

HEC Series Parts List

HEC SERIES PARTS LIST

Control Panel Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A7516E23	2	A/B CONTACTOR, 9-AMP, 3-POLE, 208/240V W/1-NO AUX Replaces Furnas 12A7516E01 & C/H 12A7516E09
12A7516E11	1	CONTACTOR / CUTLER-HAMMER 10AMP, 3-POLE Air-Cooled Condenser Fan
12A7516E26	1	A/B CONTACTOR, 23-AMP, 3-POLE, 208/240V W/1-NC AUX Compressor Contactor Replaces C/H 12A7516E13
12A7518E30	1	A/B AUX. CONTACT, 3A, 1 NO/1 NC, (SIDE MOUNT) Auxiliary contact for A/B compressor contactor above
12A7518E2	1	AUX. CONTACT (N-C) for C/H COMPRESSOR CONTACTOR For C/H 12A7516E13
12A7516E43	1	A/B CONTACTOR, 9-AMP, 4-POLE, 208/240V W/2-NO,2-NC Reversing relay (Replaces C/H 12A7517E18)
12A7536M01	1	PROGRAMMABLE CONTROLLER (PLC) FXOS-14MR (Must specify model & serial number)
12A2117G02	2	THERMOSTAT JOHNSON CONTROLS
12A2117E04	2	FREEZER PRESSURE SWITCH-R22
12A7502E07	2	FUSE HOLDER,LITTEL FUSE SHOCK
12A7504E1	2	CONTROL CIRCUIT FUSE,2.5 AMP (ORDER MULTIPLES OF 5)
12A7515E01	1	CIRCUIT BREAKER 2.5 AMP,AIRPAX Cutter Motor Circuit Breaker (1/4HP)
12A7515E17	1	CIRCUIT BREAKER 5.5 AMP, AIRPAX Cutter Motor Circuit Breaker (1/2HP)
12A7515E06	1	CIRCUIT BREAKER 6.0 AMP,AIRPAX Water Pump Circuit Breaker
12A7500E07	1	SELECTOR SWITCH, 3-POSITION A/B
12A7500E02	1	SWITCH,PUSH-BUTTON,NON-LIGHTED SPST RED N-O "Manual Harvest" Switch
12A7500E03	1	SWITCH,PUSH-BUTTON,NON-LIGHTED SPST GREEN N-O "Start" Switch
12A7500E36	2	SWITCH,PUSH-BUTTON,LIGHTED,DPST AMBER N-O "On-Off" or "Clean" Switch
12A7520E09	2	PILOT LIGHT,RED,250V OSLO (SQ w/RECT. MOUNT HOLE) "Cylinder Ice" or "Crushed Ice" Light
12A7520E1	2	PILOT LIGHT,AMBER,250V OSLO (SQ w/RECT. MOUNT HOLE) "Cutter Overload" or "Pump Overload" Light
12C3000D32	1	SWITCH BOX COVER FOR HE SERIES (PLASTIC)

HEC Series Parts List

Additional Electrical Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2117F05	1	CONDENSER FAN CONTROL SWITCH <i>Air-cooled units</i>
12A2117D02	1	HI/LOW PRESSURE SWITCH <i>Hi/low pressure switch</i>
12A2117A01	1	OIL PRESSURE SWITCH, R12/22, P28AA-2C, 60SEC DELAY <i>Optional Oil Failure Switch for HEC40</i>
12A7519E06	1	TRANSFORMER 1.5 KVA P-240/480V, S-120/240V, 50/60HZ <i>Control Circuit Transformer for 460V Water-Cooled</i>
12A7519E08	1	TRANSFORMER 3 KVA P-240/480V, S-120/240V, 50/60HZ <i>Control Circuit Transformer for 460V Air-Cooled</i>

Freezer Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2600G01	1	FREEZER COVER GASKET 13" OD X 11 11/16" ID X 3/16"
12A2145C09	1	COVER, FREEZER, 12" TYPE 304 CAST STAINLESS STEEL
12A2222H1118	8	STUD BOLT, 3/8"-16NC X2 3/4"LG
12A2240H4109	8	NUT, WING, BRASS, 3/8"-16NC
12A2250A109	8	WASHER, CUT 3/8" x 7/8" O.D. SS
12A4200L0404	1	RELIEF VALVE #3020 SET @ 275#, 1/2" MPT x 5/8" SAE
12A4200G0301	1	CHARGING VALVE, 3/8 MPT X 1/2 SAE FLARE
12A2451R01	1	REDUCER WITH GASKET 1/2" SAE X 1/4" SAE
12A4200R0702	1	ROTA-LOCK VALVE VERTICAL 7/8" ID SWT x 1-1/4-12 THREAD <i>Liquid feed/Thawing gas (also freezer pressure switch)</i>
12A2600T01	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-1/4-12 THREAD
12B2185N11	78	1" WATER DISTRIBUTOR SANOPRENE NO VENT
12B2185N21	48	1-1/4" WATER DISTRIBUTOR SANOPRENE NO VENT
12A2055B02		BRUSH, STAINLESS STEEL #GTC210 FOR 1" TUBES
12A2055B04		BRUSH, STAINLESS STEEL #GTC210 FOR 1 1/4" TUBES
12A4009R01		PLUG, RUBBER 7/8" OD X 2" LG FOR 1" TUBES
12A2215H1116	1	CAP SCREW, 3/8"-16NC X 2-1/4" LONG <i>(Use this bolt for 1" tubes)</i>
12A2250A109	2	WASHER, CUT 3/8" x 7/8" O.D. SS <i>(Use this washer for 1" tubes)</i>
12A4009R02		PLUG, RUBBER 1"OD X 2 1/2"LG FOR 1-1/4" TUBES
12A4009R03		PLUG, RUBBER 1 1/4"OD X 2 1/2" FOR 1-1/2" TUBES
12A2215H1119	1	CAP SCREW, 3/8"-16NC X 3" LONG <i>(Use this bolt for 1-1/4" or 1-1/2" tubes)</i>
12A2250A12	2	WASHER, CUT 3/8" x 1" O.D. SS <i>(Use this washer for 1-1/4" or 1-1/2" tubes)</i>
12A2240A1109	1	NUT, HEX 3/8"-16NC S.S.

HEC Series Parts List

Compressors / Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2110B22	1	COPELAMATIC COMPRESSOR, ERC1-0200-TAC-213 HEC10 Models, 208/230V-3P-60HZ
12A2110B24	1	COPELAMATIC COMPRESSOR, ERC1-0200-TAD-209, HEC10 Models, 460V-3P-60HZ or 380/400V-3P-50HZ
12A2110S3801	1	SCROLL COMPRESSOR, ZS21K4-TF5-230 HEC20 Models, 208/230V-3P-60HZ or 200V-3P-50HZ
12A2110S3901	1	SCROLL COMPRESSOR, ZB21KC-TFD-230 HEC20 Models, 460V-3P-60HZ or 380/400V-3P-50HZ
12A2110A22	1	CARLYLE SEMI-HERMETIC COMPRESSOR-2HP 208/230V-3P HEC30 Models, 208/230V-3P-60HZ (161 LBS)
12A2110A24	1	CARLYLE SEMI-HERMETIC COMPRESSOR-2HP 400/460V-3P HEC30 Models, 460V-3P-60HZ or 380/400V-3P-50HZ
12A2110A32	1	CARLYLE SEMI-HERMETIC COMPRESSOR-5HP 208/230V-3P HEC40 Models, 208/230V-3P-60HZ or 200V-3P-50HZ (242 LBS)
12A2110A34	1	CARLYLE SEMI-HERMETIC COMPRESSOR-5HP 400/460V-3P HEC40 Models, 460V-3P-60HZ or 380/400V-3P-50HZ
12A7509E13K	1	SCROLL CRANKCASE HTR KIT, 70WATTS FOR HES30/40 Replaces 40 or 80 watt heaters on all scroll compressors
12A7509E09	1	CRANKCASE HEATER #14SS-5358-23-54C42, 65 WATT HEC10, HEC30 & HEC40 Compressor
12A4200L0201	1	RELIEF VALVE #3012 SET @ 400#, 1/4" NPT x 3/8" SAE HEC10 Air-Cooled With Copelamatic Compressor
12A2110P0301		COMPRESSOR, VALVE PLATE 998-06 HEC10 With Copelamatic Compressor
12A2110P0201		COMPRESSOR VALVE PLATE PKG FOR CARLYLE O6D HEC30 - 1 Req'd, HEC40 - 2 Req'd
12A2110P0215	1	CARLYLE COMPRESSOR PUMP END BEARING HEAD ASSY HEC30 & HEC40
126608	1	GASKET SET FOR CARLYLE O6D COMPRESSOR HEC30 & HEC40
12A7523E01	2	OVERLOAD KLIXON 8347A23-54 HEC30, 208/230V
12A7523E03	2	OVERLOAD KLIXON 8347A23-63 HEC40, 208/230V
12A4200S05	1	CARLYLE SERVICE VALVE, 5/8" ODS Discharge Service Valve for HEC30
12A4200S07	1	CARLYLE SERVICE VALVE, 7/8" ODS Suction Service Valve for HE30 & HE40 Discharge
12A4200S09	1	CARLYLE SERVICE VALVE, 1-1/8" ODS Suction Service Valve for HEC40

HEC Series Parts List

Compressors / Components (Con'd)

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
126609		CARLYLE SERVICE VALVE GASKET <i>HEC30 - Suction & Discharge, HEC40 Discharge</i>
12661		CARLYLE SERVICE VALVE GASKET <i>HEC40 - Suction</i>
12A4200R0703	1	ROTA-LOCK VALVE W/NEUTRAL PORT 7/8" ID SWT x 1-1/4-12 <i>Compressor Suction service valve with neutral port - HEC20</i>
12A2396C0402	1	ROTALOCK BRASS ADAPTER, 7/8" IDS x 1-1/4"-12 THREAD <i>Compressor suction adaptor - HEC20</i>
12A4200R0402	1	ROTA-LOCK VALVE W/NEUTRAL PORT 5/8" IDS x 1-14 THREAD <i>Compressor discharge service valve with neutral port - HEC20</i>
12A2396C0201	1	ROTALOCK BRASS ADAPTER, 1/2" IDS x 1"-14 THREAD <i>Compressor discharge adaptor - HEC20</i>
12A2600T01	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-1/4-12 THREAD
12A2600T02	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-14 THREAD

Cutter Drive/Cutter Internals

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2900M0507	1	CUTTER MOTOR, 1/2HP 208/230V-1P-50/60HZ
12A4030R12	1	GEAR REDUCER, GROVE 10:1 WASHDOWN W/VENT PLUG
19T3020C01	1	GEAR OIL, 10 OUNCE BOTTLE, TEXACO CYGNUS
19T2615D01	1	CUTTER DRIVE GEAR TI-59 W/O HUB
12A2160H0101	1	CUTTER DRIVE GEAR HUB 5/8" BORE
12A2215F1112	3	CAP SCREW, 1/4"-20NC X 1 1/4" Long SS <i>Hub mounting screws</i>
12A2250B107	3	WASHER, LOCK 1/4" SS (300 SERIES)
12B2020R04	1	HE (UHMW) CUTTER BEARING
12A3040S02	1	CUTTER BEARING ROLL PIN 3/16" X 1/2"
19T2025B0103	1	BEARING BRACKET FOR 12" CUTTER
19T2170D01	1	ICE DEFLECTOR DOOR
12A4071S03	1	RIVET, 3/16 X 2 1/4 FLAT HD. FOR ICE DELECTOR DOOR
19T2163D0101	1	CUTTER DISC, STAINLESS STEEL FOR 12" CUTTER
12A3040S01	1	CUTTER DISC ROLL PIN, 1/4" X 1 1/2"
19T4073R07	1	CUTTER DISC ROLL PIN TOOL
19T2160C0101	1	HE CUTTER ASSEMBLY, INVESTMENT CAST SS
19T2010A01	1	ADAPTOR PLATE FOR HE 1" DIAMETER x 3/4" LG ICE <i>Mounting screws below thread directly into lower plate</i>
12A2226F1108	4	MACHINE SCREW, FLAT HEAD SS, 1/4" x 3/4"
19T2090C04	1	HE ICE CHUTE ASSEMBLY FOR DUAL ICE
19T2090C07	1	HE ICE CHUTE ASSEMBLY FOR SINGLE TYPE ICE

HEC Series Parts List

Water Pump/Circulating Water

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200H0401	1	FLOAT VALVE, 1/2" ROBERTS #RM214
12A4020Z14	1	HE SERIES WATER PUMP REPLACEMENT KIT, 60HZ <i>Replaces AP pump, includes pump, fittings, bracket & hoses</i>
12A4020Z15	1	HE SERIES WATER PUMP REPLACEMENT KIT, 50HZ <i>Replaces AP pump, includes pump, fittings, bracket & hoses</i>
12A4080S21	1	SEAL/IMPELLER KIT 60HZ GORMAN-RUPP WATER PUMP
12A4080S22	1	SEAL/IMPELLER KIT 50HZ GORMAN-RUPP WATER PUMP
12A2450E29	1	SUCTION ELBOW FOR GORMAN-RUPP WATER PUMP
12A2450E30	1	DISCHARGE ELBOW FOR GORMAN-RUPP WATER PUMP
12A4200G0103	1	VALVE, POLYPROPYLENE AIR COCK 1/4" MPT X 1/4" TUBING
12A4080S04	1	SEAL ASSEMBLY #397012 FOR A/P PUMP
126628AP		PUMP HOUSING O-RING #391015 FOR A/P PUMP
12A4020Y02	1	PUMP, IMPELLER #391046 FOR A/P PUMP 60HZ (12A4020A06)
12A4020Y04	1	PUMP, IMPELLER #391531 FOR A/P PUMP 50HZ (12A4020A07)
12A2240C4111	1	BRASS HEX NUT FOR MAKEUP FLOAT VALVE
12A2475T0404	1	ELL, S.S. 1/2" FPT 90 DEG.
12A2452M05	1	ADAPTOR, 1/2" MPT x 3/8" TUBING
12A2452E07	1	ELL, SWIVEL, MALE, 90 DEG. 3/8" MPT x 3/8" TUBING
19T1501S0505	1	WATER FLOAT BOX COVER FOR HE SERIES
12A4181T12	2FT	TUBING, POLYETHYLENE 3/8" OD x 1/4" ID <i>Make-up water tubing (priced per foot)</i>
12A2600G12	1	WATER TANK GASKET 16 1/8" OD x 14" ID x 3/16" THK
12A4181T06	5FT	TUBING, TYGON B-44-3, 1-1/2" OD x 1-1/4" ID <i>Pump discharge tubing (priced per foot)</i>
12A4181CL02	1	PUMP SUCTION TUBING, 2" OD x 1-1/2" ID x 4" LONG

Water Tank Drain & Blowdown

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A1501S26	1	PVC DRAIN / BLOWDOWN ASSEMBLY
12A4200G0102	1	VALVES, BRASS AIR COCK, 1/4"MPT
12A2451U19	1	CONNECTOR, MALE, BRASS 1/4" MPT X 1/4" TUBING
12A2450E19	1	ELL, PVC, (NYLON) 1/4"FPT X 1/4" TUBING
12A4181T11	2	TUBING, POLYETHYLENE 1/4OD X .170" ID <i>Pet Cock Valve Tubing (priced per foot)</i>
12A4181T04	3FT	TUBING, TYGON B-44-3, 1-1/4" OD x 1" ID <i>Water tank drain tubing (priced per foot)</i>

HEC Series Parts List

Water-Cooled Condenser

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2115S0401	1	CONDENSER, STANDARD KH2X, 8710 HEC10 & HEC20
12A2115S0301	1	CONDENSER, STANDARD QC3X #8710-41 HEC30
12A2115S0201	1	CONDENSER, STANDARD QC5X #8710-43 HEC40
12A2055B01	1	CONDENSER CLEANING TOOL, ADJUSTABLE 3/8" x 1/2" ID
12659623	1	GASKET SET-K2X, KH2X & K3X "STANDARD" CONDENSER HEC10, HEC20 (12-1/2" x 4-1/2")
1265961	1	GASKET SET-K10X, KH10X, QC3X & QC5X "STANDARD" COND. HEC30 & HEC40 (16" x 5-1/2")
12A4200E0605	1	WATER REGULATING VALVE, 3/4" HEC10, HEC20 & HEC30
12A4200E0802	1	WATER REGULATING VALVE, 1" FPT HEC40
12A4200E0402	1	WATER REGULATING VALVE, 1/2" HP HEC10, HEC20 & HEC30 High pressure (above 90 psi)
12A4200E0801	1	WATER REGULATING VALVE, 1" METREX HEC40 High pressure (above 90 psi)

Air-Cooled Condenser

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2115KS061	1	CONDENSER, HDD-61, 50/50 SPLIT COIL SINGLE PHASE HEC10 & HEC20
12A2115KS101	1	CONDENSER, HDD-101, 50/50 SPLIT COIL SINGLE PHASE HEC30
12A2115KS131	1	CONDENSER, HDD-131, 50/50 SPLIT COIL SINGLE PHASE HEC40
12A2900M0401	1	MOTOR 1/3HP GE#5KCP35MN34GS (KRAMER 049-161) HDD-61 (HEC10 & HEC20)
12A2900M0506	2	MOTOR, 1/2HP, 208/230-1-60HZ, (KRAMER 049-158) HDD-101, HDD-131 (HEC30 & HEC40)
12A2115P0301	1	CONDENSER, FAN BLADE 039-193, 30" HDD-61 (HEC10 & HEC20)
12A2115P0401	2	CONDENSER, FAN BLADE 213455000, 24" HDD-101, HDD-131 (HEC30 & HEC40)

HEC Series Parts List

Air-Cooled Condenser (Con'd)

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2117G05		CONTROL, THERMOSTAT, PENN #A19 <i>(1 Req'd on HDD61, 2 Req'd on HDD101 & HDD131)</i>
12A4200A0503	1	SOLENOID VALVE, 5/8" NORMALLY OPEN <i>HDD-61 (HEC10 & HEC20)</i>
12A4200A0704	1	SOLENOID VALVE, 7/8" NORMALLY OPEN <i>HDD-101, (HEC30)</i>
12A4200A0902	1	SOLENOID VALVE, 1-1/8" NORMALLY OPEN <i>HDD-131 (HEC40)</i>
12A2105C04	1	COIL, #0MKC-2 FOR SPORLAN N/O 208-240V.,50/60HZ
12A4199V42	1	REPAIR KIT #KS-0B14/0E14 FOR SPORLAN 5/8" N/O VALVE
12A4199V44	1	REPAIR KIT #KS-0B25/0E25 FOR SPORLAN 7/8" N/O VALVE
12A4199V45	1	SUCTION STOP VALVE REPAIR KIT FOR SPORLAN 0E34S290
12A4200B0401	1	CHECK VALVE, 1/2" O.D. <i>HDD-61 (HEC10 & HEC20)</i>
12A4200B0502	1	BALL CHECK VALVE, 5/8" O.D. <i>HDD-101, (HEC30)</i>
12A4200B0701	1	CHECK VALVE, 7/8" O.D. <i>HDD-131 (HEC40)</i>
12A4200L0201	1	RELIEF VALVE #3012 SET @ 400#, 1/4" NPT x 3/8" SAE
12A7516E11	1	CONTACTOR / CUTLER-HAMMER 10AMP, 3-POLE <i>Replaces Furnas #45CA20AG</i>
12A7512E13	1	ENCLOSURE, HOFFMAN #A-8R64, 8" x 6" x 4"
12A2396A0501	2	ROTALOCK CONNECTOR, 1 1/8" IDS x 1-1/4-12 THREAD
12A2600T01	2	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-1/4-12 THREAD
12A4200G0408	1	BALL VALVE, 1/2" O.D. WITH SEAL CAP
12A4200G0502	1	BALL VALVE, 5/8" O.D. WITH SEAL CAP
12A4200G0702	1	BALL VALVE, 7/8" O.D. WITH SEAL CAP
12A4200G0902	1	BALL VALVE, 1-1/8" O.D. WITH SEAL CAP

BALL VALVE USAGE: HDD-61 (1/2" & 5/8"), HDD-101 (5/8" & 7/8"), HDD131 (7/8" & 1-1/8")

HEC Series Parts List

Receiver Parts

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200J0405	1	UPPER GAGE COCK VALVE, HENRY 1/2" FPT <i>Replaced Brass Valve 12A4200J0403 - May 1999</i>
12A4200J0406	1	LOWER GAGE COCK VALVE, HENRY 1/2" FPT <i>Replaced Brass Valve 12A4200J0404 - May 1999</i>
12A3050C0301	2	PIPE NIPPLE, 1/2" X 1-1/2" LONG
12A2625G10	1	GAGE GLASS, 1/2" X 20" LONG <i>For Steel Valves (Started use in May 1999)</i>
12A2625G08	1	GAGE GLASS 1/2" X 18 7/8" LONG <i>For Brass Valves (Usage before May 1999)</i>
19T2635G07	1	GAGE GLASS GUARD SET, 18 5/8"
12A4199V26	2	GAGE GLASS PACKING O-RING FOR 1/2" DIAMETER
12A4200L0402	1	RELIEF VALVE #3020 SET @ 350#, 1/2" MPT x 5/8" SAE
12A4200B0502	1	BALL CHECK VALVE, 5/8" O.D.
12A4200R0401	1	ROTA-LOCK VALVE HORIZONTAL 1/2" ID SWT x 1-14 THREAD <i>King Valve</i>
12A2600T02	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-14 THREAD
12A4200R0701	2	ROTA-LOCK VALVE HORIZ. 7/8" ID SWT x 1-1/4-12 THREAD <i>Liquid Return & Thawing Gas</i>
12A2600T01	2	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-1/4-12 THREAD

Note: Valve core and 1/4" seal cap required for Rota-lock valves

12A2451C01	1	CAP, WC, 1/4" FLARE, WITH NEOPRENE SEAL
12A2451V01	1	VALVE CORE FOR 1/4" ACCESS VALVE

Thawing Gas Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200A0705	1	SOLENOID VALVE, SPORLAN ME25S 7/8" ODF 208-230V COIL <i>Thawing gas solenoid (D-valve) after Feb. 1996</i>
12A2105C16	1	COIL, #MKC-2 FOR SPORLAN 208/240V-50/60HZ
12A4199V39	1	REPAIR KIT #KSB25/E25 FOR SPORLAN ME25S
12A4200A0702	1	SOLENOID VALVE, JACKES EVANS RB21ME7 7/8" ODF <i>Thawing gas solenoid (D-valve) prior to Feb. 1996</i>
126232RB	1	COIL #R-23MM W/HOUSING 208/240 for JACKES-EVANS
12A4199V07	1	REPAIR KIT #76754 FOR JE #RB21MS7 (7/8") VALVE
12A4200R0701	1	ROTA-LOCK VALVE HORIZ. 7/8" ID SWT x 1-1/4-12 THREAD <i>Thawing gas stop valve</i>
12A2600T01	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-1/4-12 THREAD
12A2451C01	1	CAP, WC, 1/4" FLARE, WITH NEOPRENE SEAL
12A2451V01	1	VALVE CORE FOR 1/4" ACCESS VALVE

HEC Series Parts List

Liquid Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200C0302	1	EXPANSION VALVE, SPORLAN #EBFV-A-C 3/8" IN x 1/2" OUT HEC10 & HEC20 (Replaced by 12A4200C0312, 6/1996) (96F)
12A4200C0301	1	EXPANSION VALVE, SPORLAN #EBFV-C-C 3/8" IN x 1/2" OUT HEC30 & HEC40 (Replaced by 12A4200C0311, 6/1996) (96F)
12A4200C0312	1	EXPANSION VALVE, SPORLAN #SBF-V-A-C 3/8" IN x 1/2" OUT HEC10 & HEC20
12A4200C0311	1	EXPANSION VALVE, SPORLAN #SBF-V-C-C 3/8" IN x 1/2" OUT HEC30 & HEC40
12A4200A0404	1	VALVES, SOLENOID SPORLAN #ME9S 1/2" ODF 208/230V-50/60 Liquid line solenoid (A-valve)
12A2105C16	1	COIL, #MKC-2 FOR SPORLAN 208/240V-50/60HZ
12A4199V37	1	REPAIR KIT #KSB9/E9 FOR SPORLAN ME9S
126232RB	1	COIL #R-23MM W/HOUSING 208/240 for JACKES-EVANS
12A4199V02	1	REPAIR KIT #76750 FOR JE #RB9MS4 (1/2") VALVE
12A4200R0401	1	ROTA-LOCK VALVE HORIZONTAL 1/2" ID SWT x 1-14 THREAD
12A2600T02	1	ROTA-LOCK PRIMORE TEFLON SEAL FOR 1-14 THREAD
12A4140S04	1	STRAINER, 1/2" ODS Y-TYPE HENRY
12A2195D02	1	DRIER, SPORLAN #C304, 1/2" SAE

Suction Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2000A1	1	SUCTION ACCUMULATOR, REF. RESEARCH 1-1/8"
12A4200N0701	1	CRANKCASE PRESSURE REGULATOR, 7/8" ODF, 0/60 HEC10, HEC20, & HEC30
12A4200N0901	1	CRANKCASE PRESSURE REGULATOR, 1-1/8" ODF, 0/60 HEC40
12A2710H12	1	HEAT-EXCHANGER, DOUCETTE, PRE ASSY HE10, 20, 30 HEC10, HEC20, & HEC30
12A2710H11	1	HEAT-EXCHANGER, DOUCETTE 1-1/8" x 7/8", PRE ASSY HEC40 HEC40

HEC Series Parts List

Discharge Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200A0504	1	SOLENOID VALVE, 5/8" ODF SPORLAN ME14S <i>(X-valve) For air-cooled units only (HEC20 After Feb'96)</i>
12A4200A0705	1	SOLENOID VALVE, SPORLAN ME25S 7/8" ODF 208-230V COIL <i>(X-valve) For air-cooled units only (HEC30/40 After Feb'96)</i>
12A4199V38	1	REPAIR KIT #KSB14/E14 FOR SPORLAN ME14S
12A4199V39	1	REPAIR KIT #KSB25/E25 FOR SPORLAN ME25S
12A2105C16	1	COIL, #MKC-2 FOR SPORLAN 208/240V-50/60HZ
12A4200A0502	1	VALVES, SOLENOID, JACKES EVANS, 5/8" EXTENDED ENDS <i>(X-valve) For air-cooled units only (HEC20 Prior Feb'96)</i>
12A4200A0702	1	SOLENOID VALVE, JACKES EVANS RB21ME7 7/8" ODF <i>(X-valve) For air-cooled units only (HEC30/40 Prior Feb'96)</i>
12A4199V05	1	REPAIR KIT #76753 FOR JE #RB15MS5 (5/8") VALVE
12A4199V07	1	REPAIR KIT #76754 FOR JE #RB21MS7 (7/8") VALVE
126232RB	1	COIL #R-23MM W/HOUSING 208/240 for JACKES-EVANS
12A2975M05	1	MUFFLER, AC&R #S-6031, 7/8" ID <i>Water-Cooled Units</i>
12A2975M07	1	MUFFLER AC&R #S-6307 7/8" ODC <i>Air-Cooled Units</i>
12A4199V05	1	REPAIR KIT #76753 FOR JE #RB15MS5 (5/8") VALVE
126232RB	1	COIL #R-23MM W/HOUSING 208/240 for JACKES-EVANS

Casings

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2080C01	1	CASING, HEC LOWER FRONT
12A2080C02	1	CASING, HEC UPPER FRONT
12A2080C03	1	CASING, HEC UPPER REAR
12A2080C04	1	CASING, HEC LOWER REAR
12A2790L05	18	SOUTHCO #85-11-960-20 1/4 TURN STUD
12A2790L06	18	SOUTHCO #85-47-101-20 CLIP ON RECEPTACLE
12A2790L07	18	SOUTHCO # 85-46-101-39 THERMOPLASTIC WASHER
12A2790L08	18	SOUTHCO # 85-34-201-20 RETAINER

Goldenrod Water Treatment

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2195W0501	1	GOLDENROD WATER TREATMENT, 5" - 13 GPM - NSF
12A2195W0502	1	REPLACEMENT GOLDENROD CELL, 5"
12A2195I01	2	INSULATOR, DELRON FOR 5", 9", OR 12" GOLDENROD
12A2195W0504	1	DELRON THREADED PLUG FOR GOLDENROD

Contactor/Relay Cross Reference

Furnas						Cutler-Hammer						Allen Bradley					
Contactor			Aux Contacts			Contactor			Aux Contacts			Contactor			Aux Contacts		
Vogt #	Furnas #	Desc	Vogt #	Furnas #	Desc	Vogt #	Cutler-Hammer #	Desc	Vogt #	Cutler-Hammer #	Descr	Vogt #	Allen Bradley #	Desc	Vogt #	Allen Bradley #	Descr
12A7516E01	45CA20AG	2 pole 20 Amp	N/A	N/A	N/A	12A7516E09	CE15BNY1	2 pole 10 Amp	N/A	N/A	N/A	12A7516E23	100-C09L10	3 pole (N.O. aux) 9 Amp	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	12A7516E10	CE15ENY1	3 pole 25 Amp	12A7518E15	C320KGS3	1-N.C. / 1-N.O.	12A7516E26	100-C23L01	3 pole (N.C. aux) 23 Amp	12A7518E30	100-SA11	1-N.C. / 1-N.O.
N/A	N/A	N/A	N/A	N/A	N/A	12A7516E13	CE15DN3Y2BB	3 pole 18 Amp	12A7518E20	C320KGS2	1-N.C.	12A7516E26	100-C23L01	3 pole (N.C. aux) 23 Amp	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	12A7516E14	CE15NN3B	3 pole 140 Amp	N/A	N/A	N/A	12A7516E31	100-B110NL3	3 pole 110 Amp	12A7518E34 12A7518E35	195-GA11 195-GA20	1 - N.O./1-N.C. 2 - N.O.
12A7516E03	40FP32AA	3 pole with 1 N.O. aux contact	12A7518E04 12A7518E14	49AAFO 49AAFC	1- N.O. (2 Req) 1-N.C.	* 12A7516E16	CE15HN3BB	3 pole 44 Amp	12A7518E15 12A7518E16	C320KGS3 C320KGS4	1- N.O./1-N.C. 2-N.O.	12A7516E29	100-C43L10	3 pole (N.O. aux) 43 Amp	12A7518E30 12A7518E31	100-SA11 100-SA20	1- N.O./1-N.C. 2 - N.O.
12A7516E05	42BF25AG (42BE25AG)	4 pole 30 Amp Definite Purpose	12A7518E08 12A7518E09	49D22125001 49D22125002	1- N.O. 1-N.C.	**12A7516E17	C25END430B	4 pole 30 Amp Definite Purpose	12A7518E15	C320KGS3	1- N.O./1-N.C.	12A7516E28	100-C37L10	3 pole (N.O. aux) 37 Amp	12A7518E30	100-SA11	1- N.O./1-N.C.
12A7516E02	41NB20AGM	2 pole 25 Amp Definite Purpose	N/A	N/A	N/A	12A7516E18	C25DND325B	3 pole 25 Amp Definite Purpose	N/A	N/A	N/A	12A7516E26	100-C23L01	3 pole (N.C. aux) 23 Amp	N/A	N/A	N/A
12A7516E06	41NB30AGM	3 pole 25 Amp Definite Purpose	N/A	N/A	N/A	12A7516E18	C25DND325B	3 pole 25 Amp Definite Purpose	N/A	N/A	N/A	12A7516E26	100-C23L01	3 pole (N.C. aux) 23 Amp	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	12A7516E22	CE15KN3B	3 pole 73 Amps	12A7518E15 12A7518E16 12A7518E21	C320KGS3 C320KGS4 C320KGT4	1- N.O./1-N.C. 2-N.O. (side) 2-N.O. (top)	12A7516E30	100-C72L00	3 pole 72 Amps	12A7518E30 12A7518E31 12A7518E32	100-SA11 100-SA20 100-FA20	1- N.O./1-N.C. 2 - N.O. (side) 2 - N.O. (top)
12A7517E15	46US22G	2 N.O. 2 N.C.	N/A	N/A	N/A	12A7517E18	D15CRY1	2 N.O. 2 N.C.	N/A	N/A	N/A	12A7516E43	100-C09L200	2 N.O. 2 N.C.	N/A	N/A	N/A
12A7517E16	46US31G	3 N.O. 1 N.C.	N/A	N/A	N/A	12A7517E20	D15CRY3	3 N.O. 1 N.C.	N/A	N/A	N/A	12A7516E43	100-C09L200	2 N.O. 2 N.C.	12A7518E30	100-SA11	1-N.C. / 1-N.O.

Note: * Contactor structured with Aux Contacts (CH#: C320KGS3 - 1 N.O. / 1 N.C. and CH#: C320KGS4 - 2 N.O.)

** Contactor structured with Aux Contact (CH#: C320KGS3 - 1 N.O. / 1 N.C.)

Revision: 2/15/99

Model 9000 - compressor contactor - Allen Bradley 702D0H93 has replaced with 500D0H930 (NEMA 3)

Where Used Listing - Contactors/Relays

Vogt # (Furnas)	Where Used	Notes	Vogt # (Cutler-Hammer)	Vogt # (Allen-Bradley)
12A 7516E01	Fan Contactor - M1500-M4000, HE B-series, HE C-series Power Failure - M1500-M4000, HE B-series Pump Contactor - HE C-Series Cutter Contactor - HE C-Series Bin Control - (B)P118F / P218F Power Failure - (B)P118F / P218F, (C)P118F, P18XT, P112F	12A7516E11 (3 pole) can be used	12A 7516E09	12A7516E23
N/A	Fan Contactor - (B)P118F, (C)P118F, P18XT, P112F	Requires 1 N.C. / 1 N.O. Aux Contact	12A 7516E10	12A7516E26
N/A	Compressor Contactor - HE C-series	Requires 1 N.C. Aux Contact	12A 7516E13	12A7516E26
N/A	Compressor Contactor - HES-series		12A 7516E13	12A7516E26
N/A	Compressor Contactor - P18XT	Requires 1 N.C. / 1 N.O. Aux Contact and 2 N.O. Aux Contact (side mount) and 2 N.O. Aux Contact (top mount)	12A 7516E14	12A7516E31
12A 7516E03	Compressor Motor Contactor - M6000-M9000, (B)P118F / P218F	Requires 3 N.O. - 1 N.C. Aux Contact	12A 7516E16	12A7516E29
12A 7516E05	Compressor Contactor - HE B-series Control Contact - HE B-Series * Control Contact - M1500-M4000, M6000-M9000 Compressor Contactor - M1500-M4000	Requires 1 N.C. / 1 N.O. Aux Contact Requires 1 N.O. Aux Contact No Aux Contact Required No Aux Contact Required	12A 7516E17	12A7516E28
12A 7516E06	Fan Contactor - Old (B)P118F / P218F (3 pole)	Definite Purpose contact	12A 7516E18	12A7516E26
12A 7516E02	Fan Contactor - M6000-M9000 (2 pole)			
12A 7517E15	Reversing Relay - M1500-M9000, HE B-series, HE C-Series, HE S-Series Control Relay - (B)P118F / P218F, (C)P118F, P18XT, P112F		12A 7517E18	12A7516E43
12A 7517E16	Control Relay - M1500-M9000, HE B-series (3 N.O./1 N.C.) Control Contact - M1500-M4000, M6000-M9000 (3 N.O.)	Stock Potter/Brumfield for M-series machine (12A7517E08)	12A 7517E20	12A7516E43
N/A	Compressor Contactor - (C)P118F, P112F	Requires 1 N.C. / 1 N.O. Aux Contact and 2 N.O. Aux Contact (side mount) and 2 N.O. Aux Contact (top mount)	12A 7516E22	12A7516E30

*Note: Stock Potter/Brumfield for direct replacement

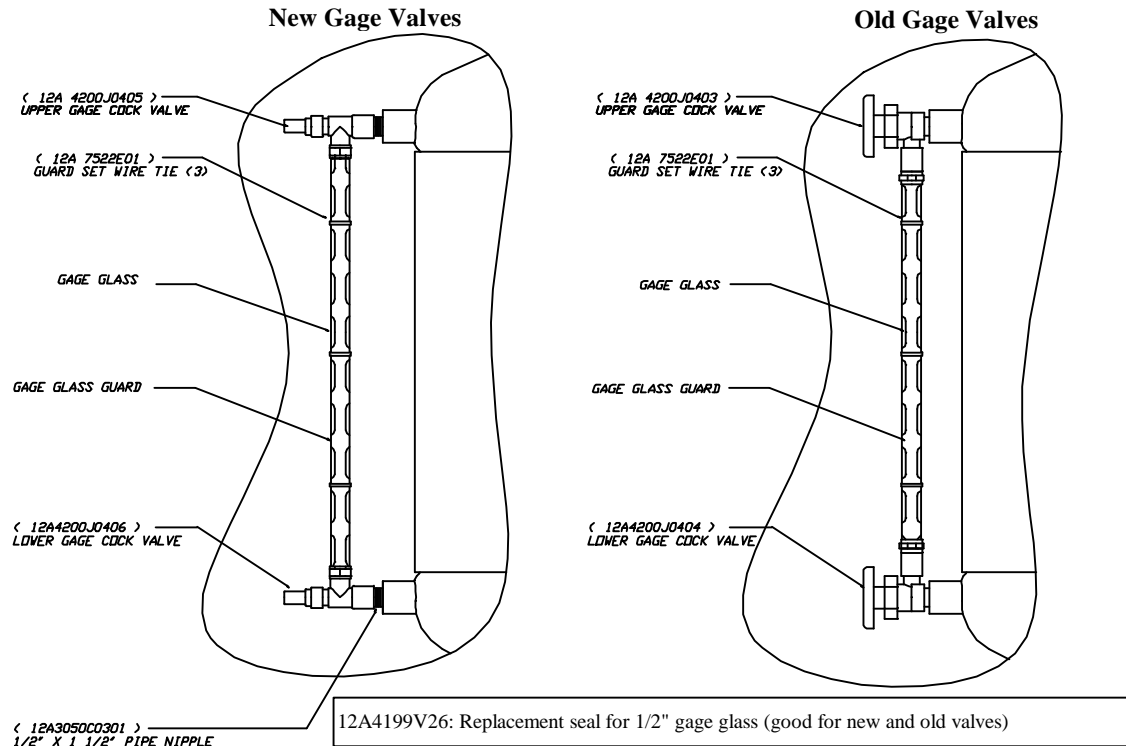
Revision: 7/9/98

Gage Cock Valves / Sightglass / Gage Guards

Date: 10/06/99

	Machine	Old		New	
Valve	All Machines	12A4200J0403	Upper Valve (# 6022)	12A4200J0405	Upper Valve (# 5022)
		12A4200J0404	Lower Valve (# 6021)	12A4200J0406	Lower Valve (# 5021)
Gage Glasses & Guards	HE, P112, P118	12A2625G08	Glass - 18 7/8" (PS95-127)	12A2625G10	Glass - 20"
		12A2635G07	Guard - 17 5/8" (PS94-126) / (set of 2)	19T2635G07	Guard - 18 5/8" / (set of 2)
	P18XT	12A2625G02	Glass - 27 1/8"	12A2625G11	Glass - 28 3/8"
		12A2635G06	Guard - 28" (PS94-209) / (set of 2)	19T2635G06	Guard - 27 1/4" / (set of 2)
	P24, P34	12A2625G05	Glass - 29"	12A2625G11	Glass - 28 3/8"
		12A2635G06	Guard - 28" (PS94-209) / (set of 2)	19T2635G06	Guard - 27 1/4" / (set of 2)
	1500, 1800, 3000	12A2625G01	Glass - 10 3/16"	12A2625G0101	Glass - 11 5/16"
		12A2635G01	Guard - 8 3/4" / (set of 2)	19T2635G07	Guard - 18 5/8" (Cut to 10 3/16" / (set of 2))
	2500, 4000, 6000, 7000, 9000	12A2625G06	Glass - 15 1/8"	12A2625G0601	Glass - 16 1/4"
		HE's before 1991	12A2635G02	Guard - 13 3/4" (PS94-97) / (set of 2)	19T2635G07

Note: If changing from the old style valve to the new gage valve, a 1/2"X1 1/2" (12A3050C0301) pipe nipple must be used to connect the valve to the receiver
 12A2635G06 - Gage Guard 60"length # PS94-342 (was 28")



Cross Reference

Revision Date: 7/14/98

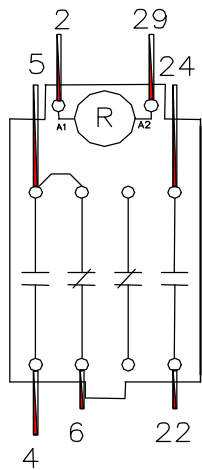
Solenoid Valves

		Jakes-Evans				Sporlan			
		Valve		Rebuild Kit		Valve		Rebuild Kit	
Where Used	Size	Vogt Part #	Model #	Vogt #	Part #	Vogt Part #	Model #	Vogt #	Part #
X-valve (P18F's)	1 5/8"	N/A	N/A	N/A	N/A	12A 4200A1103	ME42S2130	12A 4199V28	KS-E42
Kramer Air cooled condenser - HDD-590 (Normally Open)	1 5/8"	N/A	N/A	N/A	N/A	12A 4200A1104	OE42S2130	12A 4199V47	KS-OE42
Kramer Air cooled condenser - HDD-311 & 361 (Normally Open)	1 3/8"	N/A	N/A	N/A	N/A	12A 4200A1102	OE34S2110	12A 4199V45	KS-OE34
D-valve (B-Series P118F's)	1 3/8"	N/A	N/A	N/A	N/A	12A 4200A1101	ME42S2110-20	12A 4199V28	KS-E42
Kramer Air cooled condenser - HDD-131 (Normally Open)	1 1/8"	N/A	N/A	N/A	N/A	12A 4200A0902	OE34S290	12A 4199V45	KS-OE34
SS-valve (HES) with bypass									
X-valve (B-Series P118F's)	1 1/8"	12A 4200A0901	RB41MS9	12A 4199V10	76757	N/A	N/A	N/A	N/A
X-valve (C-Series P118F's)	1 1/8"	12A 4200A0903	RB41ME9	12A 4199V10	76757	12A 4200A0904	ME34S290	12A 4199V46	KS-E34
D-valve & X-valve (6000)									
Not Used	1 1/8"	N/A	N/A	N/A	N/A	12A 4200A0905	ME25S290	12A 4199V39	KS-B25/E25
Kramer Air cooled condenser - HDD-101 (Normally Open)	7/8"	N/A	N/A	N/A	N/A	12A 4200A0704	OE25S290	12A 4199V44	KS-OB25/OE25
D-valve & X-valve (Early HEB-30's & HEB-40's)	7/8"	12A 4200A0701	RB21MS7	12A 4199V07	76754	N/A	N/A	N/A	N/A
X-valve (M2500, M3000 & M4000)									
D-valve & X-valve (HE-30's & HE-40's)	7/8"	12A 4200A0702	RB21ME7	12A 4199V07	76754	12A 4200A0705	ME25S270	12A 4199V39	KS-B25/E25
D-valve (Small machines before 1982)	7/8"	----	B6MS & B6MS7	12A 4199V06	76642	N/A	N/A	N/A	N/A
Kramer Air cooled condenser - HDD-61 (Normally Open)	5/8"	N/A	N/A	N/A	N/A	12A 4200A0503	OE14S250	12A 4199V42	KS-OB14/OE14
X-valve (HEB-10's)	5/8"	12A 4200A0501	RB15S5	12A 4199V05	76753	12A 4200A0501	MB19S2	12A 4199V43	KS-B19/E19
D-valve & X-valve (1500 & 1800)			(changed part to Sporlan)						
6000 & 9000 TXV conversion kit									
X-valve (HE-20's)	5/8"	12A 4200A0502	RB9ME5	12A 4199V02	76750	12A 4200A0504	ME14S250	12A 4199V38	KS-B14/E14
D-valve (early M1500's & M1800's)	5/8"	----	B4MS & B4MS5	12A 4199V04	76641	N/A	N/A	N/A	N/A
Flush valve & Compressor heads (24's & 34's)	3/4"	12A 4200A0602	GP607	N/A	N/A	12A 4200A0607	KBR246P1	12A 4199V48	KS-BR24
Flush valve (P18 - Used before vaccumm break valve)	3/4"	12A 4200A0603	12F23C2148ACF	N/A	N/A	N/A	N/A	N/A	N/A
A-valve (Small machines before 1982)	1/2"	----	B3MS4	12A 4199V01	76640	N/A	N/A	N/A	N/A
A-valve (Early HEB's)	1/2"	12A 4200A0402	RB9MS4	12A 4199V02	76750	N/A	N/A	N/A	N/A
A-valve (HE's)	1/2"	12A 4200A0403	RB9ME4	12A 4199V02	76750	12A 4200A0404	ME9S240	12A 4199V37	KS-B9/E9
A-valve & TC-valve (HE Lowside)	1/2"								
A-valve (P24F's & P24FL's)	1/2"	12A 4200A0401	200RB5S4-M (Alco)	12A 4199V49	KS30115				
Flush valve (P118F Crushed Ice)	3/8"	12A 4200A0302	201WB06P03 (Alco)	12A 4199V50	K1112	12A 4200A0303	W6P1	N/A	N/A
Vaccumm break (P18's & Von's)	1/4"	12A 4200A0202	04F2002118ACFGC	N/A	N/A	12A 4200A0203	EV1-3-NO (Danfoss)	N/A	N/A

Solenoid valve coils: Sporlan N.C. (MKC-2) - 12A2105C16
 Sporlan N.O. (OMKC-2) - 12A2105C04
 Jakes-Evens N.C. (R-23MM) - 126232RB

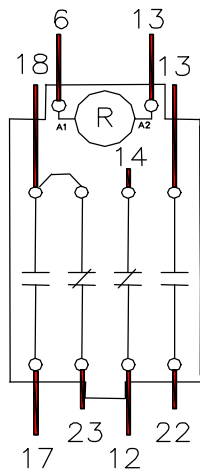
Allen-Bradley Reversing Relay/CR Relay Wiring

12A7516E43 – 2NO/2NC MOTOR RATED CONTACTS



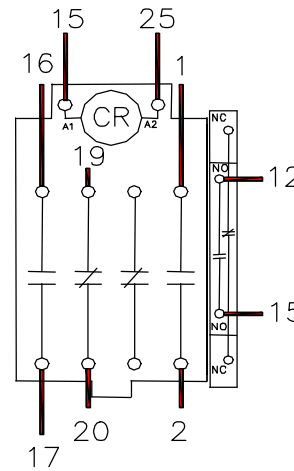
C-SERIES
HE

REPLACES 12A7517E08 (POTTER-BRUMFIELD), 12A7517E15 (FURNAS)
& 12A7517E18 (CUTLER-HAMMER)



B-SERIES HE &
M-SERIES R12

12A7516E43 – 2NO/2NC MOTOR RATED CONTACTS

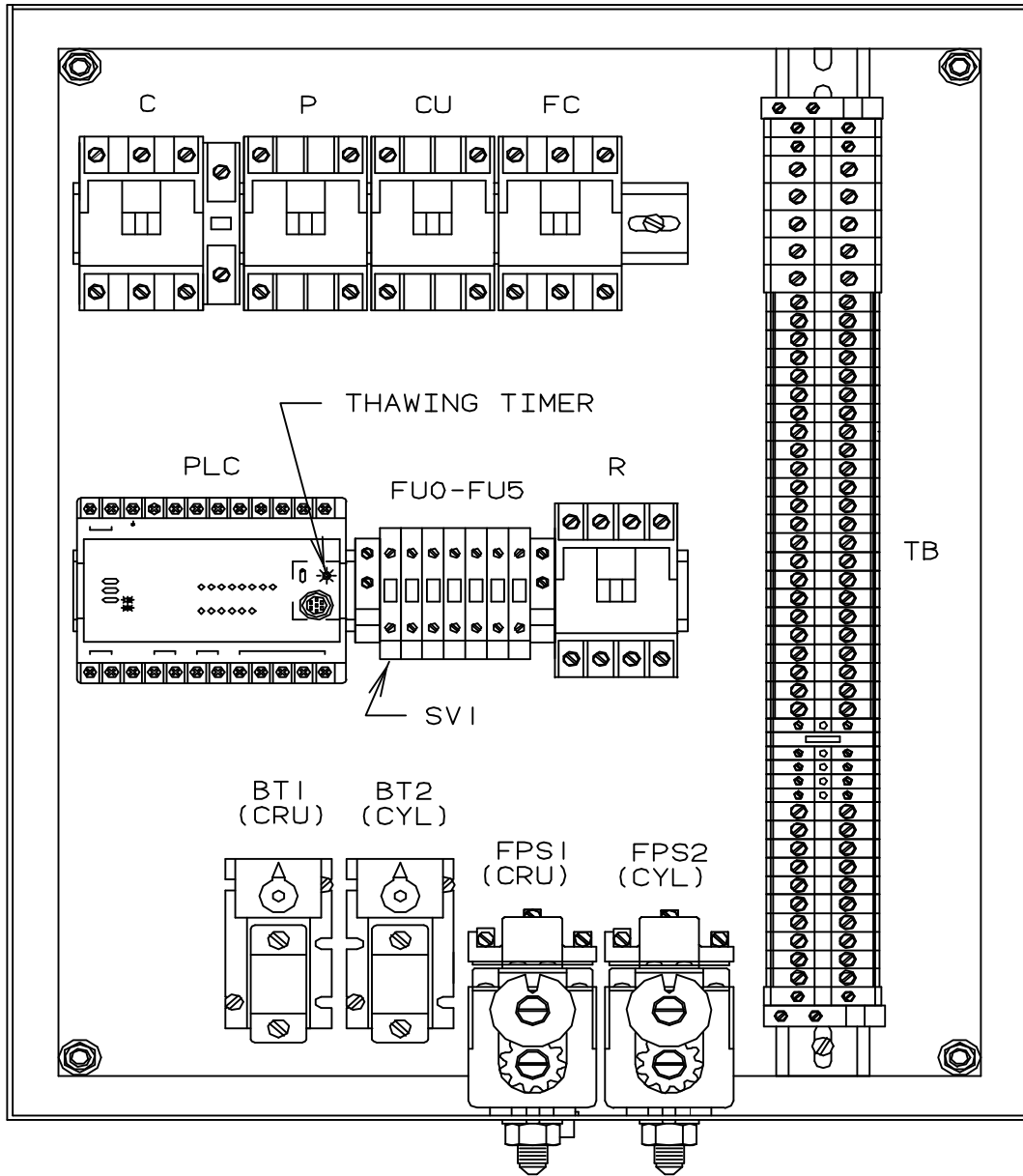


B-SERIES HE &
M-SERIES R12

REPLACES 12A7517E16 (FURNAS) & 12A7517E20 (CUTLER-HAMMER)

NOTE: REQUIRES 12A7518E30
1NO/1NC AUX CONTACT

HEC Control Panel Layout



***BT1** Bin Thermostat (Crushed)

BT2 Bin Thermostat (Cylinder)

C Compressor Contractor
Auxiliary Contact

PLC Programmable Controller

***R** Reversing Relay

TB Terminal Block Assembly

SVI Service Indicator Switch (part of fuse block assembly)

***FPS1** Freezer Pressure Switch (Crushed)

FPS2 Freezer Pressure Switch (Cylinder)

P Pump Contactor

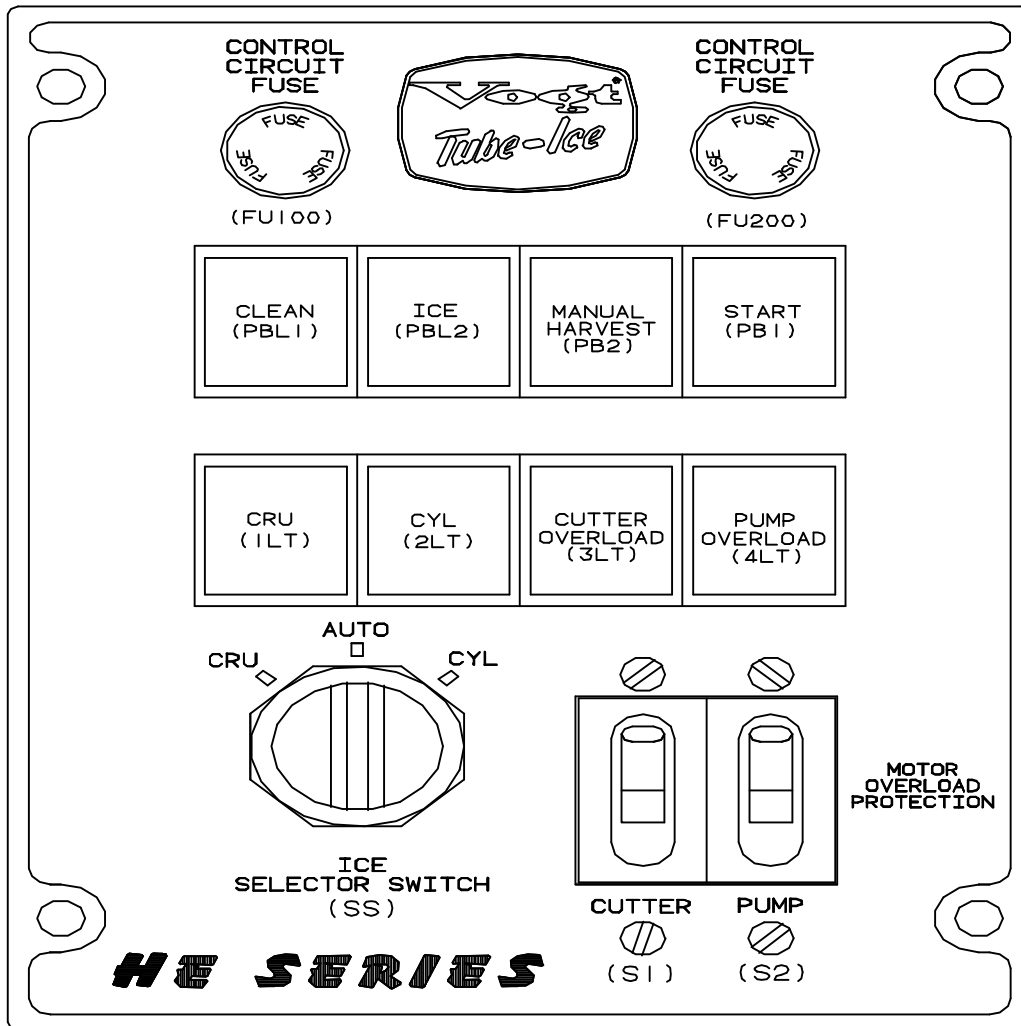
CU Cutter Contactor

FC Fan Contactor (Air-cooled only)

FU0-FU5 PLC Protection Fuses (part of fuse block)

Fuses (FU0- 2 amp fuses)

HEC Control Panel Layout



FU100	Fuse 2.5 amp	S1	Cutter Overload Switch
FU200	Fuse 2.5 amp	S2	Pump Overload Switch
PBL1	Clean Lighted Push Switch	*1LT	Cylinder Light
PBL2	On/Off Lighted Push Switch	*2LT	Crushed Light
PB1	Start Push Button	3LT	Cutter Overload Light
PB2	Manual Harvest Push Switch	4LT	Pump Overload Light
*SS	Selector Switch		