

Composite End Covers



Description

As part of our continual product improvement and development programme, a new generation of end covers has been developed for applications where our heat exchangers are used with a highly aggressive cooling medium, such as sea water. These new end covers are a further development of Bowman's GFN technology, which is extensively proven in operating conditions where our products are used with sea water, aggressive chemicals and mineral rich fresh water.

Application

The composite end cover has been designed to be a direct replacement for traditional brass or gunmetal end covers that have been historically used for marine applications. The use of a composite material reduces the possibility of galvanic reaction between dissimilar metals, (which can lead to corrosion inside the heat exchanger), plus the problem of sea water erosion of the end covers internal surface. The switch to a composite material also reduces the weight of the end covers, which for certain installations will provide a useful benefit.

Structural Composition

To handle operating pressures seen in a typical marine heat exchanger, Bowman has developed an advanced technology solution, which combines a precision engineered metallic inner core moulded into the GFN end cover, giving significant strength and rigidity throughout its structure. Bespoke designed, threaded brass inserts are also moulded into the end cover; their novel design ensuring they cannot come loose under load, or when applying fixings or pipe work connections. All critical dimensions remain unchanged and the BSP end cover connections are the same as on previous brass end covers.

Range

Bowman is introducing Composite end covers on a rolling change basis to all 3 pass marine specification heat exchangers. Our FC, FG and FH ranges are the first heat exchangers to benefit from this new development, with other ranges following on at future dates to be advised later.

Specification

Working pressure:	16 bar (tube side)
Working temperature:	110 °C
End cover connections:	FC – 1" BSP; FG – 1 1/4" BSP; FH 100 & 200 – 1" BSP FH 300 & FH 400 – 1 1/4 BSP
Materials:	End cover – GFN (Glass Filled Nylon) Inner core – Mild steel Connection inserts – Brass

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