUMP 120/1 (ES100-180) for ES38020A & ES38084V
99157-15	1/2 HP MOTOR/PUMP 120/1 (ES100-180) for 15 PSIG ES38084V
99157EX	1/2 HP MOTOR/PUMP 240/1 (ES100-ES180) for ES38051EX
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 for 100 PSIG Trim
99290	PRESSURE GAUGE 0-30 PSIG for 15 PSIG Trim

ES & HU PARTS

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, 208/3 & 240/3)
99315	FUSE BLOCK for 99314
99316	POWER CIRCUIT FUSE 600V 60 A (ES72 to ES180, 480/3 & 600/3)
99317	FUSE BLOCK for 99316
99539	POWER CIRCUIT FUSE 600V 60 A Class "J"
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	MULTISTAGE STEP SEQUENCER
99348	AUX LWCO RESET SWITCH
99363	RELAY DPDT - 120V
BOILER GASKET, FLANGE & BOLTS	
99095	BLANK FLANGE 4-1/2 x 4-1/2 (ES SERIES)
99096B	GASKET (BLACK - NO SLIC-TITE USED)
99547Z	3/4 in. ELEMENT BOLT (QTY of 1)
99547	3/4 in. ELEMENT BOLT (QTY of 6)
99524-6T	18" #6 WIRE W/TERMINAL END
99524	#6 WIRE (per ft.)
97116	RING TERMINAL
103540	BOILER GASKET KIT (INCLUDES 99096B GASKET & 99547 BOLTS (6)
AUTOMATIC BLOWDOWN SYSTEM	
103662	TIME CLOCK - 120V, 60 HZ
99353	DELAY TIMER RELAY 130 BOARD
103661	MOTOR DRIVEN BALL VALVE - 120V 1" NPT - STANDALONE ES UNITS

ES & HU PARTS

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 RANGE 0-100 PSIG (ES SERIES)
SOLID STATE PROBE TYPE LOW WATER CUTOFF & WATER FEED CONTROLS	
90229	SPARK PLUG
90229-1	AUXILIARY LOW WATER CUT OFF PROBE
90241MRT	AUXILIARY LWCO BOARD - MANUAL RESET
99807F	PROBE ROD 5-INCH for MBA, ES24A, ES30A & ES36A BOILERS ONLY - NOT USED ON FLOAT WATER LEVEL BOILERS.
100412A	LIQUID LEVEL CONTROL BOARD, 120V: MBA, ES24A, ES30A & ES36A BOILERS ONLY - NOT USED ON FLOAT WATER LEVEL BOILERS.
100412C	LIQUID LEVEL CONTROL BOARD, 240V: MBA, ES24A, ES30A & ES36A BOILERS ONLY - NOT USED ON FLOAT WATER LEVEL BOILERS.

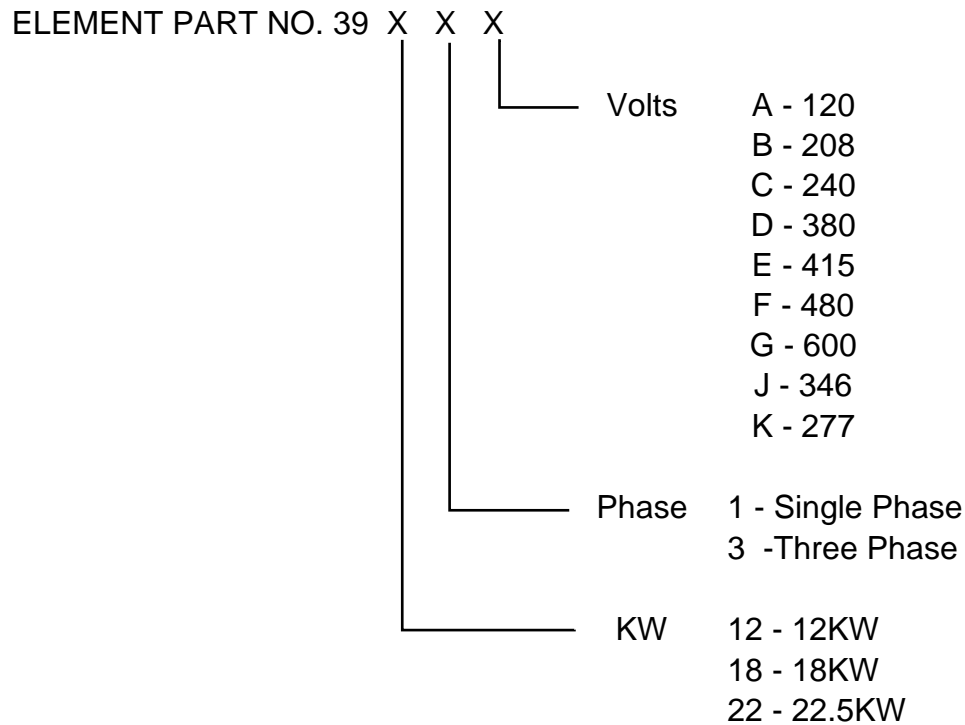
ES, HU & MBA HEATING ELEMENTS

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 wiring nuts.

ES & HU HEATING ELEMENT SELECTION CHART

BOILER 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	84	1	12	4	18
ES-100	108			6	18
ES-135	144			8	18
ES-160	157.5			7	22.5
ES-180	180			8	22.5



Example: 39183B - 18kW, 3 Phase, 208 Volts

ES & HU CONTACTOR SELECTION CHARTS

QUANTITY AND AMPS									
	VOLTS/PHASE								
BOILER	208/1	240/1	208/3	240/3	346/3	380/3	415/3	480/3	600/3
ES12	1-75	1-60	1-50	1-50	1-50	1-50	1-50	1-50	1-50
ES18	*	*	1-60	1-50	1-50	1-50	1-50	1-50	1-50
ES24	2-75	2-60	2-50	2-50	1-50	1-50	1-50	1-50	1-50
ES30	--	--	2-60	2-50	1-60	1-50	1-50	1-50	1-50
ES36	--	--	2-60	2-50	1-75	1-60	1-60	1-50	1-50
ES48	--	--	3-60	3-50	2-60	2-50	2-50	2-50	2-50
ES60	--	--	4-60	4-50	2-60	2-50	2-50	2-50	2-50
ES72	--	--	4-60	4-50	2-75	2-60	2-60	2-50	2-50
ES84/85	--	--	1-50, 4-60	5-50	Factory	3-60	Factory	3-50	3-50
ES100	--	--	6-60	6-50	3-75	3-60	3-60	3-50	3-50
ES135	--	--	8-60	8-50	4-75	4-60	4-60	4-50	4-50
ES160	--	--	7-75	7-60	7-50	4-75	4-75	4-60	4-50
ES180	--	--	8-75	8-60	8-50	4-75	4-75	4-60	4-50

* For ES18, single phase, 208V and 240V use P/N 99006B, 50 A-4 Pole Contactor

CONTACTOR PART NUMBER SELECTION:

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

Example: For ES72 240V 3 phase, there are 4 contactors, 50 amps each (Part Number is 99003, 120V Coil).

CONTACTOR PART NUMBER	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 & MBA SIGHT GAUGE GLASS PARTS

MODEL #	VALVE ASSEMBLY	GLASS TUBE	LENGTH
MBA3-MBA20	99173C	99080-1	9-3/4" - 9-7/8"
ES12-ES18	99173C	99074-1	7-3/4" - 7-7/8"
ES24-ES72	99173C	99080-1	9-3/4" - 9-7/8"
ES100-ES180	99173C	99081-1	11-3/4" - 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 sleeve gaskets P/N 99174CV
3. Glass tube is 5/8 in. diameter Pyrex

PART #	DESCRIPTION
GAUGE GLASS	
99074-1	7-3/4" GLASS WITH (2) SLEEVE GASKETS GASKETS (ES12, ES18, & <u>ES24A</u>)
99080-1	9-3/4" GLASS WITH (2) SLEEVE GASKETS (ES-24 to ES-72, MBA)
99081-1	11-3/4" GLASS WITH (2) SLEEVE GASKETS (ES-100 to ES-180)
99082-1	10-1/4" Pyrex GLASS WITH (2) SLEEVE GASKETS (BDT)
99173C	GAUGE GLASS ASSEMBLY 1/2" x 1-3/4" (MBA, ES, HU Series, BDT)
99174CV	GAUGE GLASS VITON SLEEVE 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	9-3/4" GAUGE GLASS WITH (2) SLEEVE GASKETS
99173C	GAUGE VALVE SET
99136	SAFETY VALVE 100 PSI, 1/2" NPT
99132	SAFETY VALVE 15 PSI, 1/2" NPT
99197	PRESSURE GAUGE 160 PSI
99290	PRESSURE GAUGE 0-30 PSIG for 15 PSIG Trim
99113R	OPERATING PRESSURE CONTROL 3-15 PSIG
99969R	HIGH LIMIT PRESSURE CONTROL 3-15 PSIG W/MANUAL RESET
99128R	OPERATING PRESSURE CONTROL 20-90 PSIG
99130R	HIGH LIMIT PRESSURE CONTROL 20-90 PSIG W/ MANUAL RESET
100706-1	FUSE 10 AMP
99807F	PROBE ROD 5-INCH for MBA, ES24A, ES30A & ES36A BOILERS
99807A	PROBE ROD 7-INCH AUX LWCO for MBA, ES24A, ES30A & ES36A
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
102188	RELAY FOR 100412A & 100412C
99096B	GASKET (BLACK - NO SLIC-TITE USED)
99547Z	3/4 in. ELEMENT BOLT (QTY of 1)
99547	3/4 in. ELEMENT BOLT (QTY of 6)
103540	BOILER GASKET KIT (INCLUDES 99096B GASKET AND 99547 BOLTS (6)