

CERTIFICATE OF CONSTANCY OF PERFORMANCE

Issued by DBI Certification, notified body No. 2531.

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product

Vertical hollow straight signposts

Scope: **Supports supplied for fixed vertical signs (ZA.2)**

The product fulfils the essential characteristic:

See Annex 1

Intended use: Stock Items (described by performance)

Placed on the market under the name or trade mark of:

**Infra Group Danmark ApS
Højgårdsvej 11
5750 Ringe
Denmark**

and produced in the manufacturing plant:

CPA30005

This attests that all provisions concerning the performance described in Annex ZA of the standard(s)

EN 12899-1:2007 : **Fixed, vertical road traffic signs - Part 1: Fixed signs**

under system 1 for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the

CONSTANCY OF PERFORMANCE OF THE CONSTRUCTION PRODUCT.

This certificate was first issued on 2017-09-14 and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

The attached annexes form part of this certificate.

Date of issue: **2024-04-26**

(This certificate supersedes the previous version of this certificate issued 2020-08-27)



Merete Poulsen
Responsible for evaluation



Lene Skovbjerg
Responsible for certification decision

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Annex 1

EXTENT

Type	Description																																																																																																																																																																																		
<p>Dimensions: OD 33,7 x 3,2 mm OD 48,3 x 2,9 mm OD 48,3 x 3,0 mm OD 48,3 x 3,2 mm OD 48,3 x 4,0 mm OD 60,3 x 3,6 mm OD 60,3 x 4,5 mm OD 76,1 x 3,6 mm OD 76,1 x 4,5 mm OD 88,9 x 3,2 mm OD 88,9 x 4,0 mm OD 88,9 x 4,8 mm OD 114,3 x 4,5 mm OD 114,3 x 5,0 mm OD 114,3 x 5,4 mm</p> <p>Material: Steel S235JRH, S235JOH or S235J2H Hot dip galvanized coating, according to EN 1461.</p>	<p>Resistance to horizontal loads, bending, torsion:</p> <table border="1"> <thead> <tr> <th rowspan="2">Steel pipe</th> <th colspan="2">Bending</th> <th colspan="2">Torsion</th> </tr> <tr> <th>Max moment</th> <th>Stiffness</th> <th>Max torque</th> <th>Stiffness</th> </tr> <tr> <th>mm</th> <th>kNm</th> <th>kNm²</th> <th>kNm</th> <th>kNm²</th> </tr> </thead> <tbody> <tr><td>33,7 x 3,2</td><td>0,50</td><td>7,57</td><td>0,58</td><td>5,84</td></tr> <tr><td>48,3 x 2,9</td><td>1,04</td><td>22,5</td><td>1,20</td><td>17,3</td></tr> <tr><td>48,3 x 3,0</td><td>1,07</td><td>23,1</td><td>1,24</td><td>17,8</td></tr> <tr><td>48,3 x 3,2</td><td>1,13</td><td>24,3</td><td>1,30</td><td>18,8</td></tr> <tr><td>48,3 x 4,0</td><td>1,34</td><td>28,9</td><td>1,55</td><td>22,3</td></tr> <tr><td>60,3 x 3,6</td><td>2,02</td><td>54,3</td><td>2,33</td><td>41,9</td></tr> <tr><td>60,3 x 4,5</td><td>2,41</td><td>64,9</td><td>2,78</td><td>50,1</td></tr> <tr><td>76,1 x 3,6</td><td>3,34</td><td>113</td><td>3,85</td><td>87,5</td></tr> <tr><td>76,1 x 4,5</td><td>4,02</td><td>137</td><td>4,64</td><td>105</td></tr> <tr><td>88,9 x 3,2¹</td><td>4,19</td><td>166</td><td>4,84</td><td>128</td></tr> <tr><td>88,9 x 4,0</td><td>5,09</td><td>202</td><td>5,88</td><td>156</td></tr> <tr><td>88,9 x 4,8</td><td>5,95</td><td>236</td><td>6,87</td><td>182</td></tr> <tr><td>114,3 x 4,5</td><td>9,64</td><td>492</td><td>11,1</td><td>380</td></tr> <tr><td>114,3 x 5,0</td><td>10,6</td><td>540</td><td>12,2</td><td>416</td></tr> <tr><td>114,3 x 5,4</td><td>11,3</td><td>577</td><td>13,0</td><td>445</td></tr> </tbody> </table> <p>Performance under vehicle impact:</p> <table border="1"> <thead> <tr> <th>Steel pipe</th> <th>Speed class</th> <th>Energy absorption category</th> <th>Occupant safety level</th> <th>Collapse mode</th> </tr> <tr> <th>mm</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td>33,7 x 3,2</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>48,3 x 2,9</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>48,3 x 3,0</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>48,3 x 3,2</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>48,3 x 4,0</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>60,3 x 3,6</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>60,3 x 4,5</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>76,1 x 3,6</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>76,1 x 4,5</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>88,9 x 3,2²</td><td>100</td><td>NE</td><td>C</td><td>SE</td></tr> <tr><td>88,9 x 4,0</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>88,9 x 4,8</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>114,3 x 4,5</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>114,3 x 5,0</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>114,3 x 5,4</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> <p>Durability:</p> <table border="1"> <tr> <td>Corrosion resistance (supports) Metal</td> <td>SP1</td> </tr> <tr> <td>Resistance to penetration of dust and water</td> <td>Supports can not be provided with compartments for electrical equipment</td> </tr> </table> <p>¹ Deemed to comply as class 100,NE,C according to EN 12767:2019, Annex K ² Deemed to comply as class 100,NE,C according to EN 12767:2019, Annex K</p>	Steel pipe	Bending		Torsion		Max moment	Stiffness	Max torque	Stiffness	mm	kNm	kNm ²	kNm	kNm ²	33,7 x 3,2	0,50	7,57	0,58	5,84	48,3 x 2,9	1,04	22,5	1,20	17,3	48,3 x 3,0	1,07	23,1	1,24	17,8	48,3 x 3,2	1,13	24,3	1,30	18,8	48,3 x 4,0	1,34	28,9	1,55	22,3	60,3 x 3,6	2,02	54,3	2,33	41,9	60,3 x 4,5	2,41	64,9	2,78	50,1	76,1 x 3,6	3,34	113	3,85	87,5	76,1 x 4,5	4,02	137	4,64	105	88,9 x 3,2 ¹	4,19	166	4,84	128	88,9 x 4,0	5,09	202	5,88	156	88,9 x 4,8	5,95	236	6,87	182	114,3 x 4,5	9,64	492	11,1	380	114,3 x 5,0	10,6	540	12,2	416	114,3 x 5,4	11,3	577	13,0	445	Steel pipe	Speed class	Energy absorption category	Occupant safety level	Collapse mode	mm					33,7 x 3,2	100	NE	C	SE	48,3 x 2,9	100	NE	C	SE	48,3 x 3,0	100	NE	C	SE	48,3 x 3,2	100	NE	C	SE	48,3 x 4,0	100	NE	C	SE	60,3 x 3,6	100	NE	C	SE	60,3 x 4,5	100	NE	C	SE	76,1 x 3,6	100	NE	C	SE	76,1 x 4,5	-	-	-	-	88,9 x 3,2 ²	100	NE	C	SE	88,9 x 4,0	-	-	-	-	88,9 x 4,8	-	-	-	-	114,3 x 4,5	-	-	-	-	114,3 x 5,0	-	-	-	-	114,3 x 5,4	-	-	-	-	Corrosion resistance (supports) Metal	SP1	Resistance to penetration of dust and water	Supports can not be provided with compartments for electrical equipment
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Annex 1

EXTENT

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Annex 2

TEST DOCUMENTATION

EN 12767:2007, Annex F- Deemed to comply
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Annex 3

TECHNICAL BASIS

File number	Title	Date
None	Infra Group Danmark ApS, CE marking and labeling Traffic signs - nomograms for calculation of hollow steel pipes for smaller sign sizes, Verification of the physical performance by calculation in accordance with EN 12899-1:2007.	November 2015
None	Infra Group Danmark A/S, CE marking and labeling Traffic signs - nomograms for calculation of hollow steel pipes for medium sign sizes, Verification of the physical performance by calculation in accordance with EN 12899-1:2007.	November 2015
None	Resistance to horizontal loads	2016-04-25
None	Annex 1	2016-04-25
None	Performance under vehicle impact	2016-04-25
None	Regarding change request for Certificate No. 2531-CPR-CSC10013, Addendum to Annex 1	2020-01-23

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