



**WyCarrier**  
High-pressure transport systems

**Wystrach**  
Customized solutions in high pressure

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[www.wystrach-gmbh.de](http://www.wystrach-gmbh.de)





| Pressure level         | Size  | Cylinder Type | H <sub>2</sub> Capacity at 15°C in kg <sup>(4)</sup> | Water Volume in l <sup>(4)</sup> | Total Weight in kg<br>(Tare Weight + H <sub>2</sub> Capacity) <sup>(3)</sup> | Number of Sections<br>(According to ADR 6.8) |
|------------------------|-------|---------------|--|----------------------------------|--|--|
| 300 bar <sup>(1)</sup> | 10 ft | Type IV       | 178  | 8,400                            | 4,250  | 2  |
|                        | 20 ft |               | 401  | 18,900                           | 8,000  | 4  |
|                        | 30 ft |               | 624  | 29,400                           | 13,000   | 6  |
|                        | 40 ft |               | 847  | 39,900                           | 17,250   | 9  |
|                        | 45 ft |               | 958  | 45,150                           | 19,500   | 10   |
| 381 bar <sup>(1)</sup> | 10 ft | Type IV       | 217  | 8,400                            | 5,000  | 2  |
|                        | 20 ft |               | 487  | 18,900                           | 9,250  | 4  |
|                        | 30 ft |               | 758  | 29,400                           | 15,000   | 6  |
|                        | 40 ft |               | 1,029  | 39,900                           | 20,000   | 9  |
|                        | 45 ft |               | 1,164  | 45,150                           | 22,500   | 10   |
| 500 bar <sup>(2)</sup> | 10 ft | Type IV       | 239  | 7,370                            | 6,750  | 2  |
|                        | 20 ft |               | 532  | 16,415                           | 13,500   | 4  |
|                        | 30 ft |               | 836  | 25,795                           | 21,000   | 6  |
|                        | 40 ft |               | 1,129  | 34,840                           | 26,750   | 8  |
|                        | 45 ft |               | 1,270  | 39,195                           | 32,000   | 9  |

<sup>(1)</sup> Receptacles type approved as per Section 6.2.4 of ADR in conjunction with EN 17339:2020 and German recognized technical code as per Section 6.2.5 of ADR - ATR D 1/21. Acceptance of the recognized technical code ATR D 1/21 to be checked with your national competent authority.

<sup>(2)</sup> Receptacles type approved according to EN 12245:2009 + A1:2011; approval according to EN 17339:2020 in preparation.

<sup>(3)</sup> Weight may vary depending on configuration.

<sup>(4)</sup> Calculated values based on nominal vessel volume. Manufacturing tolerances are not taken into account.

Our systems are available for UN 1046 HELIUM. compressed; UN 1049 HYDROGEN. compressed; UN 1971 METHANE. compressed; UN 1066 NITROGEN. compressed or NATURAL GAS. compressed, with high Methane content.

Please contact us for further information.

MEGCS and Battery-vehicles type approved according subsection 1.8.7.2 in conjunction with chapter 6.8 of ADR and Directive 2010/35/EC (TPED).



| General Description                  |  |
|--------------------------------------|--|
| WyCarrier size                       | 10 ft / 20 ft / 30 ft / 40 ft / 45 ft  |
| WyCarrier type                       | MEGC (multi-element gas container) or battery vehicle  |
| WyCarrier height                     | Typ III / IV: 2.743 mm<br>Typ II: 2.335 mm <sup>1</sup>  |
| Pressure level                       | 300 bar / 380 bar / 500 bar  |
| Cylinder type                        | Typ II / Typ III / Typ IV  |
| Cylinder fixing                      | Neck mounting with dedicated WyCarrier bearing   |
| Piping material                      | Stainless steel  |
| Type approval certification          | according Subsection 1.8.7.2 of ADR in conjunction with Subsection 6.8.2.3 of ADR and EN 13807:2017 normative standard |
| Type approval certification - others | ADN / RID / IMDG on request  |
| Container frame certification        | CSC, ISO 668 for corner casting position   |
| Leak test                            | Helium or hydrogen leak test N <sub>2</sub> /He or H <sub>2</sub>  |
| Documentation                        | Tank file and user manual in local language  |
| Training                             | Training on system operation   |

<sup>1</sup> dimension valid for MEGCs only

| Standard Features                             | Description   |
|---|---|
| Container material                            | High-tensile steel  |
| Frame corrosion protection                    | Hot-dip galvanization (equivalent to Level C3 as per ISO 12944-2)                           |
| Container side walls                          | Flame retardant as per e.g. EN 13501-1  |
| Container front wall                          | Powder coated (white RAL 9010), including ladder  |
| Container rear wall                           | Powder coated (white RAL 9010), including double cabinet door                               |
| Residual moisture content                     | < 100 ppm   |
| Size of section shutoff manual spindle valves | DN11  |
| Number of section valves                      | One per section   |
| Size of main shutoff manual spindle valve(s)  | DN11 (300 bar)<br>DN15 (381/500 bar)  |
| Number of main valves                         | One valve for 10 ft & 20 ft<br>Two valves for 30 ft and larger                              |
| Filling & discharge coupling(s)               | M36 x 2LH (300 bar)<br>M36 x 2LH (381 bar)<br>M52 x 2LH (500 bar)                           |
| Number of venting spindle valves              | One per WyCarrier   |
| Main pressure gauge (one per WyCarrier)       | Calibrated pressure gauge / 160 mm diameter   |
| Section pressure gauges (one per section)     | Pressure gauge / 63 mm diameter   |
| Earthing reel                                 | Earthing reel for container mounted to chassis  |
| Pneumatically activated immobilizer           | Activation of the parking brake in the event that a main cabinet door is open               |
| Reflector line                                | Reflector line on rear side and on top corner<br>Points in accordance with ECE R104 Class C |



| Optional Features  | Description  | Benefits  |
|--|--|---|
| Cylinder valve   | One manual valve per cylinder  | For flexible / efficient service and maintenance  |
| Main / section shutoff manual spindle valve(s) DN 15   | Increased diameter for main / section valve  | For improved flow rates (faster charge / discharge) / recommended for 380/500 bar   |
| Pneumatically actuated main / section valves (closed when depressurized), includes multiconductor pneumatics | Valves per section controlled by external air pressure   | <ul style="list-style-type: none"> <li>• for externally controlled charge / discharge</li> <li>• as extra safety features (auto-close function / slam-shut function)</li> </ul> |
| ESD (emergency shutdown) button (front left & rear right)  | To shut all pneumatic valves<br>Min. one pneumatic valve per main valve required   | For extra safety / recommended by Wystrach as per binding legal regulations   |
| Cabinet light  | ATEX-approved cabin light with external power supply   | For improved visibility in the cabinet in dark conditions   |
| TPRD per section   | Temperature-activated pressure relief device<br>→ Release of H <sub>2</sub> at temperature > 110°C   | For extra safety  |
| Low-pressure switch  | <ul style="list-style-type: none"> <li>• only relevant for Type IV</li> <li>• switch to protect cylinder against low pressure</li> <li>• min. one pneumatic valve per main valve required</li> </ul> | Safety switch to protect cylinders against pressures < 15 bar<br>→ to protect Type IV cylinders against low pressure  |
| Pressure regulator (300 --> 200 bar), high-pressure valve if pressure regulator is installed                 | Additional discharge line limited to 200 bar including pressure switch   | To supply gas to customers that still use 200-bar infrastructure  |
| Pressure sensor (4-20 mA)  | Per container or per section / incl. multi-connector electronics   | For external control of container / section pressure  |
| Temperature sensor (PT100)   | Per container or per section / incl. multi-connector electronics   | For external control of container / section temperature   |
| Calibrated mass flow meter   | Calibrated mass flow measurement at discharge coupling   | For accurate measuring of the amount of gas delivered to the customer   |



| Optional Features                                   | Description  | Benefits  |
|---|--|---|
| Logo or full 4-color print of the tarpaulins        | Digital print on tarpaulins  | For advertising and/or customer logo name   |
| Safety line   | Anti-drop line on roof of container  | Anti-drop safety line as per DIN EN 795:2012<br>To connect a safety harness when a person works on top of the container |
| Purge with hydrogen (up to 15 bar)                  | Cylinders get purged and charged with 15 bar hydrogen / includes drying of moisture < 20 ppm | System is ready for use upon delivery to customer   |
| Residual moisture content < 20 ppm                  | Additional drying process to remove moisture from the cylinder to < 20 ppm                   | Additional drying of cylinders when customer wants to purge with hydrogen   |
| Different color for powder-coated front / rear side | Standard color is white (RAL 9010), other color options possible                             | Visible parts only  |
| Full frame powder coating                           | Powder coating to reach equivalent to Level C4 as per ISO 12944-2                            | Powder coating on full frame, not only visible parts, for better corrosion protection                                   |
| Chassis   | ADR chassis compatible with WyCarrier  |   |