

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Watertight Door**with type designation(s)  
**Watertight hinged steel door type WR100/WR30- A0**

Issued to

**Libra-Plast A/S**  
**HAREID, Norway**is found to comply with  
**DNV GL rules for classification – Ships****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2020-03-23**This Certificate is valid until **2025-01-20**.DNV GL local station: **Norway Newbuilding**for **DNV GL**Approval Engineer: **Xiaolu Wu**

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**Arild Rogne**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

All doors are to have **5** stiffeners on the door blade (of type 50x8 or 80x8 as given in the table below).

### Handle operated

| Door | Door Size  | Plate Thickness | Toggles + Hinges | Stiffeners |                          | Max Pressure [kPa] |
|------|------------|-----------------|------------------|------------|--------------------------|--------------------|
| No.  | WxH [mm]   |                 |                  | HxT [mm]   | Edge Stiffeners HxT [mm] |                    |
| 1    | 600 x 1200 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 2    | 600 x 1400 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 3    | 750 x 1400 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 4    | 850 x 1400 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 5    | 910 x 1400 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 6    | 600 x 1600 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 7    | 750 x 1600 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 8    | 850 x 1600 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 9    | 910 x 1600 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 10   | 600 x 1800 | 5               | 8+4              | 50 x 8     | 50 x 8                   | 45                 |
| 11   | 750 x 1800 | 5               | 8+4              | 50 x 8     | 50 x 8                   | 45                 |
| 12   | 850 x 1800 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 13   | 910 x 1800 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 14   | 600 x 1900 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 15   | 750 x 1900 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 16   | 850 x 1900 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 17   | 910 x 1900 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 18   | 600 x 2000 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 19   | 750 x 2000 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 20   | 850 x 2000 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 21   | 910 x 2000 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |
| 22   | 580 x 1360 | 5               | 6+3              | 50 x 8     | 50 x 8                   | 45                 |
| 23   | 660 x 1460 | 5               | 6+3              | 50 x 8     | 50 x 8                   | 45                 |
| 24   | 810 x 1460 | 5               | 6+3              | 50 x 8     | 50 x 8                   | 45                 |
| 25   | 660 x 1660 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 26   | 810 x 1660 | 5               | 8+3              | 50 x 8     | 50 x 8                   | 45                 |
| 27   | 660 x 1860 | 5               | 8+4              | 50 x 8     | 50 x 8                   | 45                 |
| 28   | 810 x 1860 | 5               | 8+4              | 80 x 8     | 80 x 8                   | 45                 |

## Product description:

All doors are to have **5** stiffeners on the door blade type 80x8 as given in the table below.

## Wheel Alt.1

| Door | Door Size  | Plate Thickness | Toggles + Hinges | Stiffeners | Edge Stiffeners | Max Pressure [kPa] |
|------|------------|-----------------|------------------|------------|-----------------|--------------------|
| No.  | WxH [mm]   |                 |                  | HxT [mm]   | HxT [mm]        |                    |
| 1    | 600 x 1200 | 5               | 8+3              | 80 x 8     | 80 x 8          | 170                |
| 2    | 600 x 1400 | 5               | 8+3              | 80 x 8     | 80 x 8          | 145                |
| 3    | 750 x 1400 | 5               | 8+3              | 80 x 8     | 80 x 8          | 115                |
| 4    | 850 x 1400 | 5               | 8+3              | 80 x 8     | 80 x 8          | 100                |
| 5    | 910 x 1400 | 5               | 8+3              | 80 x 8     | 80 x 8          | 95                 |
| 6    | 600 x 1600 | 5               | 10+3             | 80 x 8     | 80 x 8          | 142                |
| 7    | 750 x 1600 | 5               | 10+3             | 80 x 8     | 80 x 8          | 127                |
| 8    | 850 x 1600 | 5               | 10+3             | 80 x 8     | 80 x 8          | 114                |
| 9    | 910 x 1600 | 5               | 10+3             | 80 x 8     | 80 x 8          | 100                |
| 10   | 600 x 1800 | 5               | 10+4             | 80 x 8     | 80 x 8          | 118                |
| 11   | 750 x 1800 | 5               | 10+4             | 80 x 8     | 80 x 8          | 103                |
| 12   | 850 x 1800 | 5               | 10+4             | 80 x 8     | 80 x 8          | 97                 |
| 13   | 910 x 1800 | 5               | 10+4             | 80 x 8     | 80 x 8          | 88                 |
| 14   | 600 x 1900 | 5               | 10+4             | 80 x 8     | 80 x 8          | 109                |
| 15   | 750 x 1900 | 5               | 10+4             | 80 x 8     | 80 x 8          | 94                 |
| 16   | 850 x 1900 | 5               | 10+4             | 80 x 8     | 80 x 8          | 88                 |
| 17   | 910 x 1900 | 5               | 10+4             | 80 x 8     | 80 x 8          | 83                 |
| 18   | 600 x 2000 | 5               | 10+4             | 80 x 8     | 80 x 8          | 101                |
| 19   | 750 x 2000 | 5               | 10+4             | 80 x 8     | 80 x 8          | 87                 |
| 20   | 850 x 2000 | 5               | 10+4             | 80 x 8     | 80 x 8          | 81                 |
| 21   | 910 x 2000 | 5               | 10+4             | 80 x 8     | 80 x 8          | 78                 |
| 22   | 580 x 1360 | 5               | 8+3              | 80 x 8     | 80 x 8          | 155                |
| 23   | 660 x 1460 | 5               | 8+3              | 80 x 8     | 80 x 8          | 125                |
| 24   | 810 x 1460 | 5               | 8+3              | 80 x 8     | 80 x 8          | 100                |
| 25   | 660 x 1660 | 5               | 10+3             | 80 x 8     | 80 x 8          | 127                |
| 26   | 810 x 1660 | 5               | 10+3             | 80 x 8     | 80 x 8          | 115                |
| 27   | 660 x 1860 | 5               | 10+4             | 80 x 8     | 80 x 8          | 105                |
| 28   | 810 x 1860 | 5               | 10+4             | 80 x 8     | 80 x 8          | 94                 |

### Product description:

All doors are to have **5** stiffeners on the door blade of type 65x65x7 as given in the table below.

## Wheel Alt.2

| Door | Door Size  | Plate Thickness | Toggles + Hinges | Stiffeners | Edge Stiffeners | Max Pressure [kPa] |
|------|------------|-----------------|------------------|------------|-----------------|--------------------|
| No.  | WxH [mm]   |                 |                  | HxWxT [mm] | HxT [mm]        |                    |
| 1    | 600 x 1200 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 170                |
| 2    | 600 x 1400 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 145                |
| 3    | 750 x 1400 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 115                |
| 4    | 850 x 1400 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 100                |
| 5    | 910 x 1400 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 95                 |
| 6    | 600 x 1600 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 160                |
| 7    | 750 x 1600 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 130                |
| 8    | 850 x 1600 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 110                |
| 9    | 910 x 1600 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 100                |
| 10   | 600 x 1800 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 140                |
| 11   | 750 x 1800 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 110                |
| 12   | 850 x 1800 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 100                |
| 13   | 910 x 1800 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 90                 |
| 14   | 600 x 1900 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 130                |
| 15   | 750 x 1900 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 105                |
| 16   | 850 x 1900 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 95                 |
| 17   | 910 x 1900 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 85                 |
| 18   | 600 x 2000 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 125                |
| 19   | 750 x 2000 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 100                |
| 20   | 850 x 2000 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 90                 |
| 21   | 910 x 2000 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 80                 |
| 22   | 580 x 1360 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 155                |
| 23   | 660 x 1460 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 125                |
| 24   | 810 x 1460 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 100                |
| 25   | 660 x 1660 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 140                |
| 26   | 810 x 1660 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | 110                |
| 27   | 660 x 1860 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 125                |
| 28   | 810 x 1860 | 6               | 10+4             | 65x65 x 7  | 80 x 8          | 100                |

**Product description:**

All doors are to have **6** stiffeners on the door blade of type 80x8 as given in the table below.

## Wheel Alt.3

| Door | Door Size | Plate Thickness | Toggles + Hinges | Stiffeners | Edge Stiffeners | Max Pressure |
|------|-----------|-----------------|------------------|------------|-----------------|--------------|
|------|-----------|-----------------|------------------|------------|-----------------|--------------|

| No. | WxH [mm]   |   |      | HxT [mm] | HxT [mm] | [kPa] |
|-----|------------|---|------|----------|----------|-------|
| 1   | 600 x 1200 | 5 | 8+3  | 80 x 8   | 80 x 8   | 170   |
| 2   | 600 x 1400 | 5 | 8+3  | 80 x 8   | 80 x 8   | 145   |
| 3   | 750 x 1400 | 5 | 8+3  | 80 x 8   | 80 x 8   | 115   |
| 4   | 850 x 1400 | 5 | 8+3  | 80 x 8   | 80 x 8   | 100   |
| 5   | 910 x 1400 | 5 | 8+3  | 80 x 8   | 80 x 8   | 95    |
| 6   | 600 x 1600 | 5 | 10+3 | 80 x 8   | 80 x 8   | 160   |
| 7   | 750 x 1600 | 5 | 10+3 | 80 x 8   | 80 x 8   | 130   |
| 8   | 850 x 1600 | 5 | 10+3 | 80 x 8   | 80 x 8   | 110   |
| 9   | 910 x 1600 | 5 | 10+3 | 80 x 8   | 80 x 8   | 100   |
| 10  | 600 x 1800 | 5 | 10+4 | 80 x 8   | 80 x 8   | 140   |
| 11  | 750 x 1800 | 5 | 10+4 | 80 x 8   | 80 x 8   | 110   |
| 12  | 850 x 1800 | 5 | 10+4 | 80 x 8   | 80 x 8   | 100   |
| 13  | 910 x 1800 | 5 | 10+4 | 80 x 8   | 80 x 8   | 90    |
| 14  | 600 x 1900 | 5 | 10+4 | 80 x 8   | 80 x 8   | 130   |
| 15  | 750 x 1900 | 5 | 10+4 | 80 x 8   | 80 x 8   | 105   |
| 16  | 850 x 1900 | 5 | 10+4 | 80 x 8   | 80 x 8   | 95    |
| 17  | 910 x 1900 | 5 | 10+4 | 80 x 8   | 80 x 8   | 85    |
| 18  | 600 x 2000 | 5 | 10+4 | 80 x 8   | 80 x 8   | 125   |
| 19  | 750 x 2000 | 5 | 10+4 | 80 x 8   | 80 x 8   | 100   |
| 20  | 850 x 2000 | 5 | 10+4 | 80 x 8   | 80 x 8   | 90    |
| 21  | 910 x 2000 | 5 | 10+4 | 80 x 8   | 80 x 8   | 80    |
| 22  | 580 x 1360 | 5 | 8+3  | 80 x 8   | 80 x 8   | 155   |
| 23  | 660 x 1460 | 5 | 8+3  | 80 x 8   | 80 x 8   | 125   |
| 24  | 810 x 1460 | 5 | 8+3  | 80 x 8   | 80 x 8   | 100   |
| 25  | 660 x 1660 | 5 | 10+3 | 80 x 8   | 80 x 8   | 140   |
| 26  | 810 x 1660 | 5 | 10+3 | 80 x 8   | 80 x 8   | 110   |
| 27  | 660 x 1860 | 5 | 10+4 | 80 x 8   | 80 x 8   | 125   |
| 28  | 810 x 1860 | 5 | 10+4 | 80 x 8   | 80 x 8   | 100   |

### Product description:

All doors are to have **6** stiffeners on the door blade of type 65x65x7 as given in the table below.

## Wheel Alt.4

| Door | Door Size  | Plate Thickness | Toggles + Hinges | Stiffeners | Edge Stiffeners | Max Pressure [kPa] |
|------|------------|-----------------|------------------|------------|-----------------|--------------------|
| No.  | WxH [mm]   |                 |                  | HxWxT [mm] | HxT [mm]        |                    |
| 1    | 600 x 1200 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | 170                |

|    |            |   |      |           |        |            |
|----|------------|---|------|-----------|--------|------------|
| 2  | 600 x 1400 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>145</b> |
| 3  | 750 x 1400 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>115</b> |
| 4  | 850 x 1400 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>100</b> |
| 5  | 910 x 1400 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>95</b>  |
| 6  | 600 x 1600 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 7  | 750 x 1600 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>130</b> |
| 8  | 850 x 1600 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>110</b> |
| 9  | 910 x 1600 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>100</b> |
| 10 | 600 x 1800 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>140</b> |
| 11 | 750 x 1800 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>110</b> |
| 12 | 850 x 1800 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>100</b> |
| 13 | 910 x 1800 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>90</b>  |
| 14 | 600 x 1900 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>130</b> |
| 15 | 750 x 1900 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>105</b> |
| 16 | 850 x 1900 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>95</b>  |
| 17 | 910 x 1900 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>85</b>  |
| 18 | 600 x 2000 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>125</b> |
| 19 | 750 x 2000 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>100</b> |
| 20 | 850 x 2000 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>90</b>  |
| 21 | 910 x 2000 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>80</b>  |
| 22 | 580 x 1360 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>155</b> |
| 23 | 660 x 1460 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>125</b> |
| 24 | 810 x 1460 | 6 | 8+3  | 65x65 x 7 | 80 x 8 | <b>100</b> |
| 25 | 660 x 1660 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>140</b> |
| 26 | 810 x 1660 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>110</b> |
| 27 | 660 x 1860 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>125</b> |
| 28 | 810 x 1860 | 6 | 10+4 | 65x65 x 7 | 80 x 8 | <b>100</b> |

**Product description:**

All doors are to have **6** stiffeners on the door blade of type 65x65x7 as given in the table below.

## Wheel Alt.5

| Door | Door Size  | Plate Thickness | Toggles + Hinges | Stiffeners | Edge Stiffeners | Max Pressure [kPa] |
|------|------------|-----------------|------------------|------------|-----------------|--------------------|
| No.  | WxH [mm]   |                 |                  | HxWxT [mm] | HxT [mm]        |                    |
| 1    | 600 x 1400 | 6               | 8+3              | 65x65 x 7  | 80 x 8          | <b>145</b>         |
| 2    | 650 x 1400 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | <b>175</b>         |
| 3    | 750 x 1400 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | <b>150</b>         |
| 4    | 850 x 1400 | 6               | 10+3             | 65x65 x 7  | 80 x 8          | <b>135</b>         |

|    |            |   |      |           |        |            |
|----|------------|---|------|-----------|--------|------------|
| 5  | 910 x 1400 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>125</b> |
| 6  | 600 x 1600 | 6 | 12+3 | 65x65 x 7 | 80 x 8 | <b>200</b> |
| 7  | 650 x 1600 | 6 | 14+3 | 65x65 x 7 | 80 x 8 | <b>220</b> |
| 8  | 750 x 1600 | 6 | 14+3 | 65x65 x 7 | 80 x 8 | <b>200</b> |
| 9  | 850 x 1600 | 6 | 14+3 | 65x65 x 7 | 80 x 8 | <b>180</b> |
| 10 | 910 x 1600 | 6 | 14+3 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 11 | 600 x 1800 | 6 | 12+4 | 65x65 x 7 | 80 x 8 | <b>180</b> |
| 12 | 650 x 1800 | 6 | 14+4 | 65x65 x 7 | 80 x 8 | <b>190</b> |
| 13 | 750 x 1800 | 6 | 14+4 | 65x65 x 7 | 80 x 8 | <b>170</b> |
| 14 | 850 x 1800 | 6 | 14+4 | 65x65 x 7 | 80 x 8 | <b>150</b> |
| 15 | 910 x 1800 | 6 | 14+4 | 65x65 x 7 | 80 x 8 | <b>140</b> |
| 16 | 600 x 1900 | 6 | 12+4 | 65x65 x 7 | 80 x 8 | <b>170</b> |
| 17 | 650 x 1900 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>220</b> |
| 18 | 750 x 1900 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>190</b> |
| 19 | 850 x 1900 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>170</b> |
| 20 | 910 x 1900 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 21 | 600 x 2000 | 6 | 12+4 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 22 | 650 x 2000 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>200</b> |
| 23 | 750 x 2000 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>180</b> |
| 24 | 850 x 2000 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 25 | 910 x 2000 | 6 | 16+4 | 65x65 x 7 | 80 x 8 | <b>160</b> |
| 26 | 660 x 1460 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>165</b> |
| 27 | 810 x 1460 | 6 | 10+3 | 65x65 x 7 | 80 x 8 | <b>135</b> |
| 28 | 660 x 1660 | 6 | 12+3 | 65x65 x 7 | 80 x 8 | <b>180</b> |
| 29 | 810 X 1660 | 6 | 12+3 | 65x65 X 7 | 80 X 8 | <b>150</b> |
| 30 | 660 X 1860 | 6 | 12+4 | 65x65 X 7 | 80 X 8 | <b>160</b> |
| 31 | 810 X 1860 | 6 | 14+4 | 65x65 X 7 | 80 X 8 | <b>150</b> |

Big toggles are used for alternative 5, as shown in page 3 in drawing T-1-0178 Rev.D

## Application/Limitation

The watertight doors are found to comply with DNVGL-RU-SHIP July 2019 Pt.3 Ch.12 Sec.3 [4.3].

The design pressure at the location where the doors are to be fitted shall be equal or less than the pressure above.

Doors with side scuttle is to be fitted with a dead light if located in a position where dead light is required for sides scuttle.

The Type Approval does not cover the supporting structure of the doors, which is subject to approval. Interface showing door frame and bulkhead shall be submitted for case-by-case approval by yard/end user.

The door frame may be welded or bolted to the bulkhead (ref. drawing no. LG-3-00142 rev. B).

Job Id: **262.1-017785-4**  
Certificate No: **TAS00002E6**

Particular consideration shall be given if located in highly stressed areas or in areas critical to fatigue from global hull loads.

Indication open/closed for the watertight door shall be fitted on the bridge.

**Fire safety:**

With respect to fire safety properties please see separate DNV GL certificate MEDB00005ZF (expiring 20-01-2025) for these doors.

**Type Approval documentation**

Drawings:

T-1 -0178 Rev. D (3 pages).

LG-3-00142 Rev. B

T-3-18548 Rev. F

**Tests carried out**

Each door is to be tested for tightness through hydrostatic testing to design pressure at the manufacturer.

Prototype test report dated 2009-09-24, witnessed by DNV Ulsteinvik.

Prototype test report dated 2009-10-16, witnessed by DNV Ulsteinvik.

**Marking of product**

The product is to be marked with the following info:

- Manufacturer's name or brand
- DNVGL Type Approval Certificate No. TAS00002E6
- The specific type designation:
  - WR 100/WR30-A0, Handle operated
  - WR 100/WR30-A0, Wheel Alt.1
  - WR 100/WR30-A0, Wheel Alt.2
  - WR 100/WR30-A0, Wheel Alt.3
  - WR 100/WR30-A0, Wheel Alt.4
  - WR 100/WR30-A0, Wheel Alt.5
- Max allowable design pressure as specified above

**Periodical assessment**

DNV GL surveyor has the permission to perform Certification Retention Survey at any time during the validity period of this certificate.

Periodical assessment will be required after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.