PACKAGE WASTEWATER TREATMENT PLANTS K

Index

Our trained staff can assist with the appropriate plant and component selection to meet your design constraints.

Binghamton Precast & Supply service representatives will assist you or your contractor with installation of your system.

For additional information and assistance, contact our staff at (607) 722-0334 or (800) 333-1474.

Notes to Specifiers:

Binghamton Precast & Supply Corp. is a licensed manufacturer for the Commercial and Residential Jet Wastewater Treatment Plants. The Jet design is based on widely accepted criteria set forth by leading health agencies and has received the National Sanitation Foundation Seal of Acceptance.

Commercial Jet Plants can be manufactured to accommodate flows from 1500 to 50,000 gallons per day.

Binghamton P&S Precast & Supply

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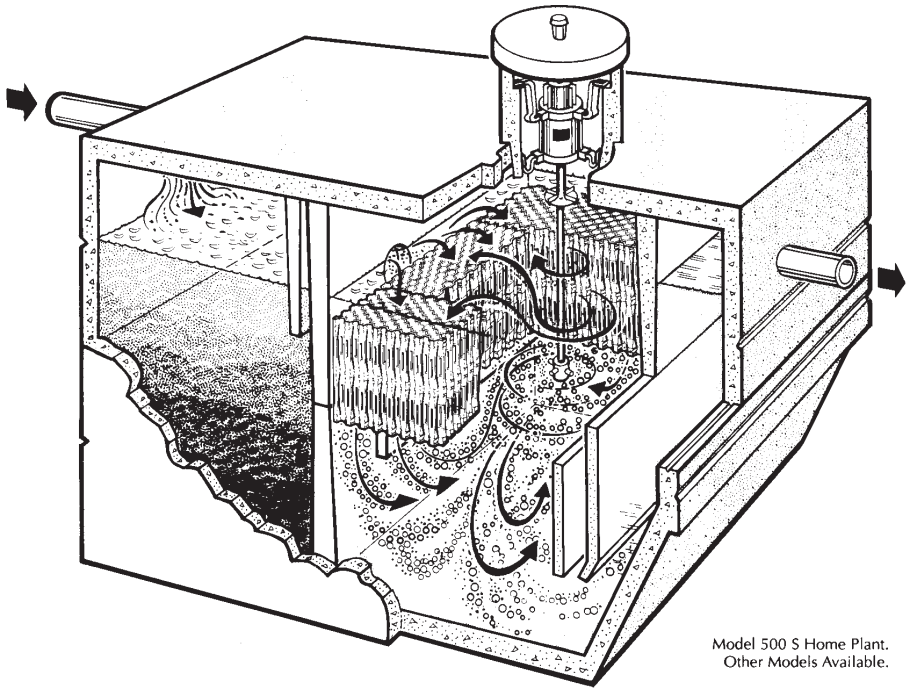
K1 How the BAT® Process Works



Model 500 S Home Plant.
Other Models Available.

The compact, efficient BIOLOGICALLY ACCELERATED TREATMENT™ Plant – which we call the JET BAT® Plant – has three compartments. The Pretreatment Compartment, on the left, receives the wastewater and partially treats it physically and biologically before it enters the Center Treatment Compartment.

In this Center Treatment Compartment, technically referred to as a "bio-reactor", the JET Aerator injects fresh air to provide oxygen and mixing to support Jet's revolutionary BAT® process. In this process, huge numbers of microorganisms – called a "biomass" – attach themselves to the submerged Jet BAT Process Media®. These microorganisms provide an extraordinarily rapid and high degree of treatment, converting the wastewater to odorless, colorless liquids and gases. Air from the JET Aerator provides the oxygen required by the microorganisms to complete this process. Mixing insures that all the wastewater inside this compartment comes in contact with the microorganisms for total treatment.

After treatment, the center compartment contents flow into the Settling Compartment where fine particles settle and return to the treatment compartment. This leaves only a clear, odorless, highly treated liquid for discharge.

As shown in the preceding chart, "The Bottom Line", chlorination with JET-CHLOR provides additional treatment.

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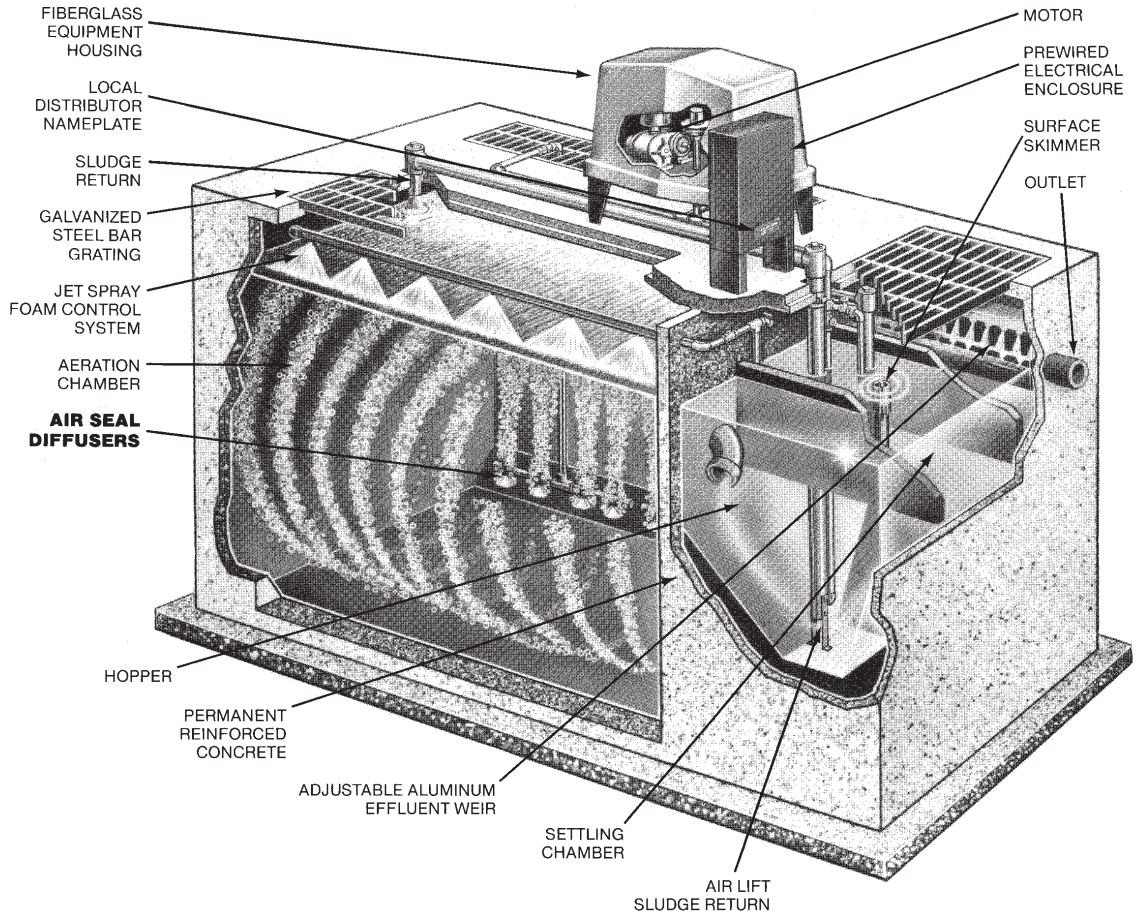
Jet Plant Features

K2

Drawing Number 53JET3



POLLUTION CONTROL BEYOND SEWER LINES

Package Wastewater Treatment Plants solve wastewater problems. They make it possible for motels and service stations to be built along interstate highways far from towns . . . subdivisions to be planned in scenic areas miles beyond sewer lines . . . factories to be located on outlying sites.

JET's Package Plants operate on the extended aeration principle, treating wastewater by a biological process called aerobic digestion. In this process, microscopic organisms use oxygen to "digest" wastewater and transform it into clear odorless liquid.

JET THREE-STAGE TREATMENT PROCESS

Pre-Treatment. In a JET Plant, large objects in the wastewater are caught by pre-treatment devices such as bar screens, trash traps, or comminutors (wastewater grinders) and broken down before being allowed to pass into the aeration chamber. Untreatable material like plastic or metal is kept out completely.

Aeration. After pre-treatment, the wastewater flows into an aeration tank where it is mixed with air. Air Diffusers at the bottom of the aeration tank bubble in large amounts of air for two purposes — to meet the oxygen demand of the aerobic digestion process and to mix the aeration tank contents, insuring complete treatment. In the aeration tank, the pre-treated wastewater is held for 24 hours while being transformed into a clear odorless liquid.

Settling. From the aeration tank the treated liquid flows into a settling tank that holds the liquid completely still. Here any small particles in suspension settle to the bottom and are returned to the aeration tank for further treatment.

This settling process in the final tank of a JET Plant leaves a clear, highly treated water at the top. Only this highly treated liquid (called "effluent") leaves the plant and returns to the environment.

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K3 Jet Specification Chart

Drawing Number 53JET4

This chart provides the information required to complete the specifications for any 3000 Series JET Commercial Wastewater Treatment Plant.

First, determine the plant size in the extreme left column (Plant Size GPD). Then, proceed from left to right on that plant size line to obtain the additional information required in the appropriate columns. The columns are numbered in the order the information is required in the specifications.

1 Plant Size GPD	2 3000 Series Model Number	3 Drawing Number	4 Aeration Volume Gal.	5 Daily B.O.D. Loading Lbs.	6 Aeration Capacity Cubic Feet	7 Air Required CFD	8 Air Available CFD	9 Air Available CFM	10 Pressure PSI	11 Settling Volume Gal.	12 Settling Rate GPD/ Sq. Ft.	13 Overflow Rate GPD	14 Motor HP
1,500	15	15	1,500	2.5	204	27,000	57,600	40	2.4	250	68	500	1
2,000	20	20-35	2,000	3.4	272	36,720	69,120	48	2.4	335	90	665	1½
2,500	25	20-35	2,500	4.2	340	36,720	67,680	47	2.7	420	113	833	1½
3,000	30	20-35	3,000	5.1	408	36,720	76,320	53	3.4	500	136	1000	2
3,500	35	20-35	3,500	5.9	476	36,720	73,440	51	3.8	585	158	1165	2
4,000	40	40-90	4,000	6.8	544	51,840	103,680	72	2.2	670	109	362	1½
5,000	50	40-90	5,000	8.5	680	51,840	100,800	70	2.5	840	137	455	1½
6,000	60	40-90	6,000	10.2	816	51,840	95,040	66	3.3	1000	164	545	2
7,500	75	40-90	7,500	12.7	1020	51,840	92,160	64	3.7	1250	205	683	2
9,000	90	40-90	9,000	15.3	1224	51,840	86,400	60	4.7	1500	247	820	3
10,000	100	100-120	10,000	17.0	1367	53,279	92,160	64	3.8	3408	133	910	2
11,000	110	100-120	11,000	18.7	1514	53,279	89,280	62	4.4	3958	146	1000	3
12,000	120	100-120	12,000	20.4	1636	53,279	87,840	61	4.6	4416	160	1590	3
13,000	130	130-180	13,000	22.1	1793	79,920	118,080	82	3.3	2766	173	1180	2
14,000	140	130-180	14,000	23.7	1903	79,920	116,640	81	3.5	3041	186	1270	3
15,000	150	130-180	15,000	25.5	2050	79,920	115,200	80	3.8	3408	200	1360	3
16,000	160	130-180	16,000	27.2	2271	79,920	110,880	77	4.4	3958	213	1450	3
17,000	170	130-180	17,000	28.9	2345	79,920	110,880	77	4.4	4141	226	1550	3
18,000	180	130-180	18,000	30.6	2455	79,920	109,440	76	4.6	4416	240	1640	3
19,000	190	190-240	19,000	32.3	2661	106,560	145,440	118	3.7	3270	253	1730	5
20,000	200	190-240	20,000	34.0	2734	106,560	145,440	117	3.8	3408	266	1815	5
21,000	210	190-240	21,000	35.4	2832	106,560	146,880	117	3.9	3591	280	1910	5
22,000	220	190-240	22,000	37.4	3028	106,560	149,760	113	4.4	3958	293	2000	5
23,000	230	190-240	23,000	39.1	3126	106,560	149,760	113	4.4	4141	306	2090	5
24,000	240	190-240	24,000	40.8	3273	106,560	148,320	112	4.6	4416	320	2180	5
25,000	250	250-350	25,000	42.5	3440	159,840	231,840	161	3.3	5166	167	2270	5
27,500	275	250-350	27,500	46.8	3808	159,840	230,400	160	3.5	6083	183	2500	5
30,000	300	250-350	30,000	51.0	4102	159,840	227,520	158	3.8	6816	200	2725	5
32,500	325	250-350	32,500	55.3	4543	159,840	223,200	155	4.4	7916	217	2950	5
35,000	350	250-350	35,000	58.6	4689	159,840	223,200	155	4.4	8283	233	3175	5
37,500	375	375-500	37,500	63.8	5420	213,120	342,720	240	3.8	6724	250	1705	7½
40,000	400	375-500	40,000	68.0	5665	213,120	338,400	244	3.9	7182	267	1835	7½
42,500	425	375-500	42,500	72.3	6057	213,120	335,520	239	4.4	7916	284	1938	7½
45,000	450	375-500	45,000	76.5	6253	213,120	335,520	239	4.4	8282	300	2050	7½
47,500	475	375-500	47,500	80.8	6547	213,120	334,080	235	4.6	8832	317	2160	7½
50,000	500	375-500	50,000	83.6	6695	217,360	334,080	235	4.7	9107	334	2275	7½

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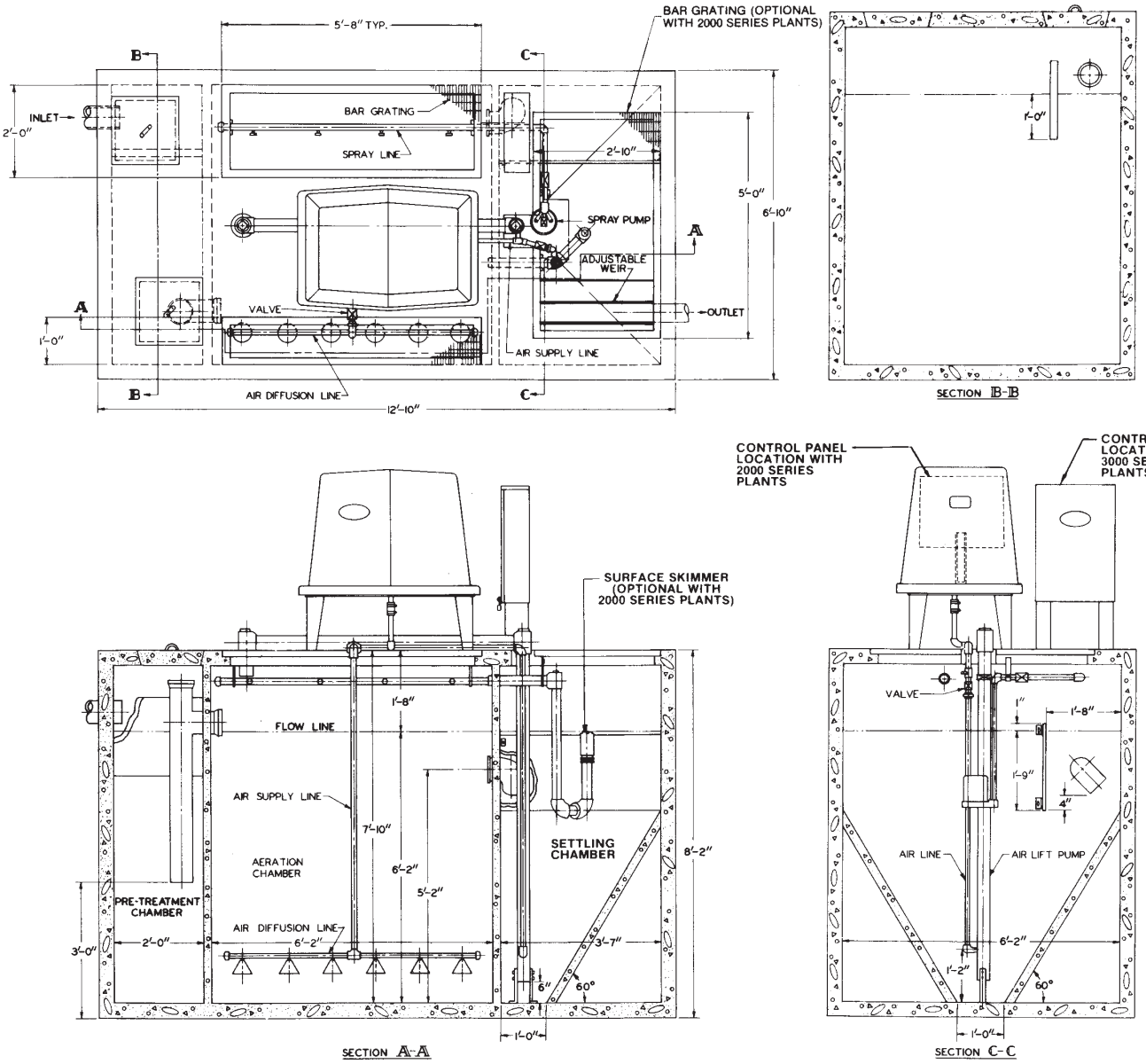
1500 GPD Jet Commercial Wastewater Treatment Plant 2000 & 3000 Series K4

Drawing Number 53JET5:



Note: To minimize fall thru plant, locate inlet invert 6" above flow line.

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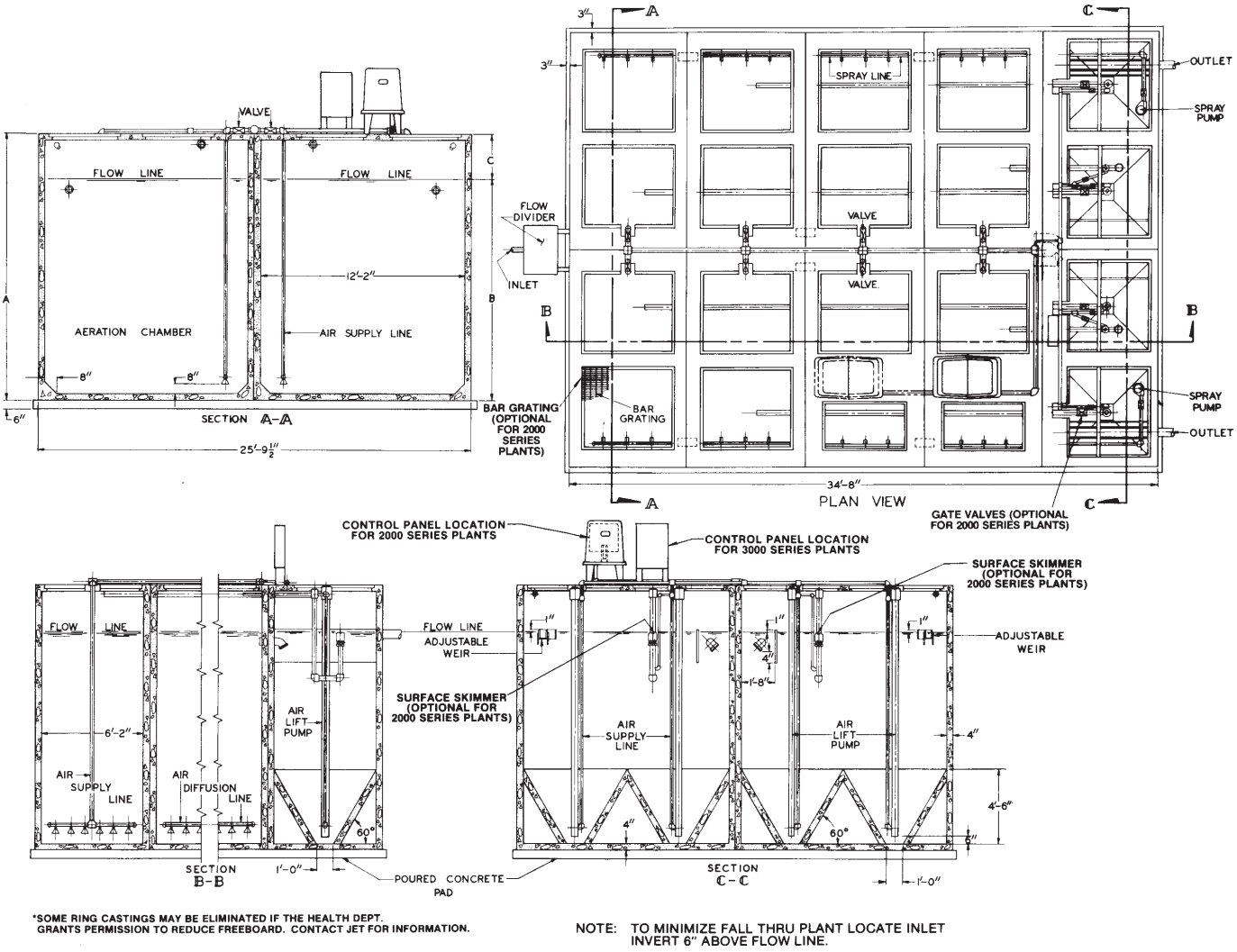
K5 37,000 to 50,000 GPD Jet Commercial Wastewater Treatment Plant 2000 & 3000 Series

Drawing Number 53JET6



*SOME RING CASTINGS MAY BE ELIMINATED IF THE HEALTH DEPT. GRANTS PERMISSION TO REDUCE FREEBOARD. CONTACT JET FOR INFORMATION.

NOTE: TO MINIMIZE FALL THRU PLANT LOCATE INLET INVERT 6" ABOVE FLOW LINE.

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