

## Tempest Proportional Mix Deicer

### The Model of Efficiency

JBT AeroTech's Tempest deicer is available with a proportional mix system that can reduce glycol use by up to 50%.

Standard pre-mix deicers have a single tank for deicing fluid with a fixed concentration of glycol. To ensure adequate deicing capabilities over a whole season the glycol concentration has to be high enough for the worst possible weather conditions. This means that on days with milder weather more glycol is used than is necessary.

JBT AeroTech's proportional mix system consists of a main fluid tank and a tank with pure (neat) glycol. A sophisticated mixing system adds pure glycol to the fluid stream to achieve exactly the correct concentration of glycol in the deicing fluid for the current conditions. By not spraying an unnecessarily strong glycol mixture on days with mild weather, a JBT proportional mix Tempest can save thousands of liters of glycol per season.

Like all other deicers the proportional mix deicers also have a completely separate anti-icing system.





#### **Tempest Aircraft Prop-Mix Deicer**

JBT AeroTech's proportional mix system contains the following innovative features:

- NEW Mix selection in 1% increments Based on operational requirements the glycol concentration can be selected from a number of fixed presets, or adjusted in increments as small as 1%.
- NEW Wireless control of mix percentage The Tempest proportional mix system can be linked to a telemetry system that allows wireless control of the mix percentage from a central location.
- Positive displacement flow meters Accuracy is guaranteed by the use of calibrated flow meters that maintain accuracy regardless of fluid flow rate and temperature.
- Fail safe mix controller Controller monitors performance and automatically shuts down if correct parameters are not obtained.
- NEW Auto lube system Available automatic lubrication system for the Hardi pumps in the proportional mix fluid system.
- In-direct glycol heating Pure glycol is heated in-directly by circulating water through coils, reducing fluid degradation.
- In-line mixing tube Industrial mixing device ensure homogeneous water/glycol mixture.
- Stand-by freeze protection Fluids circulate through system during idling to prevent freezing of water in the system.
- Overnight freeze protection Available deicing compartment insulation and electric heaters to prevent freezing of the system when the deicer is not running.
- Purge freeze protection Automated purge system fills the water lines with pure glycol to protect the system from freezing during a prolonged period out of service.

#### blendUP™ - NEW

JBT AeroTech's innovative blendUP™ system represents a further improvement to the proportional mix concept. Traditional proportional mix systems contain pure water in one of their tanks, which could freeze, creating damage that is time consuming and costly to repair. Instead of pure water, our blendUP™ system contains a mixture of glycol and water in the main tank. The concentration is sufficient enough to prevent the system from freezing even on cold days, but is equal to or less than what is required for aircraft deicing. Based on the actual weather conditions the fluid from the main tank is sprayed pure, or "blended up" with pure glycol from the second tank. With the risk of freezing eliminated there is no more need for insulation, electrical heaters and purging. This way the blendUP™ system combines the glycol savings of a proportional mix system with the freeze protection and ease of mind of a simple pre-mix system.

#### **Proportional Mix Specifications**

Fluid Tanks	Std Prop-mix	blendUP
Main tank (water or mixture)	4163 L	5487 L
Pure glycol tank (type I, II or IV)	2649 L	1325 L
Anti-ice tank (type II or IV)	1514 L	1514 L

#### Fluid System

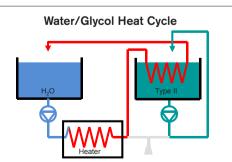
4 Hardi diaphragm pumps equipped with automatic greasing 2.8 MBTU four stage combustion heater

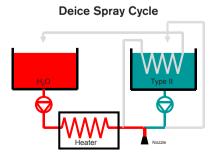
Main tank - direct heating

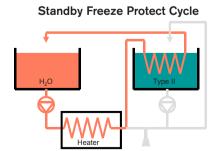
Pure glycol tank - Indirect heating through water coil

#### Mix Control

Electronic controller with fixed presets or 1% increments Positive displacement calibrated flow meters







www.jbtaerotech.com

# AeroTech

#### USA

7300 Presidents Drive Orlando, FL 32809 USA

Phone: +1 407 851 3377 Fax: +1 407 850 2839 jbtaerotech.gse@jbtc.com

#### Spain

A-2, Km 34 400 28805 Alcala de Henares Madrid, Spain Phone: +34 91 8775 880 Fax: +34 91 8775 881

#### UK

658 River Gardens North Feltham Trading Est. Feltham, London Heathrow Middx, TW14 0RB, UK Phone: +44 20 8587 0666 Fax: +44 20 8587 0660

#### Singapore

6 Loyang Lane #03-00 Young Heng Industrial Building Singapore 508920 Phone: +65 6542 9255 Fax: +65 6542 7493