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SECTION I: General

- I.1. **Aircraft:** Manned free hot air balloon BB
- I.2. **Initial certification Civil Aviation Authority:** Czech Republic (CZ) – civil aviation authority / EASA
- I.3. **Type certificate holder:** BALÓNY KUBÍČEK spol. s r.o.
Francouzská 81
602 00 Brno
CZECH REPUBLIC
- I.4. **Manufacturer:** Kubíček spol. s r.o.
Francouzská 81
602 00 Brno
(серійні номери 1-140)

BALÓNY KUBÍČEK spol. s r.o.
Francouzská 81
602 00 Brno
(серійні номери 141 та наступні)
- I.5. **Type/variant or model:**
- **Type:** BB
- Variant or model:** Z-Type: BB30Z, BB45Z
GP-Type: BB20GP
- See Note 1.
- Airworthiness Category:** Manned free air balloon

SECTION II:

- II.1 **Reference date:** 10 February 1993 (for models see Table 1)
- II.2 **Application date for Type certificate of Ukraine:** 15 August 2008
- State Aviation Administration approval date:** 21 April 2009
- II.3 **Certification basis:**
- EASA Certification basis: See TCDS EASA BA.003
 - Additional Technical Conditions (ATC): See CRI G-1
- Compliance EASA Certification basis and ATC to guarantee airworthiness level which equivalent level indicate in «Airworthiness requirements for manned free balloons» (AR-31), issue 2003
- II.4 **Equivalent level of safety:**
- AR 27.27(b) – envelope structure tests,
див. CRI № ST-1;
 - AR 31.47(d) – prolonged burners tests,
див. CRI № S-1;
 - AR 31.81(a)(3)(i) – empty weight definition,
see CRI № F-3

SECTION III. Technical description and operation limitation

III.1. Technical description:

The free hot-air balloon with the natural shaped envelope of 1,200 - 8,500 m³ volume, vertical or horizontal construction with 8-32 gores. The parachute, Smart Vent or Lite Vent (previous name Smart Vent+) is used for sealing of the vent aperture. As option the envelope can be equipped with rotation vent. A single backed up, double, triple or quadruple burner is the heat source for the envelope. The basket is cane-work connected to the envelope by means of stainless-steel or kevlar wires and karabiners with a screw gate.

Preference of the basket and burner type shall be provided with respect to the envelope model (see Table 4).Stainless steel, duralumin or titanium fuel cylinders, equipment and instruments are fixed on the inner side of the basket (approved models listed in the Flight Manual – see SECTION IV TCDS № ТП 0010).

III.2. Type design definition:

See Table 1, 2 and 3

III.3. Minimum equipment and devices:

- Altimeter;
- Variometer;
- Melting link for the envelope overheating check;
- Fuel quantity gauge;
- Double fire equipment;
- Drop line;
- Fire extinguisher;
- Heat-resistant cloth

See Note 4

III.4. Maximum take-off weight:

See Table 1

III.5. Maximum envelope temperature:

In accordance with the used fabric

- Nylon, Polyurethane coated: 110⁰C
- Polyester, Polyurethane or Acrylic coated: 124⁰C

III.6. Minimum flight crew:

1 pilot

III.7. Maximum number of persons on board:

See Table 3

III.8. Fuel:

Propane or propane-butane mix

III.9. Flight conditions:

Day under VFR are permitted only

III.10. Table 1: Envelopes

Model	Volume [m ³]	Gores [pcs.]	Maximum take-off weight [kg]	Reference date	Drawing №
BB12	1200	8 O-type	385	08.07.1992	50-050002
BB16	1600	8 O-type	470	08.07.1992	50-050013
BB17GP	1700	16 Z-type	495	04.02.2008	52-052860
BB20	2000	12 O-type	630	08.07.1992	50-050020
BB20E	2000	12 E-type	630	11.09.2008	53-053630
BB20GP	2000	24 Z-type	730	08.07.1992	52-052740
BB20XR	2000	20 Z-type	730	08.01.2008	52-054140
BB22	2200	12 O-type	730	02.02.2007	52-053310
BB22E	2200	12 E-type	680	11.09.2008	53-053620
BB22N	2200	24 N-type	730	08.07.1992	51-050034
BB22Z	2200	24 Z-type	730	19.08.2006	52-053300
BB26	2600	12 O-type	840	02.02.2007	52-053325
BB26N	2600	24 N-type	840	08.07.1992	51-050027
BB26E	2600	12 E-type	730	11.09.2008	53-053610
BB26Z	2600	24 Z-type	840	19.08.2006	52-053305
BB30N	3000	24 N-type	945	08.07.1992	51-050041
BB30Z	3000	24 Z-type	945	08.07.1992	52-052640
BB34Z	3400	24 Z-type	1040	20.04.2006	53-052880
BB37N	3700	24 N-type	1150	08.07.1992	51-050048
BB37Z	3700	24 Z-type	1150	19.08.2006	52-053315
BB42Z	4250	24 Z-type	1410	04.10.2002	52-052950
BB45N	4500	24 N-type	1520	29.02.1996	51-050455
BB45Z	4500	24 Z-type	1520	19.08.2006	52-053320
BB51Z	5100	24 Z-type	1690	20.10.2006	53-053430
BB60N	6000	32 N-type	1940	11.02.1998	51-050643
BB60Z	5950	24 Z-type	1940	18.01.2005	53-053000
BB70Z	7000	24 Z-type	2300	08.03.2004	52-052990
BB85Z	8500	28 Z-type	2820	18.01.2005	52-052850

III.11. Table 2: Burners

Model	Reference date	Drawing №
KOMET DUO up to S/N 104 including	08.07.1992	81-050676
KOMET DUO from S/N 105	08.07.1992	81-050676 Modification No. 99BB
KOMET TRIO	04.10.2002	83-053010
IGNIS	16.11.2005	84-053115.00 84-053128.00 84-053241.00

III.12. Table 3: Baskets

Model	Reference date	Dimension	Drawing №	Maximum number of persons on board
K7	08.07.1992	0.85x0.85m, height 1.10 m	60-050072	2
K10	08.07.1992	0.85x1.00 m, height 1.10 m	61-050097	4
K11	10.01.2008	0.98x1.16 m, height 1,10 m	61-054200	4
K12	08.07.1992	1.16x1.16 m, height 1.10 m	61-050556	5
K12A	08.07.1992	1.16x1.16 m, height 1.10 m	61-050586	5
K13	10.01.2008	0.98x1.25m height 1.03-1.14 m	61-054300	4
K15	08.07.1992	1.16x1.25 m, height 1.10 m	61-050111	5
K16	08.07.1992	1.16x1.40 m, height 1,10 m	61-050125	6
K17	10.01.2008	1.16x1.45m height 1.03-1.14 m	61-054400	6
K18	08.07.1992	1.16x1.55 m, height 1.10 m	61-050135	7
K22	08.07.1992	1.25x1.79 m, height 1.10 m	62-052680	7
K25P	08.07.1992	1.25x2.08 m, height 1.10 m P-Partition	62-052650	9
K32T	04.10.2002	1.25x2.41 m, height 1.15 m T-Partition	62-053050	10
K40Y	29.02.1996	1.63x2.50 m, height 1.15 m Y-Partition	62-052090	12
K50	16.01.2008	1.6x3.0 m, height 1.10 m Y-Partition адо T- Partition	62-054500	13
K60	16.01.2008	1.70x3.50 m, height 1.10 m TT Partition	62-054600	18

III.13. Table 4. Approved combinations of basic components

Envelope	Basket	Burner
BB12	K7, K10	KOMET DUO (до S/N 104)
BB16	K7, K10, K11	
BB17GP	K7, K10, K11, K12, K12A, K13	KOMET DUO, IGNIS 2 unit
BB20	K7, K10, K11, K12, K12A, K13, K15	KOMET DUO (до S/N 104)
BB20E		KOMET DUO, IGNIS 2 unit
BB20GP		
BB20XR	K10, K11, K12, K12A, K13, K15, K17	KOMET DUO, IGNIS 2 unit
BB22	K7, K10, K11, K12, K12A, K13, K15	
BB22E		
BB22N		
BB22Z		
BB26	K11, K12, K12A, K13, K15, K16, K17, K18, K22	
BB26N		
BB26E		
BB26Z		
BB30N	K11, K12, K12A, K13, K15, K16, K17, K18, K22	
BB30Z		
BB34Z	K13, K15, K16, K17, K18, K22	
BB37N	K13, K15, K16, K17, K18, K22, K25P, K32T	
BB37Z		
BB42Z	K16, K17, K18, K22, K25P, K32T	KOMET DUO/TRIO, IGNIS 2 unit/3 unit
BB45N	K25P, K32T, K40Y	KOMET DUO (з S/N 105), KOMET TRIO, IGNIS 2 unit/3 unit
BB45Z		
BB51Z		
BB60N	K25P, K32T, K40Y, K50	KOMET TRIO, IGNIS 2 unit/3 unit
BB60Z		
BB70Z	K25P, K32T, K40Y, K50, K60	KOMET TRIO, IGNIS 3 unit
BB85Z	K60	IGNIS 3 unit

III.14. Other limitations:

See respective sections in documentation, which indicate in Section IV

SECTION IV. Operation documentation:

IV.1. For flight operation:

for serial number up to S/N 639 including:

- EASA approved Flight Manual (FM), Doc. B.0102 and
- SAA approved Flight Manual Supplement for balloons registered in Ukraine, Doc. B.0102-UA.

for serial number S/N 640 and higher:

- EASA approved Flight Manual (FM), Doc. B.2102 and
- SAA approved Flight Manual Supplement for balloons registered in Ukraine, Doc. B.2102-UA.

IV.2. For maintenance operation and continued airworthiness:

for serial number up to S/N 639 including:

- EASA approved Maintenance Manual (MM), Doc. № B.0202 and
- SAA approved Maintenance Manual Supplement for balloons registered in Ukraine, Doc. B.0202-UA.

for serial number S/N 640 and higher:

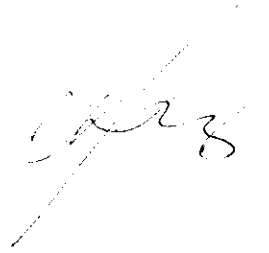
- EASA approved Maintenance Manual (MM), Doc. № B.2202 and
- SAA approved Maintenance Manual Supplement for balloons registered in Ukraine, Doc. B.2202-UA.

SECTION V: Notes

- Note 1** «O-Type», «N-Type», «Z-type», «GP-Type» and «XR-Type» define the method of shape (the form diametrical cut) envelope.
Serial number balloon define envelope serial number.
- Note 2** Applicable range of balloon parts or equipment from the other manufacturers – see the Optional Bulletin No. BB/22b-1.
- Note 3** The designation of following models: BB22; BB26; BB30; BB37; BB45; BB60 have been changed by adding capital letter 'N' to the model designation. The capital letter defines the cutting style. New designation is as follows: BB22N; BB26N; BB30N; BB37N; BB45N; BB60N.
- Note 4** The balloon can to deliver without needed equipment, for example altimeter, variometer etc. In this case owner/operator must to provide availability needed equipment, which approved for using in civil aviation in air balloon category.

Note 5 For balloons, which registered in Ukraine, pilot restraint harness is mandatory for baskets models K25, K32, K40, K50 and K60 (Drawing 62-054580.00 "POUTACI PÁS PILOTA").

**Deputy head of aeronautical product
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