

# CUSTOM MARINE EXHAUST SOLUTIONS



PROPULSION & GENERATOR EXHAUST



ENVIRONMENTAL SOLUTIONS



COMPOSITE TUBING & COMPONENTS



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## SETTING THE STANDARD FOR CUSTOM MARINE EXHAUST SOLUTIONS FOR OVER FIFTY YEARS.

Use this catalog as a guide to better understand the various options available to suit your specific needs. Keep in mind, however, that our specialty is customization. Whether that means something as simple as changing the angle of an inlet or completely designing an exhaust system from the turbo to atmosphere, we have the knowledge, expertise and ability to make it happen!

### OUR STORY

The history of Centek Marine is basically the same as the history of marine wet exhaust in general. Way back in 1962 in Boca Raton, FL, Vernay Products began what eventually grew to become Centek Marine. In the early days, pioneers in the industry like John Ford developed nearly all the critical designs used by boat builders and repair shops around the globe. Today that tradition of innovation continues, and Centek is now the premier designer and manufacturer of marine exhaust systems.

Centek Marine is now located in Thomasville, GA – a thriving small town in the Southwest corner of the state. Here in Thomasville, the climate is stable, and the skilled workforce is second to none. Many of the craftsmen and women have been with Centek for over 25 years and have always been what sets us apart. Building the best exhaust components and systems for the best boats in the world is what we do, and we are proud of it! Whether propulsion engines or gen-sets, ski boats to mega yachts and all in between, we can design and build it for you.



## ENGINEERING & CUSTOMIZATION

Centek owes its strength and growth to the experience, imagination, and capabilities of our in-house engineering staff. A prime example is the Vernatone™ exhaust muffler that was the first FRP water-cooled marine muffler. In addition, Centek has over 14 patents and continues to lead the industry in design and innovation. Listening carefully to customers' needs, Centek has fulfilled and/or surpassed the requirements and specifications of boat builders for over 50 years.

The products listed in the Centek catalog represent less than 20% of the total wet marine mufflers Centek manufactures for the boat building industry worldwide. The list of custom mufflers and marine exhaust products has grown to over 14,000 specially designed units. Centek's engineering staff offers customers over 80 years of wet marine exhaust system design and innovation experience. Centek engineers work with boat builders, marine architects, and engineers around the world to assist in determining the proper system for new or re-powered systems based on engine size, cost, and available space while providing a system that offers optimum engine performance and the best sound level and quality. Our engineers communicate with customers by computer (e-mail and CAD), fax, phone, and in person at the customer's location to examine alternatives to identify the best approach from concept to design and installation. Utilizing the internet and state of the art 3-D software, our engineers provide the customers with dimensional model designs to fit the boat configuration. Most of the innovative designs in wet marine mufflers are a result of the working partnerships between Centek and its customers.



## PRODUCTION FACILITIES

Centek's 80,000 square foot plant manufactures thousands of mufflers and parts for marine engines ranging from 5 to 6,000 + horsepower. The innovative plant design incorporates a balanced air system that provides continuous fresh air replacement and particle filtration. The facility was constructed specifically to manufacture fiberglass-reinforced plastic products and has been used as a model for similar manufacturing facilities.





## CONSTRUCTION

Centek craftspeople construct mufflers and components using CAD drawings. The components of finished products are made through a variety of manufacturing processes. Centek's manufacturing processes include resin transfer molding (RTM), compression molding, hand lay-up, and filament winding. Every product delivered by Centek is totally manufactured in house. Continuous inspection and testing by experienced employees and engineers assure excellence in product quality. As an example, 100% of all flow parts of the system (Y's, T's, angles, tube sections, and mufflers) are pressure tested prior to painting, labeling, and packaging.



## QUALITY AND SAFETY

As the industry leader, Centek Industries works with laboratories, suppliers, builders, and marine groups to upgrade safety and product specifications. These groups (ASTM, ABYC, ABS, and ISO) constantly address material quality, product specifications, and customer safety. Centek holds customer safety foremost in building all its products and continues to work with the ABYC to upgrade product safety standards. Centek products meet or exceed ASTM-D-635 fire retardant specifications. Centek was the first to comply with these specifications and all products are classified as fire retardant and "self-extinguishing". Vernatube™, the basic product for most mufflers and many components, meets ABS certification requirements. To maintain this approval Centek is subject to continuous and often unannounced inspections. The Vernalift™ family was designed specifically to exceed ABYC specifications for lift mufflers and is the only one to meet those specifications. Centek utilizes only the finest high temperature resins.



CENTEK EXHAUST SYSTEMS AND COMPONENTS  
ARE LLOYD'S REGISTER TYPE APPROVED.

## CERTIFICATIONS

Lloyd's	Lloyd's Register Type Approved (all products)
ABYC	American Boat & Yacht Council (exceeds guidelines for wet exhaust systems)
ISO	International Organization for Standardization

Note: Copies of Certifications available upon request.

### MEMBER OF:

NMMA	National Marine Manufacturing Association
MRAA	Marine Retailers Association of America
AMI	Association of Marina Industries
MEEF	Marine Environmental Education Foundation
NCBC	National Clean Boating Campaign



## CUSTOMIZED SOLUTIONS



Centek is flexible in meeting its customer's needs by offering multiple exhaust options for both gasoline and diesel engines.

Centek will work with the customer to obtain the correct specifications (rate of exhaust gas and cooling water flow and maximum back pressure allowed) for the engine operating conditions. These are generally available from the engine manufacturer, although Centek maintains extensive files on many of the more popular marine engines.



More than half of the exhaust applications that Centek creates for their customers require customized exhaust designs. Centek is the marine industry leader in providing this innovative service to its customers.

Centek maintains an in-house dynamometer to load a marine engine to provide testing capability on many new exhaust designs.



State of the art sound pressure level and back pressure measurement equipment is used to collect data to evaluate product performance while insuring that maximum power output of the engine is not negatively impacted.

Centek conducts periodic destructive internal pressure tests on its products to ensure the best possible structural integrity.

## PRODUCT FINISHES

Centek can provide a range of finishes from spray black or white paint to beautiful “yacht quality” glossy white. The yacht quality finish provides total world class engine room appearance.

Centek offers a high gloss YACHT QUALITY FINISH and YACHT PLUS FINISH to satisfy the most discriminating designers to complete a modern engine room appearance. Available upon request.

A flat GEL-COAT FINISH is available upon request for those who require a smooth exterior surface.

The enamel WHITE or BLACK FINISH is Centek’s standard.



YACHT QUALITY



GEL-COAT



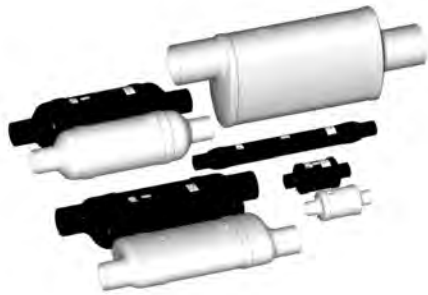
STANDARD WHITE



STANDARD BLACK



## PRODUCT DESCRIPTION



### VERNATONE™

The Vernatone™ exhaust muffler is the original FRP water-cooled marine muffler. This style has been used by boat builders and boaters world wide for over 50 years. The Vernatone™ family of inline mufflers includes eight basic products with hundreds of variations in length, width, height, inlets and outlets. Builders and boaters requested these variations for specific engine or location requirements in a particular vessel. These mufflers also vary in size which influences the acoustical performance.



### VERNALIFT™

The Vernalift™ muffler was originally designed for small auxiliary propulsion engines installed near or below the water line in sailboats. In the early 70's the quieting capabilities of lift mufflers were recognized. The Vernalift™ family expanded to include new and larger engines.



### UNDERWATER EXHAUST

This exhaust silencer was designed specifically for use with underwater exhaust systems. It combines Centek's experience in muffler design with all the benefits of an underwater discharge. One of the benefits includes the elimination of the exhaust gases flowing back into the boat, commonly referred to as the "station wagon effect".

Another benefit is the elimination of engine exhaust deposits (soot) staining the exterior surfaces of the boat. The underwater exhaust is available in a vertical design for installation in the engine room as well as a horizontal design for mounting under the deck in the cockpit area.

## PRODUCT DESCRIPTION



### GAS/WATER SEPARATION MUFFLERS

The routing of exhaust gas and cooling water in some complex vessels brought about the development of new types of muffler products. Centek has met these needs with its gas/water separation mufflers. Separation systems are very effective where engines are located amidships or well forward in the hull and extremely effective in reducing exhaust noise.



### GEN-SEP™

The Gen-Sep™ is used in conjunction with a Vernalift™ muffler on generator sets. The water drain from the Gen-Sep™ can be located below the water line to eliminate irritating water splash during overnight moorings.



### COMBO-SEP™

The patented Combo-Sep™ combines a Vernalift™ muffler and a highly efficient gas/water separator into a single space saving unit. The Combo-Sep™ is excellent for mid-range generators and propulsion engines installed amidship or forward. Centek recommends the Combo-Sep™ for above water line installations for maximum silencing and excellent water separation.

## PRODUCT DESCRIPTION



### VERNATUBE™

Vernatube™ is a resin-impregnated glass filament wound tubing made exclusively with a fire retardant resin formulated for high temperature applications. Centek uses the fire retardant Vernatube™ to fabricate many of the basic components used to manufacture our wet marine exhaust systems. Vernatube™ exceeds values for the class of materials designated as “self-extinguishing” per ASTM –D-635, UL94V-O, and the US Navy/USCG MIL-R-21607 and MIL-R-7575.

The smooth, resin-rich I.D. assures minimal restriction to exhaust gases and cooling water flowing through the tubing. Precise control of the outside diameter ensures ease of connecting mating ports with marine exhaust hose.



### EXHAUST FITTINGS

Exhaust systems fittings are made of the same fiberglass and fire retardant resins used to produce Vernatube™. The fittings are lightweight, strong, non-corroding, and durable. Fittings are easy to install and O.D.'s are compatible with approved marine rubber exhaust hose.

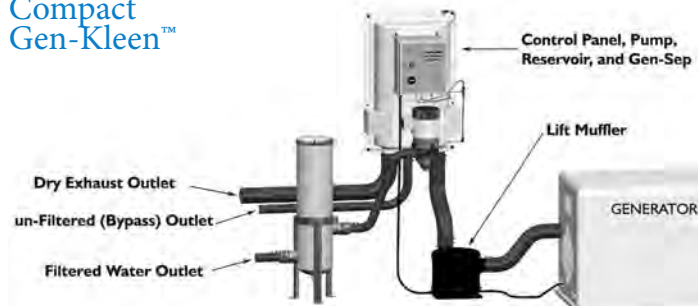


### ACCESSORIES

Centek also offers thru-hull fittings (with and without flappers), check valves, exhaust flanges, crush sleeves, and scupper drains.

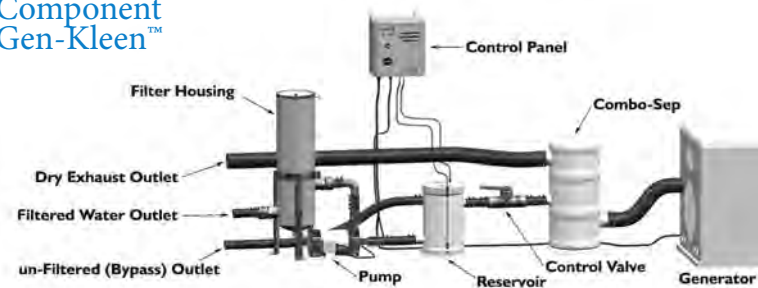
# ENVIRONMENTAL PRODUCTS - GEN-KLEEN™

## Compact Gen-Kleen™



\*Lift Muffler application with Gen-Sep™/Reservoir combo package

## Component Gen-Kleen™



Combo-Sep application with individual components.

### Filters Exhaust Discharge - Removes Hydrocarbons - Eliminates Sheen

#### GEN-KLEEN™ FILTER SYSTEM

Centek developed the Gen-Kleen™ Filter system in response to customers who received complaints about, or simply did not like, the sheen that was appearing around their boat or yacht when the diesel generator was running.

This patented system binds hydrocarbons to a filter system and discharges clean water without sheen.

The system consists of six individual components serving a specific function.

- A lift type muffler, which may already be in place in an existing installation
- An exhaust gas/water separator (Gen-Sep™, Verna-Sep™ or Combo-Sep™)
- A reservoir for collecting the water from the gas/water separator
- A pump to circulate the water through the filter
- A control component to turn the system on/off and regulate pump speed and output
- The filter to remove hydrocarbon contamination (which causes sheen) from the water

These components can be supplied as discrete parts or packaged for convenience. The package will require that a space of sufficient size is available in the proper location. If this is not the case, the separate components can be positioned in available smaller spaces and connected appropriately. In either case, Centek will assist with proper instructions to insure that the installation is completed satisfactorily. If you have any questions or require additional information on the Gen-Kleen™ Filter System, contact Centek Engineering.

## ENVIRONMENTAL PRODUCTS - BILGEKLEEN™



Filters Bilge Water Discharge - Removes Hydrocarbons - Eliminates Sheen

### BILGEKLEEN™ FILTER SYSTEM

The patented BilgeKleen System automatically removes oil, gas, diesel fuel and other hydrocarbon pollutants from bilge water before it is discharged overboard. Using a special filter medium, the BilgeKleen captures and binds to hydrocarbons and lets water pass through freely. As a result, 99.9% of the hydrocarbon pollutants are eliminated from discharge with no increase in pressure to the bilge pump.

SPECIFICATIONS	MINI BILGEKLEEN	BILGEKLEEN - 1	BILGEKLEEN - 2	BILGEKLEEN - 3
PART NUMBER	8-MBK-1	8-BK-1	8-BK-2	8-BK-3
FILTER CAPACITY	MIN 150 GRAMS	MIN 300 GRAMS	MIN 900 GRAMS	MIN 1800 GRAMS
MAXIMUM FLOW	10 GPM	25 GPM	40 GPM	50 GPM
DIMENSIONS IN / OUT	4.5" DIA. X 7.5" H 0.5" NPT	4.5" DIA. X 12.5" H 0.75" NPT	4.5" DIA. X 14" H 1.5" NPT	4.5" DIA. X 20" H 1.5" NPT
REPLACEMENT FILTER	8-M5-1	8-BF-1-1R	8-BF-2-1R	8-BF-3-1R



## CHOOSING THE RIGHT MUFFLER

### PRODUCT SELECTION

Why use fiberglass reinforced plastics to make wet marine mufflers? FRP will not corrode or deteriorate when exposed to gasoline or diesel fumes mixed with salt or fresh water. Electrolysis and welds in stainless steel, which often cause early failure, are eliminated. Resistance to higher temperatures will not result in warping or melting often observed in some rubber or plastic mufflers.

The right muffler for any given vessel should be determined by answering the following basic questions:

#### 1. ENGINE LOCATION

Engines located at or below the loaded water line (LWL) require some type of a lift muffler, (Vernalift™). Engines located aft or mid ship and above the LWL can utilize a muffler of the Vernatone™ family.

#### 2. EXHAUST SYSTEM SIZE (Diameter)

Larger engines with higher horsepower require larger diameter exhaust systems and more space. The muffler and accompanying tubing, hose and fittings must be large enough to carry the cooling water and gases through the system without creating back pressure in excess of the engine manufacturer's recommendations. Centek's engineering expertise assures accurate sizing.

#### 3. NOISE REDUCTION

Muffler size and internal design will determine the amount of noise reduction achievable in a given installation. Larger mufflers normally provide better silencing than small mufflers. Space limitations for installations will often determine the size and type of muffler that can be used.

## EXHAUST SYSTEM SIZE

and the engine manufacturer's allowable backpressure. Backpressure requirements vary greatly among engine manufacturers.

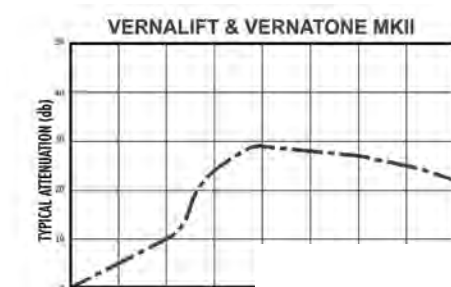
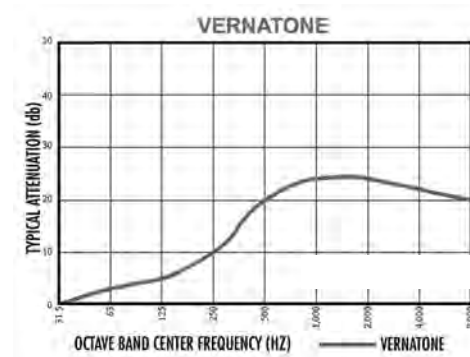
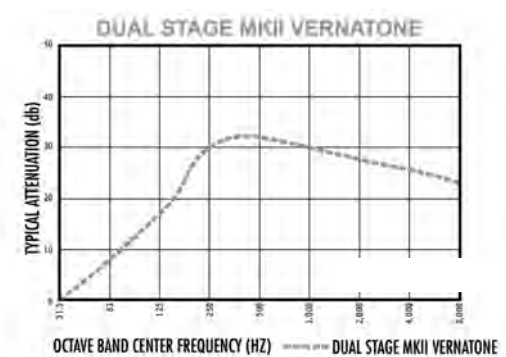
The table to the right is for general reference only.

NOTE: For V-Block engines where twin exhaust lines are desired, divide the H.P. by two and then match to the appropriate size.

## SOUND ATTENUATION IS BASED ON A COMPARISON TO STRAIGHT EXHAUST

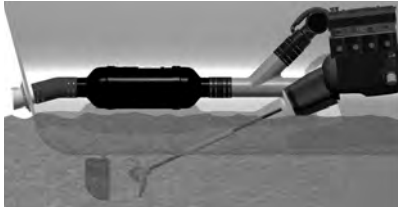
Fair	10-12 dB
Good	15-18 dB
Better	22-28 dB
Best	25-30 dB

ENGINE HP	TYPICAL EXHAUST SIZES
0 - 10	1.5" - 2"
11 - 25	1.75" - 3"
26 - 50	2" - 4"
51 - 75	2.5" - 4"
76 - 100	3" - 4.5"
101 - 125	3.5" - 5"
126 - 150	3.5" - 6"
151 - 200	4" - 6"
201 - 225	4" - 8"
226 - 350	5" - 8"
351 - 500	6" - 10"
501 - 550	8" - 10"
551 - 675	8" - 12"
676 - 925	10" - 12"
926 - 1200	12" - 14"
1,201 - 1,750	12" - 16"
1,756 - 2,300	14" - 18"
2,701 - 3,500	18" - 24"
3,501 - 6,000	24" - 26"
> 6,000	Call



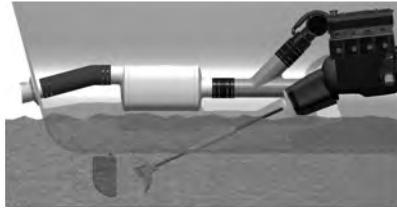
The attenuation curves as shown are typical only for the products as shown and meant to display their comparative acoustical properties. Actual results will depend highly on the engine to which the product is applied and the operating parameters of that engine.

## TYPICAL INSTALLATION DIAGRAMS



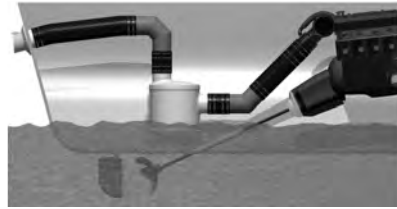
### VERNATONE™

Engine installation above the LWL with inline muffler. See detailed Vernatone™ installation instructions accompanying the new muffler.



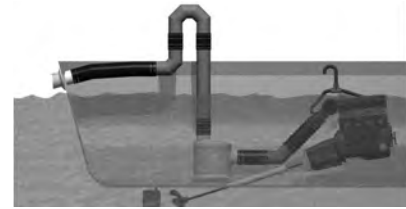
### VERNATONE™ MKII

Engine installation above the LWL with inline muffler. See detailed Vernatone™ MK II installation instructions accompanying the new muffler.



### VERNALIFT™ - ABOVE LWL

Engine installation above the LWL with a Vernalift™ muffler. See detailed installation instructions accompanying the new muffler.

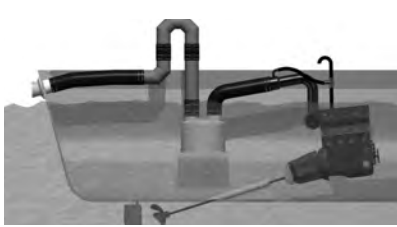


### VERNALIFT™ - BELOW

Engine installation near or below the LWL with space available below the engine for a Vernalift™ muffler. See detailed installation instructions

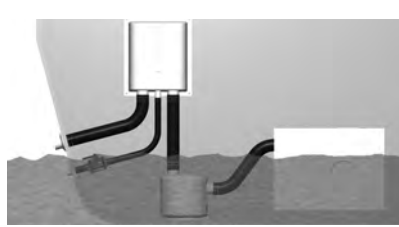


## TYPICAL INSTALLATION DIAGRAMS



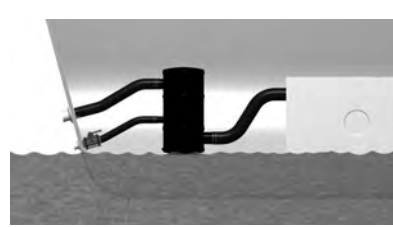
### VERNALIFT™ - BELOW LWL

Engine installation near or below the LWL with no or limited space below the engine for a lift muffler. See detailed installation instructions accompanying the new muffler.



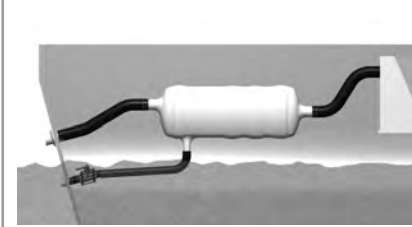
### GEN-SEP™

Engine/generator installation near or below the LWL with a Vernalift™ muffler and the Gen-Sep™ water separator. See detailed installation instructions accompanying the new muffler.



### COMBO-SEP™

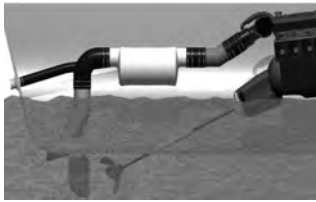
Generator installation above the LWL with combo-sep water separation muffler. See detailed installation instructions accompanying the new muffler.



### COMBO-SEP™ HORIZONTAL

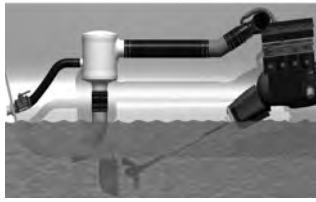
Generator installation above the LWL with horizontal combo-sep water separation muffler. See detailed installation instructions accompanying the new muffler.

## TYPICAL INSTALLATION DIAGRAMS



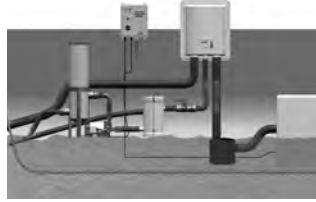
**HORIZONTAL  
UNDERWATER  
EXHAUST**

Engine installation above the LWL with the underwater exhaust muffler. See detailed installation instructions accompanying the new muffler.



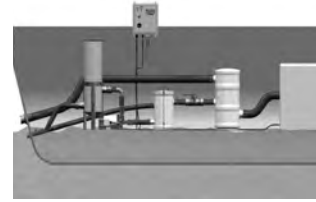
**VERTICAL  
UNDERWATER  
EXHAUST**

Engine installation above the LWL with the underwater exhaust muffler. See detailed installation instructions accompanying the new muffler.



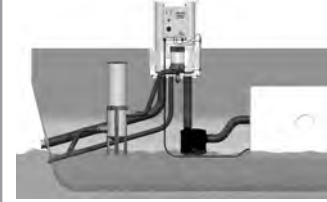
**GEN-KLEEN™  
COMPONENT  
VERSION -  
BELOW LWL**

Engine installation near or below the LWL with Gen-Kleen™ water cleaning system. See detailed installation instructions accompanying the new cleaning system.



**GEN-KLEEN™  
COMPONENT  
VERSION -  
ABOVE LWL**

Engine installation above the LWL with Gen-Kleen™ water cleaning system. See detailed installation instructions accompanying the new cleaning system.



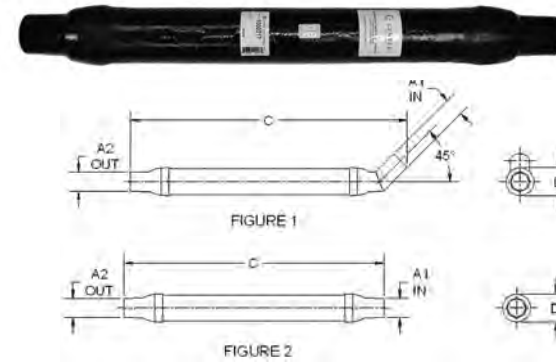
**GEN-KLEEN™  
COMPACT  
VERSION**

Engine installation near or below the LWL with Gen-Kleen™ water cleaning system. See detailed installation instructions accompanying the new cleaning system.

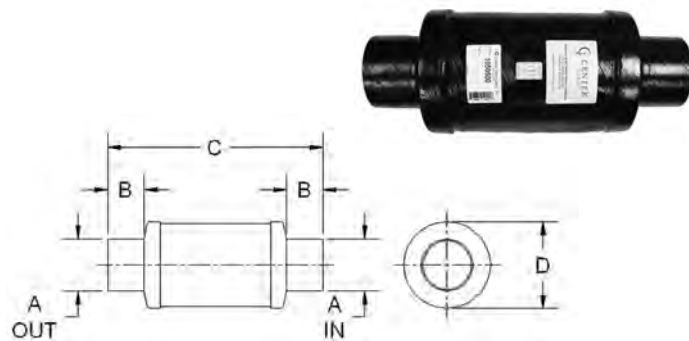
PART#	A	C	D	G
	IN/OUT	LGTH	DIA	FIGURE
	IN/MM	IN/MM	IN/MM	
1000216	3.00 / 76	43.00 / 1,092	4.38 / 111	1
1000217	3.00 / 76	39.50 / 1,003	4.38 / 111	2
1000262	3.50 / 89	42.00 / 1,067	4.38 / 111	1
1000266	3.50 / 89	40.00 / 1,016	4.38 / 111	2
1000265	4.00 / 102	44.00 / 1,018	4.38 / 111	1
1000267	4.00 / 102	40.00 / 1,016	4.38 / 111	2

Application: Ski Boats • Fuel Type: Gas Only • Waterline: Above Only • Sound Rating: Good

## VERNA SKI



## MINIMAX



PART#	A	B	C	D
	IN/OUT	I/O LGH	LGTH	DIA
	IN/MM	IN/MM	IN/MM	IN/MM
1050250	2.50 / 64	2.00 / 51	12.75 / 324	6.38 / 162
1050300	3.00 / 76	2.50 / 64	13.75 / 349	6.38 / 162
1050350	3.50 / 89	2.50 / 64	14.75 / 375	6.38 / 162
1050400	4.00 / 102	3.00 / 76	16.75 / 425	8.38 / 213
1050450	4.50 / 114	3.00 / 76	18.75 / 476	8.38 / 213
1050500	5.00 / 127	3.50 / 89	20.75 / 527	8.38 / 213
1050600	6.00 / 152	4.00 / 102	25.00 / 635	10.04 / 255

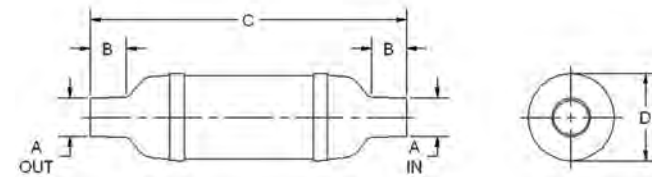
Application: V Drives & Space Restraints • Fuel Type: Gas/Diesel • Waterline: Above Only • Sound Rating: Fair

PART#	A	B	C	D
	IN/OUT	I/O LGH	LGTH	DIA
1000281	2.00/51	1.25/32	18.00/457	4.34/110
1000103	2.50 / 64	3.00 / 76	21.62 / 549	5.58 / 142
1000145	3.00 / 76	3.50 / 89	20.12 / 511	7.07 / 180
1000104	3.00 / 76	3.50 / 89	25.84 / 656	7.07 / 180
1000105	3.50 / 89	3.50 / 89	30.00 / 762	8.09 / 205
1000165	4.00 / 102	3.50 / 89	25.50 / 648	9.06 / 230
1000106	4.00 / 102	3.50 / 89	33.69 / 856	9.06 / 230
1000107	4.50 / 114	4.00 / 102	35.62 / 905	10.10 / 257
1000108	5.00 / 127	4.40 / 112	38.75 / 984	11.00 / 279
1000112	6.00 / 152	5.00 / 127	31.43 / 798	12.20 / 310
1000111	6.00 / 152	5.00 / 127	41.50 / 1,054	12.20 / 310
1000117	6.00 / 152	6.00 / 152	39.62 / 1,006	16.21 / 412
1000113	6.00 / 152	6.00 / 152	52.75 / 1,340	16.21 / 412
1000120	8.00 / 203	6.00 / 152	39.62 / 1,006	16.21 / 412
1000119	8.00 / 203	6.00 / 152	52.75 / 1,340	16.21 / 412
1000235	10.00/254	7.50/191	52.00/1,321	16.21/412

## VERNATONE™ - ROUND

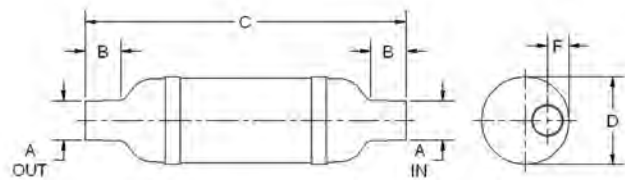


Application: All Inboards  
 Fuel Type: Gas/Diesel  
 Waterline: Above Only  
 Sound Rating: Good



Note: For 10"-14" in/out range please reference our Vernatone™ MKII round or the MKII Dual Stage round. If you have any questions please contact our Engineering Department.

## VERNATONE™ - ROUND PORT & STARBOARD



PORT SHOWN

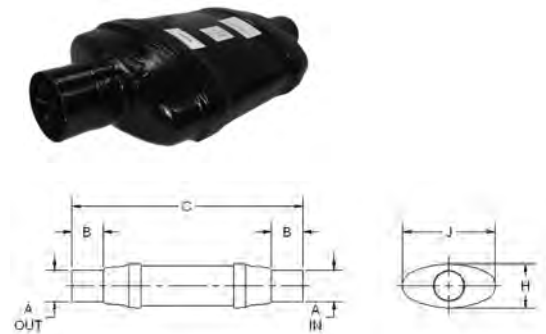
PART#	A	B	C	D	F
	IN/OUT	I/O LGH	LGTH	DIA	I/O OFFSET
1000241 (PORT)	4.00 / 102	4.00 / 102	27.00 / 686	8.00 / 203	2.38 / 60
1000242 (STBD)	4.00 / 102	4.00 / 102	27.00 / 686	8.00 / 203	2.38 / 60
1000249 (PORT)	5.00 / 127	4.75 / 121	35.63 / 905	10.00 / 254	3.08 / 78
1000250 (STBD)	5.00 / 127	4.75 / 121	35.63 / 905	10.00 / 254	3.08 / 78

Application: All Inboards • Fuel type: Gas/Diesel • Waterline: Above only • Sound rating: Good

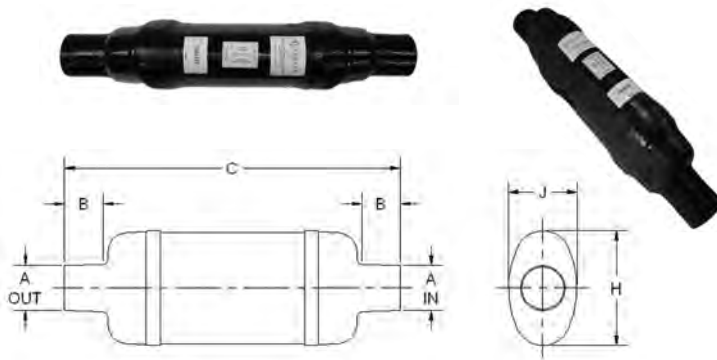
## VERNATONE™ - OVAL HORIZONTAL MOUNT

PART#	A	B	C	H	J
	IN/OUT	I/O LGH	LGTH	HGT	WIDTH
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
1000229	5.00 / 127	5.00 / 127	35.13 / 892	7.00 / 178	14.75 / 375
1000263	6.00 / 152	5.00 / 127	42.33 / 1,075	9.00 / 229	15.00 / 381
1000139	8.00 / 203	5.70 / 145	54.00 / 1,372	12.00 / 305	19.00 / 483
1000194	10.00 / 254	7.50 / 191	65.50 / 1,664	14.50 / 368	24.50 / 622

Application: All Inboards • Fuel type: Gas/Diesel  
 Waterline: Above only • Sound rating: Good



## VERNATONE™ OVAL VERTICAL



Application: All Inboards • Fuel type: Gas/Diesel  
 Waterline: Above only • Sound rating: Good

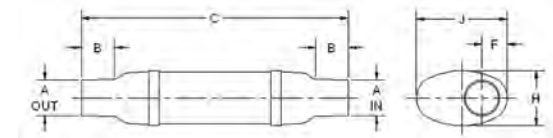
PART#	A	B	C	H	J
	IN/OUT	I/O LGH	LGTH	HGT	WIDTH
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
1000127	4.50 / 114	5.25 / 133	35.62 / 905	14.75 / 375	7.00 / 178
1000269	5.00 / 127	5.25 / 133	35.62 / 905	14.75 / 375	7.00 / 178
1000115	6.00 / 152	5.00 / 127	42.50 / 1,080	15.12 / 384	9.00 / 229
1000118	6.00 / 152	5.00 / 127	32.00 / 813	15.12 / 384	9.00 / 229
1000121	8.00 / 203	5.70 / 145	54.00 / 1,372	19.00 / 483	12.00 / 305
1000122	8.00 / 203	5.70 / 145	39.00 / 991	19.00 / 483	12.00 / 305
1000123	10.00 / 254	7.50 / 191	65.50 / 1,664	24.50 / 622	14.50 / 368

## VERNATONE™ - OVAL HORIZONTAL MOUNT (PORT & STARBOARD)

PART#	A	B	C	F	H	J
	IN/OUT	I/O LGH	LGTH	I/O OFFSET	HGT	WIDTH
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
1000162 (PORT)	6.00 / 152	5.00 / 127	42.50 / 1,080	4.25 / 108	9.00 / 229	15.12 / 384
1000163 (STBD)	6.00 / 152	5.00 / 127	42.50 / 1,080	4.25 / 108	9.00 / 229	15.12 / 384
1000149 (PORT)	6.00 / 152	5.00 / 127	52.50 / 1,334	6.31 / 160	12.00 / 305	19.00 / 483
1000150 (STBD)	6.00 / 152	5.00 / 127	52.50 / 1,334	6.31 / 160	12.00 / 305	19.00 / 483
1000140 (PORT)	8.00 / 203	5.32 / 135	54.50 / 1,384	6.31 / 160	12.00 / 305	19.00 / 483
1000141 (STBD)	8.00 / 203	5.32 / 135	54.50 / 1,384	6.31 / 160	12.00 / 305	19.00 / 483

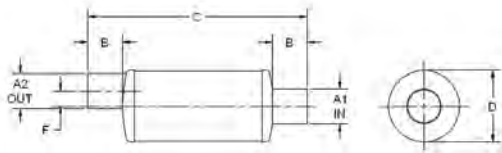


Application: All Inboards  
 Fuel type: Gas/Diesel  
 Waterline: Above only  
 Sound rating: Good



PORT SHOWN

## VERNATONE™ MKII ROUND



Application: All Inboards • Fuel type: Gas/Diesel  
 Waterline: Above only • Sound rating: Better

PART#	A1	A2	B	C	D	F
	INLET	OUTLET	I/O LGTH	LGTH	DIA	I/O OFFSET
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
1400003	2.00 / 51	2.00 / 51	2.50 / 64	16.00 / 406	6.38 / 162	1.85 / 47
1400002	2.38 / 60	2.38 / 60	3.00 / 76	16.00 / 406	6.38 / 162	1.66 / 42
1400032	2.50 / 64	2.50 / 64	3.00 / 76	18.00 / 457	6.38 / 162	1.60 / 41
1400015	3.00 / 76	3.00 / 76	3.00 / 76	19.00 / 483	8.38 / 213	2.38 / 60
1400016	3.50 / 89	3.50 / 89	4.00 / 102	23.00 / 584	8.38 / 213	2.13 / 54
1400017	4.00 / 102	4.00 / 102	4.00 / 102	25.38 / 645	10.04 / 255	2.66 / 68
1400018	4.50 / 114	4.50 / 114	4.50 / 114	28.50 / 724	10.04 / 255	2.41 / 61
1400006	5.00 / 127	5.00 / 127	5.00 / 127	31.50 / 800	10.04 / 255	2.16 / 55
1400040	5.00 / 127	6.00 / 152	5.00 / 127	40.00 / 1,016	12.50 / 318	2.84 / 72
1400007	6.00 / 152	6.00 / 152	6.00 / 152	38.00 / 965	12.50 / 318	2.84 / 72
1400039	6.00 / 152	8.00 / 203	8.00 / 203	50.50 / 1,283	16.25 / 413	3.72 / 94
1400008	8.00 / 203	8.00 / 203	8.00 / 203	50.50 / 1,283	16.25 / 413	3.72 / 94
1400030	8.00 / 203	10.00 / 254	10.00 / 254	61.00 / 1,549	18.50 / 470	3.85 / 98
1400009	10.00 / 254	10.00 / 254	10.00 / 254	63.00 / 1,600	18.50 / 470	3.85 / 98
1400010	12.00 / 305	12.00 / 305	12.00 / 305	75.50 / 1,918	22.25 / 565	4.25 / 108
1400011	14.00 / 356	14.00 / 356	12.00 / 305	87.00 / 2,210	22.25 / 565	3.25 / 83

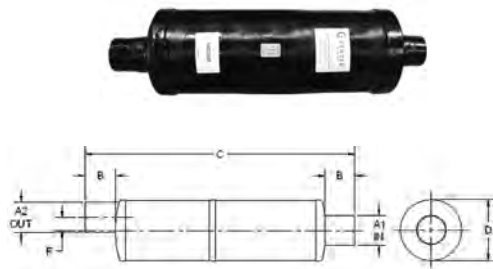
## VERNATONE™ MKII OVAL VERTICAL MOUNT

PART#	A1	A2	B	C	H	J	F
	INLET IN/MM	OUTLET IN/MM	I/O LGTH IN/MM	LGTH IN/MM	HGT IN/MM	WIDTH IN/MM	I/O OFFSET IN/MM
1400042	5.00 / 127	5.00 / 127	5.50 / 140	31.50 / 800	15.00 / 381	9.00 / 229	4.56 / 116
1400037	5.00 / 127	6.00 / 152	6.00 / 152	38.00 / 965	15.00 / 381	9.00 / 229	4.06 / 103
1400043	6.00 / 152	6.00 / 152	6.00 / 152	32.38 / 822	15.00 / 381	9.00 / 229	4.06 / 103
1400014	6.00 / 152	8.00 / 203	8.00 / 203	50.50 / 1,283	19.00 / 483	12.00 / 305	5.06 / 129
1400044	8.00 / 203	8.00 / 203	8.00 / 203	50.50 / 1,283	19.00 / 483	12.00 / 305	4.81 / 122
1400045	10.00 / 254	10.00 / 254	10.00 / 254	63.00 / 1,600	24.50 / 622	14.50 / 368	6.85 / 174
1400046	12.00 / 305	12.00 / 305	12.00 / 305	75.50 / 1,918	30.00 / 762	18.00 / 457	8.25 / 210
1400047	12.00 / 305	14.00 / 356	12.00 / 305	77.13 / 1,959	30.00 / 762	18.00 / 457	7.25 / 184
1400028	14.00 / 356	14.00 / 356	12.00 / 305	77.00 / 1,956	30.00 / 762	18.00 / 457	7.25 / 184



Application: All Inboards • Fuel type: Gas/Diesel  
Waterline: Above only • Sound rating: Better

## VERNATONE™ MKII DUAL STAGE ROUND

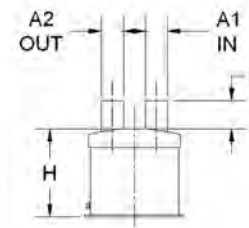
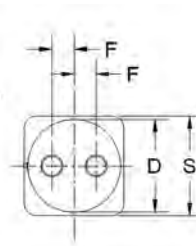


Application: All Inboards • Fuel type: Gas/Diesel  
Waterline: Above only • Sound rating: Best

PART#	A1	A2	B	C	D	F
	INLET IN/MM	OUTLET IN/MM	I/O LGTH IN/MM	LGTH IN/MM	DIA IN/MM	I/O OFFSET IN/MM
1420300	3.00 / 76	3.00 / 76	3.00 / 76	29.00 / 737	8.38 / 213	2.13 / 54
1420350	3.50 / 89	3.50 / 89	3.50 / 89	30.00 / 762	8.38 / 213	1.88 / 48
1420400	4.00 / 102	4.00 / 102	4.00 / 102	38.50 / 978	10.06 / 256	2.50 / 64
1420500	5.00 / 127	5.00 / 127	5.00 / 127	46.00 / 1,168	10.06 / 256	2.00 / 51
1420600	6.00 / 152	6.00 / 152	6.00 / 152	54.00 / 1,372	12.38 / 314	2.63 / 67
1420800	8.00 / 203	8.00 / 203	8.00 / 203	66.00 / 1,676	16.25 / 413	3.50 / 89
1421000	10.00 / 254	10.00 / 254	8.00 / 203	81.00 / 2,057	18.50 / 470	3.63 / 92
1421200	12.00 / 305	12.00 / 305	10.00 / 254	94.00 / 2,388	22.25 / 565	4.50 / 114
1421400	14.00 / 356	14.00 / 356	10.00 / 254	113.00 / 2,870	22.25 / 565	3.50 / 89

PART#	A1	A2	B	D	F	H	S
	INLET IN/MM	OUTLET IN/MM	I/O LGTH IN/MM	DIA IN/MM	I/O OFFSET IN/MM	HGT IN/MM	SQ BASE IN/MM
1500060	1.50 / 38	1.50 / 38	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500219	1.50 / 38	2.00 / 51	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500220	1.63 / 41	1.50 / 38	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500270	1.63 / 41	1.63 / 41	2.00 / 51	6.38 / 162	1.50 / 38	9.00 / 229	7.00 / 178
1500003	1.63 / 41	1.63 / 41	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500143	1.63 / 41	1.88 / 48	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500005	1.75 / 44	1.75 / 44	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500007	1.88 / 48	1.88 / 48	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500221	2.00 / 51	1.50 / 38	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500009	2.00 / 51	2.00 / 51	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500010	2.00 / 51	2.00 / 51	2.50 / 64	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500126	2.00 / 51	2.38 / 60	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500011	2.25 / 57	2.25 / 57	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500012	2.25 / 57	2.25 / 57	2.50 / 64	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500013	2.38 / 60	2.38 / 60	2.50 / 64	8.36 / 212	2.00 / 51	8.00 / 203	9.00 / 229
1500015	2.50 / 64	2.50 / 64	2.50 / 64	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500141	2.50 / 64	2.50 / 64	3.00 / 76	12.34 / 313	2.75 / 70	12.00 / 305	13.00 / 330
1500138	2.50 / 64	3.00 / 76	3.00 / 76	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500016	2.88 / 73	2.88 / 73	3.00 / 76	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500017	3.00 / 76	3.00 / 76	3.00 / 76	10.04 / 255	2.50 / 64	10.16 / 258	10.50 / 267
1500063	3.00 / 76	3.00 / 76	4.00 / 102	12.34 / 313	2.75 / 70	12.00 / 305	13.00 / 330
1500150	3.00 / 76	3.50 / 89	4.00 / 102	12.34 / 313	2.75 / 70	12.00 / 305	13.00 / 330
1500064	3.50 / 89	3.50 / 89	4.00 / 102	12.34 / 313	2.75 / 70	12.00 / 305	13.00 / 330
1500065	4.00 / 102	4.00 / 102	4.00 / 102	12.34 / 313	2.75 / 70	12.00 / 305	13.00 / 330
1500066	4.50 / 114	4.50 / 114	4.00 / 102	12.34 / 313	3.00 / 76	12.00 / 305	13.00 / 330
1500067	4.50 / 114	4.50 / 114	4.00 / 102	16.17 / 411	4.00 / 102	16.00 / 406	17.00 / 432
1500271	5.00 / 127	5.00 / 127	5.00 / 127	12.34 / 313	3.31 / 84	12.00/305	13.00 / 330
1500068	5.00 / 127	5.00 / 127	5.00 / 127	16.17 / 411	4.00 / 102	16.00 / 406	17.00 / 432
1500069	6.00 / 152	6.00 / 152	5.00 / 127	16.17 / 411	4.00 / 102	16.00 / 406	17.00 / 432
1500131	8.00 / 203	8.00 / 203	8.00 / 203	22.00 / 559	5.00 / 127	22.00 / 559	23.00 / 584
1500154	10.00 / 254	10.00 / 254	8.00 / 203	28.50 / 724	7.00 / 178	28.00 / 711	30.00 / 762

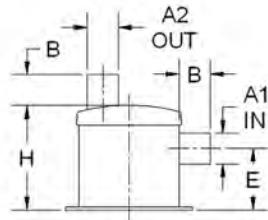
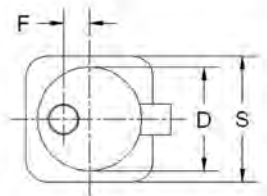
## VERNALIFT™ TOP IN - TOP OUT



Application: Inboards,  
Sail boats & Generators  
Fuel type: Gas/Diesel  
Waterline: Above or below  
Sound rating: Better



# VERNALIFT™ SIDE IN - TOP OUT

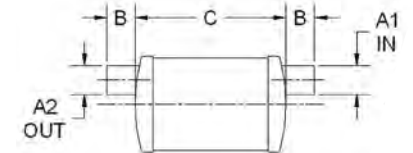


Application: Inboards, Sailboats & Generator:  
 Fuel type: Gas/Diesel  
 Waterline: Above or below  
 Sound rating: Better

PART#	A1	A2	B	D	E	F	H	S
	IN/MM	OUT/MM	I/O LGTH	IN/MM	IN/MM	I/O OFFSET	HGT	SQ BASE
1500071	1.50 / 38	1.50 / 38	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500142	1.50 / 38	2.00 / 51	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500222	1.63 / 41	1.50 / 38	3.00 / 76	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500262	1.63 / 41	1.63 / 41	2.00 / 51	6.38 / 162	5.81 / 148	1.50 / 38	9.00 / 229	7.00 / 179
1500020	1.63 / 41	1.63 / 41	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500123	1.63 / 41	1.63 / 41	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500140	1.63 / 41	1.75 / 44	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500073	1.63 / 41	2.00 / 51	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500125	1.75 / 44	1.50 / 38	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500022	1.75 / 44	1.75 / 44	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500148	1.75 / 44	2.00 / 51	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500146	1.88 / 48	1.63 / 41	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500024	1.88 / 48	1.88 / 48	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500263	1.88 / 48	1.88 / 48	2.00 / 51	6.38 / 162	5.81 / 148	1.50 / 38	9.00 / 229	7.00 / 179
1500075	1.88 / 48	2.00 / 51	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500210	2.00 / 51	1.50 / 38	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500077	2.00 / 51	1.63 / 41	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500121	2.00 / 51	1.88 / 48	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500074	1.88 / 48	1.88 / 48	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500078	2.00 / 51	1.88 / 48	2.50 / 64	10.40 / 264	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500264	2.00 / 51	2.00 / 51	2.00 / 51	6.38 / 162	5.81 / 148	1.50 / 38	9.00 / 229	7.00 / 179
1500026	2.00 / 51	2.00 / 51	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500027	2.00 / 51	2.00 / 51	2.50 / 64	10.04 / 255	6.50 / 165	2.00 / 51	10.16 / 258	10.50 / 267
1500120	2.00 / 51	2.00 / 51	2.00 / 51	12.34 / 313	8.50 / 216	2.50 / 64	12.00 / 305	13.00 / 330
1500147	2.00 / 51	2.25 / 57	3.00 / 76	12.34 / 313	8.50 / 216	2.50 / 64	12.00 / 305	13.00 / 330
1500137	2.00 / 51	2.50 / 64	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500055	2.00 / 51	2.50 / 64	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500079	2.00 / 51	2.50 / 64	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500132	2.00 / 51	2.50 / 64	3.00 / 76	12.34 / 313	8.50 / 216	2.50 / 64	12.00 / 305	13.00 / 330
1500028	2.25 / 57	2.25 / 57	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500029	2.25 / 57	2.25 / 57	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500080	2.25 / 57	2.38 / 60	2.50 / 64	12.34 / 313	8.34 / 212	2.50 / 64	12.00 / 305	13.00 / 330
1500030	2.38 / 60	2.38 / 60	2.50 / 64	8.36 / 212	4.68 / 119	2.00 / 51	8.00 / 203	9.00 / 229
1500031	2.38 / 60	2.38 / 60	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500081	2.38 / 60	2.38 / 60	2.50 / 64	12.34 / 313	7.25 / 184	2.50 / 64	12.00 / 305	13.00 / 330
1500082	2.38 / 60	2.50 / 64	2.50 / 64	10.04 / 255	6.30 / 160	2.50 / 64	10.16 / 258	10.50 / 267
1500083	2.50 / 64	2.38 / 60	2.50 / 64	12.34 / 313	8.25 / 210	2.50 / 64	12.00 / 305	13.00 / 330
1500032	2.50 / 64	2.50 / 64	2.50 / 64	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500128	2.50 / 64	3.00 / 76	3.00 / 76	12.34 / 313	7.25 / 184	2.75 / 70	12.00 / 305	13.00 / 330
1500033	2.88 / 73	2.88 / 73	3.00 / 76	10.04 / 255	6.19 / 157	2.50 / 64	10.16 / 258	10.50 / 267
1500139	2.88 / 73	3.00 / 76	3.00 / 76	10.04 / 255	6.19 / 157	2.50 / 64	10.16 / 258	10.50 / 267
1500084	3.00 / 76	2.88 / 73	3.00 / 76	12.34 / 313	8.00 / 203	2.75 / 70	12.00 / 305	13.00 / 330
1500034	3.00 / 76	3.00 / 76	3.00 / 76	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500085	3.00 / 76	3.00 / 76	3.00 / 76	12.34 / 313	8.00 / 203	2.75 / 70	12.00 / 305	13.00 / 330
1500152	3.00 / 76	3.50 / 89	3.50 / 89	10.04 / 255	6.50 / 165	2.50 / 64	10.16 / 258	10.50 / 267
1500086	3.50 / 89	3.00 / 76	3.50 / 89	12.34 / 313	7.75 / 197	2.75 / 70	12.00 / 305	13.00 / 330
1500087	3.50 / 89	3.50 / 89	3.50 / 89	12.34 / 313	7.75 / 197	2.75 / 70	12.00 / 305	13.00 / 330
1500151	3.50 / 89	5.00 / 127	5.00 / 127	12.34 / 313	7.75 / 197	2.75 / 70	12.00 / 305	13.00 / 330
1500130	4.00 / 102	3.50 / 89	4.00 / 102	12.34 / 313	7.25 / 184	2.75 / 70	12.00 / 305	13.00 / 330
1500088	4.00 / 102	4.00 / 102	4.00 / 102	12.34 / 313	7.50 / 191	2.75 / 70	12.00 / 305	13.00 / 330
1500149	4.00 / 102	5.00 / 127	5.00 / 127	16.17 / 411	8.75 / 222	4.00 / 102	16.00 / 406	17.00 / 432
1500089	4.50 / 114	4.50 / 114	4.50 / 114	12.34 / 313	7.25 / 184	2.75 / 70	12.00 / 305	13.00 / 330
1500091	5.00 / 127	5.00 / 127	5.00 / 127	12.34 / 313	6.00 / 152	2.75 / 70	12.00 / 305	13.00 / 330
1500090	5.00 / 127	5.00 / 127	5.00 / 127	16.17 / 411	8.75 / 222	4.00 / 102	16.00 / 406	17.00 / 432
1500092	6.00 / 152	6.00 / 152	5.00 / 127	16.17 / 411	8.75 / 222	4.00 / 102	16.00 / 406	17.00 / 432
1500094	8.00 / 203	8.00 / 203	6.00 / 152	18.50 / 470	10.50 / 267	3.00 / 76	18.00 / 457	19.00 / 483
1500159	10.00 / 254	10.00 / 254	8.00 / 203	24.60 / 625	12.00 / 305	6.00 / 152	24.00 / 610	26.00 / 660

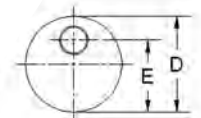
PART#	A1	A2	B	C	D	E
	INLET IN/MM	OUTLET IN/MM	I/O LGTH IN/MM	LGTH IN/MM	DIA IN/MM	I/O OFFSET IN/MM
1500035	1.50 / 38	1.50 / 38	2.00 / 51	10.50 / 267	6.36 / 162	4.88 / 124
1500036	1.63 / 41	1.63 / 41	2.00 / 51	10.50 / 267	6.36 / 162	4.88 / 124
1500037	1.63 / 41	1.63 / 41	2.00 / 51	14.00 / 356	8.36 / 212	6.18 / 157
1500155	1.63 / 41	1.63 / 41	2.00 / 51	17.00 / 432	10.04 / 255	7.52 / 191
1500038	1.75 / 44	1.75 / 44	2.00 / 51	10.50 / 267	6.36 / 162	4.68 / 119
1500039	1.75 / 44	1.75 / 44	2.00 / 51	14.00 / 356	8.36 / 212	6.18 / 157
1500040	1.88 / 48	1.88 / 48	2.00 / 51	10.50 / 267	6.36 / 162	4.88 / 124
1500041	1.88 / 48	1.88 / 48	2.00 / 51	14.00 / 356	8.36 / 212	6.18 / 157
1500042	2.00 / 51	2.00 / 51	2.00 / 51	10.50 / 267	6.36 / 162	4.88 / 124
1500043	2.00 / 51	2.00 / 51	2.00 / 51	14.00 / 356	8.36 / 212	6.18 / 157
1500044	2.00 / 51	2.00 / 51	2.00 / 51	17.50 / 445	10.04 / 255	7.52 / 191
1500095	2.00 / 51	2.50 / 64	2.50 / 64	17.00 / 432	10.04 / 255	7.52 / 191
1500059	2.00 / 51	3.00 / 76	3.00 / 76	17.50 / 445	10.04 / 255	7.52 / 191
1500045	2.25 / 57	2.25 / 57	2.25 / 57	14.00 / 356	8.36 / 212	6.18 / 157
1500046	2.25 / 57	2.25 / 57	2.25 / 57	17.50 / 445	10.04 / 255	7.52 / 191
1500047	2.38 / 60	2.38 / 60	2.38 / 60	14.00 / 356	8.36 / 212	6.18 / 157
1500048	2.38 / 60	2.38 / 60	2.38 / 60	17.50 / 445	10.04 / 255	7.52 / 191
1500049	2.50 / 64	2.50 / 64	2.50 / 64	17.50 / 445	10.04 / 255	7.52 / 191
1500050	2.88 / 73	2.88 / 73	3.00 / 76	17.50 / 445	10.04 / 255	7.52 / 191
1500051	3.00 / 76	3.00 / 76	3.00 / 76	17.50 / 445	10.04 / 255	7.52 / 191
1500096	3.00 / 76	3.00 / 76	3.00 / 76	20.00 / 508	12.34 / 313	9.17 / 233
1500119	3.50 / 89	3.50 / 89	3.50 / 89	17.00 / 432	10.04 / 255	7.52 / 191
1500098	4.00 / 102	4.00 / 102	4.00 / 102	22.00 / 559	12.34 / 313	9.17 / 233
1500099	4.50 / 114	4.50 / 114	5.00 / 127	22.00 / 559	12.34 / 313	9.17 / 233
1500100	5.00 / 127	5.00 / 127	5.00 / 127	22.00 / 559	12.34 / 313	9.17 / 233
1500101	6.00 / 152	6.00 / 152	6.00 / 152	28.00 / 711	16.17 / 411	12.47 / 317
1500102	8.00 / 203	8.00 / 203	6.00 / 152	32.00 / 813	18.50 / 470	13.75 / 349
1500169	10.00 / 254	10.00 / 254	8.00 / 203	40.00 / 1,016	22.00 / 559	16.00 / 40

## VERNALIFT™ INLINE

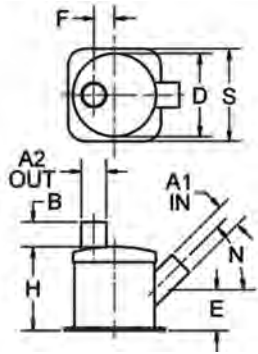


Application: Inboards, Sailboats, & Generators  
 Fuel type: Gas/Diesel

Waterline: Above or below • Sound rating: Better



## VERNALIFT™ SIDE ANGLE IN - TOP OUT



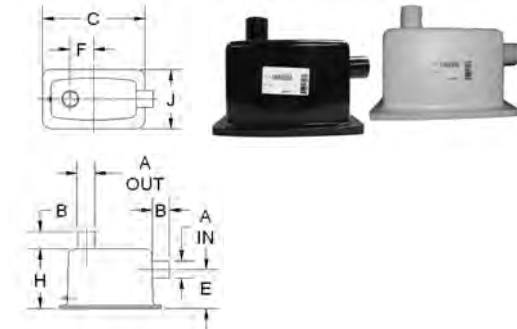
Application: Inboards,  
Sailboats, & Generators  
Fuel type: Gas/Diesel  
Waterline: Above or below  
Sound rating: Better

PART#	A1	A2	B	D	E	F	H	N	S
	INLET IN/MM	OUTLET IN/MM	I/O LGTH IN/MM	DIA IN/MM	INLET HGT IN/MM	I/O OFFSET IN/MM	HGT IN/MM	ANGLE	SQ BASE IN/MM
1500223	1.50 / 38	1.50 / 38	2.50 / 64	8.36 / 212	4.43 / 113	2.50 / 64	8.00 / 203	45°	9.00 / 229
1500265	1.63 / 41	1.63 / 41	2.00 / 51	6.36 / 162	4.43 / 113	1.50/38	6.00/152	45°	7.00 / 178
1500266	1.63 / 41	1.63 / 41	2.00 / 51	6.36 / 162	6.57 / 168	1.50 / 38	9.00 / 267	45°	7.00 / 178
1500104	1.63 / 41	1.63 / 41	2.00 / 51	8.36 / 212	4.43 / 113	2.00 / 51	8.00 / 203	45°	9.00 / 229
1500127	1.75 / 45	1.75 / 45	2.00 / 51	8.36 / 212	4.43 / 113	2.00 / 51	8.00 / 203	45°	9.00 / 229
1500267	1.88 / 48	1.88 / 48	2.00 / 51	6.36 / 162	6.57 / 168	1.50 / 38	9.00 / 267	45°	7.00 / 178
1500157	1.88 / 48	1.88 / 48	2.00 / 51	8.36 / 212	4.43 / 113	2.00 / 51	8.00 / 203	45°	9.00 / 229
1500106	1.88 / 48	1.88 / 48	2.00 / 51	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500268	2.00 / 51	2.00 / 51	2.00 / 51	6.36 / 162	6.63 / 168	1.50 / 38	9.00 / 267	45°	7.00 / 178
1500171	2.00 / 51	2.00 / 51	2.00 / 51	8.36 / 212	4.43 / 113	2.00 / 51	8.00 / 203	45°	9.00 / 229
1500107	2.00 / 51	2.00 / 51	2.00 / 51	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500108	2.25 / 57	2.25 / 57	2.00 / 51	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500109	2.25 / 57	3.00 / 76	2.50 / 64	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500122	2.38 / 61	2.38 / 61	2.00 / 51	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500110	2.50 / 64	2.50 / 64	2.00 / 51	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500160	2.50 / 64	3.00 / 76	3.00 / 76	12.34 / 313	6.67 / 170	2.75 / 70	12.00 / 305	45°	13.00 / 330
1500111	2.88 / 73	2.88 / 73	2.50 / 64	10.04 / 255	5.30 / 135	2.50 / 64	10.16 / 258	45°	10.50 / 267
1500112	3.00 / 76	3.00 / 76	3.00 / 76	12.34 / 313	6.67 / 170	2.75 / 70	12.00 / 305	45°	13.00 / 330
1500153	3.00 / 76	4.00 / 102	4.00 / 102	12.34 / 313	6.92 / 176	2.75 / 70	12.00 / 305	30°	13.00 / 330
1500113	3.50 / 89	3.50 / 89	3.50 / 89	12.34 / 313	7.50 / 191	2.75 / 70	12.00 / 305	30°	13.00 / 330
1500134	3.50 / 89	5.00 / 127	4.50 / 114	12.34 / 313	7.75 / 197	2.75 / 70	12.00 / 305	45°	13.00 / 330
1500114	4.00 / 102	4.00 / 102	4.00 / 102	12.34 / 313	6.92 / 176	2.75 / 70	12.00 / 305	30°	13.00 / 330
1500115	4.50 / 114	4.50 / 114	4.00 / 102	12.34 / 313	7.25 / 184	2.75 / 70	12.00 / 305	45°	13.00 / 330
1500116	5.00 / 127	5.00 / 127	5.00 / 127	12.34 / 313	6.00 / 152	2.75 / 70	12.00 / 305	30°	13.00 / 330
1500117	6.00 / 152	6.00 / 152	5.00 / 127	16.17 / 411	8.75 / 222	4.00 / 102	14.50 / 368	45°	17.00 / 432
1500118	8.00 / 203	8.00 / 203	6.00 / 152	18.50 / 470	10.00 / 254	3.00 / 76	18.00 / 457	45°	19.00 / 483
1500136	10.00 / 254	10.00 / 254	8.00 / 203	24.60 / 625	12.00 / 305	6.00 / 152	24.00 / 610	45°	26.00 / 660

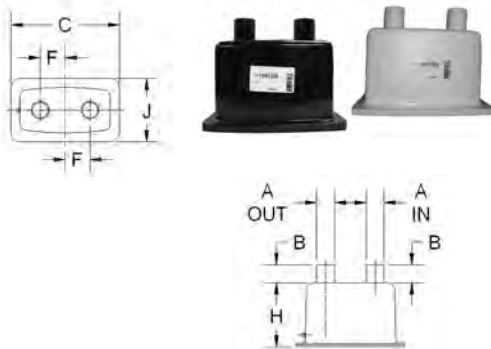
## VERNALIFT™ RECTANGULAR SIDE IN/TOP OUT

PART#	A	B	C	E	F	H	J
	IN/OUT IN/MM	I/O LGTH IN/MM	LGTH IN/MM	IN/HGT IN/MM	OUT/HGT IN/MM	HGT IN/MM	WIDTH IN/MM
15R2150	1.50 / 38	2.00 / 51	12.00 / 305	4.43 / 113	2.75 / 70	7.00 / 178	7.00 / 178
15R2163	1.63 / 41	2.00 / 51	12.00 / 305	4.43 / 113	2.75 / 70	7.00 / 178	7.00 / 178
15R2188	1.88 / 48	2.00 / 51	12.00 / 305	4.43 / 113	2.75 / 70	7.00 / 178	7.00 / 178
15R2200	2.00 / 51	2.00 / 51	12.00 / 305	4.43 / 113	2.75 / 70	7.00 / 178	7.00 / 178

Application: Inboards, Sailboats, & Generators • Fuel type: Gas/Diesel  
Waterline: Above or below • Sound rating: Better



## VERNALIFT™ RECTANGULAR TOP IN/TOP OUT

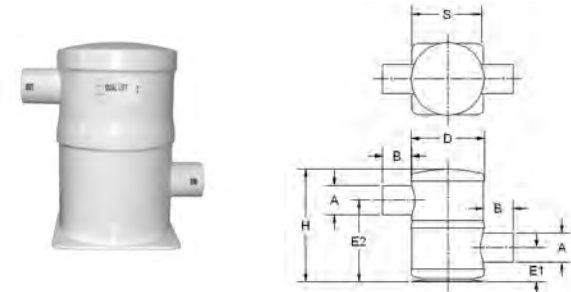


PART#	A	B	C	F	H	J
	IN/OUT IN/MM	I/O LGH IN/MM	LGTH IN/MM	OFFSET IN/MM	HGT IN/MM	WIDTH IN/MM
15R1150	1.50 / 38	2.00 / 51	12.00 / 305	2.75 / 70	7.00 / 178	7.00 / 178
15R1163	1.63 / 41	2.00 / 51	12.00 / 305	2.75 / 70	7.00 / 178	7.00 / 178
15R1188	1.88 / 48	2.00 / 51	12.00 / 305	2.75 / 70	7.00 / 178	7.00 / 178
15R1200	2.00 / 51	2.00 / 51	12.00 / 305	2.75 / 70	7.00 / 178	7.00 / 178

Application: Inboards, Sailboats, & Generators • Fuel type: Gas/Diesel  
Waterline: Above or below • Sound rating: Better

## VERNALIFT™ DUAL STAGE - FOR ABOVE WATERLINE INSTALLATIONS

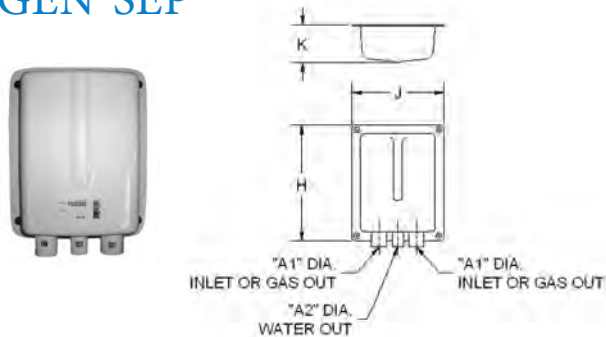
PART#	A	B	D	E1	E2	H	S
	IN/OUT IN/MM	I/O LGTH IN/MM	DIA IN/MM	IN/HGT IN/MM	OUT/HGT IN/MM	HGT IN/MM	SQ. BASE IN/MM
1520200	2.00 / 51	2.50 / 64	8.38 / 213	4.00 / 102	8.00 / 203	11.25 / 286	9.00 / 229
1520250	2.50 / 64	2.50 / 64	8.38 / 213	4.25 / 108	9.00 / 229	12.50 / 318	9.00 / 229
1520300	3.00 / 76	3.00 / 76	10.06 / 256	4.75 / 121	10.25 / 260	14.25 / 362	10.50 / 267
1520350	3.50 / 89	3.50 / 89	10.06 / 256	5.25 / 133	11.00 / 280	15.25 / 387	10.50 / 267
1520400	4.00 / 102	4.00 / 102	12.38 / 314	5.00 / 127	11.50 / 292	16.25 / 413	12.00 / 305
1520500	5.00 / 127	5.00 / 127	12.38 / 314	5.75 / 146	13.75 / 349	19.00 / 483	12.00 / 305
1520600	6.00 / 152	6.00 / 152	16.25 / 413	7.00 / 178	16.25 / 413	22.50 / 572	17.00 / 432
1520800	8.00 / 203	8.00 / 203	18.50 / 470	9.00 / 229	21.00 / 534	29.25 / 743	19.00 / 483
1521000	10.00 / 254	8.00 / 203	22.00 / 559	12.00 / 305	26.25 / 667	36.00 / 915	24.00 / 610
1521200	12.00 / 305	10.00 / 254	24.63 / 626	13.00 / 330	30.00 / 762	41.00 / 1,042	26.50 / 673



Application: Inboards • Fuel type: Gas/Diesel  
Waterline: Above • Sound rating: Best

Also available in Oval Shapes. Contact the Centek Engineering Department for more details.

## GEN-SEP™



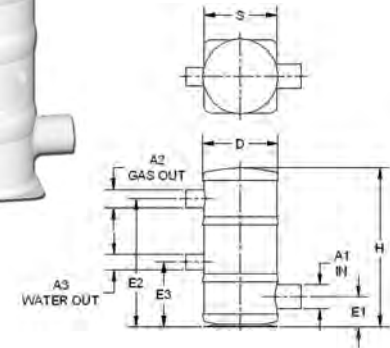
The Inlets & Outlets are also available in other configurations!  
Contact the Centek Engineering Department for more details.

PART#	A1	A2	H	J	K
	IN/OUT IN/MM	DRAIN IN/MM	HGT IN/MM	WIDTH IN/MM	DEPTH IN/MM
1020150	1.50 / 38	1.25 / 32	15.63 / 397	12.38 / 31	5.38 / 137
1020162	1.62 / 41	1.25 / 32	15.63 / 397	12.38 / 314	5.03 / 128
1020200	2.00 / 51	1.50 / 38	15.63 / 397	12.38 / 314	5.38 / 137
1020250	2.50 / 64	1.50 / 38	20.50 / 521	17.50 / 445	7.00 / 178
1020300	3.00 / 76	1.50 / 38	20.50 / 521	17.50 / 445	7.19 / 183
1020350	3.50 / 89	2.00 / 51	27.00 / 686	23.50 / 597	9.00 / 229
1020400	4.00 / 102	2.50 / 64	27.00 / 686	23.50 / 597	9.19 / 233
1020450	4.50 / 114	2.50 / 64	30.00 / 762	28.00 / 711	7.25 / 184
1020500	5.00 / 127	3.00 / 76	30.00 / 762	28.00 / 711	7.25 / 184
1020301	3.00/76	1.5/38	15.63/397	12.38/314	5.38/137
1020501	5.0/127	3.0/76	27.0/686	23.50/597	9.19/233

Application: Generators • Fuel type: Gas/Diesel • Waterline: Above only • Sound rating: Best  
\* Must be used in conjunction with a Vernalift™.

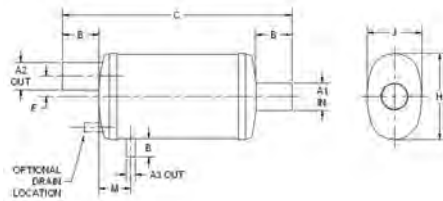
## COMBO-SEP™-VERTICAL

PART#	A1	A2	A3	D	E1	E2	E3	H	S
	INLET	GAS OUT	WTR OUT	DIA	INLET	GAS OUT	WTR OUT	HGT	SQ BASE
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
1040200	2.00 / 51	1.50 / 38	1.25 / 32	10.00 / 254	3.75 / 95	16.50 / 419	8.13 / 207	20.00 / 508	10.50 / 267
1040250	2.50 / 64	2.00 / 51	1.50 / 38	10.00 / 254	3.75 / 95	16.50 / 419	8.13 / 207	20.00 / 508	10.50 / 267
1040300	3.00 / 76	2.50 / 64	1.50 / 38	10.00 / 254	3.75 / 95	16.50 / 419	8.13 / 207	20.00 / 508	10.50 / 267
1040350	3.50 / 89	3.00 / 76	2.00 / 51	12.34 / 313	5.00 / 127	21.00 / 533	10.50 / 267	26.00 / 660	12.00 / 305
1040400	4.00 / 102	3.00 / 76	2.50 / 64	12.34 / 313	5.00 / 127	21.00 / 533	10.70 / 272	26.00 / 660	12.00 / 305
1040500	5.00 / 127	4.00 / 102	2.50 / 64	14.36 / 365	6.00 / 152	25.00 / 635	12.38 / 314	30.00 / 762	15.00 / 381
1040600	6.00 / 152	5.00 / 127	3.00 / 76	16.25 / 413	7.00 / 178	29.25 / 743	14.25 / 362	35.00 / 889	17.00 / 432
1040800	8.00 / 203	6.00 / 152	4.00 / 102	18.50 / 470	9.25 / 235	37.75 / 959	19.00 / 483	45.00 / 1,143	19.00 / 483
1041000	10.00 / 254	8.00 / 203	5.00 / 127	22.00 / 559	11.25 / 286	46.25 / 1,175	22.63 / 575	55.00 / 1,397	23.00 / 584
1041200	12.00 / 305	10.00 / 254	6.00 / 152	28.50 / 724	13.25 / 337	55.13 / 1,400	26.00 / 660	64.00 / 1,626	30.00 / 762



Application: Generators & Inboards • Fuel type: Gas/Diesel • Waterline: Above only • Sound rating: Best  
 The Inlet/Outlets are also available in other configurations. Contact the Centek Engineering Department for more details.

## COMBO-SEP™ HORIZONTAL



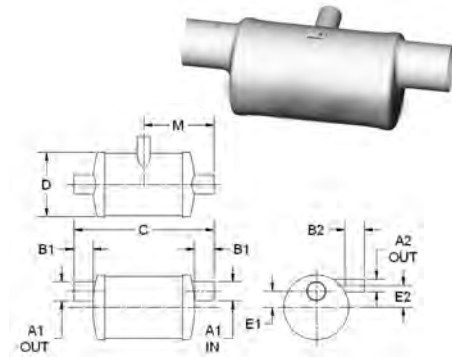
PART#	A1	A2	A3	B	C	F	H	J	M
	INLET	GAS OUT	WTR OUT	I/O LGTH	LGTH	OFFSET	HEIGHT	WIDTH	BP OFFSET
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
104H200	2.00 / 51	2.00 / 51	1.50 / 38	4.00 / 102	44.00 / 1,118	2.00 / 51	14.00 / 356	7.00 / 178	4.00 / 102
104H250	2.50 / 64	2.50 / 64	1.50 / 38	4.00 / 102	49.00 / 1,245	2.00 / 51	14.00 / 356	7.00 / 178	4.00 / 102
104H300	3.00 / 76	3.00 / 76	2.00 / 51	5.00 / 127	49.00 / 1,245	2.00 / 51	14.00 / 356	7.00 / 178	4.00 / 102
104H400	4.00 / 102	4.00 / 102	2.50 / 64	5.00 / 127	56.00 / 1,422	1.50 / 38	15.00 / 381	9.00 / 229	4.00 / 102
104H500	5.00 / 127	5.00 / 127	3.00 / 76	5.00 / 127	65.00 / 1,651	3.00 / 76	19.00 / 483	12.00 / 305	4.00 / 102

Application: Generators & Inboards  
 Fuel type: Gas/Diesel  
 Waterline: Above only  
 Sound rating: Best

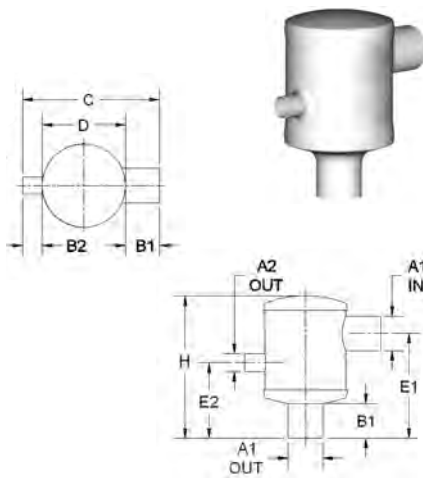
## UNDERWATER EXHAUST HORIZONTAL

PART#	A1	A2	B1	B2	C	D	E1	E2	M
	IN/OUT	BYPASS	I/O LGTH	BP LGTH	LGTH	DIA	I/O ELEV	BP ELEV	BP OFFSET
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
107H500	5.00 / 127	2.50 / 64	5.00 / 127	3.00 / 76	28 / 711	10.40 / 264	2.16 / 55	2.75 / 70	13.82 / 351
107H600	6.00 / 152	3.00 / 76	6.00 / 152	3.50 / 89	34 / 864	12.34 / 313	2.84 / 72	2.81 / 71	17.00 / 432
107H800	8.00 / 203	4.00 / 102	8.00 / 203	4.50 / 114	45 / 1,143	16.11 / 409	3.72 / 94	3.75 / 95	22.50 / 572
107H100	10.00 / 254	5.00 / 127	8.00 / 203	5.00 / 127	52 / 1,321	18.41 / 468	3.80 / 97	3.81 / 97	26.00 / 660
107H120	12.00 / 305	6.00 / 152	8.00 / 203	6.00 / 152	60 / 1,524	24.60 / 625	5.75 / 146	5.75 / 146	30.00 / 762
107H140	14.00 / 356	6.00 / 152	8.00 / 203	6.00 / 152	66 / 1,676	28.50 / 724	6.75 / 171	6.75 / 171	33.00 / 838
107H160	16.00 / 406	8.00 / 203	10.00 / 254	8.00 / 203	78 / 1,981	28.50 / 724	5.75 / 146	5.75 / 146	39.00 / 991
107H180	18.00 / 457	8.00 / 203	10.00 / 254	8.00 / 203	85 / 2,159	34.00 / 864	7.75 / 197	7.75 / 197	42.50 / 1080

Application: Inboards • Fuel type: Gas/Diesel • Waterline: Above Only • Sound rating: Best



## UNDERWATER EXHAUST VERTICAL



PART#	A1	A2	B1	B2	C	D	E1	E2	H
	IN/OUT	BYPASS	I/O LGTH	BP LGTH	LGTH	DIA	INLET ELEV	BP ELEV	HGT
	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM	IN/MM
107V500	5.00 / 127	2.50 / 64	5.00 / 127	3.00 / 76	20.50 / 521	12.50 / 318	16.00 / 406	2.75 / 70	21.00 / 533
107V600	6.00 / 152	3.00 / 76	6.00 / 152	3.50 / 89	24.00 / 610	14.50 / 368	18.00 / 457	2.81 / 71	24.50 / 622
107V800	8.00 / 203	4.00 / 102	8.00 / 203	4.50 / 114	31.00 / 787	18.50 / 470	23.25 / 590	3.75 / 95	31.50 / 800
107V100	10.00 / 254	5.00 / 127	9.00 / 229	5.00 / 127	36.00 / 914	22.00 / 559	27.75 / 705	3.81 / 97	37.50 / 953
107V120	12.00 / 305	6.00 / 152	10.00 / 254	6.00 / 152	40.75 / 1,035	24.75 / 629	33.00 / 838	5.75 / 146	44.50 / 1,130
107V140	14.00 / 356	6.00 / 152	11.00 / 279	6.00 / 152	45.50 / 1,156	28.50 / 724	38.75 / 984	6.75 / 171	50.50 / 1,283
107V160	16.00 / 406	8.00 / 203	12.00 / 305	8.00 / 203	55.00 / 1,397	35.00 / 889	45.63 / 1,159	5.75 / 146	58.00 / 1,473
107V180	18.00 / 457	8.00 / 203	13.00 / 330	8.00 / 203	56.00 / 1,422	35.00 / 889	46.75 / 1,187	7.75 / 197	62.00 / 1,575

Application: Inboards • Fuel type: Gas/Diesel  
Waterline: Above Only • Sound rating: Best

## VERNATUBE™

Vernatube is corrosion-resistant high-temperature exhaust tubing designed specifically to minimize exhaust gas and cooling water flow restrictions. Centek uses the fire retardant Vernatube to fabricate many of the basic components used in our wet marine exhaust systems. Vernatube exceeds the values for the class of materials designated as “self-extinguishing” per ASTM- D-635, UL94V-O, and the US Navy / USCG MIL-R-7575. Additionally, precise outside diameters facilitate perfect connections between sections of the tubing and flexible joints or hoses.

PART#	NOMINAL O.D.	NOMINAL WALL	WEIGHT LBS. PER FT.	STD. LENGTH
	IN/MM	IN/MM		IN/MM
1100530-5	0.75/12.7	0.125/3.2	0.20	60/1524
1100526-3	1.25/31.7	0.135/3.4	0.40	36.00 / 914
1100526-5	1.25/31.7	0.135/3.4	0.40	60.00 / 1524
1100526-10	1.25/31.7	0.135/3.4	0.40	120.00 / 3048
1100527-3	3.25/82.5	0.125/3.2	0.90	36.00 / 914
1100527-5	3.25/82.5	0.125/3.2	0.90	60.00 / 1524
1100527-10	3.25/82.5	0.125/3.2	0.90	120.00 / 3048
1100525-5	1.00 / 25	0.104/2.6	0.03	60.00 / 1524
1100521-3	1.50 / 38	0.105/2.7	0.40	36.00 / 914
1100521-5	1.50 / 38	0.105/2.7	0.40	60.00 / 1524
1100521-10	1.50 / 38	0.105/2.7	0.40	120.00 / 3048
1100522-3	1.62 / 41	0.113/2.9	0.40	36.00 / 914
1100522-5	1.62 / 41	0.113/2.9	0.40	60.00 / 1524
1100522-10	1.62 / 41	0.113/2.9	0.40	120.00 / 3048
1100523-3	1.75 / 44	0.112/2.8	0.45	36.00 / 914
1100523-5	1.75 / 44	0.112/2.8	0.45	60.00 / 1524
1100523-10	1.75 / 44	0.112/2.8	0.40	120.00 / 3048
1100524-3	1.88 / 48	0.116/2.9	0.50	36.00 / 914
1100524-5	1.88 / 48	0.116/2.9	0.50	60.00 / 1524
1100524-10	1.88 / 48	0.116/2.9	0.50	120.00 / 3048
1100512-3	2.00 / 51	0.125/3.2	0.50	36.00 / 914
1100512-5	2.00 / 51	0.125/3.3	0.50	60.00 / 1524
1100512-10	2.00 / 51	0.125/3.2	0.50	120.00 / 3048
1100510-3	2.25 / 57	0.127/3.2	0.60	36.00 / 914
1100510-5	2.25 / 57	0.127/3.2	0.60	60.00 / 1524
1100510-10	2.25 / 57	0.127/3.2	0.50	120.00 / 3048
1100511-3	2.38 / 60	0.127/3.2	0.65	36.00 / 914
1100511-5	2.38 / 60	0.127/3.2	0.65	60.00 / 1524
1100511-10	2.38 / 60	0.127/3.2	0.60	120.00 / 3048
1100501-3	2.50 / 64	0.128/3.3	0.70	36.00 / 914
1100501-5	2.50 / 64	0.128/3.3	0.70	60.00 / 1524
1100503-3	3.50 / 89	0.135/3.4	1.00	36.00 / 914
1100503-5	3.50 / 89	0.135/3.4	1.00	60.00 / 1524
1100503-10	3.50 / 89	0.135/3.4	1.00	120.00 / 3048
1100504-3	4.00 / 102	0.138/3.5	1.30	36.00 / 914
1100504-5	4.00 / 102	0.138/3.5	1.30	60.00 / 1524
1100504-10	4.00 / 102	0.138/3.5	1.30	120.00 / 3048
1100505-3	4.50 / 114	0.140/3.5	1.50	36.00 / 914
1100505-5	4.50 / 114	0.140/3.5	1.50	60.00 / 1524
1100505-10	4.50 / 114	0.140/3.5	1.50	120.00 / 3048
1100506-3	5.00 / 127	0.144/3.6	1.70	36.00 / 914
1100506-5	5.00 / 127	0.144/3.6	1.70	60.00 / 1524
1100506-10	5.00 / 127	0.144/3.6	1.70	120.00 / 3048
1100507-3	6.00 / 152	0.148/3.7	2.00	36.00 / 914
1100531-3	5.5/139.7	0.280/7.1	3.20	36.00 / 914
1100531-5	5.5/139.7	0.280/7.1	3.20	60.00 / 1524
1100531-10	5.5/139.7	0.280/7.1	3.20	120.00 / 3048
1100507-5	6.00 / 152	0.148/3.7	2.00	60.00 / 1524
1100507-10	6.00 / 152	0.148/3.7	2.00	120.00 / 3048
1100508-3	8.00 / 203	0.154/3.9	3.00	36.00 / 914
1100508-5	8.00 / 203	0.154/3.9	3.00	60.00 / 1524
1100508-10	8.00 / 203	0.154/3.9	3.00	120.00 / 3048
1100509-3	10.00 / 254	0.16/4.0	3.80	36.00 / 914
1100509-5	10.00 / 254	0.16/4.0	3.80	60.00 / 1524
1100509-10	10.00 / 254	0.16/4.0	3.80	120.00 / 3048
1100515-3	12.00 / 305	0.16/4.0	4.60	36.00 / 914
1100515-5	12.00 / 305	0.16/4.0	4.60	60.00 / 1524
1100515-10	12.00 / 305	0.16/4.0	4.60	120.00 / 3048
1100514-3	14.00 / 356	0.200/5.1	6.50	36.00 / 914
1100514-6	14.00 / 356	0.200/5.1	6.50	72.00/1829
1100514-12	14.00 / 356	0.200/5.1	6.50	144.00 / 3658
1100516-3	16.00 / 406	0.200/5.1	8.00	36.00 / 914
1100516-6	16.00 / 406	0.200/5.1	8.00	72.00/1829
1100516-12	16.00 / 406	0.200/5.1	8.00	144.00 / 3658
1100529-3	18.00 / 457	0.200/5.1	8.50	36.00 / 914
1100529-6	18.00 / 457	0.200/5.1	8.50	72.00/1829
1100529-12	18.00 / 457	0.200/5.1	8.50	144.00 / 3658



## SHAFT LOG/RUDDER POST HOUSING

Additional sizes are available upon request.  
Contact Centek Marine for more information.

PART#	ID. IN/MM	TOLERANCES	O.D. IN/MM	TOLERANCE	NOMINAL WALL THICKNESS (IN)	STD. LGTH (FT.)	LBS. PER FOOT
1100252-5	0.425 / 10.795	+/- .005	0.625 / 15.875	+/- .015	0.100	5'	0.12
1100250-5	0.550 / 13.970	+/- .005	0.750 / 19.050	+/- .015	0.100	5'	0.17
1100251-5	0.794 / 20.168	+/- .005	1.000 / 25.400	+/- .015	0.103	5'	0.21
1100234-10	1.290 / 32.766	+0.10 - .005	1.500 / 38.100	+/- .030	0.105	10'	0.33
1100243-10	1.290 / 32.766	+0.10 - .005	1.630 / 41.402	+/- .030	0.170	10'	0.56
1100276-10	1.290 / 32.766	+0.10 - .005	1.750 / 44.450	+/- .030	0.230	10'	1.10
1100204-10	1.500 / 38.100	+0.10 - .005	2.000 / 50.800	+/- .030	0.250	10'	0.99
1100221-10	1.500 / 38.100	+0.10 - .005	2.250 / 57.150	+/- .030	0.375	10'	1.27
1100237-10	1.523 / 38.684	+0.10 - .005	1.750 / 44.450	+/- .030	0.113	10'	0.42
1100240-10	1.640 / 41.656	+0.10 - .005	2.000 / 50.800	+/- .030	0.180	10'	0.74
1100236-10	1.640 / 41.656	+0.10 - .005	2.380 / 60.452	+/- .030	0.370	10'	1.68
1100262-10	1.750 / 44.450	+0.10 - .005	2.000 / 50.800	+/- .030	0.125	10'	0.50
1100209-10	1.750 / 44.450	+0.10 - .005	2.250 / 57.150	+/- .030	0.250	10'	1.13
1100293-10	1.750 / 44.450	+0.10 - .005	2.500 / 63.500	+/- .030	0.375	10'	2.00
1100214-10	1.750 / 44.450	+0.10 - .005	2.750 / 69.850	+/- .030	0.500	10'	2.54
1100218-10	1.875 / 47.625	+0.10 - .005	2.380 / 60.452	+/- .030	0.252	10'	1.20
1100249-10	1.875 / 47.625	+0.10 - .005	2.500 / 63.500	+/- .030	0.313	10'	1.53
1100208-10	1.875 / 47.625	+0.10 - .005	2.630 / 66.802	+/- .030	0.378	10'	1.91
1100206-10	1.875 / 47.625	+0.10 - .005	2.750 / 69.850	+/- .030	0.438	10'	2.29
1100231-10	1.875 / 47.625	+0.10 - .005	2.880 / 73.152	+/- .030	0.503	10'	2.70
1100217-10	2.000 / 50.800	+0.10 - .005	2.250 / 57.150	+/- .030	0.125	10'	0.60
1100201-10	2.000 / 50.800	+0.10 - .005	2.380 / 60.452	+/- .030	0.190	10'	0.93
1100203-10	2.000 / 50.800	+0.10 - .005	2.500 / 63.500	+/- .030	0.250	10'	1.27
1100213-10	2.000 / 50.800	+0.10 - .005	2.630 / 66.802	+/- .030	0.315	10'	1.63
1100207-10	2.000 / 50.800	+0.10 - .005	3.000 / 76.200	+/- .030	0.500	10'	2.83
1100220-10	2.250 / 57.150	+0.10 - .005	2.500 / 63.500	+/- .030	0.125	10'	0.67
1100222-10	2.250 / 57.150	+0.10 - .005	3.000 / 76.200	+/- .030	0.375	10'	2.23
1100277-10	2.250 / 57.150	+0.10 - .005	3.250 / 82.550	+/- .030	0.500	10'	3.50
1100202-10	2.375 / 60.325	+0.10 - .005	2.630 / 66.802	+/- .030	0.125	10'	0.71
1100245-10	2.375 / 60.325	+0.10 - .005	3.000 / 76.200	+/- .030	0.313	10'	1.90
1100205-10	2.375 / 60.325	+0.10 - .005	3.380 / 85.852	+/- .030	0.500	10'	3.25
1100216-10	2.500 / 63.500	+0.10 - .005	3.000 / 76.200	+/- .030	0.250	10'	1.56
1100288-10	2.500 / 63.500	+0.10 - .005	3.500 / 88.900	+/- .030	0.500	10'	3.55
1100225-10	2.625 / 66.675	+0.10 - .005	2.880 / 73.152	+/- .030	0.125	10'	0.78
1100224-10	2.625 / 66.675	+0.10 - .005	3.000 / 76.200	+/- .030	0.188	10'	1.19
1100228-10	2.625 / 66.675	+0.10 - .005	3.380 / 85.852	+/- .030	0.375	10'	2.36
1100254-10	2.625 / 66.675	+0.10 - .005	3.630 / 92.202	+/- .030	0.500	10'	3.27
1100302-10	2.740 / 69.596	+0.10 - .005	3.250 / 82.550	+/- .030	0.250	10'	1.75
1100226-10	2.750 / 69.850	+0.10 - .005	3.500 / 88.900	+/- .030	0.375	10'	2.65
1100215-10	2.875 / 73.025	+0.10 - .005	3.250 / 82.550	+/- .030	0.188	10'	1.30
1100242-10	2.875 / 73.025	+0.10 - .005	3.880 / 98.552	+/- .030	0.500	10'	3.84
1100211-10	3.000 / 76.200	+0.10 - .005	3.500 / 88.900	+/- .030	0.250	10'	1.84
1100289-10	3.000 / 76.200	+0.10 - .005	3.750 / 95.250	+/- .030	0.375	10'	3.20
1100232-10	3.000 / 76.200	+0.10 - .005	4.000 / 101.600	+/- .030	0.500	10'	5.09
1100239-10	3.230 / 82.042	+0.10 - .005	3.500 / 88.900	+/- .030	0.135	10'	1.03
1100212-10	3.230 / 82.042	+0.10 - .005	3.630 / 92.202	+/- .030	0.200	10'	1.53
1100241-10	3.230 / 82.042	+0.10 - .005	4.030 / 102.362	+/- .030	0.400	10'	3.28
1100244-10	3.230 / 82.042	+0.10 - .005	4.380 / 111.252	+/- .030	0.575	10'	4.92
1100230-10	3.230 / 82.042	+0.10 - .005	4.500 / 114.300	+/- .030	0.635	10'	5.55
1100259-10	3.475 / 88.265	+0.10 - .005	4.000 / 101.600	+/- .030	0.263	10'	2.39
1100253-10	3.475 / 88.265	+0.10 - .005	4.500 / 114.300	+/- .030	0.513	10'	4.66
1100279-10	3.560 / 90.424	+0.10 - .005	4.000 / 101.600	+/- .030	0.220	10'	2.07
1100235-10	3.735 / 94.869	+0.10 - .005	4.120 / 104.648	+/- .030	0.193	10'	1.71
1100248-10	3.735 / 94.869	+0.10 - .005	4.500 / 114.300	+/- .030	0.383	10'	3.56
1100247-10	3.735 / 94.869	+0.10 - .005	4.740 / 120.396	+/- .030	0.503	10'	4.82
1100257-10	3.735 / 94.869	+0.10 - .005	5.000 / 127.000	+/- .030	0.633	10'	6.25
1100227-10	4.230 / 107.442	+0.10 - .005	5.250 / 133.350	+/- .030	0.510	10'	5.47
1100260-10	4.720 / 119.888	+0.10 - .005	6.000 / 152.400	+/- .030	0.640	10'	7.76
1100290-10	4.940 / 125.476	+0.10 - .005	6.500 / 165.100	+/- .030	0.780	10'	11.10
1100229-10	5.704 / 144.882	+0.10 - .005	6.000 / 152.400	+/- .030	0.148	10'	1.98
1100309-10	5.704 / 144.882	+0.10 - .005	6.250 / 158.750	+/- .030	0.273	10'	4.01

## THRUSTER TUNNELS



PART #	I.D.	O.D.	NOMINAL WALL	INTERIOR FINISH	EXTERIOR FINISH	STD. LENGTH
	IN/MM	IN/MM	IN/MM			IN/MM
1100600	5.51 / 140	5.91 / 150	0.20 / 5	Natural	Natural	120.00 / 3048
1100601	5.51 / 140	5.91 / 150	0.20 / 5	White Gel Coat	Natural	120.00 / 3048
1100602	5.51 / 140	5.91 / 150	0.20 / 5	White Gel Coat	White Pigment	120.00 / 3048
1100603	7.28 / 185	7.72 / 196	0.22 / 5.5	Natural	Natural	120.00 / 3048
1100604	7.28 / 185	7.72 / 196	0.22 / 5.5	White Gel Coat	Natural	120.00 / 3048
1100605	7.28 / 185	7.72 / 196	0.22 / 5.5	White Gel Coat	White Pigment	120.00 / 3048
1100606	7.28 / 185	7.76 / 197	0.24 / 6	Natural	Natural	120.00 / 3048
1100607	7.28 / 185	7.76 / 197	0.24 / 6	White Gel Coat	Natural	120.00 / 3048
1100608	7.28 / 185	7.76 / 197	0.24 / 6	White Gel Coat	White Pigment	120.00 / 3048

Thruster tunnels may be factory machined to fit exact hull dimensions. Contact Centek to discuss machining options.

PART #	NOMINAL PIPE SIZE (INCHES)	DIAMETER OF FLANGE (INCHES)	THICKNESS (INCHES)	NUMBER OF BOLTS	DIAMETER OF BOLTS (INCHES)	BOLT CIRCLE (INCHES)
1200915	5	10	1.125	8	.75	8.5
1200916	6	11	1.375	8	.75	9.5
1200917	8	13.5	1.5	8	.75	11.75
1200918	10	16	1.625	12	.875	14.25
1200919	12	19	1.875	12	.875	17
1200920	14	21	2.125	12	1	18.75
1200921	16	23.5	2.25	16	1	21.25
1200922	18	25	2.625	16	1.125	22.75
1200923	20	27.5	3	20	1.125	25
1200924	24	32	3.375	20	1.25	29.5

Centek designs and builds flanges in a wide variety of sizes. Per ABS guidelines, tubing larger than 4.5" require flange connections.

## ANSI FLANGES



## MARLIN SERIES - STREAMLINE MUFFLER



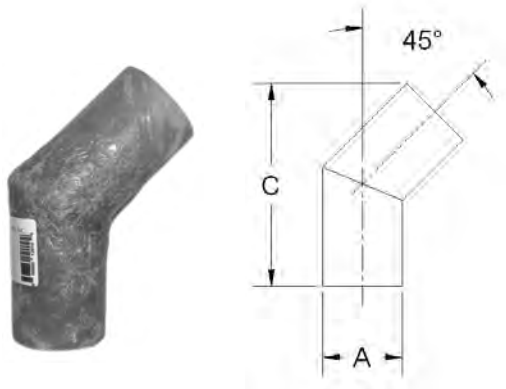
Application: Sportfishers/Space Restraints  
 Fuel type: Gas/Diesel  
 Waterline: Above Only • Sound rating: Good

PART #	INLET OUTLET	LENGTH	DIAMETER
	IN/MM	IN/MM	IN/MM
1090005	5/127	45.5/1156	8.38/213
1090006	6/152	49.5/1257	8.38/213
1090008	8/203	65.5/1664	10.38/264
1090010	10/254	80.75/2051	12.38/314
1090012	12/305	97.5/2476	14.38/365
1090014	14/356	109.5/2781	16.38/416
1090016	16/406	126/3200	18.38/467
1090018	18/457	142/3607	22.25/565

Centek introduces the latest design of streamline mufflers. With sound attenuation similar to the Vernatone™, these are an excellent solution for those who demand performance and need to save room for extra fuel capacity or additional equipment. Gel-coat finish and crush sleeves standard.

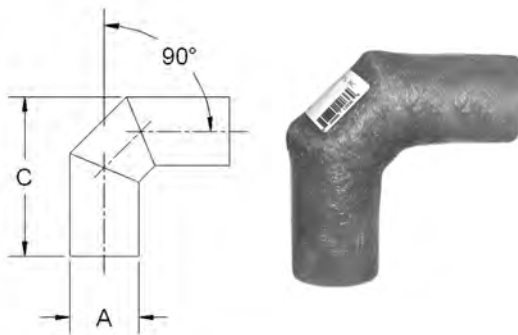
PART#	A	C
	NOM. O.D. IN/MM	LGTH IN/MM
1200217	1.50 / 38	6.00 / 152
1200214	1.63 / 41	6.00 / 152
1200349	1.75 / 45	6.00 / 152
1200281	1.88 / 48	6.63 / 168
1200192	2.00 / 51	6.75 / 171
1200350	2.25 / 57	7.00 / 178
1200308	2.38 / 61	7.25 / 184
1200215	2.50 / 64	7.75 / 197
1200294	2.88 / 73	8.50 / 216
1200109	3.00 / 76	8.50 / 216
1200111	3.50 / 89	10.25 / 260
1200112	4.00 / 102	10.25 / 260
1200168	4.50 / 114	12.13 / 308
1200113	5.00 / 127	13.63 / 346
1200114	6.00 / 152	15.38 / 391
1200216	8.00 / 203	19.31 / 490
1200204	10.00 / 254	22.44 / 570
1200311	12.00 / 305	25.56 / 649
1200351	14.00 / 356	28.68 / 728
1200352	16.00 / 406	31.80 / 808

## 45° STANDARD ELBOWS



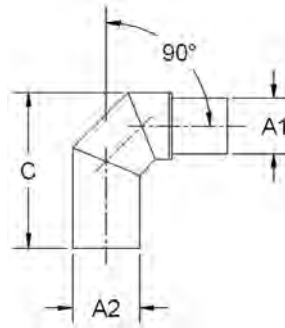
PART#	A	C
	NOM O.D. IN/MM	LGTH IN/MM
1200376	1.00 / 26	3.56 / 90
1200555	1.25 / 32	3.78 / 96
1200202	1.50 / 38	5.13 / 130
1200201	1.63 / 41	5.13 / 130
1200312	1.75 / 45	5.50 / 140
1200267	1.88 / 48	5.63 / 143
1200200	2.00 / 51	5.75 / 146
1200330	2.25 / 57	6.00 / 152
1200269	2.38 / 61	6.31 / 160
1200195	2.50 / 64	6.38 / 162
1200295	2.88 / 73	7.38 / 187
1200171	3.00 / 76	7.50 / 191
1200189	3.50 / 89	9.00 / 229
1200157	4.00 / 102	9.38 / 238
1200190	4.50 / 114	10.83 / 275
1200175	5.00 / 127	12.25 / 311
1200162	6.00 / 152	14.00 / 356
1200197	8.00 / 203	18.12 / 460
1200327	10.00 / 254	21.83 / 554
1200346	12.00 / 305	25.54 / 649
1200347	14.00 / 356	29.24 / 743
1200348	16.00 / 406	33.00 / 838

## 90° STANDARD ELBOWS

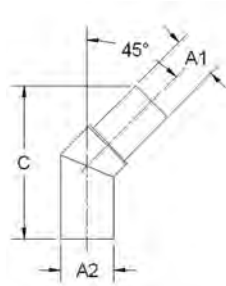


PART#	A1	A2	C
	NOM O.D.	NOM. O.D.	LGTH
	IN/MM	IN/MM	IN/MM
1200570	1.25 / 32	1.50 / 38	5.11 / 130
1200500	1.50 / 38	2.00 / 51	5.04 / 128
1200576	1.63 / 41	2.00 / 51	5.77 / 147
1200523	1.75 / 44	2.00 / 51	6.00 / 152
1200528	1.88 / 48	2.00 / 51	6.00 / 152
1200429	2.00 / 51	2.25 / 57	6.30 / 160
1200409	2.00 / 51	2.38 / 60	6.31 / 160
1200437	2.00 / 51	2.50 / 64	6.37 / 162
1200424	2.00 / 51	3.00 / 76	8.50 / 216
1200384	2.38 / 60	3.00 / 76	7.47 / 190
1200421	2.50 / 64	3.00 / 76	8.25 / 210
1200329	3.00 / 76	3.50 / 89	9.00 / 229
1200454	3.00 / 76	4.00 / 102	10.52 / 267
1200521	3.50 / 89	4.00 / 102	10.21 / 259
1200624	3.50 / 89	4.50 / 114	10.96 / 278
1200581	3.50 / 89	5.00 / 127	10.90 / 277
1200531	4.00 / 102	5.00 / 127	12.31 / 313
1200428	4.00 / 102	5.50 / 140	11.21 / 285
1200385	5.00 / 127	6.00 / 152	13.95 / 354
1200477	6.00 / 152	8.00 / 203	17.22/437
1200577	8.00 / 203	10.00 / 254	23.00/584

## 90° REDUCER ELBOWS



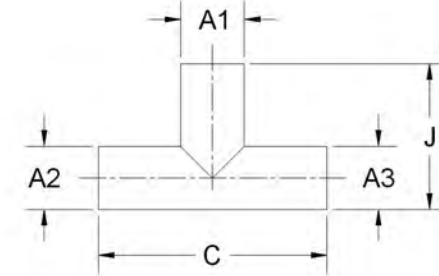
## 45° REDUCER ELBOWS



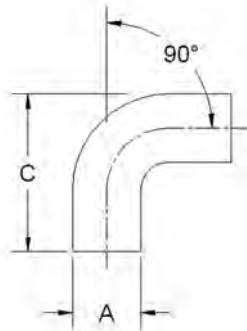
PART#	A1	A2	C
	NOM O.D.	NOM O.D.	LGTH
	IN/MM	IN/MM	IN/MM
1200496	2.00 / 51	3.00 / 76	7.74 / 197
1200605	2.25 / 57	3.00 / 76	7.69 / 195
1200497	2.50 / 64	3.00 / 76	8.25 / 210
1200480	3.00 / 76	3.50 / 89	9.32 / 237
1200468	3.00 / 76	4.00 / 102	11.80 / 300
1200420	3.50 / 89	4.00 / 102	10.38 / 264
1200450	3.50 / 89	4.50 / 114	11.80 / 300
1200642	3.50 / 89	5.00 / 127	12.00 / 305
1200457	4.00 / 102	5.00 / 127	14.13 / 359
1200378	5.00 / 127	6.00 / 152	18.20 / 462
1200380	6.00 / 152	8.00 / 203	23.25 / 591

PART#	A1	A2	A3	C	J
	NOM O.D. IN/MM	NOM. O.D. IN/MM	NOM. O.D. IN/MM	LGTH IN/MM	WIDTH IN/MM
1200524	1.00 / 26	1.00 / 26	1.00 / 26	6.00 / 152	3.50 / 89
1200522	1.50 / 38	1.50 / 38	1.50 / 38	7.50 / 191	4.50 / 114
1200405	2.00 / 51	2.00 / 51	2.00 / 51	8.00 / 203	5.00 / 127
1200552	2.50 / 64	2.50 / 64	3.50 / 89	14.00 / 356	8.34 / 212
1200475	2.50 / 64	2.50 / 64	4.00 / 102	13.00 / 330	9.18 / 233
1200280	3.00 / 76	3.00 / 76	3.00 / 76	11.00 / 279	7.00 / 178
1200478	3.00 / 76	3.00 / 76	3.50 / 89	14.00 / 356	9.50 / 241
1200389	3.00 / 76	3.00 / 76	4.00 / 102	14.00 / 356	8.00 / 203
1200441	3.00 / 76	3.00 / 76	5.00 / 127	14.00 / 356	9.00 / 229
1200495	3.50 / 89	3.50 / 89	3.50 / 89	13.50 / 343	8.50 / 216
1200492	3.50 / 89	3.50 / 89	4.00 / 102	14.25 / 362	8.00 / 203
1200373	4.00 / 102	4.00 / 102	4.00 / 102	14.00 / 356	9.00 / 229
1200444	4.00 / 102	4.00 / 102	4.50 / 114	15.00 / 381	8.50 / 216
1200341	4.00 / 102	4.00 / 102	5.00 / 127	15.00 / 381	9.00 / 229
1200379	5.00 / 127	5.00 / 127	5.00 / 127	18.00 / 457	11.50 / 292
1200494	5.00 / 127	5.00 / 127	6.00 / 152	18.75 / 476	11.00 / 279
1200602	8.00 / 203	8.00 / 203	8.00 / 203	24.00 / 610	16.00 / 406

## STANDARD T FITTINGS

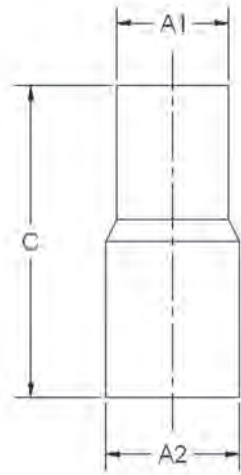


## 90° SMOOTH RADIUS ELBOWS



PART#	A	C
	NOM O.D. IN/MM	LGTH IN/MM
1200937	6.00/152	14.00/356
1200762	8.00 / 203	18.00 / 457
1200817	10.00 / 254	22.00 / 559
1200818	12.00 / 305	25.00 / 635
1200719	14.00 / 356	28.00 / 711
1200670	16.00 / 406	32.00 / 813
1200671	18.00/457	34.00/864

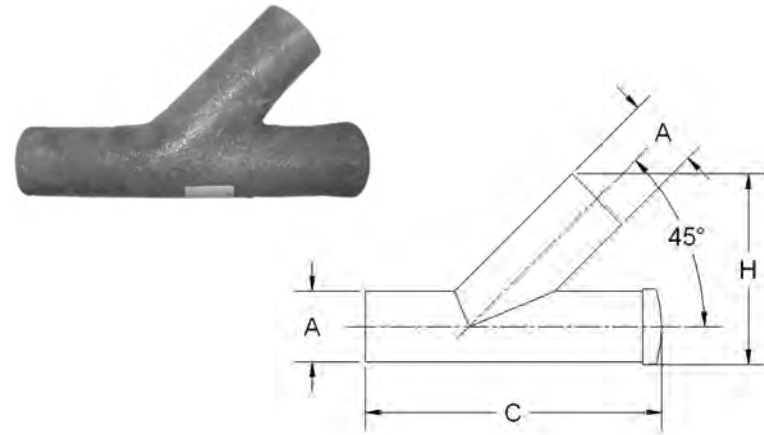
## REDUCER COUPLINGS



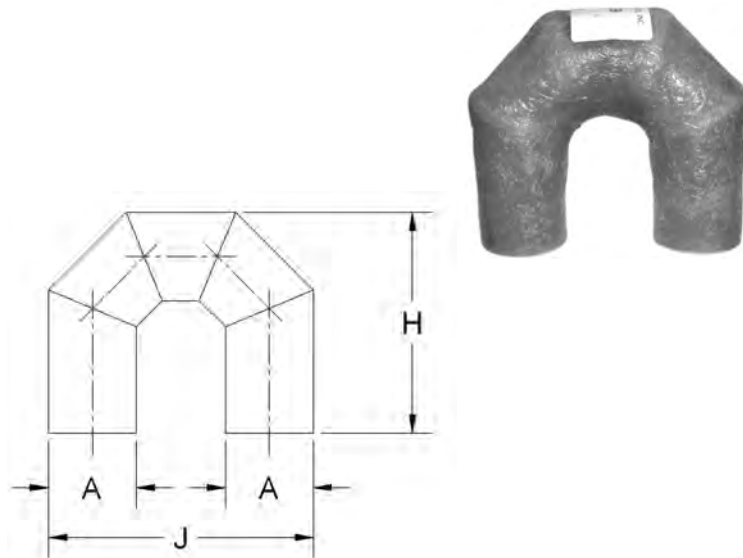
PART#	A1	A2	C
	NOM. O.D. IN/MM	NOM. O.D. IN/MM	LGTH IN/MM
1200532	1.25 / 32	1.63 / 41	5.00 / 127
1200390	1.50 / 38	1.63 / 41	6.00 / 152
1200435	1.50 / 38	1.75 / 44	6.00 / 152
1200503	1.50 / 38	1.88 / 48	6.00 / 152
1200410	1.50 / 38	2.00 / 51	6.20 / 157
1200533	1.63 / 41	1.75 / 44	5.00 / 127
1200266	1.63 / 41	2.00 / 51	3.00 / 76
1200447	1.63 / 41	2.38 / 60	5.00 / 127
1200506	1.63 / 41	2.50 / 64	9.00 / 229
1200394	1.75 / 44	2.00 / 51	6.00 / 152
1200505	1.75 / 44	2.38 / 60	6.00 / 152
1200309	1.88 / 48	2.00 / 51	5.88 / 149
1200430	2.00 / 51	2.25 / 57	6.00 / 152
1200396	2.00 / 51	2.38 / 60	5.00 / 127
1200277	2.00 / 51	2.50 / 64	4.25 / 108
1200371	2.00 / 51	2.88 / 73	8.00 / 203
1200264	2.00 / 51	3.00 / 76	8.00 / 203
1200336	2.00 / 51	3.50 / 89	8.00 / 203
1200400	2.00 / 51	4.00 / 102	9.00 / 229
1200431	2.25 / 57	2.38 / 60	6.00 / 152
1200569	2.25 / 57	3.00 / 76	6.19 / 157
1200529	2.38 / 60	2.50 / 64	7.00 / 178
1200318	2.38 / 60	2.88 / 73	8.50 / 216
1200451	2.38 / 60	3.00 / 76	8.50 / 216
1200270	2.50 / 64	3.00 / 76	8.50 / 216
1200125	2.50 / 64	3.50 / 89	9.00 / 229
1200161	3.00 / 76	3.50 / 89	9.50 / 241
1200170	3.00 / 76	4.00 / 102	10.00 / 254
1200639	3.00 / 76	5.00 / 127	9.19 / 233
1200222	3.50 / 89	4.00 / 102	10.50 / 267
1200124	3.50 / 89	4.50 / 114	11.00 / 279
1200185	4.00 / 102	4.50 / 114	11.50 / 292
1200223	4.00 / 102	5.00 / 127	12.00 / 305
1200265	4.00 / 102	6.00 / 152	14.00 / 356
1200227	4.50 / 114	5.00 / 127	12.50 / 318
1200123	4.50 / 114	6.00 / 152	14.00 / 356
1200285	5.00 / 127	5.50 / 140	10.00 / 254
1200148	5.00 / 127	6.00 / 152	14.00 / 356
1200491	5.00 / 127	8.00 / 203	14.19 / 360
1200272	5.50 / 140	6.00 / 152	11.88 / 302
1200268	6.00 / 152	6.62 / 168	15.00 / 381
1200166	6.00 / 152	8.00 / 203	18.00 / 457
1200603	6.00 / 152	8.63 / 219	14.25 / 362
1200392	6.69 / 170	8.00 / 203	18.00 / 457
1200534	8.00 / 203	8.63 / 219	16.25 / 413
1200259	8.00 / 203	10.00 / 254	22.00 / 559
1200425	10.00 / 25	12.00 / 305	16.00 / 406

PART#	A	C	H
	NOM. O.D. IN/MM	LGTH IN/MM	HGT IN/MM
1200442	3.00 / 76	14.19 / 360	8.30 / 211
1200387	3.50 / 89	15.75 / 400	9.70 / 246
1200362	4.00 / 102	18.00 / 457	11.07 / 281
1200363	4.50 / 114	19.75 / 502	12.28 / 312
1200364	5.00 / 127	21.50 / 546	13.50 / 343
1200365	6.00 / 152	25.00 / 635	15.90 / 404
1200366	8.00 / 203	32.00 / 813	20.75 / 527
1200367	10.00 / 254	39.00 / 991	25.56 / 649

## SURGE CHAMBERS



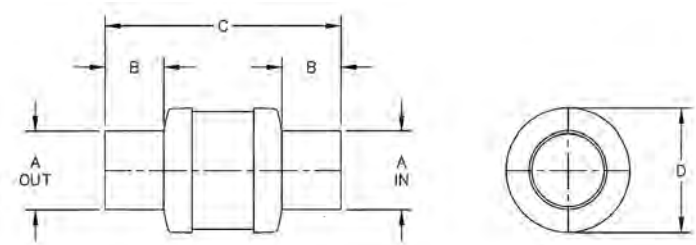
## 180° RETURNS STANDARD



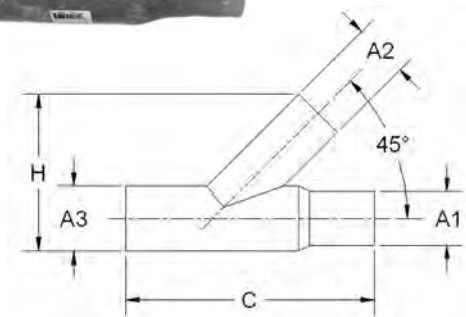
PART#	A	H	J
	NOM. O.D. IN/MM	HGT IN/MM	WIDTH IN/MM
1200353	1.50 / 38	3.75 / 95	4.50 / 114
1200354	1.63 / 41	4.00 / 102	4.88 / 124
1200355	1.75 / 45	4.38 / 111	5.25 / 133
1200356	1.88 / 48	4.75 / 121	5.63 / 143
1200333	2.00 / 51	5.75 / 146	6.00 / 152
1200357	2.25 / 57	5.63 / 143	6.75 / 172
1200358	2.38 / 61	6.00 / 152	7.13 / 181
1200359	2.50 / 64	6.25 / 159	7.50 / 191
1200360	2.88 / 73	7.25 / 184	8.63 / 219
1200199	3.00 / 76	7.50 / 191	8.44 / 214
1200361	3.50 / 89	8.75 / 222	10.50 / 267
1200334	4.00 / 102	9.38 / 238	11.50 / 292
1200476	4.50 / 114	11.25 / 286	13.50 / 343
1200402	5.00 / 127	12.50 / 318	15.00 / 381
1200399	6.00 / 152	15.00 / 381	18.04 / 458
1200370	8.00 / 203	20.34 / 517	24.00 / 610
1200446	10.00 / 254	25.00 / 635	30.00 / 762

PART#	A	B	C	D
	NOM. O.D. IN/MM	I/O LGTH IN/MM	LGTH IN/MM	DIA IN/MM
1200403	1.50/38	2.00/51	9.75/248	4.34/110
1200263	1.63/41	2.00/51	9.75/248	4.34/110
1200398	1.88/48	2.00/51	9.75/248	4.34/110
1200328	2.00/51	1.50/38	8.37/213	4.34/110
1200426	2.25/57	3.00/76	10.50/267	5.31/135
1200449	2.38/60	3.00/76	10.50/267	5.31/135
1200307	2.50/64	3.00/76	10.50/267	5.31/135
1200274	3.00/76	3.00/76	10.50/267	5.31/135
1200411	3.50/89	3.00/76	12.00/305	6.38/162
1200369	4.00/102	3.00/76	12.00/305	6.38/162
1200479	4.50/114	4.00/102	15.00/381	8.38/213
1200377	5.00/127	4.00/102	15.00/381	8.38/213
1200286	6.00/152	5.00/127	26.20/665	12.20/318

## CHECK VALVES



## STANDARD Y FITTINGS

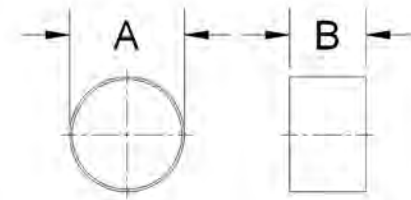
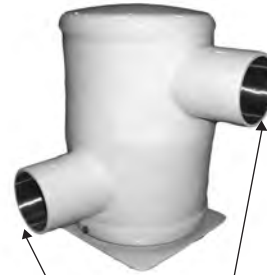


PART#	A1&A2	A3	C	H
	NOM. O.D. IN/MM	NOM. O.D. IN/MM	LGTH IN/MM	HGT IN/MM
1200427	2.00 / 51	3.00 / 76	10.83 / 275	5.83 / 148
1200406	2.00 / 51	3.50 / 89	16.00 / 406	8.45 / 215
1200458	2.38 / 60	3.50 / 89	18.50 / 470	8.72 / 221
1200321	2.50 / 64	3.50 / 89	18.50 / 470	8.80 / 224
1200432	2.50 / 64	4.00 / 102	13.00 / 330	8.95 / 227
1200413	3.00 / 76	3.00 / 76	14.00 / 356	8.55 / 217
1200293	3.00 / 76	3.50 / 89	19.00 / 483	11.18 / 284
1200256	3.00 / 76	4.00 / 102	14.00 / 356	9.30 / 236
1200116	3.00 / 76	4.50 / 114	14.38 / 365	9.83 / 250
1200320	3.00 / 76	5.00 / 127	14.87 / 378	10.08 / 256
1200417	3.50 / 89	3.50 / 89	16.00 / 406	9.94 / 252
1200415	3.50 / 89	4.00 / 102	16.00 / 406	10.19 / 259
1200255	3.50 / 89	4.50 / 114	16.00 / 406	10.67 / 271
1200315	3.50 / 89	5.00 / 127	21.50 / 546	11.19 / 284
1200414	3.50 / 89	6.00 / 152	20.00 / 508	12.02 / 305
1200316	4.00 / 102	4.00 / 102	16.50 / 419	11.20 / 284
1200391	4.00 / 102	4.50 / 114	18.00 / 457	10.86 / 276
1200304	4.00 / 102	5.00 / 127	17.50 / 445	11.82 / 300
1200119	4.00 / 102	6.00 / 152	19.13 / 486	13.33 / 339
1200453	4.50 / 114	6.00 / 152	19.50 / 495	13.42 / 341
1200120	5.00 / 127	5.00 / 127	21.57 / 548	13.85 / 352
1200310	5.00 / 127	6.00 / 152	23.00 / 584	15.19 / 386
1200319	5.00 / 127	8.00 / 203	28.50 / 724	16.83 / 427
1200203	6.00 / 152	6.00 / 152	26.50 / 673	16.61 / 422
1200322	6.00 / 152	8.00 / 203	30.00 / 762	18.61 / 473
1200314	6.00 / 152	10.00 / 254	37.19 / 945	20.61 / 523
1200397	6.63 / 168	10.00 / 254	37.19 / 945	20.61 / 523
1200525	8.00 / 203	12.00 / 305	33.00 / 838	26.31 / 668



PART#	A	B
	NOM. / O.D IN/MM	LGTH IN/MM
1200584	4.00 / 102	4.00 / 102
1200585	5.00 / 127	4.00 / 102
1200586	6.00 / 152	4.00 / 102
1200593	6.63 / 168	4.00 / 102
1200587	8.00 / 203	4.00 / 102
1200594	8.63 / 219	4.00 / 102
1200588	10.00 / 254	4.00 / 102
1200595	10.63 / 270	4.00 / 102
1200589	12.00 / 305	4.00 / 102
1200590	14.00 / 356	4.00 / 102
1200591	16.00 / 406	4.00 / 102
1200592	18.00 / 457	4.00 / 102

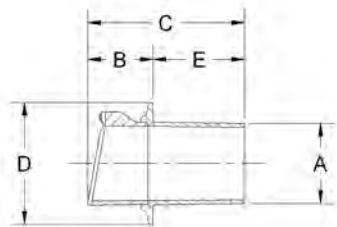
## CRUSH SLEEVES



Fits inside Inlet/Outlet to prevent damage due to over tightening of hose clamps

CRUSH SLEEVES

## THRU HULL FITTING WITH FLAPPER



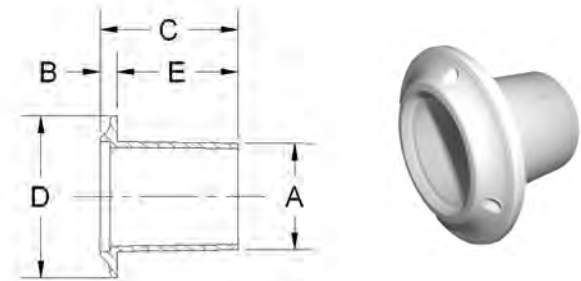
### FLAPPER REPAIR KIT

Part #	Size
1200344	2.00
1200313	3.00
1200340	4.00
1200345	5.00

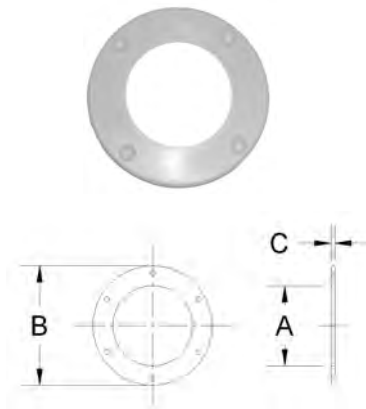
PART#	A	B	C	D	E
	NOM. O.D. IN/MM	EXT. LGTH IN/MM	LGTH IN/MM	DIA IN/MM	T-H LGTH IN/MM
1200300 - W	2.00 / 51	1.75 / 44	4.50 / 114	3.50 / 89	2.75 / 70
1200301 - BL	2.00 / 51	1.75 / 44	4.50 / 114	3.50 / 89	2.75 / 70
1200298 - W	3.00 / 76	2.50 / 64	5.50 / 140	4.88 / 124	3.00 / 76
1200299 - BL	3.00 / 76	2.50 / 64	5.50 / 140	4.88 / 124	3.00 / 76
1200326 - W	4.00 / 102	3.25 / 83	7.75 / 197	6.00 / 152	4.50 / 114
1200325 - BL	4.00 / 102	3.25 / 83	7.75 / 197	6.00 / 152	4.50 / 114
1200342 - W	5.00 / 127	3.44 / 87	9.06 / 230	7.50 / 191	5.63 / 143
1200343 - BL	5.00 / 127	3.44 / 87	9.06 / 230	7.50 / 191	5.63 / 143

## THRU HULL FITTING WITHOUT FLAPPER

PART#	A	B	C	D	E
	NOM. O.D. IN/MM	EXT. LGTH IN/MM	LGTH IN/MM	DIA IN/MM	T-H LGTH IN/MM
1200302 - W	2.00 / 51	0.44 / 11	3.19 / 81	3.50 / 89	2.75 / 70
1200303 - BL	2.00 / 51	0.44 / 11	3.19 / 81	3.50 / 89	2.75 / 70
1200287 - W	3.00 / 76	0.63 / 16	3.63 / 92	4.88 / 124	3.00 / 76
1200288 - BL	3.00 / 76	0.63 / 16	3.63 / 92	4.88 / 124	3.00 / 76
1200324 - W	4.00 / 102	0.63 / 16	5.13 / 130	6.00 / 152	4.50 / 114
1200323 - BL	4.00 / 102	0.63 / 16	5.13 / 130	6.00 / 152	4.50 / 114
1200337 - W	5.00 / 127	0.75 / 19	6.38 / 162	7.50 / 191	5.63 / 143
1200338 - BL	5.00 / 127	0.75 / 19	6.38 / 162	7.50 / 191	5.63 / 14



## TRIM FLANGE



PART#	A	B	C
	I.D. IN/MM	O.D. IN/MM	THICK IN/MM
1200137	2.10 / 53	4.00 / 102	0.25 / 6
1200138	2.60 / 66	4.62 / 117	0.25 / 6
1200139	3.10 / 79	5.37 / 136	0.25 / 6
1200140	3.60 / 91	6.12 / 155	0.25 / 6
1200141	4.10 / 104	7.12 / 181	0.25 / 6
1200142	5.10 / 130	8.06 / 205	0.31 / 8
1200143	6.06 / 154	9.10 / 231	0.31 / 8

## SCUPPER DRAIN FITTING

PART#	DESCRIPTION
1200134	3" Scupper Drain - white with flapper
1200252	3" Scupper Drain - black with flapper

