

Spare Parts List

Item # Description

Heat Exchanger

1	Model # PBC13-3PU-1-1
2	Model # PBC13L-3PU-1-1
3	Model # PBC13-4PU-1-1
4	Model # PBC13L-4PU-1-1
5	Model # PBC13-5PU-1-1
6	Model # PBC13L-5PU-1-1
7	Model # PBC13-6PU-1-1
8	Model # PBC13L-6PU-1-1
9	Model # PBC13-7PU-1-1
10	Model # PBC13L-7PU-1-1
11	Model # PBC13DL-3PU-1-1
12	Model # PBC13DL-4PU-1-1
13	Model # PBC13DL-5PU-1-1
14	Model # PBC13DL-6PU-1-1
15	Model # PBC13DL-7PU-1-1
16	Model # PBC13SL-3PU-1-1
17	Model # PBC13SL-4PU-1-1
18	Model # PBC13SL-5PU-1-1
19	Model # PBC13SL-6PU-1-1
20	Model # PBC13SL-7PU-1-1

Accessories (for Heat Exchangers)

21	Intermediate block (43501) Part # 13C-1
22	Intermediate block (43500) Part # 13C-1A
23	Intermediate block (43500) Part # 13C-1N
24	DC block (H-2552-3-C) Part # 13C-1E
25	Header block (49164) Part # 13C-2
26	Header block (49161) Part # 13C-2A
27	Header block (40511) Part # 13C-2B
28	Header block (49162) Part # 13C-2C
29	Header block (49163) Part # 13C-2D
30	Header block (4.34238) Part # 13C-2E
31	Header block (4329169) Part # 13C-2F
32	Bottom header clock (4.37035) Part # 13C-2G
33	Header 6" - 150# (H-2227-5-B) 13C-2AF
34	Floating comp. Plate - Std. 5"/6" Part # 13C-3
35	Floating comp. Plate - 4" conc. (CH94-226) Part # 13C-3ZE
36	Floating comp. Plate - 4" ecc. (CH94-232) Part # 13C-3ZF
37	Flanged gland (CH94-227) Part # 13C-4ZE
38	Vertical shell - length as required Part # 13C-5ZE
39	Horizontal shell - length as required Part # 13C-5ZF
40	Fixed compression plate - Std. 5"/6" Part # 13C-6
41	Fixed compression plate - 4" conc. (CH94-26) Part # 13C-6ZD
42	Fixed compression plate - 4" conc. (CH94-228) Part # 13C-6ZE
43	Fixed compression plate - 4" ecc. (CH94-229) Part # 13C-6ZF
44	Service baffle (1A-CH94-76) Part # 13C-8B
45	Coil spring (1A-CH94-241) Part # 13C-9
46	Baffle ring (40933) Part # 13C-10 & 13C-10B
47	Spring assy washer (1A-CH94-220) Part # 13C-12
48	Shell seal ring Part # 13C-13
49	Shell seal ring (1A-CH94-269) PRFE Part # 13C-13A

- 50 EPDM "O" ring (CH97-104) Part # 13C-13ZA
- 51 Head gasket EPDM (CH97-103) Part # 13C-14ZF
- 52 Shell gasket Part # 13C-15
- 53 Shell gasket (1A-CH94-323) Part # 13C-15D & 13C-15E
- 54 Sleeve for spring Part # 13C-20
- 55 Tightening gauge (1A-CH94-219) Part # 13C-29
- 56 Gasket B/W block & header (40907) Part # 13C-30
- 57 Flat washer (1A-CH94-265) Part # 13C-31
- 58 Split lockwasher (1A-CH94-266) Part # 13C-33
- 59 KB cement kit including resin (Quart)
- 60 KB cement kit including resin (Gallon)

Piping

Expansion Joints

- 61 Model 1G3 D (size 1")
- 62 Model 1G3 T (size 1")
- 63 Model 1A2 D (size 1")
- 64 Model 1A2 T (size 1")
- 65 Model 15G3 D (size 1 1/2")
- 66 Model 15G3 T (size 1 1/2")
- 67 Model 15A2 D (size 1 1/2")
- 68 Model 15A2 T (size 1 1/2")
- 69 Model 2A3 D (size 2")
- 70 Model 2A3 T (size 2")
- 71 Model 2A2 D (size 2")
- 72 Model 2A2 T (size 2")
- 73 Model 25G3 D (size 2 1/2")
- 74 Model 25G3 T (size 2 1/2")
- 75 Model 25A2 D (size 2 1/2")
- 76 Model 25A2 T (size 2 1/2")
- 77 Model 3G3 D (size 3")
- 78 Model 3G3 T (size 3")
- 79 Model 3A2 D (size 3")
- 80 Model 3A2 T (size 3")
- 81 Model 4G3 D (size 4")
- 82 Model 4G3 T (size 4")
- 83 Model 4A2 D (size 4")
- 84 Model 4A2 T (size 4")
- 85 Model 5A3 D (size 5")
- 86 Model 5A3 T (size 5")
- 87 Model 5A2 D (size 5")
- 88 Model 5A2 T (size 5")
- 89 Model 6G3 D (size 6")
- 90 Model 6G3 T (size 6")
- 91 Model 6A2 D (size 6")
- 92 Model 6A2 T (size 6")
- 93 Model 8G3 D (size 8")
- 94 Model 8G3 T (size 8")
- 95 Model 8A2 D (size 8")
- 96 Model 8A2 T (size 8")
- 97 Model 10G3 D (size 10")
- 98 Model 10G3 T (size 10")
- 99 Model 10A2 D (size 10")
- 100 Model 10A2 T (size 10")
- 101 Model 12G3 D (size 12")
- 102 Model 12G3 T (size 12")
- 103 Model 14G3 D (size 14")

- 104 Model 14G3 T (size 14")
- 105 Model 16G3 D (size 16")
- 106 Model 16G3 T (size 16")

Safety Shields

- 107 for Exp. Joint 1G3 D SH-T-1B
- 108 for Exp. Joint 1A2 D SH-T-1A
- 109 for Exp. Joint 15G3 D SH-T-15B
- 110 for Exp. Joint 15A2 D SH-T-15A
- 111 for Exp. Joint 2A3 D SH-T-2B
- 112 for Exp. Joint 2A2 D SH-T-2A
- 113 for Exp. Joint 25G3 D SH-T-25B
- 114 for Exp. Joint 25A2 D SH-T-25A
- 115 for Exp. Joint 3G3 D SH-T-3B
- 116 for Exp. Joint 3A2 D SH-T-3A
- 117 for Exp. Joint 4G3 D SH-T-4B
- 118 for Exp. Joint 4A2 D SH-T-4A
- 119 for Exp. Joint 5G3 D SH-T-5B
- 120 for Exp. Joint 5A2 D SH-T-5A
- 121 for Exp. Joint 6G3 D SH-T-6B
- 122 for Exp. Joint 6A2 D SH-T-6A
- 123 for Exp. Joint 8G3 D SH-T-8B
- 124 for Exp. Joint 8A2 D SH-T-8A
- 125 for Exp. Joint 10G3 D SH-T-10B
- 126 for Exp. Joint 10A2 D SH-T-10A
- 127 for Exp. Joint 12A3 D SH-T-12A

Pipe/Fittings

- 128 PIPE & FITTINGS FOR BANDSTAND, CONLEY, SMITH FIBERCAST
- 129 BONDSTRAND - PSX-34-C Adhesive Kits 3 oz. 6 pk
- 130 BONDSTRAND - PSX-34-C Adhesive Kits 5 oz. 6 pk

Granite

Part "A" Mastic Resin

- 131 Per Gallon (10 lbs.)
- 132 Per Liter (2.5 lbs.)
- 133 5 gallon pails (18.9 liter - 45 lbs.)
- 134 55 gallon drum (208 liter - 495 lbs.)
- 135 55 gallon drum (208 liter - 495 lbs.) with an order of granite

Part "B" Mastic Resin

- 136 Per Gallon (10 lbs.)
- 137 Per Liter (2.5 lbs.)
- 138 5 gallon pails (18.9 liter - 45 lbs.)
- 139 55 gallon drum (208 liter - 495 lbs.)
- 140 55 gallon drum (208 liter - 495 lbs.) with an order of granite

Miscellaneous Granite Parts

- 141 Lord Corporation AP-132 Chemlok Primer / per gallon
- 142 (ABOVE) Chemlok Primer with an order of granite / per gallon
- 143 Ethafoam Rope (5/8", 3/4", 1" and 1 1/2" diameters) / per lineal foot
- 144 Ethafoam Rope (16mm, 19mm, 25mm and 38mm diameters) / per lineal meter
- 145 Furan Mortar - 1 unit (2 bags of powder & 1 pail of liquid 5 gal)
- 146 Granite Covers - FULL RANGE AVAILABLE
- 147 Granite Liners - FULL RANGE AVAILABLE
- 148 Granite Weirs - FULL RANGE AVAILABLE

Valves

- 149 VALVE - 1" PVDF / Teflon Diaphragm Valve Model # 14K010PF
150 14D010P - 1" Teflon diaphragm & 14D010K - PVDF gas barrier
- 151 VALVE - 2" PVC / EPDM Diaphragm Valve Model # 14A020EF
152 14D020E - 2" EPDM Diaphragm
- 153 VALVE - 2" PP / Teflon Diaphragm Valve Model # 14B020PF
154 14D020P - 2" Teflon Diaphragm
- 155 VALVE - 2" PVDF / Teflon Diaphragm Valve Model # 14K020PF
156 14D020P - 2" Teflon diaphragm & 14D020K - PVDF gas barrier
- 157 VALVE - 3" PP / Teflon Diaphragm Valve Model # 14B030PF
158 14D030P - 3" Teflon diaphragm
- 159 VALVE - 3" PVDF / Teflon Diaphragm Valve Model # 14K030PF
160 14D030P - 3" Teflon diaphragm & 14D010K - PVDF gas barrier
- 161 VALVE - 4" PP / Teflon Diaphragm Valve Model # 14B040PF
162 14D040P - 4" Teflon diaphragm
- 163 VALVE - 4" PVDF / Teflon Diaphragm Valve Model # 14K040PF
164 14D040P - 4" Teflon diaphragm & 14D010K - PVDF gas barrier
- 165 VALVE - 6" PVDF / Teflon Diaphragm Valve Model # 15K060PF
166 15D060P - 6" Teflon diaphragm & 15D060K - PVDF gas barrier
- 167 VALVE - 8" PVDF / Teflon Diaphragm Valve Model # DVK080PF
168 D080P - 8" Teflon diaphragm & D080K - PVDF gas barrier
- 169 VALVE - 1/2" PP / Viton Ball Valve NPT Model # 21B005VT
170 21005KIT-V - 1/2" Viton O-Ring Kit
- 171 VALVE - 1" PP / Viton Ball Valve Flanged Model # 21B010VF
172 21010KIT-V - 1" Viton O-Ring Kit
- 173 VALVE - 2" PP / Viton Ball Valve Flanged Model # 21B020VF
174 21020KIT-V - 2" Viton O-Ring Kit
- 175 VALVE - 1/2" CPVC / Viton Ball Valve Socket Model # 21C005VC
176 21005KIT-V - 1/2" Viton O-Ring Kit
- 177 VALVE - 1" CPVC / Viton Ball Valve Socket Model # 21C010VC
178 21010KIT-V - 1" Viton O-Ring Kit
- 179 VALVE - 1-1/2" CPVC / Viton Ball Valve Flanged Model # 21C015VF
180 21015KIT-V - 1-1/2" Viton O-Ring Kit
- 181 VALVE - 1/2" PVDF / FPM-F Ball Valve NPT Model # 21K005FT
182 21005KIT-FPM-F - 1/2" FPM O-ring Kit
- 183 VALVE - 1-1/2" PVDF / FPM-F Ball Valve Flanged Model # 21K015FF
184 21015KIT-FPM-F - 1-1/2" FPM O-ring Kit
- 185 VALVE - 1-1/2" PVC / PP / EPDM Butterfly c/w Pneumatic Spring Retune Actuator, Limit Switches Model # 56A015BEL PPS2F015 PLSSTL4

186 TB015SE - 1-1/2" EPDM Seat & TB015OE - O'ring Kit

187 VALVE - 2" PVC / EPDM Butterfly Valve Model # 56A020BEL
188 TB020SE - 2" EPDM Seat & TB020OE - O'ring Kit

189 VALVE - 3" PVC / PP / EPDM Butterfly Valve Model # 56A030BEL
190 TB030SE - 3" EPDM Seat & TB030OE - O'ring Kit

191 VALVE - 1-1/2" PP / PP / Viton Butterfly Valve Model # 56B015BVL
192 TB015SV - 1-1/2" Viton Seat & TB015OV - O'ring Kit

193 VALVE - 1-1/2" PP / PP / Viton Butterfly c/w Pneumatic Spring Retune Actuator, Limit Switches Model #
56B015BVL PPS2F015 PLSSTL4
194 TB015SV - 1-1/2" Viton Seat & TB015OV - O'ring Kit

195 VALVE - 2" PP / PP / Viton Butterfly Valve Model # 56B020BVL
196 TB020SV - 2" Viton Seat & TB020OE - O'ring Kit

197 VALVE - 2" PP / PVDF / FPM-F Butterfly Valve Model # 56B020KFL
198 TB020-FPM-KIT - 2" FPM-F Seat & O'ring Kit

199 VALVE - 3" PP / PP / Viton Butterfly Valve Model # 56B030BVL
200 TB030SV - 3" Viton Seat & TB030OE - O'ring Kit

201 VALVE - 4" PP / PP / Viton Butterfly Valve Model # 56B040BVL
202 TB040SV - 4" Viton Seat & TB040OV - O'ring Kit

203 VALVE - 4" PP / PP / Viton Butterfly c/w Pneumatic Spring Retune Actuator, Limit Switches Model #
56B040BVL PPS3F040 PLSSTL4
204 TB040SV - 4" Viton Seat & TB040OV - O'ring Kit

205 VALVE - 4" PP / PVDF / FPM-F Butterfly Valve Model # 56B040KFL
206 TB040-FPM-F-KIT - 4" FPM-F Seat & O'ring Kit

207 VALVE - 4" PP / PVDF / Viton Butterfly c/w Pneumatic Spring Retune Actuator, Limit Switches Model #
56B040KFL PPS3F040 PLSSTL4
208 4" TB040-FPM-F-KIT - FPM-F Seat & O'ring Kit

209 VALVE - 6" PP / PP / Viton Butterfly Valve Model # 56B060BVL
210 TB060SV - 6" Viton Seat & TB060OE - O'ring Kit

211 VALVE - 1" PP / Viton Ball Check Valve NPT Model # BTB010VT
212 BC010KIT-V - 1" Viton Seat & O'ring Kit

213 VALVE - 1-1/2" PP / Viton Ball Check Valve Flanged Model # BTB015VF
214 BC015KIT-V - 1-1/2" Viton Seat & O'ring Kit

215 VALVE - 2" PP / Viton Ball Check Valve Flanged Model # BTB020VF
216 BC020KIT-V - 2" Viton Seat & O'ring Kit

217 VALVE - 2" PVDF / Teflon Ball Check Valve Flanged Model # BTK020PF
218 BC020KIT-P - 2" Teflon Seat & O'ring Kit

219 VALVE - 1/2" PP / EPDM Globe Valve NPT Model # GVB005T
220 GV005KIT-E - 1/2" EPDM O'ring Kit

221 VALVE - 1-1/2" PP / EPDM Globe Valve Flanged Model # GVB015F

- 222 GV015KIT-E - 1-1/2" EPDM O'ring Kit
- 223 VALVE - 2" PP / EPDM Globe Valve Flanged Model # GVB020F
- 224 GV020KIT-E - 2" EPDM O'ring Kit
- 225 2" PP / Teflon Swing Check Valve Model # SCB020P
- 226 4" PP / Teflon Swing Check Valve Model # SCB040P
- 227 ASCO Solenoid Valve 1/4" Model # 8320G182
- 228 ASCO Solenoid Valve 1" Model # 8210G4
- 229 Steam valve 2" Model # KE71
- 230 Stem seal retrofit Model # 3010388
- 231 Plug and bonnet gasket kit Model # 3015784
- 232 Seat and gasket kit Model # 3015780
- 233 Diaphragm kit Model # 3570484
- 234 Electro-pneumatic positioner Model # 78375403000

Strainer

- 235 Strainer model 8724-F18 Capacity 200/400 gpm
- 236 "O" ring gaskets EPDM/ set of 5
- 237 Strainer basket 1/8" dia. Perforation – polypropylene
- 238 Strainer model 8746-F Capacity 400/600 gpm
- 239 "O" ring gaskets EPDM/ set of 5
- 240 Strainer basket 7/16" dia. Perforation – polypropylene
- 241 Strainer model 8746-F18 Capacity 400/600 gpm
- 242 "O" ring gaskets EPDM/ set of 5
- 243 Strainer basket 1/8" dia. Perforation – polypropylene
- 244 Strainer model # 8768-F18N Capacity 600/800 gpm
- 245 "O" ring gaskets EPDM/ set of 5
- 246 Strainer basket 1/8" dia. Perforation – polypropylene
- 247 Optional bleed valve for all above strainers
- 248 Inline Acid Strainer 200 - 400 GPM
- 249 Spare Strainer Element (for above strainer)
- 250 O'Rings (for above strainer)
- 251 Inline Acid Strainer 400 - 600 GPM
- 252 Spare Strainer Element (for above strainer)
- 253 O'Rings (for above strainer)
- 254 Inline Acid Strainer 600 - 800 GPM
- 255 Spare Strainer Element (for above strainer)
- 256 O'Rings (for above strainer)
- 257 Rectangular Inline Strainer
- 258 NEW STYLE FRP Cascade Strainer 3" Inlet, 3" Outlet

259 PVC Strainer Element (for above strainer)

Fume System

260 HPRS 24 Fan (old Model #HCB-24-FRP Fan) (Spare Parts)
261 Impeller
262 Sheaves & Bolts (price per set)
263 Bearings (price per set of 2)
264 Carbon Steel Shaft

As an option (only) the following accessories can be supplied

265 Epoxy Painted C/S Belt Guard
266 Flexible Connector
267 Vibration Isolators
268 Common C Channel Base for Fan & Motor
269 V-Belt Drive for 60 HP
270 V-Belt Drive for 75 HP
271 60 HP Motor TEFC 1800 rpm
272 75 HP Motor TEFC 1800 rpm
273 Pillow Block & Bearing assemblies (Price per 2)

Scrubber GST-6-18 (6" Dia.) (Spare Parts)

274 6' dia. Mist eliminator pad with support grids
275 Sieve plates (2 plates per tray - Price per tray)
276 1" dia. Sieve Plate tied down rods & nuts (Price per set - 1 threaded rod+2nuts+spacer) Require 6 sets per tray.
277 1-1/2" dia. Filler Plate hold down rod & nut (this is for bolting the FRP Filler plates in place. Required 1 set per tray)
278 FRP Sieve plates retaining clamps (Required 6 clamps per tray)
279 Manway Cover

Droplet Eliminator (Spare Parts)

280 Polypropylene Chevron Blade Module
281 12" dia. Clear View Port Cover with hardware & gasket
282 FRP Access Door Cover for 10" x 3'-8" access door

Pumps

283 ANSIMAG & INNOMAG MAG drive pumps – FULL RANGE AVAILABLE
284 Full range of pump replacement parts – FULL RANGE AVAILABLE

Metering Pumps

285 Caustics Pump Model # SICAHM12090PVT0070D000
Info: Motor metering pump sigma control - Flow 28.6 GPH - 108 L/H - Pressure 145 PSI / 10 Bar - 115 V 60 HZ

Spare Parts for above Pump

286 3/4" PP / EPDM Foot Valve MNPT
287 3/4" MNPT, PPI / EPDM Injection Valve
288 3/4" Hose Barb
289 3/4" PVC Braided Hose (price per foot)
290 Control cable - CTR cable 15' / 5 wire / 5 pole
291 Acid Pump Model # GALA0713TTT060UD00100
292 *Info: Solenoid-Driven metering pump GALA - Flow 2.9 GPH - 11 L/H - Pressure 101 PSI / 7 Bar - 115 V 60 HZ*
293 1/2" MNPT X 1/2" MNPT X 1/2" MNPT, PVC Inject Valve
294 1/2" MNPT (DN10) PVC Hose Barb
295 Rinse Chemical Pump (CITROSOL) Model # GALA0220PPE260UD01200

Info: Flow 19 LPH - Pressure 29 PSI c/w Injection valve & Foot valve - 20' suction / 40' discharge tubing

Instrumentation

- 296 Flow Indicator Model # 675F3C-BON-CSA (0-500 GPM P/N 7152325.0)
- 297 Flow Sensor Model # F1A11B2 (PVDF P/N 7152329.0)
- 298 Flow Tee Model MHF31G2 (3" DIA PVDF mounting Tee c/w flanges)
- 299 Flow Tee Model MHF16E2 (2" DIA PVDF mounting Tee c/w flanges)
- 300 Flow Tee Model MHF15B2 (1" DIA PVC mounting Tee c/w flanges)
- 301 Flow Tee Model MHF15G2 (3" DIA PVC mounting Tee c/w flanges)
- 302 Flow Tee Model MHF15E2 (2" DIA PVDF mounting Tee c/w flanges)
- 303 Flow Tee Model MHF16D2 (1-1/2" DIA PVDF mounting Tee c/w flanges)
- 304 Flow sensor Model # F1A11A1 (PP P/N 7152330.0)
- 305 Sealed Sump Level control Model # ALC-18P (c/w 10' of cable P/N 7.152332.0)
- 306 Sealed Sump Level control support flange 3" PVC flange for above
- 307 Remote Alarm Beacon Model # 50-CR-N5-40W
- 308 DIC pH Controller Model # DICA DIP 20001G220E
- 309 Thermocouple Wire Model # JX20PP (price per 200 feet)
- 310 Thermowell Model # 2TWF-28-10.875-1/2 S CPVC Blind Flange
- 311 Thermocouple Model # TC164FJC00012
- 312 Multiranger Plus 115/230 VAC Model # 82778014 (Old Model # 7ML10203EA14)
- 313 XPS-10 Transducer Model # 8852215D (Old Model # 7ML11150CD41)
- 314 Multiranger Plus Hand Programmer Model # 69900008 (Old Model # 7ML18302AE)
- 315 Conductivity analyzer Model # E53-A2-A1-N
- 316 30M pH probe cable 3mm, SNM x SN6F
- 317 Industrial high temp pH controller (with 3m coax cable & connector) Model # 7304984
- 318 Industrial pH probe (with 3m coax cable & connector) Model # 7305098

Boiler System

- 319 500 Gallon boiler tank with stand, level control and gauge glass
- 320 Grundfos CR8-80 pumps and motors
- 321 Magnetic starters and alternators
- 322 Steam pre-heater system
- 323 Alternate deaerator with pump
- 324 Blowdown tank model # 34-1 1/2 with cooling controls
- 325 Chemical Feed pumps and motors model 1460 1/2"
- 326 Alamo Duplex Zeolite Water Softener Model # H360P-CSC-D 30" resin tanks
- 327 Boiler Model # MRG-5907-AHK-300

**Info: 300 BHP, 150 psig design, Combination fired / natural gas # 2 fuel oil
Complete with: Automatic Blowdown, surface Blowdown, stack limit control, IRI fuel train, gas pressure regulator (main), gas pressure regulator (Pilot)**

Option Only

- 328 Conductivity Controls for Surface Blowdown
- 329 Lead/Lag Control
- 330 Master Control with Remote Modulation

Miscellaneous Components

- 331 Wiper Bar 3M Size 50" x 2.75" x 48"
- 332 Spray header nozzle NPT S14W
- 333 Spray header nozzle NPT 1/4-F8070
- 334 Rinse seal nozzle
- 335 Polypropylene holder
- 336 FRP bottom seal
- 337 1/2" dia. titanium square wiper holder bolt
- 338 1/2" dia. x 3" bolt (c/w 1 nut & 2 flat washers)
- 339 Replacement bag filters (50 per box) for spray rinse filter