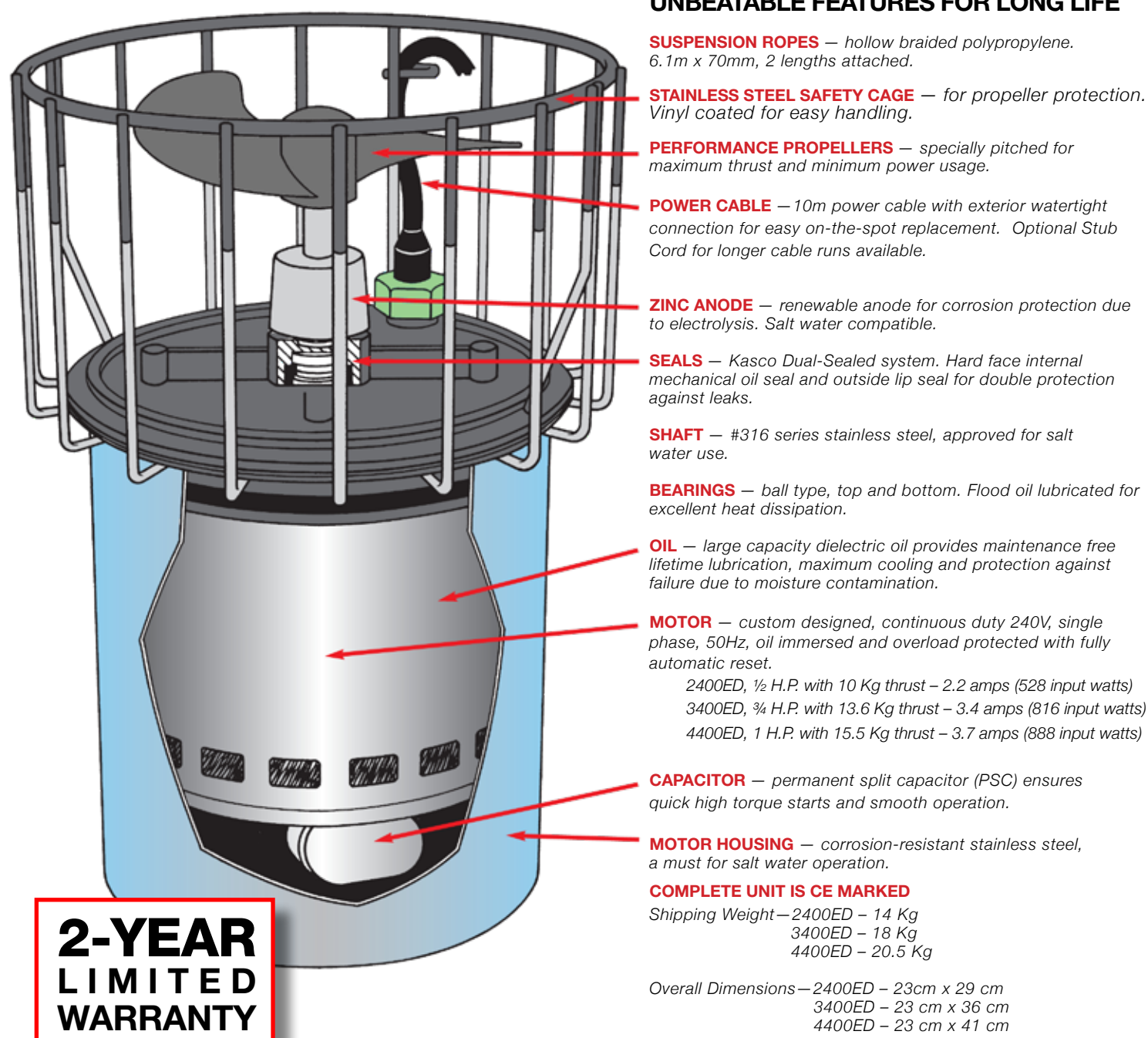


The very best in energy efficiency and durability. . . pioneered by Kasco® Marine.



Kasco Marine knows the relationship between quality, dependability, and energy efficiency. That's why Kasco has de-icer water agitators in use all over the world. Today's Kasco De-icers are the result of over 40 years of experience in the design and manufacture of superior agitator equipment. Compare and you'll choose the best – Kasco De-icers.



A Kasco De-icer Horizontal Flotation Unit (in corner behind the whale) keeps a breathing hole open as "Bone," one of the trapped whales, pokes its head up for air.



Inset shows a Kasco De-icer in a more conventional use.

KASCO® – The Arctic Proven De-icers

In October 1988, Kasco Marine sent its de-icing equipment and company personnel 312 miles north of the Arctic Circle to help with the whale rescue off the coast of Barrow, Alaska.

Although Kasco Marine had no official rescue invitation, they were convinced their equipment could do the job... so Kasco decided to "crash the party." At first, local officials did not take Kasco's de-icing equipment seriously, but they quickly became enthusiastic after seeing the great results Kasco delivered. There was also a friendly reception from the whales.

Kasco's 3/4 H.P. Horizontal Flotation Units maintained ice-free breathing holes for the trapped whales at temperatures consistently reaching -30° F. Keeping these breathing holes free of ice, while waiting for a Russian ice-breaker, was essential to the ultimate freedom of the trapped whales.

OTHER KASCO PRODUCTS AVAILABLE FOR MANAGING WATER QUALITY

Fountains for Aesthetics and Aeration

Enhance the beauty and look of your pond with a dramatic Fountain display. The Aerating Fountain will also improve water quality and circulation by adding vital aeration. Available in multiple sizes with a variety of patterns and styles.



Aerators

Efficient operation and high oxygen transfer at low operating costs make Pond Aerators a perfect choice for improved water quality when a fountain display is not needed or desired. Available in multiple sizes to fit any pond size or application.

KASCO MARINE, INC.
800 Deere Road
Prescott, WI U.S.A.
54021-1241



Phone: 1-715-262-4488
Fax: 1-715-262-4487
www.de-icer.com
sales@de-icer.com

Kasco® Marine, The Industry Leader in Ice Control Engineering

Kasco® De-icers

Your Best Protection Against Costly Ice Damage!



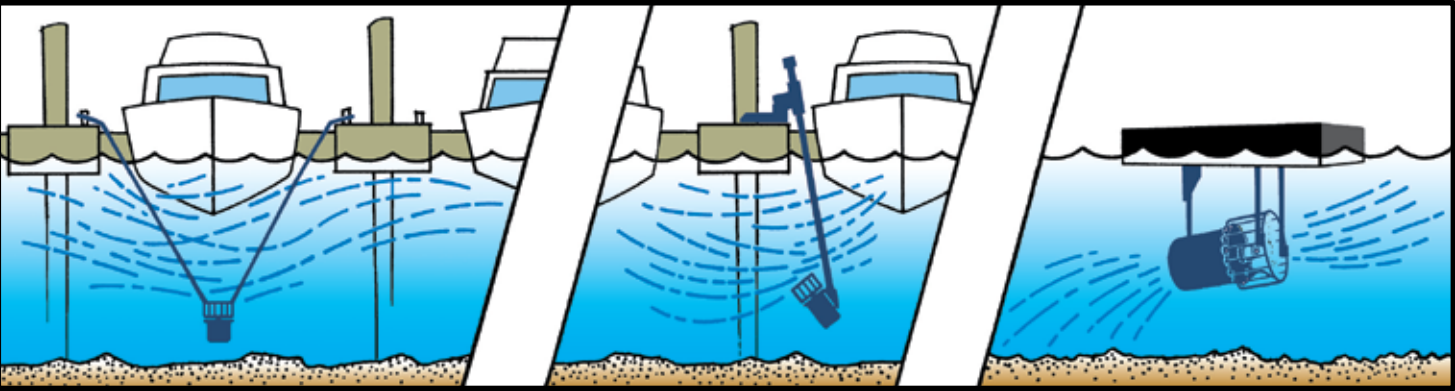
Available in 1/2 hp, 3/4 hp and 1 hp sizes.

For over 40 years, Kasco De-icers have set the standard for energy efficiency and reliable operation.



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Kasco® De-icers help prevent the formation of damaging ice in marinas and harbors.



ROPE SUSPENSION

UNIVERSAL DOCK MOUNT

HORIZONTAL FLOTATION UNIT

Suspended Operation

Kasco De-icers come complete for suspended operation from a dock or boat in either a vertical or angle position. Angle operation by suspended method or with optional flotation unit produces an elongated pattern of agitated water. A vertical positioning produces a circular pattern.

Adjusting the angle of de-icer suspension is done by simply looping one suspension rope back one or two ribs on the propeller cage.

Kasco De-icers are effective in either mild or severe winter climates. In milder climates fewer Kasco units are required for safe de-icing. Users find that Kasco De-icers create more water flow than any product available.

Optional Equipment

UNIVERSAL DOCK MOUNT

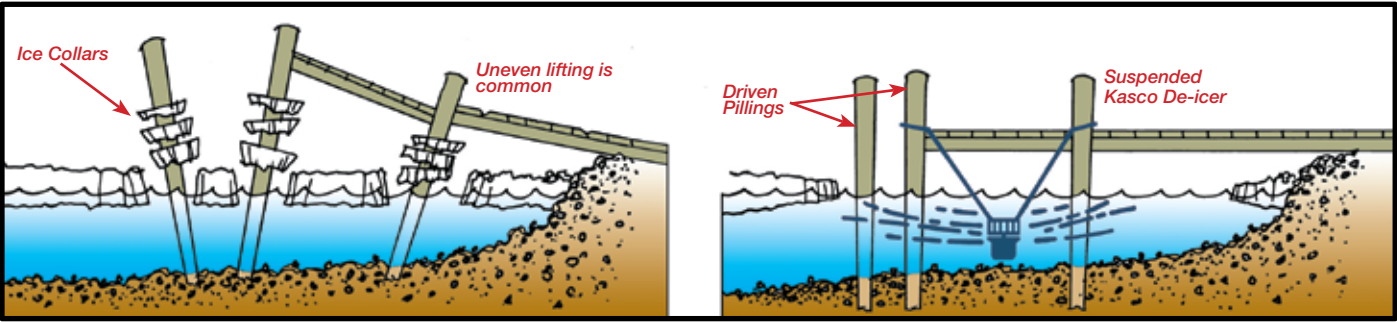
Kasco Marine offers an optional dock or piling mount. A Kasco De-icer may be operated in either a vertical or several angle positions. The de-icer may be adjusted to a maximum depth of 10 feet from the mounting bracket.

HORIZONTAL FLOTATION KIT

Kasco De-icers can be attached to our optional flotation kit to create an elongated de-icing pattern in either fresh or salt water.

Flotation application of Kasco De-icers is ideal for all de-icing needs and well suited for tough problems such as shallow water or where water and ice levels may fluctuate, such as tidal waters.

YOUR BEST PROTECTION AGAINST ICE JACKING/LIFTING DAMAGE



Jacking/Lifting damage can occur anytime ice and water levels fluctuate. The most common cause of lifting is the tide; however, lifting damage is common on large lakes where weather and wind changes can cause smaller, but more rapid changes than tides. Jacking damage can also occur on any body of water regulated by man.

Repair costs are not only limited to physical damage, but

also the down-time of dock facilities and time spent obtaining necessary permits.

Maintaining an ice-free zone in and around dock structures is your very best protection against jacking/lifting damage. Keeping partially open water near dock structures will reduce ice thickness in the general area around docks and pilings and help to limit the risk of ice damage.



Optional equipment and replacement parts.



UNIVERSAL DOCK MOUNT

Kasco's heavy duty dock or piling mount is made from corrosion protected steel and stainless steel. This dock mount can be used with any of our de-icer units.

The de-icer unit may be extended down from the surface mounting bracket to a maximum length of 3 m. Due to shipping limitations, users must supply their own 2.54 cm O.D. pipe extensions.

Performance Propellers

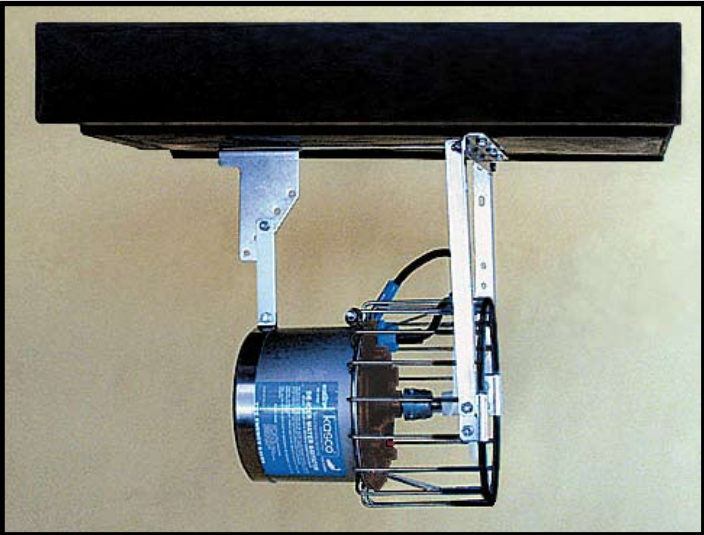
— Kasco's high performance, energy efficient propellers are specially pitched for maximum thrust and minimum power usage. Damaged propellers must be replaced to maintain de-icer performance.

Replacement orders must specify the model unit since each prop is designed for the maximum thrust for that specific horsepower.

Zinc Anode

— Custom engineered zinc anodes are fitted to the propeller shaft of all Kasco De-icers to prevent electrolysis damage to the unit. Anodes must be periodically inspected and replaced when significant deterioration has occurred. Replacement anodes are available from all dealers. The 1/2 and 3/4 hp units use the same zinc that fits their 1/2" (127mm) shaft. The 1 hp unit uses a different zinc to fit its 5/8" (159mm) shaft.

PLEASE NOTE: Under certain conditions no ice control device can prevent damage from ice movement caused by wind or current, or from extremely cold weather causing ice to form all the way to the bottom and in some cases where bottom water temperature is the same as ice. Effective de-icing can also be retarded when used in extremely shallow conditions.

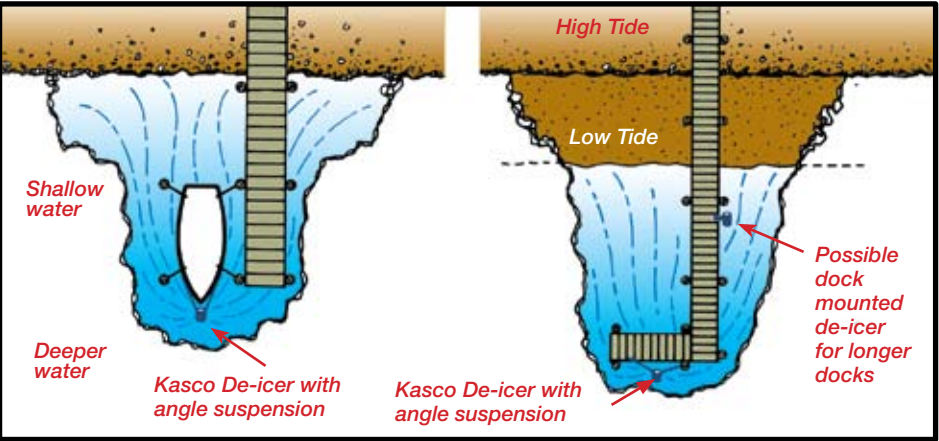


HORIZONTAL FLOTATION UNIT

Kasco offers an exclusive, arctic proven flotation kit. The easy-to-assemble kit consists of stainless steel components and a flotation block.

The de-icer unit is mounted at an angle just below the flotation block. Angle operation of de-icer produces an elongated pattern of agitated water and is well-suited for shallow water operation. All models can be used with this float.

UTILIZING YOUR KASCO® DE-ICING EQUIPMENT



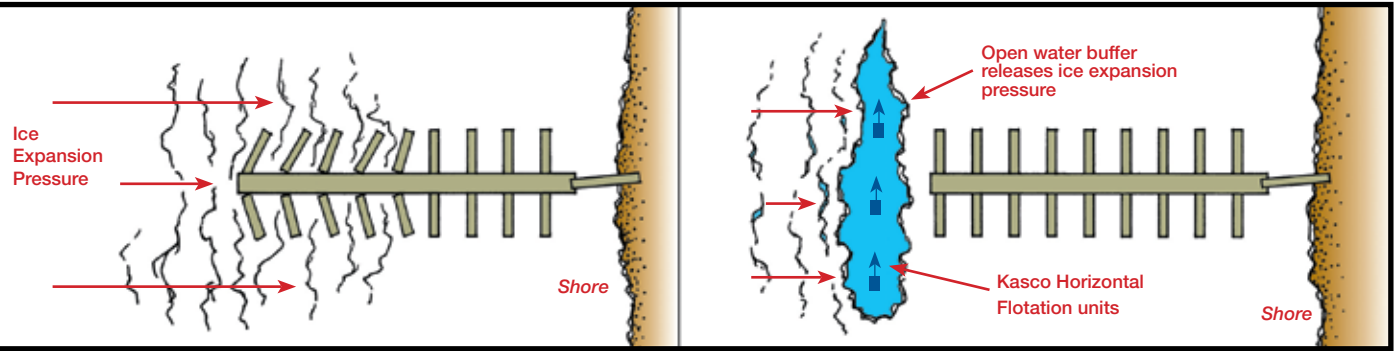
To de-ice a shallow water area, direct the flow of warmer water from a deeper area into the shallower area. Remember, a de-icer works because it draws warmer, denser water from the bottom and circulates it upward to the surface, preventing ice formation or melting existing ice.

It is often easier to de-ice a boat by installing the de-icer at or near the bow, angled toward the stern. If the water flow is directed toward the shore or a retaining wall, it will flare, forming

a desirable "T" shaped pattern. In tidal waters, split the difference in water depth so the de-icer is in shallow water at low tide and deep water at high tide. Or, tie your de-icer to the boat and allow the boat and de-icer to rise and fall with the tide.

The area of water that can be de-iced by a single unit depends on climate and the body of water involved. For specific information contact your local Kasco dealer.

YOUR BEST PROTECTION AGAINST ICE EXPANSION DAMAGE

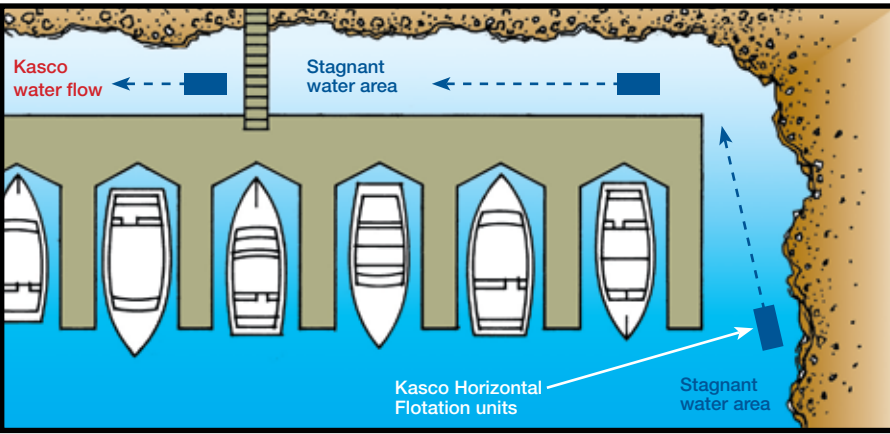


Ice expansion pressure is a vastly underrated damage risk. The size of a body of water is directly proportional to expansion damage risk potential. Pressure damage can affect that part of the dock structure nearest the shore or at the opposite end as shown above.

Although it may be preferred to maintain an ice-free zone around your dock structure, it is also possible to limit damage risk with an open water buffer zone. Kasco Horizontal Flotation units positioned between docks and expanding ice can relieve damaging expansion pressure.



Water quality during hot summer weather is an increasing problem for marinas and waterfront developments. Sheltered water, behind docks or under walkways where wind and current cannot reach, tends to become stagnant and dirty. As a result, algae and odor problems often develop, destroying an otherwise pleasant outdoor experience.



The use of Kasco de-icers during hot summer weather to create a man-made current helps "Mother Nature" with her natural cleaning action.

The quiet-running Kasco Horizontal Flotation unit produces an aesthetically pleasing high-volume water current in marinas, waterfront developments and park facilities.