

P34AL PARTS LIST

Note: The P34AL low-side ammonia machine began production in 1976. The original control panel utilized Allen-Bradley NEMA components, and in mid-1993 changed to include Cutler-Hammer components. The control panel was changed to Allen Bradley I.E.C. components in mid-1999 those items will be listed below as replacements.

Control Panel, Allen-Bradley I.E.C Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2590G12	1	GAGE, DURO #156,4 1/2" DIA, 30" TO 150 LBS, 1/4" BC R717 SCALE <i>Suction Pressure Gage (Optional)</i>
12A2590G13	1	GAGE, DURO #156,4 1/2" DIA,30" TO 300 LBS,1/4" BC R717 SCALE <i>Discharge Pressure Gage (Optional)</i>
12A2117D01	1	CONTROL, DUAL PRESS, PENN P70MA-2C, MAN. RESET SPST F <i>(Optional)</i>
12A7500E60	1	SELECTOR SWITCH, 2 POSITION, 2 <i>"1SS" Hand/Auto Switch</i>
12A7500E74	1	CONT BLK/MNTING LATCH, 1NO/1NC <i>Contact Block for 12A7500E60 Selector Switch</i>
12A7500E57	1	PUSH BUTTON, MOMENTARY, RED, A <i>"1PB" Stop Push-Button Switch</i>
12A7500E76	1	CONT BLK/MNTING LATCH, 1NC, <i>Contact Block for 12A7500E57</i>
12A7500E56		PUSH BUTTON, MOMENTARY, GREEN, <i>"2PB" Start Push-Button Switch</i>
12A7500E75	1	CONT BLK/MNTING LATCH, 1NO, <i>Contact Block for 12A7500E56</i>
12A7500E58	1	PUSH BUTTON, MOMENTARY, WHITE, <i>"3PB" Manual Harvest Switch</i>
12A7500E75	1	CONT BLK/MNTING LATCH, 1NO, <i>Contact Block for 12A7500E58</i>
12A7500E78B	1	BLUE LED LIGHT MODULE/MOUNTING <i>"1LT" Freezing</i>
12A7500E78W	1	WHITE LED LIGHT MODULE/MOUNTIN <i>"2LT" Liquid Feed</i>
12A7500E78R	1	RED LED LIGHT MODULE/MOUNTING <i>"3LT" Thawing</i>
12A7520E35	3	BULB, #755, REPLACEMENT FOR AB
12B7503E21	1	PLEASEUSE PART NUMBER 12B7503E20
12B7503E20	1	TIMER, ELAPSED, 187-264VAC, 50
12A7503E22	1	THAW TIMER ONLY ,AB #700-HRM12 <i>"2TR"</i>
12A7503E39	1	TIMER BASE, TIMER BASE, AB #70
<p>Note: A timer is the standard method to control the "Freeze Cycle" on P34AL Units. Analogue timers were used until the mid-1990's at that time a change was made to digital timers which are still being used. Please verify the type timer being replaced along with the control voltage to ensure the correct replacement is provided.</p>		
12A7503E3K	1	KIT, TIMER, EAGLE #CX202B6 DIG

		Primary Freezing Timer
12A7503E4K	1	KIT, TIMER, EAGLE #CX202A6 DIG
		Primary Freezing Timer
12A7503E04	1	TIMER,EAGLE SIGNAL #HP56B601,0
		Analogue Primary Freezing Timer
12A7503E03	1	TIMER EAGLE SIGNAL #HP55B601 0
		Analogue Primary Freezing Timer
12A7503E2	1	TIMER , EAGLE SIGNAL #HP518B60
		Analogue Primary Freezing Timer
12A7503E05	1	TIMER #HP54B601 CYCL-FLEX 10 M
		Analogue Primary Freezing Timer
12A7503E06	1	TIMER 60MIN EAGLE SIGNAL #HP56
		Analogue Primary Freezing Timer
12A7503E02	1	TIMER 30MIN EAGLE SIGNAL #HP55
		Analogue Primary Freezing Timer
12A2117C03	1	CONTROL, PRESS SW, ASCO #PA16A
		Option to Freeze Timer, requires Transducer (12A2117T03)
12A2117T03	1	CONTROL, TRANSDUCER, ASCO RE10A44,
		Used with Freezer Pressure Switch 12A2117C03
12A7517E27	1	RELAY, 10A, 2 NO/2 NC, 208/240V COIL AB #700-CF220L
		"CR1" Relay for 208/240 Volt Controls
12A7517E28	2	RELAY, 10A, 3 NO/1 NC, 208/240V AB #700-CF310L
		"CR2 or CR3" Relay for 208/240 Volt Controls
12A7517E32	1	RELAY, 10A, 2 NO/2 NC, 120V
		"CR1" Relay for 120 Volt Controls
12A7517E33	2	RELAY, 10A,3 NO/1 NC, 120V
		"CR2 or CR3" Relay for 120 Volt Controls
12A7518E30	1	AUX. CONTACT, 10A, 1 NO/1 NC, SIDE MOUNT AB #100-SA11
12A7503E38	1	TIMER, PNEUMATIC, ON-DELAY, AB
		Time Delay for Cutter Motor on "1CR" Relay
12A7516E23	1	CONTACTOR, 9A, 3 POLE, W/NO AUX
		"2M" Water Pump or "3M" Cutter Motor (9-amp Max)
12A7516E24	1	CONTACTOR, 12A, 3 POLE, W/1NO AUX
		"2M" Water Pump or "3M" Cutter Motor (12-amp Max)
12A7505E21	1	CONNECTOR KIT FOR 140MT-C / CO
		Connecting Kit Cutter/Pump Contactor to Motor Starter
12A7530E55UL	1	MANUAL MOTOR STARTER, 2.5-4.0A
12A7530E56UL	1	MANUAL MOTOR STARTER, 4.0-6.3A
12A7530E57UL	1	MANUAL MOTOR STARTER, 6.3-10.0
12A7518E33UL	2	AUX. CONTACT, 6A, 1 NO TRIP, 1 NC TRIP, FRONT MOUNT, AB #140MT-
		Auxillary for Water Pump and Cutter Motor Starter
Note: If replacing Water Pump Or Cutter Motor Contactor in Pre-1993 Allen Bradley Panel or Pre-1999 Cutler-Hammer Control Panel, the Contactor and Overload Relays listed below will be required (wiring drawing available upon request). Amp rating on motors should be set in compliance with name plate amp rating when setting the overload relay.		
12A7516E24	1	CONTACTOR, 12A, 3 POLE, W/1NO AUX
		"2M" Water Pump or "3M" Cutter Motor (12-amp Max)
		Water Pump or Cutter Motor Contactor (12-amp Max)
12A7538E11	1	OVERLOAD RELAY, 1-5A, 3PH, SOL

		Cutter Motor or Water Pump 460 Volt
12A7538E12	1	OVERLOAD RELAY, 3.2-16A, 3PH,
		Cutter Motor or Water Pump 230 Volt
12A7519E31		TRANSFORMER, 1KVA, HEVI-DUTY
12A7519E24		TRANSFORMER, HEVI-DUTY #HS14F1
12A7515E21S	1	CIRCUIT BREAKER, 3A, 2 POLE, 4
		"CB4" Control Circuit 460V
12A7515E22S	1	CIRCUIT BREAKER, 6A, 2 POLE, 4
		"CB4" Control Circuit 200/208/230V
12A7515E33S	1	CIRCUIT BREAKER, 4A, 2 POLE, 4
		"CB4" Control Circuit 400V

Freezer Components

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A2600G1	1	GASKET 37" OD X 33" ID X 3/16"
12B2145C07	1	P34 POLYCARBONATE FREEZER COVE
		(Requires the valve and pipe listed below when replacing stainless, galvanized or polycarbonate cover with 2-1/2" hole)
12A4200B1008	1	VALVE, AIR ADMITTANCE, 4" STUD
19T3049P0401	1	PIPE, 4" STD.WT. PVC 8" LG. DRILLED (VENT)
19T4001S0916	4	P34 PLASTIC FREEZER COVER RETA
12A2240H4109	16	NUT, WING, BRASS, 3/8"-16NC
12A2250A12	16	WASHER, FLAT 3/8" X 1" OD (300
12B2185V12	564	WATER DISTRIBUTOR 1" 16GA. TUBE, WHITE, VENTED WITH 7 1/2"
12B2185V22	420	WATER DISTRIBUTOR 1 1/4" 16GA. TUBES, WHITE, VENTED
12B2185V32	306	WATER DISTRIBUTOR 1 1/2" 16GA. TUBES, WHITE, VENTED
12B2185V42	228	WATER DISTRIBUTOR 1-3/4" 16GA. TUBES, WHITE, VENTED
12A4009R01		PLUG, RUBBER 7/8" OD X 2" LG F
		Requires 3/8" Bolt, Nut & Washers Below
12A2215H1119	1	CAP SCREW, 3/8"-16NC X 3" L
12A2240A1109	1	NUT, HEX 3/8"-16NC S.S. (FUL
12A2250A109	2	WASHER, CUT 3/8" SS X 7/8" OD
		(Use this washer for 1" tubes)
12A4009R02		PLUG, RUBBER 1"OD X 2 1/2"LG F
		Requires 3/8" Bolt, Nut & Washers Below
12A2215H1119	1	CAP SCREW, 3/8"-16NC X 3" L
12A2240A1109	1	NUT, HEX 3/8"-16NC S.S. (FUL
12A2250A12	2	WASHER, FLAT 3/8" X 1" OD (300
		(Use this washer for 1 1/4" & 1 1/2" tubes)
12A4009R03		PLUG, RUBBER 1 1/4"OD X 2 1/2"
		Requires 3/8" Bolt, Nut & Washers Below
12A2215H1119	1	CAP SCREW, 3/8"-16NC X 3" L
12A2240A1109	1	NUT, HEX 3/8"-16NC S.S. (FUL
12A2250A12	2	WASHER, FLAT 3/8" X 1" OD (300
		(Use this washer for 1 1/4" & 1 1/2" tubes)
12A7500E22	1	FLOAT SWITCH ASSEMBLY, HANSEN
		Replaces Alco FS1A or RS Type LL
12A7500E24		SWITCH ASSEMBLY, HANSEN #HLLSW

		Also can be used on RS Type LL
12A7509E17		HEATER, HANSEN #HTR2, 230V, 10
		Optional - Heater for Refrigerant Float Switch Assembly
12A2600F01	2	GASKET, HANSEN #70-0132 FOR ST
12A2625G03	1	GAGE GLASS 1/2 X 28 1/8 PYREX
		For Use with Hand Wheel Gage Cock Valves
12A2625G11	1	GAGE GLASS, 1/2" DIA. X 28 3/8
		For Use with Service Wrench Gage Cock Valves
12A2625G05	1	GAGE GLASS 1/2"X 29" LG., RED
		For Custom Application (Cut to Fit)
19T2635G06	1	GAGE GLASS GUARD SET, 27 1/4"
		For Use with Service Wrench Gage Cock Valves
12A2635G06	1	(REPLACED BY 19T4001S0672) GAG
		For Custom Application (Cut to Fit)
12A4199V26	2	REPAIR GROMMET VALVE, PACKIN
12A4200J0405	1	VALVES, UPPER GAGE COCK, HENRY
		Replaced Hand Wheel Valve 12A4200J0401 - May 1999
12A4200J0406	1	VALVES, LOWER GAGE COCK, HENR
		Replaced Hand Wheel Valve 12A4200J0402 - May 1999
12A3050C0301	2	PIPE NIPPLE, 1/2 X 1 1/2 EX H

Note: Serial number of unit required for purchase of relief valves. Relief valve setting must not exceed the design pressure of the vessel.

12A4200L0409	2	VALVES, RELIEF, SET @275# HANS
12A4200M0402	1	VALVES, 3-WAY, HANSEN #H8021,

Cutter Drive

Note: The cutters on the original P34 units were nickel plated carbon steel with a galvanized water tank. In 1977 the entire water tank and cutter was changed to stainless steel. Reliance one piece gearmotors were used until a design change in 1998 to the separate Grove reducer and U.S. Motor.

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
19T2165K3400	1	GEARMOTOR REPLACEMENT KIT, DOD
		Replaces Reliance Gearmotor used until 1998
		(Grove Gearmotor, Mounting Plate, Spit Taper Bushing)
12A2900M0803	1	MOTOR/GEAR REDUCER, 2 HP GROVE
		Units Built Since 1998
12A2900M0805	1	MOTOR, 2 HP, US MOTOR # HT86,
12A4030R11	1	GEAR REDUCER, GROVE # FMQ826-
12A4080S18	1	DISCONTINUED SEAL KIT FOR GRO
		Includes Input & Output Seal
19T1501S26	1	P34 Mtg Plate Assm for Grove 2
12B2615D05	1	P34 DRIVE GEAR , ALUMINUM / BR
		Replaces Cast Iron Gear
12A4080S11	1	SEAL, KIT #07901938AE FOR RELI
12B2060B01	1	SPLIT-TAPER BUSHING, 1 1/8" BO
		Used with Reliance gearmotors

12B2060B02	1	SPLIT-TAPER BUSHING, 1 1/4" BO
		<i>Used with Grove gearmotors</i>
12A2215G111	3	CAP SCREW,5/16"-18NC X 1" LG.
12A2250B108	3	WASHER, LOCK 5/16" SS (300 S
19T2615R04	1	RING GEAR, P34 FINISHED ALUMIN
12A3040S05	8	PIN, 1/4 X 3/4, 31S-250-075 (

Cutter Internals

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
19T2035B02	2	CUTTER BLADE, P34, 15" LONG
19T2010A13	2	P34 ADAPTOR PLATE, 3/16" THK S
19T4130T09	8	SPACER, 1/2" SCH 160 SS PIPE X
12A2226H1117	8	SCREW, FLAT HEAD SS, 3/8"-16N
12A2240A1309	8	NUT, HEX 3/8"-16NC S.S. (HEA
19T2025B0162	1	P34 BEARING BRACKET ASSM NEW W
19T2163D0403	1	TINES DISC - P34 CYLINDER ICE
19T4130C02	1	P24/34 TINES HUB SPACER
19T4090S03	1	CUTTER SHAFT P24/34
19T4065R01	1	P24/34 CUTTER RETAINER
19T2165K2434	1	P24/P34 CUTTER REPAIR KIT
		<i>Kit Contains Items for Cutter Maintenance and Rebuild</i>

Water Tank/Circulating Water

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
19T2165C0306	1	CUTTER/TANK, P34 ASSEMBLY FOR
		<i>Includes complete cutter assembly and drive train, water tank</i>
		<i>tines disc, & bearing support. Does not include water pump</i>
		<i>or internal water piping (specify tube size when ordering)</i>
12A2600G11	1	GASKET,40"OD X 37"ID X 3/16" G
12A4200H0603	1	VALVES, FLOAT 1 1/2" FPT, ROBE
		<i>Current Valve used on Water Tanks with 1 1/2" Connection</i>
12A3050S0701		PIPE NIPPLE, 1 1/2" SCH40, CLO
12A4200HP05		VALVES, STEM, FOR ROBERTS, 1/
12A4200HP05A		STEM ADAPTER, 3/8 MPT - 1/8 FI
12A4200HP04		FLOAT, VALVE, ROBERTS #PF8, 1/
12A4200H0606	1	VALVE, FLOAT, ROBERTS #R400-3/
		<i>Used on Water Tanks from 1994 to 2004 W/3/4" Connection</i>
12A4200HP01	1	VALVES, STEM, SR10, STAINLESS
12A4200HP02	1	VALVES, FLOAT FOR ROBERTS #PF4
12A4200H0801	1	VALVES, FLOAT, HUDSON 1" FPT
12A4020G12	1	PUMP, GOULD XYLEM ESH, 3 HP, 2
		<i>Stainless Steel Housing, Bottom Flange Mount</i>
12A2600R09	2	GASKET, P24/P34 S.S. PUMP SUCT
12A4080S13	1	SEAL, PUMP FOR GOULD 2 & 3HP P
12A4200A0607LF	1	VALVE, WATER, 3/4", GRANZOW
		<i>Water Tank Flush Valve (Replaces Sporlan & Jake Evans)</i>
12A2105C42K	1	ASSEMBLY, COIL, 230/240V GRANZ

12A2105C41K	1	ASSEMBLY, COIL, 110/120V GRANZ
19T1500S15	1	SPRAY PIPE ASSY, P34 WATER TANK FLUSH
126223	1	COIL 208-240V/50-60HZ SPORLAN
12A2105C06	1	COIL, 120 VOLT, 50/60 HZ, SPOR
12A2105C17	1	COIL, J/E #G-23, 208/230V.,50/
12A4170T01	1	THERMOMETER, WEKSLER 2T04B,2"
12A4205G0601LF	1	3/4" STOP VALVE, LEAD FREE BRO
12A4181T15	15	TUBING, PLASTIC, CLEAR, 2 7/8 ID X 3 1/4" OD NSF
		<i>Circulating Water (\$ per ft.) Add Labor Charge to Cut</i>
12A4181T09	15	TUBING, CLEAR VINYL, 2 ID 3/16 WAL
		<i>Overflow (\$ per ft.) Add Labor Charge to Cut</i>
12A4078C02	1	SPLASH CURTAIN, P34 TUBE ICE M
12A4020S03	1	PUMP, PMP-56, 3 HP, 460/230-3-
		<i>Cast Iron Housing</i>
12A2600R03	1	GASKET,5 1/4" OD X 3 1/4" ID X
		<i>For Scot Pump Suction</i>

Liquid Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200C0802	1	VALVES, EXPANSION, HANSEN #RSB101C 1" SOCKET WELD
12A4200A0801	1	VALVE KIT, SOLENOID, HANSEN HS7A , 1" PORT, 70-0267, NO COIL
		<i>Replaces Alco M511 & Hansen HS8</i>
12A4140S07	1	STRAINER KIT, HANSEN #ST100D, #60 MESH, FOR 3/4", 1" & 1 1/4",
12A2600F01		GASKET, HANSEN #70-0132 FOR ST
12A2538S0107		FLANGE KIT 1" FPT HANSEN #HKT100/100 (70-0113)
12A4200B0602	1	VALVES, CHECK, HANSEN #HCK4-5, 1 1/4" PORT / ADAPTER RING
126229	1	COIL KIT,#70-1086, 208/230V-50
12A2105C08	1	COIL KIT, HANSEN #70-1085, 115
12A4199V52	1	REPAIR KIT,VALVE, HANSEN HS7
12A7500E22	1	FLOAT SWITCH ASSEMBLY, HANSEN
		<i>Replaces Alco FS1A or RS Type LL</i>
12A7500E24	1	SWITCH ASSEMBLY, HANSEN #HLLSW
		<i>Also can be used on RS Type LL</i>
12A7509E17		HEATER, HANSEN #HTR2, 230V, 10
		<i>Optional - Heater for Refrigerant Float Switch Assembly</i>
12A2600F01	2	GASKET, HANSEN #70-0132 FOR ST

Thawing Gas Line

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200D1402	1	REGULATOR, 2 " OUTLET PRESS W/
		<i>Replaces Hubbell PHS, Alco FA5-18 & RS #A40AS</i>
19T2535H0200	1	ADAPTER, 2" PRESSURE REGULATOR
12A4199V34H	1	REPAIR KIT, 2" HANSEN HA40S RE
126229	1	COIL KIT,#70-1086, 208/230V-50
12A2105C08	1	COIL KIT, HANSEN #70-1085, 115
126246	1	COIL (240/60HZ) FOR S4AE, S6A, S7A & S8F VALVES ENCAPSULATE
126247	1	COIL #205207, A3M PKGD, 230V/5

12A4140S18	1	STRAINER, HANSEN, #78-0188, ST
12A4200B1403	1	VALVE, CHECK, HANSEN HCK1/5
		Note: Henry & Hubbell check valves both obsolete

Valves-Flanges-Gaskets

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4200G021		VALVES, 1/4" MPT X 1/4" FPT ANGLE, HANSEN #H7771 W/SEALCAP
12A4200G0202		VALVES, 1/4MPT X 1/4FPT ANGLE,
12A4200G0402		VALVES, ANGLE, HENRY #7775, 1
12A4200G0407		VALVES, GLOBE, HANSEN 1/2" #GSB051C (PATTERN BONNET)
12A4200G0603		VALVES, ANGLE, 3/4" FPT, HENR
12A4200G0608		VALVE HANSEN 3/4" ANGLE THREAD
12A4200G0605		VALVES, ANGLE SOCKET WELD, 3/4
12A4200G0606		VALVES, ANGLE, 3/4" HANSEN #
12A4200G0607		VALVES, GLOBE, 3/4" SOCKET WEL
12A4200G0804		VALVES, ANGLE, 1", HANSEN #ASB100C SOCKET WELD W / SC
12A4200G0805		VALVES, GLOBE, 1" SCK WLD HANSEN 1" W / SC , #GSB101C
12A4200G1406		VALVE, 2" SOC WELD HANSEN GS20
12A4200G1806		VALVE, ANGLE, STOP, 3" BW HANS
12A4200G2104		VALVE, ANGLE, STOP, 4" BW HANS
12A4200D1601		VALVE ,3" DUAL REG. HANSEN HA4
12A4200D1701		REGULATOR, 4" DUAL PRESSURE, H
12A2538S0106		FLANGE SET 3/4"FPT, HANSEN #HK
12A2538S0107		FLANGE KIT 1" FPT HANSEN #HKT100/100 (70-0113)
12A2530G0206		FLANGE GROOVE - 2" SW, HANS
12A2530T0206		FLANGE TONGUE - 2" SW - HANS
12A2535T0106		ADAPTOR RING, 2" MALE, FLANGE
12A2530G0208		FLANGE GROOVE - HENRY 2 1/2"
12A2530T0208		FLANGE TONGUE SW 2 1/2"
12A2530G021		FLANGE GROOVE - PARKER #3092
12A2530T021		FLANGE TONGUE SW HENRY #S2SW
12A2530G0212		FLANGE FEMALE GROOVE PARKER #
12A2530T0212		FLANGE TONGUE, SW, 4", HENRY
12A2600F01		GASKET, HANSEN #70-0132 FOR ST
12A2600F04		GASKET, 2", HENRY 5-023-094 (R
12A2600F05		GASKET 2 1/2" HENRY #5-023-085
12A2600F06		GASKET 3 YORK 028-00869/HENRY
12A2600F08		GASKET 4 YORK 028-00876/HENRY

Pressure Line & Fittings

<u>Part Number</u>	<u>Req'd</u>	<u>Description</u>
12A4182S03		TUBING, HYD, T304 SS, 1/4"OD X.035
12A2452M02		CONNECTOR, MALE, 1/4" MPT X 1/
12A2452E01		ELL, 90 DEG 1/4" MPT X 1/4" T
12A2452F01		CONNECTOR, FEMALE 1/4FPT X 1

12A2452T01		TEE, UNION, 1/4 X 1/4 X 1/4 TU
12A2452T02		TEE, 1/4 X 1/4 X 1/4 MPT, PARK
12A2100C0303		CLAMPS, 1/4" OD TUBING , SILEN