

COMMONWEALTH OF AUSTRALIA



CERTIFICATE OF TYPE APPROVAL

Number 148-2 Issue 3

Manufacturer/Holder: Kavanagh Balloons Pty Limited

Address: 39 Jubilee Street
Wahroonga NSW 2076
Australia

This certifies that approval has been granted in accordance with Regulation 22 of the Civil Aviation Regulations for models E-120, E-140, E-160, E-180, E-200, E-210, E-240, E-260 and E-300 hot air balloons.

This certificate is valid until suspended or cancelled by the Civil Aviation Authority. The basis of certification is as prescribed in Certificate of Type Approval Data Sheet Number 148-2 issued by this Authority.

A handwritten signature in black ink, appearing to read 'C. Torkington'.

C. Torkington
for the Authority

Date of issue: 1 July 1993

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No.: 148-2
Revision: 0
Kavanagh
E-120 E-140
E-160 E-180
E-200 E-210
E-240 E-260
E-300
Date: 1 July 1993



CERTIFICATE OF TYPE APPROVAL DATA SHEET

This data sheet, which is part of the Certificate of Type Approval No.148-2, lists the conditions and limitations under which the balloon for which the Certificate of Type Approval was issued meets the airworthiness requirements of the Civil Aviation Authority.

Type Certificate Holder: Kavanagh Balloons Pty Limited
39 Jubilee Street
Wahroonga NSW 2076
Australia

L Model E-120 Hot Air Balloon (Balloon Category) Approved 8 September 1989

Envelope: Kavanagh envelope, drawing KAV-E-20-001.

Volume: 3394 cubic metres.

Air heaters: Kavanagh Series 3, double or triple.

Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-D/E-30-001 or KAV-E-30-002.

Fuel: Commercial LPG or propane.

Maximum weight: Gross weight limited to 1175 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

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- Fuel capacity: See Note 1.
- Serial No.s eligible: Subsequent to KB045.
- II. Model E-140** Hot Air Balloon (Balloon Category) Approved 8 September 1989
- Envelope: Kavanagh envelope, drawing KAV-E-20-001.
- Volume: 3960 cubic metres.
- Air heaters: Kavanagh Series 3, double or triple.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-D/E-30-001 or KAV-E-30-002.
- Fuel: Commercial LPG or propane.
- Maximum weight: Gross weight limited to 1300 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.
- Maximum envelope temperature: 120 degrees Celsius.
- Minimum crew: One pilot.
- Fuel capacity: See Note 1.
- Serial No.s eligible: Subsequent to KB045.
- III. Model E-160** Hot Air Balloon (Balloon Category) Approved 8 September 1989
- Envelope: Kavanagh envelope, drawing KAV-E-20-001.
- Volume: 4530 cubic metres.
- Air heaters: Kavanagh Series 3, double or triple.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-D/E-30-001 or KAV-E-30-002.
- Fuel: Commercial LPG or propane.

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Maximum weight: Gross weight limited to 1400 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

Fuel capacity: See Note 1.

Serial No.s eligible: KB042 and subsequent.

IV. Model E-180 Hot Air Balloon (Balloon Category) Approved 24 November 1992

Envelope: Kavanagh envelope, drawing KAV-E-20-001 and 001B.

Volume: 5099 cubic metres.

Air heaters: Kavanagh Series 3, double, triple or quad.

Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001 or KAV-E-30-002.

Fuel: Commercial LPG or propane.

Maximum weight: Gross weight limited to 1450 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

Fuel capacity: See Note 1.

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- V. Model E-200** Hot Air Balloon (Balloon Category) Approved 8 September 1989
- Envelope: Kavanagh envelope, drawing KAV-E-20-001.
- Volume: 5695 cubic metres.
- Air heaters: Kavanagh Series 3, double, triple or quad.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001 or KAV-E-30-002.
- Fuel: Commercial LPG or propane.
- Maximum weight: Gross weight limited to 1500 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.
- Maximum envelope temperature: 120 degrees Celsius.
- Minimum crew: One pilot.
- Fuel capacity: See Note 1.
- VI. Model E-210** Hot Air Balloon (Balloon Category) Approved 8 September 1989
- Envelope: Kavanagh envelope, drawing KAV-E-20-001.
- Volume: 5940 cubic metres.
- Air heaters: Kavanagh Series 3, double, triple or quad.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001 or KAV-E-30-002.
- Fuel: Commercial LPG or propane.
- Maximum weight: Gross weight limited to 1550 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

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Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

Fuel capacity: See Note 1.

Serial No.s eligible: KB018 and subsequent.

VII. Model E-240 Hot Air Balloon (Balloon Category) Approved 8 September 1989

Envelope: Kavanagh envelope, drawing KAV-E-20-001.

Volume: 6760 cubic metres.

Air heaters: Kavanagh Series 3, double, triple or quad.

Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001 or KAV-E-30-002.

Fuel: Commercial LPG or propane.

Maximum weight: Gross weight limited to 1700 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

Fuel capacity: See Note 1.

Serial No.s eligible: Subsequent to KB045.

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VIII. Model E-260 Hot Air Balloon (Balloon Category) Approved 8 September 1989

- Envelope: Kavanagh envelope, drawing KAV-E-20-001 and 001A.
- Volume: 7323 cubic metres.
- Air heaters: Kavanagh Series 3, double, triple or quad.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001 or KAV-E-30-002.
- Fuel: Commercial LPG or propane.
- Maximum weight: Gross weight limited to 1900 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.
- Maximum envelope temperature: 120 degrees Celsius.
- Minimum crew: One pilot.
- Fuel capacity: See Note 1.
- Serial No.s eligible: Subsequent to KB077.

IX. Model E-300 Hot Air Balloon (Balloon Category) Approved 1 July 1993

- Envelope: Kavanagh envelope, drawing KAV-E-20-001 and 001C.
- Volume: 8498 cubic metres.
- Air heaters: Kavanagh Series 3, double, triple or quad.
- Baskets: Kavanagh basket to any size shown in the table of sizes on drawing KAV-E-30-001, KAV-E-30-002 or KAV-E-30-003.
- Fuel: Commercial LPG or propane.
- Maximum weight: Gross weight limited to 2200 kg, or to weight requiring a maximum continuous envelope temperature of 120 degrees Celsius, which ever is the lesser.

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Maximum envelope temperature: 120 degrees Celsius.

Minimum crew: One pilot.

Fuel capacity: See Note 1.

Serial No.s eligible: Subsequent to KB110.

Data pertinent to all models:

Certification basis: CAO 101.54 Issue 1.

Drawing list: Sealed drawing list No. 4 dated 13 May 1993.

NOTE 1. Fuel capacity: Balloons fitted with a double, triple or quad burner units must carry at least two master tanks as specified in drawing KAV-E-30-001. Additional master or slave tanks as specified in drawing KAV-E-30-001 may be carried as desired by the pilot.

Due to the change in Australian Civil Aviation Regulations, Type Certificates and Type Certificate Data Sheets have been superseded by Certificate of Type Approval (CTA) and Certificate of Type Approval Data Sheet (CTADS) respectively. The issuance of this CTADS at Revision 0 dated 1 July 1993 supersedes all previous data sheets or conformance sheets issued under approval Number 148-2.

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