

Raetech Inlet Restrictor Catalog

Intake restrictors are being used by race sanctioning bodies to equalize performance across a range of engine and vehicle types. RAETECH has employed CFD modeling and Engine Simulation to develop an optimized series of Inlet Restrictors. Designing the restrictor with the least flow loss at the required minor diameter provides optimal performance for the competitor.

RAETECH has two restrictor series, GTL Restrictors in sizes 22.5 – 30 mm, and the GTH Restrictors with diameters 30 – 43 mm.

GTL Restrictor with Bell Inlet

22.5 – 30 mm Diameters
Modular Construction



2 Inlet Options:
Bell Mouth
3" Hose

Outlet Options:
3" Hose

GTH Restrictor with Bell Inlet

30 – 43 mm Diameters
Modular Construction



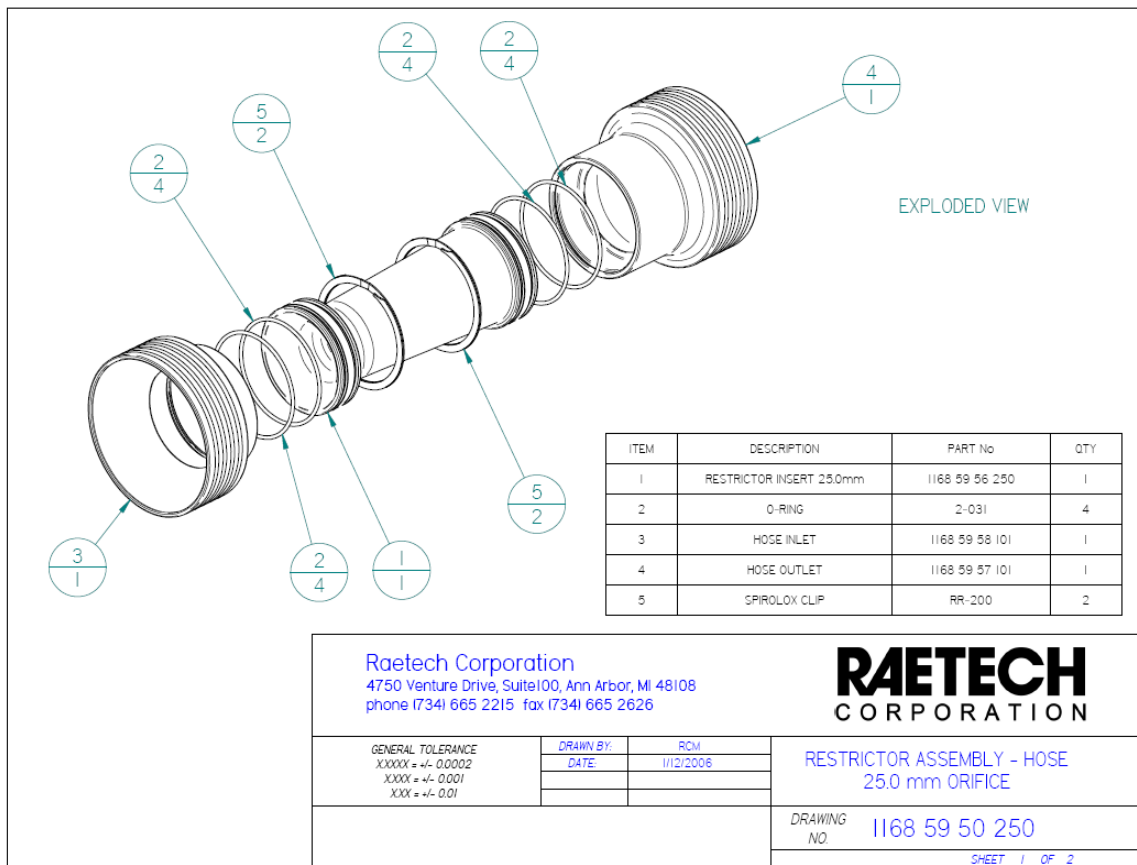
4 Inlet Options
5 Outlet Options

36 Possible Configurations

RAETECH GTL Inlet Restrictor Series

RAETECH Motorsports an Inlet Restrictor design which can be assembled in a variety of configurations suitable for SCCA's GTL, IT and D Prepared categories.

RAETECH's restrictors are modular. All of the restrictors within a series share common inlet and outlet adapter allowing the size to be change by only replacing the center section. Each restrictor has the interior geometry optimized to provide the maximum pressure recovery and the least flow loss.



GTL Inlet Restrictors are available with two inlet styles, the first provides for a 3" dia. hose attachment to duct in the inlet air, the second is a bell mouth for use in free air without a hose. Outlet adapters provide for a 3" Hose attachment.

RAETECH GTL Inlet Restrictor Assemblies:

GTL Restrictor with Bell Inlet



GTL Single Inlet Restrictor w/ Hose Inlet:



GTL Single Inlet Restrictor Assemblies:

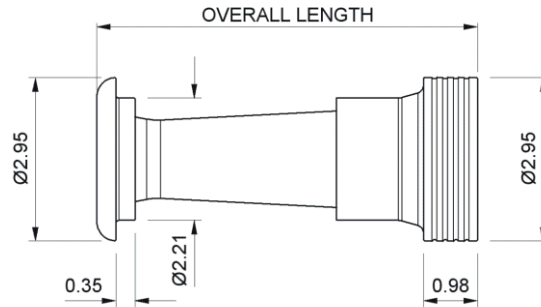
\$350.00 ea. + \$25.00 Shipping and Handling

Includes: (1 ea.) Inlet, Outlet, Restrictor Insert, Clips and Seals

<u>Dia. (mm)</u>	<u>Hose Inlet Assembly</u>	<u>Bell Inlet Assembly</u>
22.5	1168-59-50-225	1168-59-51-225
23.0	1168-59-50-230	1168-59-51-230
23.5	1168-59-50-235	1168-59-51-235
24.0	1168-59-50-240	1168-59-51-240
24.5	1168-59-50-245	1168-59-51-245
25.0	1168-59-50-250	1168-59-51-250
25.5	1168-59-50-255	1168-59-51-255
26.0	1168-59-50-260-A	1168-59-51-260-A
27.0	1168-59-50-270	1168-59-51-270
28.0	1168-59-50-280	1168-59-51-280
29.0	1168-59-50-290	1168-59-51-290
30.0	1168-59-50-300	1168-59-51-300

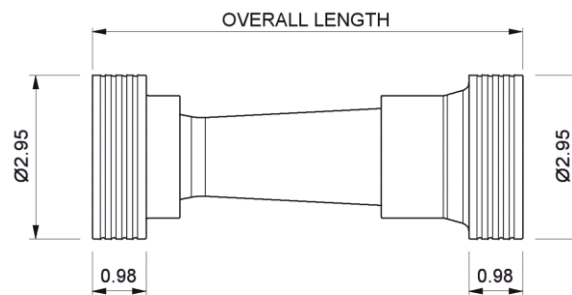
Raetech GTL Inlet Restrictor Dimensions:

GTL Single Inlet Restrictor w/ Bell Inlet – Dimensions (inches)



<u>Dia. (mm)</u>	<u>Part Number</u>	<u>Length (in)</u>	<u>Weight (lbs)</u>
22.5	1168-59-51-225	6.62	0.91
23.0	1168-59-51-230	6.62	0.90
23.5	1168-59-51-235	6.62	0.90
24.0	1168-59-51-240	6.62	0.89
24.5	1168-59-51-245	6.62	0.88
25.0	1168-59-51-250	6.62	0.87
25.5	1168-59-51-255	6.62	0.86
26.0	1168-59-51-260-A	6.03	0.82
27.0	1168-59-51-270	5.64	0.80
28.0	1168-59-51-280	5.64	0.80
29.0	1168-59-51-290	5.64	0.80
30.0	1168-59-51-300	5.64	0.80

GTL Single Inlet Restrictor w/ Hose Inlet – Dimensions (inches)



<u>Dia. (mm)</u>	<u>Part Number</u>	<u>Length (in)</u>	<u>Weight (lbs)</u>
22.5	1168-59-50-225	7.87	0.98
23.0	1168-59-50-230	7.87	0.97
23.5	1168-59-50-235	7.87	0.96
24.0	1168-59-50-240	7.87	0.95
24.5	1168-59-50-245	7.87	0.94
25.0	1168-59-50-250	7.87	0.93
25.5	1168-59-50-255	7.87	0.92
26.0	1168-59-50-260-A	7.28	0.88
27.0	1168-59-50-270	6.89	0.86
28.0	1168-59-50-280	6.89	0.86
29.0	1168-59-50-290	6.89	0.86
30.0	1168-59-50-300	6.89	0.86

Raetech GTL Individual Restrictor Components:

GTL Restrictor Inserts: \$180.00 each

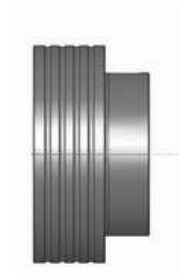


<u>Dia. (mm)</u>	<u>Part Number</u>	<u>Description</u>
22.5	1168-59-56-225	22.5 mm Insert
23.0	1168-59-56-230	23.0 mm Insert
23.5	1168-59-56-235	23.5 mm Insert
24.0	1168-59-56-240	24.0 mm Insert
24.5	1168-59-56-245	24.5 mm Insert
25.0	1168-59-56-250	25.0 mm Insert
25.5	1168-59-56-255	25.5 mm Insert
26.0	1168-59-56-260-A	26.0 mm Insert
27.0	1168-59-56-270	27.0 mm Insert
28.0	1168-59-56-280	28.0 mm Insert
29.0	1168-59-56-290	29.0 mm Insert
30.0	1168-59-56-300	30.0 mm Insert

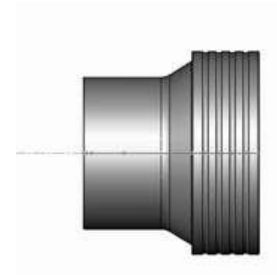
GTL Adapters: \$85.00 each



Bell Inlet
1168-59-58-102



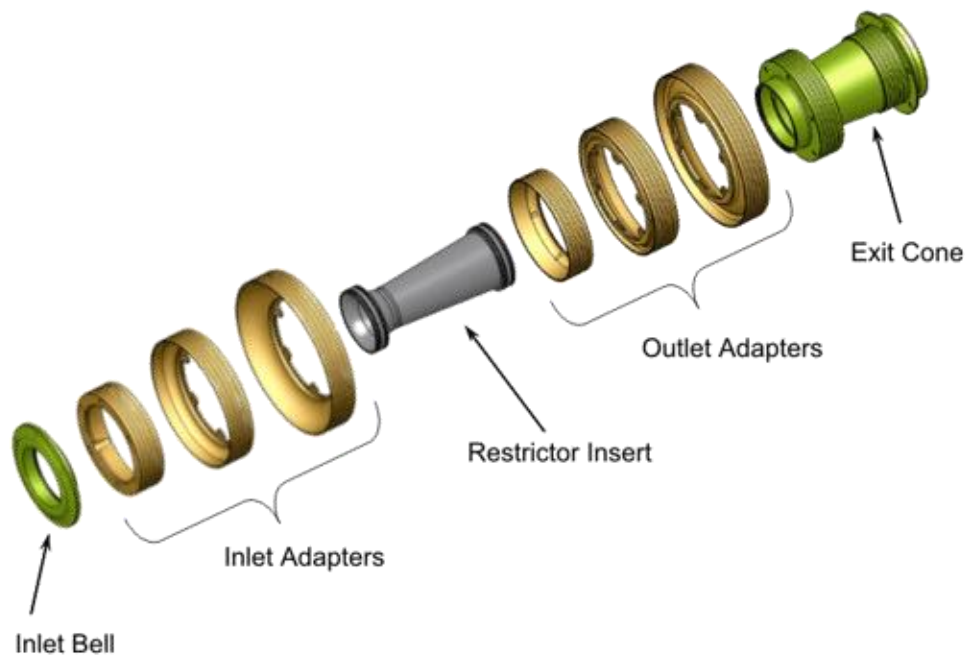
Hose Inlet
1168-59-58-101



Hose Outlet
1168-59-57-101

RAETECH GTH Inlet Restrictor Series

The GTH Restrictor is designed for larger displacement engines including SCCA's GT2, GT3 and B Prepared categories. A longer exit cone provides improved pressure recovery after the restrictor throat maximizing the restrictor efficiency. A selection of hose adapters is available offering connections for larger ducting.



Raetech GTH Inlet Restrictors are designed with a modular construction providing for a wide variety of inlet and outlet configurations. The inlet bell can attach to your choice of a 4", 5" or 6" diameter hose, or be bolted to panel. Similarly the outlet can be selected as 3", 4", 5" or 6" hose, or bolt directly to your air box. The Exit Cone has two mounting flange locations available. A total of 36 possible inlet and outlet configurations are available creating a restrictor assembly which can be adapted to your installation requirements.

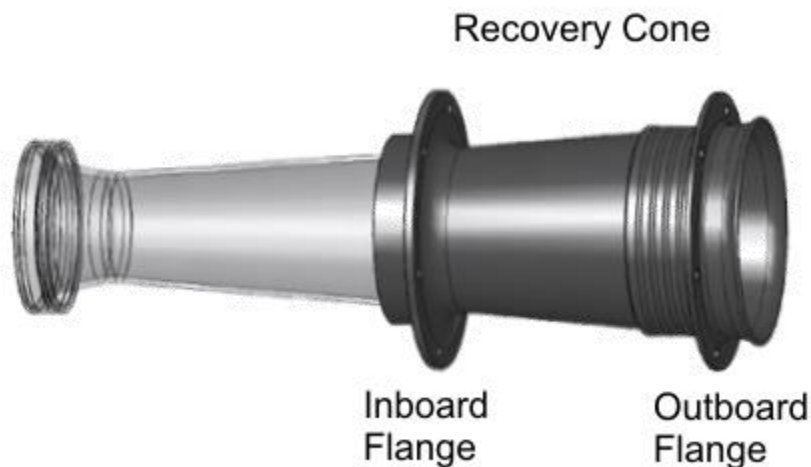
The Inlet Bell, Restrictor Insert and Exit Cone are required parts for any GTH restrictor assembly. The Inlet and Outlet Adapters provide options for hose connections. GT restrictor Inserts are available in a range of diameters between 30 to 43 mm.

RAETECH GTH Universal Recovery Cone

The RAETECH Motorsports Universal Outlet Recovery Cone extends the restrictor taper thereby enhancing performance, improving pressure recovery and maximizing flow. The Recovery Cone includes a variety of attachment features creating in a large selection of restrictor installation options.

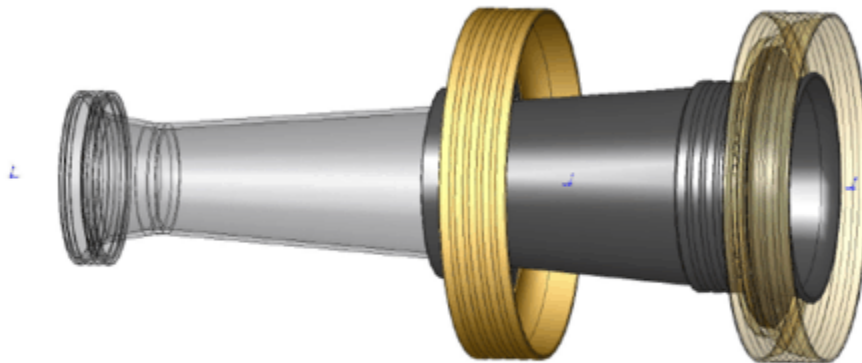


Out of the box the RAETECH Universal Recovery Cone provides for a 4 inch hose connection. Other available hose adapters can be mounted to the flange show on the right, or the Recovery Cone can be bolted directly to an airbox. With simple machining the 4 inch hose barb can be removed and another mounting flange then exposed.



This flange show above on the left is now available for mounting alternate size hose adapters, bolting to an airbox or attaching support brackets. A 5 inch (and 6") hose connector is available which can be attached at either flange location as shown below. Another option is to remove the 4 inch hose barb with the inboard flange then bolt the hose barb to the outboard flange moving the joint outboard on the restrictor assembly.

RAETECH GTH Universal Recovery Cone (cont')



Available Hose Adapter Locations

With another machining operation trimming the exit taper and removing the outboard flange, show on the right above, a 3 inch hose barb is exposed as shown below.

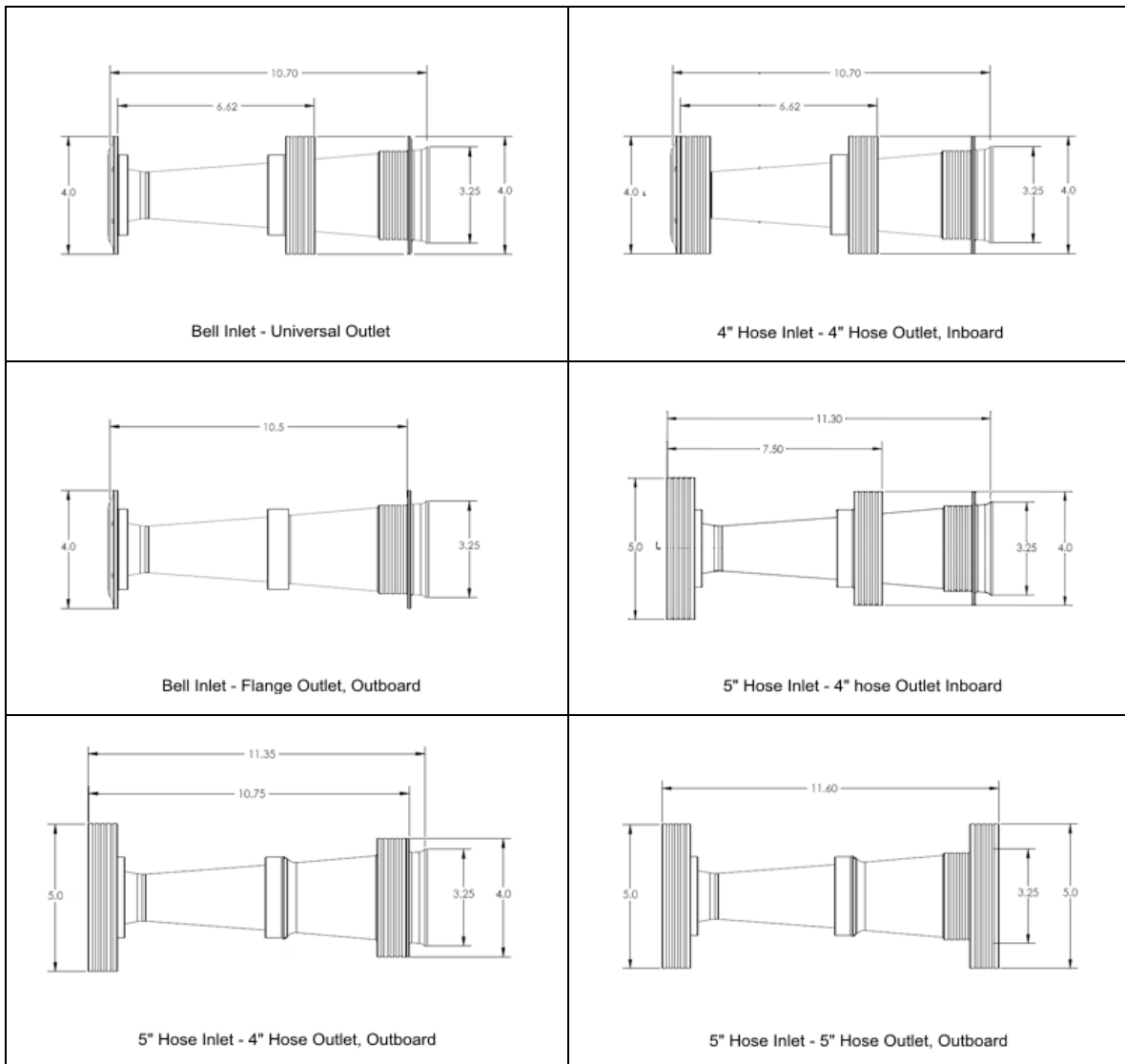


3 inch Hose Outlet

Any unnecessary mounting features can be removed to minimize restrictor system weight. RAETECH Motorsports can custom machine the Universal Recovery Cone to your application on request.



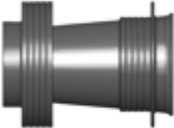
RAETECH GTH Inlet Restrictor Series Assembly Examples

Below are examples of some of the GT Restrictor configurations which can be created by selecting inlet and outlet adapters for the assembly. Many more combinations are possible.




GTH Restrictor Component Prices (Call for Availability)

Select Components to Build Required Configuration

<u>Component</u>	<u>Description</u>	<u>Part Number</u>	<u>Price</u>
 Bell Inlet	Bell Inlet	1168-59-68-106	\$130.00
 Restrictor Insert	Restrictor Insert 31 – 40 mm Specify Size	1168-59-66-Dia	\$250.00
 Universal Exit Cone	Universal Exit Cone	1168-59-67-106	\$295.00

Clip and Seal Kit 1168-59-69-101 \$20.00

<u>Optional Parts</u>	<u>Description</u>	<u>Part Number</u>	<u>Price</u>
 5 inch Hose Adapter	5" Hose Adapter	1169-59-68-107	\$175.00

For more Information about Inlet Restrictors Please Contact:

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