

DEGASSING TOWERS



Degas Towers are tailor made solutions for high density land based aquaculture tanks to extract excessive CO₂ from the water. MAT DGT provides an efficient means of carbon dioxide (CO₂) and nitrogen (N₂) gas removal, maintaining the suitable conditions of treated water to fish livestock.

The undesirable gases are diffused out of the water into the ambient with minimum energy consumption. The Unit offers three operation options:

- » Static flow trough
- » Two-phase atmospheric cross flow
- » Two-phase cross flow with vacuum

MAT Vacuum Degasser Systems operation

is based on the diffusional removal of undesirable gases and the enrichment of water in Oxygen by a fan and Titanium micron diffuser system. The gas exchange process is enhanced by the usage of a specifically dedicated blower that draws air into the water body. Air may flow atmospheric or under negative pressure -vacuum- depending on the operator's selection. On all options, air and water run in cross flow both through the media and the free-spaced columns for the maximum gas exchange efficiency.

MAT-KULING Degassers have unique auto clean wash and ozonated clean in place solution to avoid any kind of fouling.



DEGASS TOWER	DGT-25V	DGT-50V	DGT-100V	DGT-150V
Max Water Flow Rate (m ³ /hr)	25	50	100	150
Flow Rate @100 m/h HSL (m ³ /hr)	20	44	79	123
Flow Rate @75 m/h HSL (m ³ /hr)	15	33	59	92
Air Flow Nm ³ /hr	25 - 50	50 - 100	100 - 200	150 - 300
Air/Water Ratio G:L air/water	45323	45323	45323	45323
Operational Vacuum Pressure mBAR	100 - 150	100 - 150	100 - 150	100 - 150
Water inlet height mm	3100	3300	4315	4465
Water Outlet height mm	150	175	200	250
Tank height mm	3450	3650	4625	4780
Overall height mm	3600	3800	4775	5340
Water inlet diam. mm	140	160	200	225
Water outlet diam. mm	140	160	200	225
Cleaning Water Discharge Diamater (Gravity) mm	Ø75	Ø90	Ø110	Ø140
Cleaning Water Discharge Diamater (Pressure) inch	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Tank Dia mm	500	750	1000	1250

DGT-300V	DGT-600V	DGT-900V	DGT-1200V
300	600	900	1200
201	434	638	829
151	325	478	622
300 - 600	600 - 1200	900 - 1800	1200 - 2400
45323	45323	45323	45323
100 - 150	100 - 150	100 - 150	100 - 150
4695	4940	5260	5700
300	375	475	550
4930	5250	5620	6060
5900	6200	6500	6940
315	400	500	710
315	400	500	710
Ø160	Ø160	Ø200	Ø225
1 1/2"	1 1/2"	1 1/2"	1 1/2"
1600	2350	2850	3250

DEGASS TOWER	DGT-25V	DGT-50V	DGT-100V	DGT-150V
Degassing Surface Area m ²	0.2	0.44	0.79	1.23
Manhole diam. mm	Sight Glass	Sight Glass	Sight Glass	450
Emergency Oxygen Gas Inlet inch	1/2"	1/2"	1/2"	1/2"
Media Specific Surface Area m ² /m ³	140	140	140	140
Media Column Height cm	170	170	170	170
Media Volume m ³	0.5	1.15	2.05	3.28
Air outlet diam. mm	75	75	110	140
Air inlet diam. mm	75	75	110	140
Auto clean pump model	21-40/55-56H	21-40/58H	21-40/58H	Normblock 65/250
Blower Installed Power kW	0.75	1.5	3	4
Cleaning Pump Installed Power kW	1.33	1.77	1.77	5.5
Cleaning VFD Model	EP66-0022 T3	EP66-0022 T3	EP66-0022 T3	EP66-0075 T3
Blower VFD Model	EP66-0007 T3	EP66-0015 T3	EP66-0030 T3	EP66-0040 T3
Blower Model	k04-ms	k05-ms	k07-ms	k075-ms

DGT-300V	DGT-600V	DGT-900V	DGT-1200V
2.01	4.34	6.38	8.29
450	450	450	450
3/4"	3/4"	1"	1"
140	140	140	140
170	170	170	170
5.3	11.73	17.1	22.15
200	250	315	500
200	250	315	500
Normblock 65/250	Normblock Multi 100/250	Normblock 125/250	Normblock 125/250
5.5	15	11 x 2	15 x 2
7.5	11	18.5	22
EP66-0110 T3	EP66-0150 T3	EP66-0220 T3	EP66-0300 T3
EP66-0055 T3	EP66-0150 T3	2 x EP66-0110 T3	2 x EP66-0150 T3
k10-ms	e11 ts	k09-ts x 2	e11 ts x 2

DEGASS TOWER	DGT-25	DGT-25H	DGT-50	DGT-50H	DGT-100	DGT-100H	DGT-150
Max Water Flow Rate (m ³ /hr)	25	25	50	50	100	100	150
Flow Rate @100 m/h HSL (m ³ /hr)	20	20	44	44	79	79	123
Flow Rate @75 m/h HSL	15	15	33	33	59	59	92
Atmospheric Type Max Air Flow @5Mbar(Nm ³ /hr)	200	200	400	400	800	800	1200
Water inlet height (mm)	2100	3100	2300	3300	3315	4315	3500
Water Outlet Height (mm)	150	150	175	175	190	200	250
Tank height (mm)	2450	3450	2650	3650	3625	4625	3900
Overall height (mm)	2600	3600	2800	3800	3845	4845	4200
Water inlet diam. (mm)	140	140	160	160	200	200	225
Water outlet diam. (mm)	140	140	160	160	200	200	225
Cleaning Water Dis-charge Diamater (Gravity) (mm)	Ø75	Ø75	Ø90	Ø90	Ø110	Ø110	Ø140
Cleaning Water Dis-charge Diamater (Pressure) (inch)	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "
Tank Dia mm	500	500	750	750	1000	1000	1250
Degassing Surface Area (m ²)	0.2	0.2	0.44	0.44	0.79	0.79	1.23
Manhole diam. mm	Sight Glass	Sight Glass	Sight Glass	Sight Glass	Sight Glass	Sight Glass	450

DGT-150H	DGT-300	DGT-300H	DGT-600	DGT-600H	DGT-900	DGT-900H	DGT-1200	DGT-1200H
150	300	300	600	600	900	900	1200	1200
123	201	201	434	434	638	638	829	829
92	151	151	325	325	478	478	622	622
1200	2400	2400	4800	4800	7200	7200	9600	9600
4500	3695	4695	3940	4940	4260	5260	4700	5700
250	270	300	328	375	445	475	550	550
4900	3930	4930	4250	5250	4620	5620	5060	6060
5200	5000	6000	5320	6320	5655	6655	5940	6940
225	315	315	400	400	500	500	710	710
225	315	315	400	400	500	500	710	710
Ø140	Ø160	Ø160	Ø160	Ø160	Ø160	Ø200	Ø200	Ø225
1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "	1 1/2 "
1250	1600	1600	2350	2350	2850	2850	3250	3250
1.23	2.01	2.01	4.34	4.34	6.38	6.38	8.29	8.29
450	450	450	450	450	450	450	450	450

DEGASS TOWER	DGT-25	DGT-25H	DGT-50	DGT-50H	DGT-100	DGT-100H	DGT-150
Emergency Oxygen Gas Inlet (inch)	1/2 "	1/2 "	1/2 "	1/2 "	1/2 "	1/2 "	1/2 "
Media Specific Surface Area (m2/m3)	140	140	140	140	140	140	140
Media Column Height (cm)	170	250	170	250	170	250	170
Media Volume (m3)	0.3	0.43	0.68	1	1.22	1.81	1.97
Air outlet diam. (mm)	110	110	140	140	160	200	200
Air inlet diam. (mm)	110	110	140	140	160	200	200
Auto clean pump model	21-40/55-56H	21-40/55-56H	21-40/58H	21-40/58H	21-40/58H	21-40/58H	Norm-block 65/250
Air Fan Installed Power (kW)	0.25	0.25	0.25	0.25	0.25	0.25	0.37
Cleaning Pump Installed Power (kW)	1.33	1.33	1.77	1.77	1.77	1.77	5.5
Cleaning VFD Model	EP66-0007 T3	EP66-0007 T3	EP66-0007 T3	EP66-0007 T3	EP66-0007 T3	EP66-0007 T3	EP66-0007 T3

DGT-150H	DGT-300	DGT-300H	DGT-600	DGT-600H	DGT-900	DGT-900H	DGT-1200	DGT-1200H
1/2 "	3/4 "	3/4 "	3/4 "	3/4 "	1 "	2 "	3 "	4 "
140	140	140	140	140	140	140	140	140
250	170	250	170	250	170	250	170	250
2.89	3.18	4.68	7.04	10.35	10.26	15.09	13.28	19.54
200	200	280	355	400	400	450	450	500
225	225	280	355	355	355	450	450	500
Norm-block 65/250	Norm-block 65/250	Norm-block 65/250	Norm-block Multi 100/250	Norm-block Multi 100/250	Norm-block Multi 125/250	Norm-block Multi 125/250	Norm-block Multi 125/250	Norm-block Multi 125/250
0.37	0.37	0.37	1.1	1.1	2.2	2.2	4	4
5.5	7.5	7.5	11	11	18.5	18.5	22	22
EP66-0007 T3	EP66-0007 T3	EP66-0007 T3	EP66-0015 T3	EP66-0015 T3	EP66-0022 T3	EP66-0022 T3	EP66-0040 T3	EP66-0040 T3

**DGS OPTIONAL
FEATURES****DGS-22 -
DGS-1300**

Overflow Switch	optional
Air Fan	optional
Air/Water Ratio On 2 Min Retention Time	5//1
Biomedica BIO-100	optional
Biomedica BIO-500	optional

**DEGASS TOWER
OPTIONAL FEATURES****DGT-25 - DGT-
1200H**

Blower (Vacuum Unit)	optional
Air Fan (Atmospheric Unit)	optional
Blower VFD	optional
pH sensor	optional
CO2 probes	optional
O2 probes	optional
Turbidity Probe	optional
Water level sensor	optional
Overflow sensor	optional
Cleaning Pump	optional
Manual Face Piping Valve Manifold	optional
Auto Clean System Mo- torized Face Piping Valve Manifold	optional
Electrical Control Panel	optional
PLC Automated Control Panel	optional

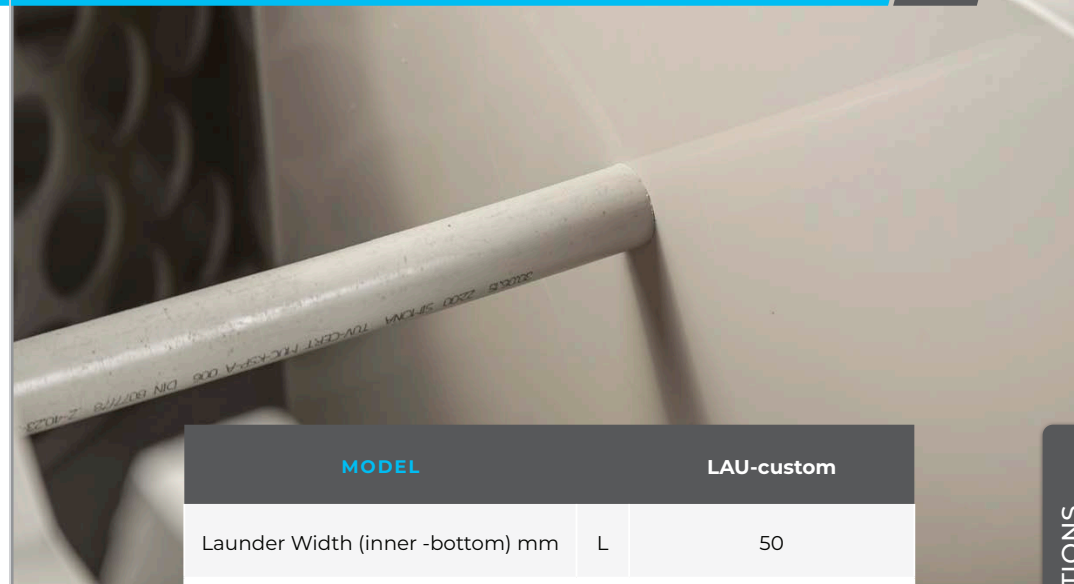


DEGASSING SOLUTIONS OVERFLOW LAUNDERS



The Overflow Launder is a robust structural element built of PP (Polypropylene) and it allows the water to trickle and degas through its gradual flow design. It is used in industrial effluent wastewater treatment and in intensive land based fish farming applications as a degassing / aeration solution.

MAT-KULING manufactures custom overflow effluent launders according to each fish farm design specifications.



MODEL		LAU-custom
Launder Width (inner -bottom) mm	L	50
Theta rad		1063
Launder Entry Width (inner) mm	W	600
Launder Height mm	h	50
Launder Height (max) mm	D	85
Launder Length (max) mm		11500
Length between Notches mm		200
Flowrate per Launder m3/hr		1300
Flowrate Through Notch m3/hr		4,13
Wet Weight (max) kg		3750
Dry Weight (max) kg		260