

## Section 1: General Information

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### 0. Identification of the type

|                      |                       |
|----------------------|-----------------------|
| 0.1 0.2 0.4 Type ID: | 51-065-0003-5-001-001 |
| 0.3 Date of record:  | 2020-12-01            |

### 1. General Information

|                            |                 |
|----------------------------|-----------------|
| 1.1 Type name:             | SGNSS 60'       |
| 1.2 Alternative type name: | Container Wagon |

### 1.3 Manufacturer:

#### 1.3.1 Manufacturer identification data:

|                                     |   |
|-------------------------------------|---|
| 1.3.1.1 Name of organisation:       | VAKO Vagon Konteyner Mak. Müh. Pro. San. Ve Tic. A.Ş. |
| 1.3.1.2 Registered business number: | 1118-Beypazari  |
| 1.3.1.3 Organisation code:          |   |

#### 1.3.2 Manufacturer contact data:

|   |                                |
|---|--------------------------------|
| 1.3.2.1 Address of organisation, street and number: | Akyazı Mevkii Ankara Yolu 3.Km |
| 1.3.2.2 Town:                                       | Beypazari/ANKARA               |
| 1.3.2.3 Country code:                               | TR                             |
| 1.3.2.4 Post code:                                  | 06730                          |
| 1.3.2.5 E-mail address:                             | sdemirkoparan@vako.com.tr      |

|                      |          |
|----------------------|----------|
| Registration Method: | New Type |
|----------------------|----------|

|                          |  |
|--------------------------|--|
| Registered Vehicle Type: |  |
|--------------------------|--|

|               |                |
|---------------|----------------|
| 1.4 Category: | Freight Wagons |
|---------------|----------------|

|                  |               |
|------------------|---------------|
| 1.5 Subcategory: | Freight wagon |
|------------------|---------------|

|               |           |
|---------------|-----------|
| 1.6 Platform: | Sgnss 60' |
|---------------|-----------|

## Section 2: Conformity with TSI

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### 2.1 Conformity with TSI and Sections not complied with:

|        |  |
|--------|--|
| 1435mm | <b>WAG (Reg (EU) No 321/2013 amended by Reg (EU) No 1236/2013 amended by Reg (EU) 2015/924 amended by Reg (EU) 2019/776) + clause 7.1.2 + Appendix C totally [GE Wagon] Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) 2019/774)</b> |
|--------|--|

### 2.3 Applicable specific cases (specific cases conformity with which has been assessed)

### 2.2 Reference of 'EC type examination certificates'

Reference of 'EC type examination certificates' - if  
module SB applied - and/or 'design verification  
certificate' - if module SH1 applied

2593\_1\_SB\_2020\_RST\_EN\_9593\_0101\_V01

### Section 3: Authorisations

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#### European Union

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3.0 Area Of Use: EU(European Union)

3.1.1 Member state of authorisation: European Union(EU)

3.1.2.1 Status: Valid

3.1.2.2 Validity of Authorisation (until):

3.1.2.3 Coded conditions for use and other  
restrictions:

#### **1435mm**

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 75

1.3 Speed restrictions in Km/h: 120

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone EN 50125-1:2014: 3.1.1 T1

3.1.2.4 Non-coded conditions for use and other  
restrictions:

3.1.3.1.1 Date of the original authorisation: 2020-11-06

3.1.3.1.2 Authorisation holder:

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3.1.3.1.2.1 Authorisation holder identification data:

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3.1.3.1.2.1.1 Name of organisation: VA-KO Vagon Konteyner Makina Mühendislik Proje  
Sanayi ve Ticaret A.Ş.

3.1.3.1.2.1.2 Registered business number: 8830306445

3.1.3.1.2.1.3 Organisation code:

3.1.3.1.2.2 Authorisation holder contact data:

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3.1.3.1.2.2.1 Address of organisation, street and  
number: Akyazı Mevkii Ankara Yolu 3.Km Beypazarı

3.1.3.1.2.2.2 Town: ANKARA

3.1.3.1.2.2.3 Country code: TR

3.1.3.1.2.2.4 Post code: 06730

3.1.3.1.2.2.5 E-mail address: info@vako.com.tr

|  |  |
|--|--|
| 3.1.3.1.3 Authorisation document reference:  | EU8020200035                               |
| 3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:                        | 2593/1/SB/2020/RST/EN/9593/0101 V02        |
| 3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:                                | 1435mm<br>0.0 None                         |
| 3.1.3.1.6 Comments:  |  |
| 3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013: | 2020-074 - VAKO Vagon Risk Declaration.pdf |

#### 3.1.3.1 Initial Registration

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3.1.2.3 Coded conditions for use and other restrictions:

##### **1435mm**

1 Technical restriction related to construction  
1.1 Minimum curve radius in meters: 75  
1.3 Speed restrictions in Km/h: 120  
2 Geographical restriction  
2.1 Kinematic gauge (coding WAG TSI): G1  
2.2 Wheelset gauge: 2.2.4 Gauge 1435  
2.3 No CCS on board: True  
3 Environmental restrictions  
3.1 Climatic zone EN 50125-1:2014: 3.1.1 T1

3.1.2.4 Non-coded conditions for use and other restrictions:

|   |            |
|---|------------|
| 3.1.3.1.1 Date of the original authorisation: | 2020-11-06 |
|---|------------|

3.1.3.1.2 Authorisation holder:

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3.1.3.1.2.1 Authorisation holder identification data:

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|   |   |
|---|---|
| 3.1.3.1.2.1.1 Name of organisation:       | VA-KO Vagon Konteyner Makina Mühendislik Proje Sanayi ve Ticaret A.Ş. |
| 3.1.3.1.2.1.2 Registered business number: | 8830306445  |
| 3.1.3.1.2.1.3 Organisation code:          |   |

3.1.3.1.2.2 Authorisation holder contact data:

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|   |  |
|---|--|
| 3.1.3.1.2.2.1 Address of organisation, street and number: | Akyazı Mevkii Ankara Yolu 3.Km Beypazarı |
|---|--|

|  |  |
|--|--|
| 3.1.3.1.2.2.2 Town:  | ANKARA                                     |
| 3.1.3.1.2.2.3 Country code:  | TR   |
| 3.1.3.1.2.2.4 Post code:   | 06730                                      |
| 3.1.3.1.2.2.5 E-mail address:  | info@vako.com.tr                           |
| 3.1.3.1.3 Authorisation document reference:  | EU8020200035                               |
| 3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:                        | 2593/1/SB/2020/RST/EN/9593/0101 V02        |
| 3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:                                | 1435mm<br>0.0 None                         |
| 3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013: | 2020-074 - VAKO Vagon Risk Declaration.pdf |

#### Section 4: Technical Characteristics

|  |                 |      |
|--|-----------------|------|
| 4.1.3 Wheel set gauge<br>RC  | 1435            | mm   |
| 4.1.12 Number of vehicles composing the fixed formation (for fixed formation only) | 1               |      |
| 4.1.2 Speed  |                 |      |
| 4.1.2.1 Maximum design speed   | 120             | km/h |
| 4.2.1 Reference profile<br>RC  | G1              |      |
| 4.3.1 Temperature range  | T1 (-25 to +40) |      |
| 4.3.3 Snow, ice and hail conditions  | Nominal         |      |
| 4.5.1 Permissible payload for different line categories RC                         | 1435mm          |      |
|  | A (43,8)        | t    |
|  | B1 (51,8)       | t    |
|  | B2 (51,8)       | t    |
|  | C2 (59,8)       | t    |
|  | C3 (59,8)       | t    |
|  | C4 (59,8)       | t    |
|  | D2 (69,8)       | t    |
|  | D3 (69,8)       | t    |
|  | D4 (69,8)       | t    |
|  | D5 (69,8)       | t    |

|  |        |   |          |         |    |  |
|--|--------|---|----------|---------|----|--|
| 4.5.2 Design mass  |        |   |          |         |    |  |
| 4.5.2.1 Design mass in working order RC  |        | 20200                                       | kg       |         |    |  |
| 4.5.2.2 Design mass under normal payload RC  |        | 90000                                       | kg       |         |    |  |
| 4.5.3 Static axle load   |        |   |          |         |    |  |
| 4.5.3.1 Static axle load in working order RC   |        | 5050  | kg       |         |    |  |
| 4.5.3.2 Static axle load under normal payload RC   |        | 22500                                       | kg       |         |    |  |
| 4.5.3.4 Position of the axles along the unit (axle spacing) :  | 1435mm | a: 0014.60 b: 0001.90 c: 0012.80            | m        |         |    |  |
| a: Distance between axles  |        |   |          |         |    |  |
| b: Distance from end axle to the end of the nearest coupling plane   |        |   |          |         |    |  |
| c: distance between two inside axles   |        |   |          |         |    |  |
| RC   |        |   |          |         |    |  |
| 4.5.5 Total vehicle mass (for each vehicle of the unit) RC   | 1435mm | 90000                                       | kg       |         |    |  |
| 4.5.6 Mass per wheel RC  | 1435mm | 11250                                       | kg       |         |    |  |
| 4.6.4 Combination of maximum speed and maximum cant deficiency for which the vehicle was assessed RC                         | 1435mm | 0120.00                                     | km/h     | 0130.00 | mm |  |
| 4.6.5 Rail inclination RC  | 1435mm | 1/20 and 1/40                               |          |         |    |  |
| 4.7.2.1 Brake performance on steep gradients with normal payload   |        |   |          |         |    |  |
| 4.7.2.1.1 Reference case of TSI  |        | Reference case (70 km/h, 21‰ (mm/m), 40 km) |          |         |    |  |
| 4.7.2.1.6 Maximum brake thermal energy capacity  | 1435mm | 45  | kJ       |         |    |  |
| 4.7.3 Parking brake  |        |   |          |         |    |  |
| 4.7.3.3 Maximum gradient on which the unit is kept immobilized by the parking brake alone (if the vehicle is fitted with it) |        | 25.8  | ‰ (mm/m) |         |    |  |

|  |                   |                                 |        |          |                  |
|--|-------------------|---------------------------------|--------|----------|------------------|
| 4.7.3.4 Parking brake  | 1435mm            | True                            |        |          |                  |
| 4.7.6 For general operation :<br>Brake weight percentage (lambda) or Braked mass   | 1435mm            | 100.00                          | (%) or | 00072.00 | tonnes           |
| 4.7.7 Service brake: At maximum service brake:   | 1435mm            | 0677.00                         | m      | 0000.91  | m/s <sup>2</sup> |
| Stopping distance,<br>Maximum deceleration,<br>for the load condition<br>'design mass under<br>normal payload' at the<br>design maximum speed. |                   |                                 |        |          |                  |
| 4.7.8 Wheel slide protection system  | 1435mm            | False                           |        |          |                  |
| 4.8.1 Vehicle length   |                   | 19.64                           | m      |          |                  |
| 4.8.2 Minimum in-service wheel diameter RC   |                   | 840                             | mm     |          |                  |
| 4.8.5 Minimum vertical convex curve radius capability  |                   | 300                             | m      |          |                  |
| 4.8.6 Minimum vertical concave curve radius capability   |                   | 250                             | m      |          |                  |
| 4.9.1 Type of end coupling   | <b>Manual</b>     |                                 |        |          |                  |
|  | Tensile force     | 1350.0000                       | kN     |          |                  |
|  | Compressive force |                                 | kN     |          |                  |
| 4.9.2 Axle bearing condition monitoring (hot axles box detection) RC   |                   | Detectable by line side         |        |          |                  |
| 4.14.1 Type of train detection systems for which the vehicle has been designed and assessed RC   |                   | Track circuits<br>Axle counters |        |          |                  |