



# **PR-002 Categorisation of FW Aircraft for Firebombing**



**Standard**  
**November 2012**

# 1 Background

In order to streamline procurement processes and operational procedures it is useful to define the broad categories or “Types” of aircraft, according to their notional capability.

These categories offer a common interpretation for NAFC, its Members, Contractors, suppliers and others of the different types of aircraft used in firebombing operations.

## 2 Standard

- 2.1 Fixed wing firebombing aircraft are all referred to as airtankers.
- 2.2 Single-engined airtankers (SEATs) are commonly adapted from, or have the design characteristics of, an agricultural aircraft.
- 2.3 Fixed wing aircraft used for firebombing will be assigned a Type based on their water carrying capacity and design features, as specified below:

Type	Engines	Water carrying capacity
1	Multi engine	Greater than <b>11,356</b> litres
2	Multi engine	Between <b>11,356</b> and <b>6,813</b> litres inclusive
3	Multi engine	Less than <b>6,813</b> litres
4	Single engine	Greater than <b>2,270</b> litres
5	Single engine	Less than or equal to <b>2,270</b> litres

- 2.4 Water carrying capacity is the maximum physical volume of water that can be carried in the aircraft’s internal tank or attached tank(s). The aircraft must be reasonably capable of carrying the maximum volume in routine firebombing operations under conditions as follows:
  - a. routine firebombing operations include take-off, cruise flight and manoeuvring for dropping, at Mean Sea Level in International Standard Atmosphere (ISA) plus 25°C conditions (i.e. at 40°C); and
  - b. take off and landing area conditions are not limiting; and
  - c. the aircraft carries 120 minutes of fuel, including reserves, calculated at normal cruise power settings as used in firebombing configuration; and
  - d. the aircraft carries normal operating crew (at a standard weight of 86kg per person); and
  - e. there is no loss of water through vents or ports in the tank or the drop doors during normal manoeuvring.
- 2.5 Aircraft with the design features specified below are assigned a Type as above, suffixed by the qualifier specified.

Design feature	Qualifier
<b>Self-fill capability</b> e.g. by scooping or skimming	<b>“S”</b> e.g. “Type 2S”



- 2.6 Type 1 Fixed wing aircraft may be further categorised as Very Large Airtankers (VLAT) if they are capable of delivering a volume of 40,000 litres of fire retardant slurry to a fire based on the following scenario and returning without refuelling:

Criteria	Value
Distance from base to fire	400 nm
Depart loaded from base	Yes
Specific Gravity of retardant slurry	1.07
Weather conditions	ISA plus 25°C

- 2.7 Each individual aircraft is assigned a Type. A Type 1 aircraft may be further classified as a VLAT.

