PROMED P300

Consumables, Spare Parts and Annual Maintenance Schedule

Prepared for tender clarification. This document answers only the following two questions: (1) list of consumables, necessary spare parts and their replacement schedule; (2) annual maintenance schedule required for the equipment.

Operating basis: Yearly cost of Spare Parts and Consumables based on 8 Hrs / Day Operation. 8 Hrs/ Day = 12 Cycles = 1.440 Kg Total Med. Waste Sterilization / Day

Note: Replacement frequencies are based on the supplied spare parts and consumables consumption workbook. Items marked 'If Available' apply only if that option is installed on the supplied equipment. Price/cost columns are intentionally omitted because the tender questions request schedules only.

1. List of Consumables, Necessary Spare Parts and Replacement Schedule

1.1 Consumables

No.	Consumable	Unit on System	Estimated Lifetime (cycles)	Replacement Schedule
1	Autoclave Door Gasket	2	1200	Y1: 3x; Y2: 3x; Y3: 3x; Y4: 3x; Y5: 3x; Y6: 3x; Y7: 3x; Y8: 3x; Y9: 3x; Y10: 3x
2	Integrated Shredder	1	4000	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
3	Shredder Shaft	1	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
4	Shredder Shaft Carbon Seal	1	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
5	Regulating Filter Oil	1	1000	Y1: 3x; Y2: 4x; Y3: 3x; Y4: 4x; Y5: 4x; Y6: 3x; Y7: 4x; Y8: 3x; Y9: 4x; Y10: 4x
6	Electrical S.Boiler Heating Elements 10kW (If Electrical S.Boiler Available)	8	3500	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
7	Printer Paper	1	1000	Y1: 3x; Y2: 4x; Y3: 3x; Y4: 4x; Y5: 4x; Y6: 3x; Y7: 4x; Y8: 3x; Y9: 4x; Y10: 4x
8	Water softener Resin	1	6000	Y2: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y9: 1x; Y10: 1x
9	Water softener Salt	1	300	Y1: 12x; Y2: 12x; Y3: 12x; Y4: 12x; Y5: 12x; Y6: 12x; Y7: 12x; Y8: 12x; Y9: 12x; Y10: 12x

1.2 Necessary Spare Parts

The following spare parts have a unit quantity on the system and are therefore listed as necessary spare parts for the equipment configuration in the provided workbook.

No.	Necessary Spare Part	Unit on System	Estimated Lifetime (cycles)	Replacement Schedule
1	Check Valve 1"	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
5	Shredder Shaft Ctailess Steel Seal Kit	1	20000	Y6: 1x
6	Shredder Reduction Gearbox	1	15000	Y5: 1x; Y9: 1x
7	Danfoss Vacuum Safety System - KP 35	2	5200	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y8: 1x; Y9: 1x
8	Pressure Transmitter	2	8000	Y3: 1x; Y5: 1x; Y7: 1x; Y9: 1x
9	Safety Valve (Mechanical)	4	12000	Y4: 1x; Y7: 1x; Y10: 1x
12	Connector 40A	1	10000	Y3: 1x; Y6: 1x; Y9: 1x
13	Manometer - Cell (Sterilization Cabin)	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
14	Manometer - Generator	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
15	Manometer - Air Regulator	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
16	Y-Strainer 1/2"	2	10000	Y3: 1x; Y6: 1x; Y9: 1x
17	Y-Strainer 3/4"	2	10000	Y3: 1x; Y6: 1x; Y9: 1x

19	Solenoid Valve 1"	1	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
20	Solenoid Valve 1/2"	4	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
21	Solenoid Valve 3/4"	2	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
22	Water Pump (If Available)	1	15000	Y5: 1x; Y9: 1x
23	Vacuum Pump - Type I (If Available)	1	30000	Y9: 1x
24	W Automat - 10 A	4	10000	Y3: 1x; Y6: 1x; Y9: 1x
25	W Automat Group - 3 x 10 A	12	10000	Y3: 1x; Y6: 1x; Y9: 1x
26	Limit Switch	2	10000	Y3: 1x; Y6: 1x; Y9: 1x
28	Solenoid Valve Bobbin	7	10000	Y3: 1x; Y6: 1x; Y9: 1x
29	Micro Processor (PLC) Control System	1	27000	Y8: 1x
30	Operator Display	1	20000	Y6: 1x
31	Report Lazer Printer	1	10000	Y3: 1x; Y6: 1x; Y9: 1x
39	Water Level Relay	1	1000	Y1: 3x; Y2: 4x; Y3: 3x; Y4: 4x; Y5: 4x; Y6: 3x; Y7: 4x; Y8: 3x; Y9: 4x; Y10: 4x
40	Air Compressor	1	20000	Y6: 1x
41	Air Hose Set	1	20000	Y6: 1x
42	HEPA Filter (Air Filter) (If Available)	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
44	Pneumatic Cylinder (Door)	2	10000	Y3: 1x; Y6: 1x; Y9: 1x
45	Pneumatic Cylinder (Ring)	2	10000	Y3: 1x; Y6: 1x; Y9: 1x
46	Pneumatic Cylinder (Safety Lock)	2	10000	Y3: 1x; Y6: 1x; Y9: 1x
47	On/Off Switch	1	20000	Y6: 1x
48	Emergency Stop Button	4	20000	Y6: 1x
49	Buzzer	1	20000	Y6: 1x
50	Fan	1	20000	Y6: 1x
51	Vacuum Breaker (If Available)	1	20000	Y6: 1x
52	Inox Fitting 1" T	5	50000	Replace according to condition / when required
53	Inox Fitting 1/2" T	5	50000	Replace according to condition / when required
54	Inox Fitting 3/4" T	5	50000	Replace according to condition / when required
55	Pipe Union 1/2"	5	50000	Replace according to condition / when required
56	Pipe Union 3/8"	5	50000	Replace according to condition / when required
57	Pipe Union 1/4"	5	50000	Replace according to condition / when required
58	Corner Union 1/2"	5	50000	Replace according to condition / when required
59	Corner Union 3/4"	5	50000	Replace according to condition / when required
60	Corner Union 1"	5	50000	Replace according to condition / when required
61	Plane Union 1/2"	5	50000	Replace according to condition / when required
62	Plane Union 3/4"	5	50000	Replace according to condition / when required
63	Plain Union 1"	5	50000	Replace according to condition / when required
65	Phase Protector Fuse	1	20000	Y6: 1x
66	Power Supply, 5 - 24 V	1	30000	Y9: 1x
67	Electrical Panel Box	1	50000	Replace according to condition / when required
68	Motor Connection Base	1	50000	Replace according to condition / when required
70	Sterilizer Door Bearings	4	50000	Replace according to condition / when required
71	Pressure Transmitter Collector	1	50000	Replace according to condition / when required
78	Pneumatic Valve	8	15000	Y5: 1x; Y9: 1x
79	Pneumatic Cylinder Motion sensor	12	10000	Y3: 1x; Y6: 1x; Y9: 1x
80	Pneumatic pressure switch (For Seals)	1	10000	Y3: 1x; Y6: 1x; Y9: 1x
81	Pneumatic Valve Block Set	1	12000	Y4: 1x; Y7: 1x; Y10: 1x
82	0-10 Bar 4-20 Ma Transmitter	1	6000	Y2: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y9: 1x; Y10: 1x
83	PT 100 Temperature Sensor 4-20 Ma 25 Cm (Body Sensor)	1	3000	Y1: 1x; Y2: 1x; Y3: 1x; Y4: 1x; Y5: 2x; Y6: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 2x
84	PT 100 Temperature Sensor 4-20 Ma 30 Cm (Waste Sensor)	1	20000	Y6: 1x
85	PT 100 Converter	1	7500	Y3: 1x; Y5: 1x; Y7: 1x; Y9: 1x
86	Boiler Tank Mechanical Pressure Sensor	1	20000	Y6: 1x
87	Cover Object Sensor	1	20000	Y6: 1x
88	Liquid Level Probe	4	20000	Y6: 1x
89	Liquid Level Relay Siemens	4	15000	Y5: 1x; Y9: 1x
90	Solid State Relay Bs3F75U48S	8	12000	Y4: 1x; Y7: 1x; Y10: 1x
91	Contactor Af09-30-10	1	20000	Y6: 1x
92	Contactor Af12-30-13	1	20000	Y6: 1x
93	Solenoid Valve 5/3	7	20000	Y6: 1x
94	Cover inflation Valve 3V211008Ncbg	2	20000	Y6: 1x
95	Cover Deflation Valve 3V206Ncbg	2	12000	Y4: 1x; Y7: 1x; Y10: 1x

96	Piston Valve Valve 3V106Bg	8	12000	Y4: 1x; Y7: 1x; Y10: 1x
97	Cylinder Sensor Btc-50Rp	14	18000	Y5: 1x; Y10: 1x
98	Abb Mini Relay Crp024Dc2 With Led And Socket	48	20000	Y6: 1x
99	Digital Pressure Switch	2	5000	Y2: 1x; Y3: 1x; Y5: 1x; Y6: 1x; Y7: 1x; Y9: 1x; Y10: 1x
100	Rotary Elbow 1/8-8	1	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
101	Flat Fitting 1/8-8	1	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
102	Rotary Elbow 1/4-8	9	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
103	Flat Fitting 1/4-8	7	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
104	Rotar Elbow 1/2-8	20	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
105	Flat Fitting 1/2-8	6	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
106	Ye Additional Element	12	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
108	M8 Teflon Hose	2	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x
109	1/2 Ball Valve	2	4500	Y2: 1x; Y3: 1x; Y4: 1x; Y5: 1x; Y7: 1x; Y8: 1x; Y9: 1x; Y10: 1x

2. Annual Maintenance Schedule Required for the Equipment

The equipment maintenance schedule is cycle-based. For tender purposes, the annual plan below follows the 10-year annual replacement quantities in the supplied workbook. Detailed due items are identified in the Replacement Schedule column in Section 1.

Maintenance Year	Operating Cycle Range	Consumables Due	Spare Parts Due	Required Annual Maintenance Action
Year 1	Approx. cycles 1-3,600	5 consumable item type(s), 22 replacement action(s)	7 spare part item type(s), 9 replacement action(s)	Replace all components marked Y1 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 2	Approx. cycles 3,601-7,200	9 consumable item type(s), 28 replacement action(s)	22 spare part item type(s), 25 replacement action(s)	Replace all components marked Y2 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 3	Approx. cycles 7,201-10,800	8 consumable item type(s), 25 replacement action(s)	36 spare part item type(s), 38 replacement action(s)	Replace all components marked Y3 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 4	Approx. cycles 10,801-14,400	7 consumable item type(s), 26 replacement action(s)	22 spare part item type(s), 25 replacement action(s)	Replace all components marked Y4 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 5	Approx. cycles 14,401-18,000	9 consumable item type(s), 28 replacement action(s)	29 spare part item type(s), 38 replacement action(s)	Replace all components marked Y5 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 6	Approx. cycles 18,001-21,600	8 consumable item type(s), 25 replacement action(s)	44 spare part item type(s), 46 replacement action(s)	Replace all components marked Y6 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 7	Approx. cycles 21,601-25,200	9 consumable item type(s), 28 replacement action(s)	28 spare part item type(s), 31 replacement action(s)	Replace all components marked Y7 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 8	Approx. cycles 25,201-28,800	6 consumable item type(s), 23 replacement action(s)	18 spare part item type(s), 20 replacement action(s)	Replace all components marked Y8 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 9	Approx. cycles 28,801-32,400	9 consumable item type(s), 28 replacement action(s)	43 spare part item type(s), 46 replacement action(s)	Replace all components marked Y9 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.
Year 10	Approx. cycles 32,401-36,000	9 consumable item type(s), 28 replacement action(s)	27 spare part item type(s), 36 replacement action(s)	Replace all components marked Y10 in Section 1. After replacement, check system operation, safety interlocks, steam/vacuum/pressure lines, pneumatic functions, shredder operation and reporting/printing functions before returning equipment to service.