DRAFT TANZANIA STANDARD

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First Edition

Textiles — Travelling Bags – Part 1: Suitcase type — Specification

TANZANIA BUREAU OF STANDARDS

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Foreword

This Draft Tanzania Standard is being developed by the Household Textile Technical Committee under supervision of the Textile and Leather Division Standards Committee and it is in accordance with the procedures of the Bureau.

This Draft Tanzania Standard has been prepared with assistance drawn from:

KS 2746 - 1 Travel bags — Specification (First Edition) Part 1: Suitcase type travel bags.

IS 8518 – Specification for suitcase air travel.

1. Scope

This Draft Tanzania Standard specifies requirements, sampling, and test methods for suitcase type of travel bag made of textile fabrics, leather or plastic materials.

2. Normative References

For the purpose of this Draft Tanzania Standard the following references shall apply:

a) TZS 4, Rounding off numerical values.
b) TZS 21, Textiles – Woven or knitted fabrics – Determination of mass per unit length and per unit area.
c) TZS 22, Textiles - Woven fabrics - Determination of breaking load and extension.
d) TZS 40, Textiles - Tests for colour fastness to light: Daylight.
e) TZS 43, Textiles - Tests for colour fastness - Fastness to washing: Test 1.
f) TZS 44, Textiles - Woven or knitted fabrics - Determination of length and width.
g) TZS 27, Textiles determination of dimensional changes of fabrics by cold water immersion
h) TZS 138, Textile-test for colour fastness to rubbing.
i) TZS 280, Textiles – Test for colour fastness – Colour fastness to perspiration.
j) TZS 326, Textiles – Ternary fibre mixtures – Quantitative analysis.
k) TZS 327, Textiles – Binary fibre mixtures – Quantitative chemical analysis.
l) TZS 531, Textiles – Tests for colour fastness – Colour fastness to spotting: Water.
m) TZS 1136, Textile – Zippers – Specification.
n) TZS 1425, Textile - Sewing Threads Specification - Sewing threads made wholly or partly from synthetic fibres.
o) TZS 2510, Leather for upholstery – Specifications.
p) TZS 3200, Textile – Requirements for flat woven lining material.
q) ISO 62, Plastics — Determination of water absorption.
r) ISO 180, Plastics — Determination of Izod impact strength.
s) ISO 527-1, Plastics — Determination of tensile properties — Part 1: General principles.
t) ISO 898 -2, Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread.
u) ISO 13936 – 1, Textiles — Determination of the slippage resistance of yarns at a seam in woven fabrics — Part 1: Fixed seam opening method.
v) ISO 13936 – 2, Textiles — Determination of the slippage resistance of yarns at a seam in woven fabrics — Part 2: Fixed load method.
w) ISO 13937 - 1, Textiles — Tear properties of fabrics — Part 1: Determination of tear force using ballistic pendulum method (Elmendorf). Check TZS available
x) ISO 13938 – 2, Textiles — Bursting properties of fabrics — Part 2: Pneumatic method for determination of bursting strength and bursting distension. Check TZS available
y) ISO 6383, Plastics — Film and sheeting — Determination of tear resistance — Part 2: Elmendorf method

z) ISO 6940, Textile fabrics — Burning behaviour — Determination of ease of ignition of vertically oriented specimens.

aa) ISO 6941, Textile fabrics — Burning behaviour — Measurement of flame spread properties of vertically oriented specimens

3. Terms and Terminologies

For the purpose of this Draft Tanzania Standard the following definitions shall apply:

3.1 travel bag

bag usually made out of plastics, leather or textile material and of specified shape and dimensions used for carrying personal belongings while travelling such as hand bag or suit case.

3.2 suitcase type of travel bag

portable cuboid shaped case designed to hold travellers clothing and personal belongings,

4. Requirements

4.1 Materials

4.1.1 Textile fabric

The fabric structure shall be woven or knitted.

4.1.1.1 Fibre composition and proportion

The fibre composition of the fabric shall be of any natural or manmade textile fibre of quality as specified in this Draft Tanzania Standard.

4. 1. 2 Leather

4.1.2.1 The grain of the leather for making up the travelling bag shall be free from flays and grain defects that affect its appearance in accordance with TZS 2510.

4.1.2.2 The flesh side of the leather shall have been shaved and shall be free from any cuts and loose flesh.

4.1.2.3 The leather shall be firm, pliable and shall not be pipy.

4.1.2.4 The colour of the leather and the nature of the grain surface (whether smooth or printed) shall be as per agreement between buyer and seller.

4.1.3 Plastics

The plastic material making up the travel bag shall be hardened and stiffened able to withstand strains, stresses, and deformations caused by loading, handling and changes in temperature. The plastic material shall also comply with the requirements in Table 2.

4.2 Construction.

4.2.1 Foundation

The suit case shall be constructed on a foundation made out of plastic sheet and formed so as to assume the cuboid shape of the bag. The characteristics of the plastic sheet shall be such that the entire internal depth and girth of the cuboid is covered and also have a thickness of not less than 0.76 cm.

4.2.2 Lining

The travelling bag interior shall be lined with a lining fabric complying with TZS 3200 and of a hue close to that of the panels of the suitcase.

4.2.3 Lifting handles

The suit case type of travel bag shall have a top and side lifting handles made of plastic and a base of light metal or any other suitable materials. The lifting handles shall be fixed on the plastic sheet of the foundation and comply with the requirements of Tables 1 and 2.

4.2.4 Piping

The stitched seams shall be reinforced with piping made out of material preferably similar to that of the panels of the bag, with a core material strong enough to serve the intended purpose. The piping expressed as diameter and measured with a Vernier caliper shall be as specified in Table 3.

4.2.5 Studs

The suit case type of travel bag shall have suitable studs fixed by screws on the foundation, face adjacent to the one housing the carriage.

4.2.6 Seams and stitches

The suit case shall have a face, back and middle panels forming the cuboid shape The panels constituting the suit case shall be joined with stitched seams. It shall have at least one pocket stitched on the face panel. The stitched seams shall bear a piping complying with the specifications of table 3. The stitches per centimeter shall be as specified in table 1 and 3 and be tested in accordance with Annex B.

4.2.7 Sewing thread

The sewing threads used for making up the seams of the suit case type of travel bags shall be of synthetic fibre preferably polyester and comply with TZS 1425.

4.2.8 Zippers

The openings of the suitcase type of travel bag and pockets shall have zippers complying with the requirements as specified in Table 1 and attached to the middle panel of the bag with a double stitch.

4.2.8 Size codes and Dimensions

The dimensions of suit case type of travel bags shall be as specified in Table 3.

4.3 Accessories

4.3.1 Foundation

The suitcase type of travelling bag shall be constructed on a foundation made out of suitable material preferably plastic sheet and formed so as to assume the cuboid shape of the bag. The characteristics of the plastic sheet shall be such that the entire internal depth and girth of the cuboid is covered and also have a thickness of not less than 0.76 cm.

4.3.2 Locks

The suit case type of travel bag shall have a lock fixed on the plastic sheet of the foundation and operating with the pullers of the zippers. The dimensions of the locks shall be as given in table 3.

Instructions for operating the programmable locks shall be provided with the suitcase bag in a legible and indelible format.

.4.3.3 Carrier assembly

The suit case type of travel bag shall have a carrier assembly with a plate fixed at the base and made from suitable material preferably hardened plastic for ease of transporting the bag by rolling. The carrier shall be fitted with wheels on a spindle or clamps at least at the four corners of the base of the suit case. The carrier shall have an adjustable and self-locking pulling handle fitted on double or single tubes at the top. The carrier and associated parts shall comply with the requirements of Table 3.

4.3.4 Fasteners

Where provided, the carrier assembly shall be fastened on the plastic sheet constituting the foundation of the hand bag with appropriate fasteners as specified in ISO 898-2.

4.4 Flammability

The burning behaviour of suitcase type of travel bag fabrics shall be tested in accordance with 16 CFR Part 1610 and be of at least Class 1. See ISO 6940 and ISO 6941.

5. Specific requirements

The specific requirements of suitcase type of travelling bags shall comply with the requirements specified in Table 1

Table 1 – Table of requirements of suitcase type of travelling bag made from fabric.

SN	Parameter	Requirements	Test Method
1	Fibre composition	As declared subject to a tolerance of 2%	TZS 326 TZS 327
2	Mass per unit area of fabric, g/m^2, min	330	TZS 21
3	Mass per unit area lining, g/m^2, min	33.1	TZS 21
4	Stitches per cm along the seam, min	2	Visual
5	Seam strength N, min	235	ISO 13936 - 1
6	Seam Slippage N, min		ISO 13936 - 2
	Warp	100	
	Weft	100	
7	Bursting strength Kpa, min	160	ISO 13938 - 2

8	Dimensional change after five washing, %	≥3		TZS 27
9	Zipper specification	pass		TZS 1136
10	Drop test based on 5-14 kg load, at 1 metre height	Pass		Annex c
11	Handle attachment strength, in N min.	305		Annex D
12.	Breaking strength (N), min			
	Warp	445		TZS 22
	Weft	445		
13	Tear strength, N, min			
	Warp	63		ISO 13937-1
	Weft	52		
14	Colour fastness			
	Agency	Colour Change	Staining	
	a) light, min	5	NA	TZS 40
	b) to rubbing, min i) wet ii) dry	 3 4	 NA	TZS 138
	c) washing, min	4	NA	ISO 105:B04
	d) perspiration i) acid ii) alkali	 4 4	 4 4	TZS 280

Table 2 – Table of requirements of suitcase type of travel bag made from plastic materials

Parameters	Requirements	Test Method
Tensile strength, MPa, minimum	50	ISO 527-1:2019
Tensile elongation at break, % maximum	60	ISO 527-1:2019
Water absorption, (immersion 24 hours)%	0.15	ISO 62:2008
Impact strength ,kJ/m^2 ,Minimum	30	ISO 180:2019
Tear resistance , kN/m	120	ISO 6383-2

Table 3 - Size code and dimensions of Suit case type of travel bag

Size Code And Characteristic	1	2	3	4	5	6	7	Test Method
Length, cm	≤ 49.5	49.5 - 51.27	51.27-53.92	53.92-58.34	58.34-65.11	65.11-76	≥ 76	Annex A
Width, cm	≤ 14.5	14.5 - 16.73	16.73-20.08	20.08-26.66	26.66-35.22	35.22-48	≥48	Annex A
Depth, cm	≤14.5	14.5-16	16-18.25	18.25-22.6	22.6-28.35	28.35-37	≥37	Annex A

Table 4 - Dimensions of accessories of suit case type of travel bag

SN	Characteristics		Dimensions	Test Method
1	Carrier mechanism, dimensions in cm	Bottom width	25 – 27.2	Annex A
		Top width	19 – 19.1	Annex A
		Height	72 – 97.5	Annex A
2	Wheels dimension in cm	Diameter	14 – 23.7	Annex A
		Thickness	2.8 – 3.75	Annex A
3	Locks dimension in cm	Length	10.7 – 11.2	Annex A
		Width	2.87 – 3.16	Annex A
		Depth	0.15 – 1.5	Annex A
4	Piping, diameter ,in cm		0.3-0.6	Annex A
5	Tubes, diameter in cm	Width	1.82 – 3.2	Annex A
		Thickness	1.13 – 2.47	Annex A

6. Packing

6.1 Unit Packaging

Each suitcase type of travelling bag shall be wrapped with suitable material which conform to TZS 2709.

6.2 Bulk Packaging

The suitcase type of travel bags shall be wrapped with suitable material which conform to TZS 2709.

7. Marking

6.1 Unit packages

The following information shall indelibly have marked on a label sewn or marked at an appropriate position on the travelling bag;

a) Manufacturers name, address and registered trade mark;
b) Name and description of the product;
c) Batch number;
d) Size code and dimensions in cm;
e) Composition of the material
f) Country of manufacture.

7.2 Bulk Packages

The following information shall indelibly have labeled/printed on the bulk package;

g) Manufacturer's name, address and registered trade mark;
h) Suit case type of travel bag
i) Number of unit packages in the bulk package;
j) Gross Mass;
k) Batch number;
l) County of origin.

ANNEX A
(Normative)
Determination of Dimensions

A1 Determine the dimensions of the suit case as specified in A1, A2. A3 and A4 by use of a steel rule and Vernier calliper under standard laboratory testing conditions. For details See Figures 1, 2,3 and 4

A2 Apparatus

Steel rule and Vernier calliper.

A3 Testing Condition.

The testing shall be done under the Standard Laboratory testing Condition.

A4 Suit case dimensions

A4.1 Length

A4.1.2 Width

A4.1.3 Height

A5 Locks

A5.1 Width

A5.2 Length

A5.3 Depth

A6 Carrier Assembly

A6.1 Pulling handle Mechanism

A6.1.1 Length

A6.1.2 Width

A6.2 Wheels

A6.2.1 Diameter

A6.2.2 Width

A6.3 Tubes

A6.3.1 Width

A6.3.2 Thickness

A7 Lifting handles

A7.1 Span

A7.2 Depth

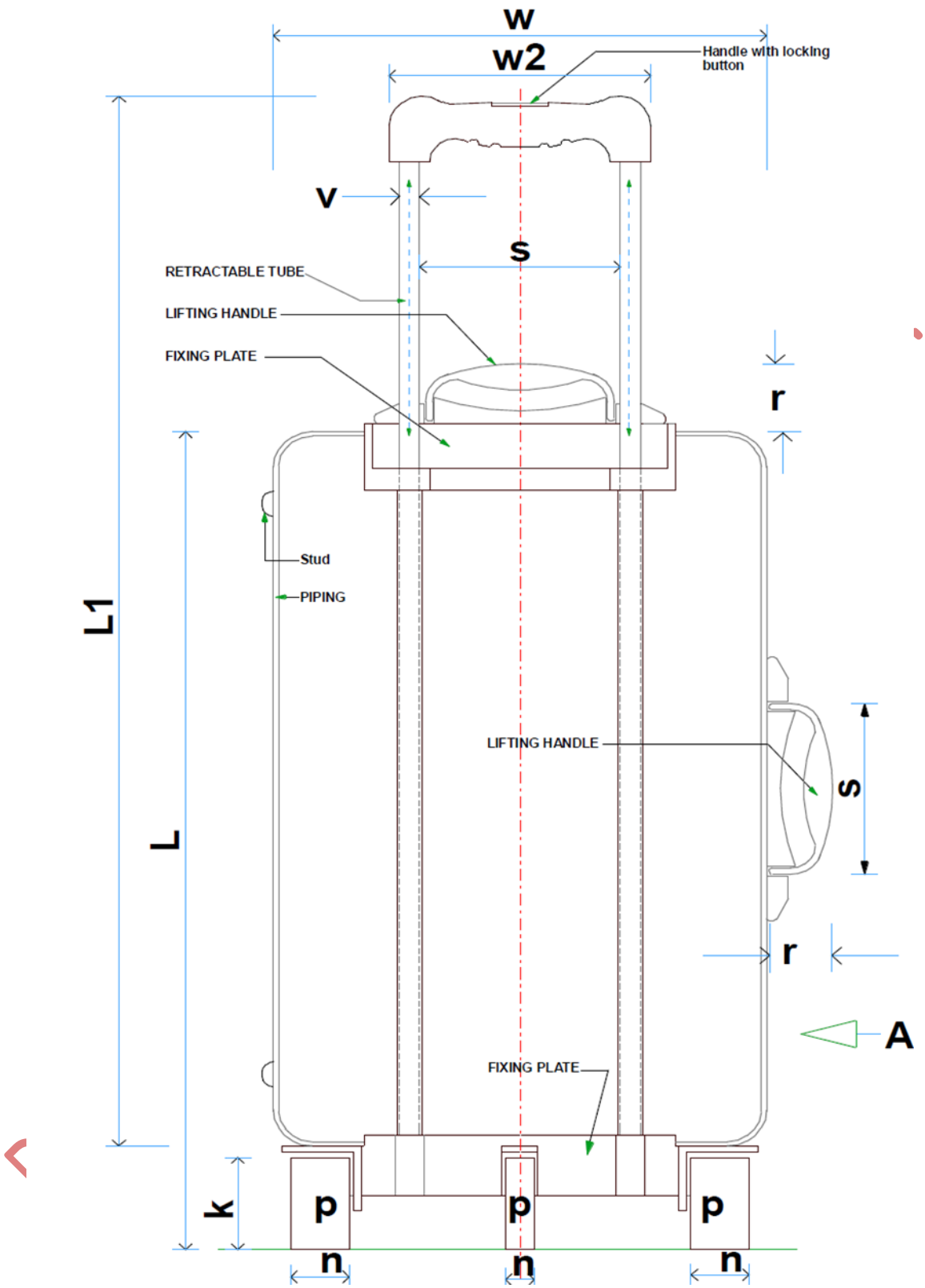

Figure 1 – Rear Elevation of Suitcase.

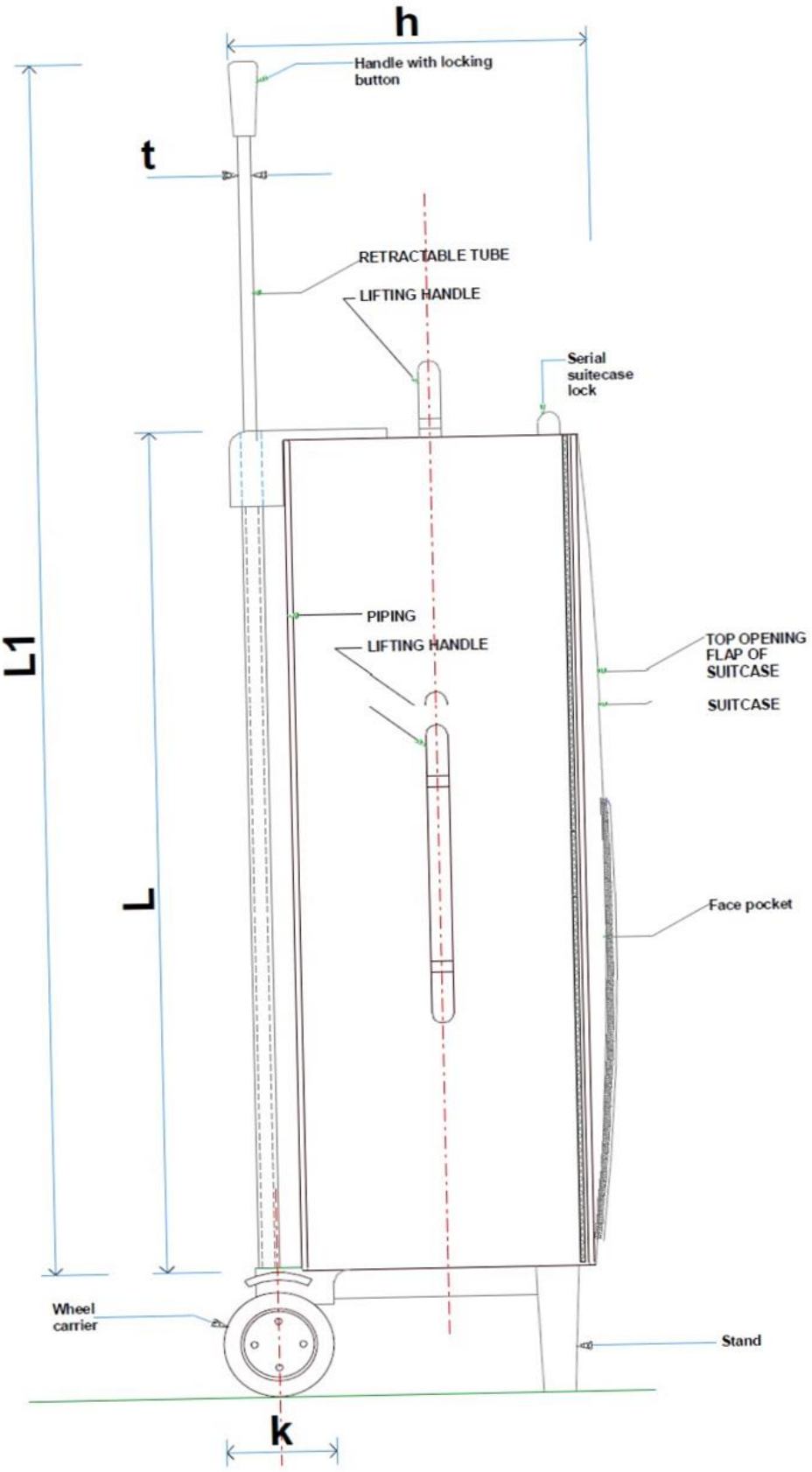

Figure 2 – Side Elevation of Suitcase.

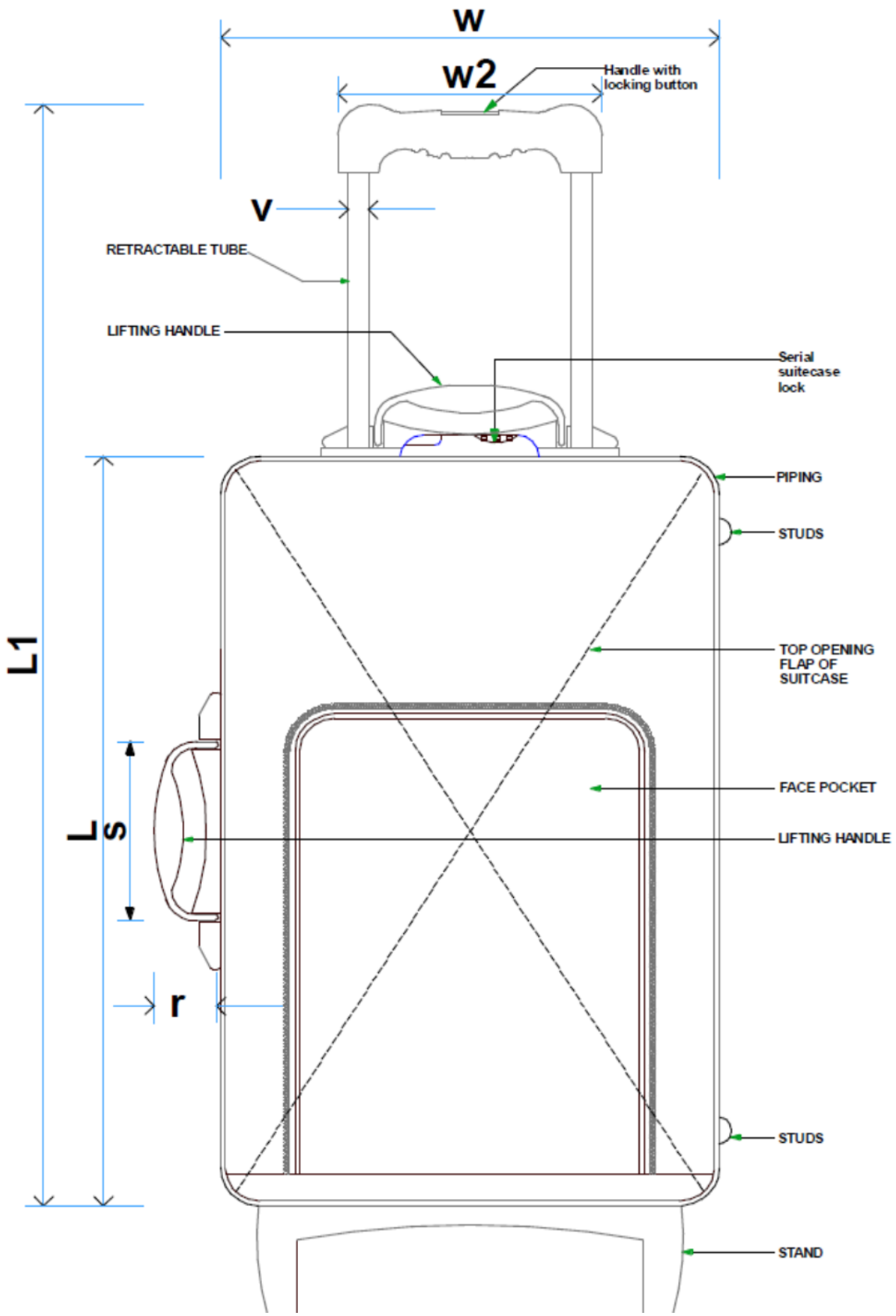

Figure 3 – Front Elevation of Suitcase

Key

L – Suitcase Length

W – Suitcase width

W_2 – Carrier assembly width

L_1 – Carrier assembly length

S – Lifting handle

K – Wheel diameter

N – Wheel width

V – Tube width

P – Carrier width

ANNEX B
Normative
Determination of Stitches per cm

B1 Count the number of stitches along a seam length of known distance in centimetres and determine the number of stitches per centimetre.

ANNEX C
(Normative)
Drop test (Life Performance)

C1 Procedure

A suitcase type of travel bags of specified dimensions (see table C1) is loaded with relevant personal items of mass (8 – 25 kg) collated with the size of bag. The loaded bag is dropped from the edge of a bench, 1-metre-high, to a flat floor. The drop test is repeated 10 times. After the test, the tested bag is examined; the stitches and seams shall not open and the locks, handles and carrier assembly, shall not break or come out of their positions.

TABLE C 1: Preferred suit case dimensions related to carrying capacity

Category of size	Preferred Bag Dimensions and carrying capacity			
	Length, cm	Width, cm	Depth, cm	Carrying capacity, kg
1	49.5 – 51.27	14.5 – 16.73	14.5 - 16	8 – 9.13
2	51.27 – 53.92	16.73 – 20.08	16 – 18.25	9.13 – 10.83
3	53.92 – 58.34	20.08 – 26.66	18.25 – 22.6	10.83 – 13.66
4	58.34 – 65.11	26.66 – 35.22	22.6 – 28.35	13.66 - 18
5	65.11 - 76	35.22 - 48	28.35 - 37	18 - 25

ANNEX D
(Normative)
HANDLE ATTACHMENT STRENGTH

D1 The travelling bag shall be securely fixed in an inverted position on a rigid support, leading the handle free for applying the load. The handle shall be suitably harnessed to distribute the load applied over the entire handle. A load of 100 N (10 Kgf) shall be applied suddenly to the handle and repeated 10 times.

D2 The weight may be applied either by means of a spring balance or weights, suitable placed on stirrup. During or after the test, the handles shall not have snapped or shall not have loosened in fittings.