

#### **Definitions**

| Abbreviation            | Definition  |   |  |  |  |
|-------------------------|---|---|--|--|--|
| Pressure specifications | (all pressure specifications are to be understood as overpressure, unless otherwise stated)                   |   |  |  |  |
| PN                      | Nominal pressure  | Nominal pressure after temperature compensation at 15 °C (59 °F)  |  |  |  |
| PS                      | Max. allowable operating pressure   | Maximum allowable operating pressure acc. to Pressure Equipment Directive 2014/68/EU, Article 2 paragraph 8   |  |  |  |
| PT                      | Hydrostatic test pressure   | Hydrostatic test pressure acc. to Pressure Equipment Directive 2014/68/EU, Annex I no. 7.4  |  |  |  |
| PP                      | Pilot pessure   | Actuation pressure for hydraulic and pneumatic components   |  |  |  |
| PC                      | Cracking pressure   | Pressure at which the check valve opens and the first indication of flow occurs   |  |  |  |
| WP                      | Working pressure  | 'Working pressure' means the maximum pressure to which a component is designed to be subjected to and which is the basis for determining the strength of the component under consideration  |  |  |  |
| MAWP                    | Max. allowable working pressure   | Max. allowable operating pressure at which the weakest point of the system or the vessel (e.g. cylinder valve) can operate at a certain temperature during normal operation   |  |  |  |
| Dimensions              | Dimensions  |   |  |  |  |
| L1, L2, L3              | Length specification  |   |  |  |  |
| D1, D2, D3              | Diameter specification  |   |  |  |  |
| A/F(1), A/F(2)          | Wrench size specification   |   |  |  |  |
| Ports                   |   |   |  |  |  |
| A/X                     | Customer-specific port (test piece, sample, cylinder valve, handwheel respiratory protective equipment)       |   |  |  |  |
| B1, B2, B3              | Media ports   |   |  |  |  |
| C1, C2, C3              | Gas recirculation ports   |   |  |  |  |
| P1, P2, P3              | Pilot pressure ports  |   |  |  |  |
| MA1, MA2                | Measuring ports   |   |  |  |  |
| Q                       | Drain port filter   |   |  |  |  |
| G                       | Mounting bores  |   |  |  |  |
| Others                  |   |   |  |  |  |
| DN                      | PED-nominal size<br>(DN)  | Nominal size (DN) acc. to Pressure Equipment Directive 2014/68/EU, whereby the largest, pressurized diameter of the media or pilot pressure connections of the WEH Device (A, B1, B2, B3 or C1, C2, C3 and P1, P2, P3) which faces the customer's pipe system, is relevant. Expressed by a rounded, dimensionless number, e. g. DN 25 |  |  |  |
| TNW                     | Technical nominal size  | The technical nominal size (formerly expressed by "effective diameter") is the smallest diameter available for the media flow of the respective pressure device. Expressed by a number with unit, e. g. 12 mm   |  |  |  |
| μm                      | Max. diameter of the filtered particle  |   |  |  |  |
| Kv                      | Is the discharge of water in m <sup>3</sup> /h at a pressure drop of 1 bar (14.5 psi), acc. to DIN/EN 60534-2 |   |  |  |  |
| Cv                      | Is the discharge of water in gallons per minute at a pressure drop of 1 psi, acc. to DIN/EN 60534-2           |   |  |  |  |
| IR                      | Infrared data interface   |   |  |  |  |
| ENR                     | Exchangeable data interface (exchangeable nozzle receiver)  |   |  |  |  |



#### **Definitions**

| Abbreviation    | Definition   |
|-----------------|--|
| TS              | Maximum allowable temperature acc. to Pressure Equipment Directive 2014/68/EU, Article 2 paragraph 9 |
| Breakaway force | Is the force range, in which the breakaway releases  |
| NC              | Normally closed (initial position of shut-off valve)   |
| NO              | Normally open (initial position of shut-off valve)   |

#### **Technical explanations**

| Technical explanations            |  |  |  |  |
|-----------------------------------|--|--|--|--|
| Term                              | Definition   |  |  |  |
| Temperature range                 | Is the temperature range in which the WEH <sup>®</sup> Product can be used. If no explicit information on medium and ambient temperature is given, this temperature range applies to both medium and environment.  |  |  |  |
| Media<br>temperature range        | Is the temperature range of the medium used, which can flow through the WEH® Product (may change depending on the time of measurement).  |  |  |  |
| Ambient temperature range         | Is the temperature range of the environment in which the WEH® Product can be used.   |  |  |  |
| Leak rate                         | Is the maximum external leak rate, which the WEH® Product exhibits in delivery condition.  |  |  |  |
| Internal leak rate                | The internal leak rate depends, among other things, on type of application, medium and pressure difference on the WEH® Product. On request it can be specified more precisely.   |  |  |  |
| Max. side load                    | Is the max. allowable sum of all external forces that may act on the device under intended use.  Note:  External forces can affect the life time of WEH® Products and can cause damage. Tensile and transverse loads as well as vibrations and pressure impacts need to be considered, e.g. by user side measures such as on site mountings and similar. Therefore, lateral forces such as whipping hoses or other equipment must be avoided. WEH® Products should be installed in such a way, that lateral forces which could lead to leakage or damage can not occur.  Special applications require a special consultation before selecting the product. |  |  |  |
| Products with pneumatic actuation | The customer has to ensure there is adequate axial movement when pneumatically actuated WEH® Products are used in automated systems, see maximum side load. Ideally the products should be mounted with a floating joint or introduced individually to prevent the possibly existing clamping jaws getting blocked or jammed in the thread of the test piece.  |  |  |  |
| Sealing material                  | On request the WEH <sup>®</sup> Product can be adapted to customer specific applications regarding to the sealing materials used.  The clarification of the media compatibility and suitability of the adapted WEH <sup>®</sup> Product for the final application is always the responsibility of the end user.  |  |  |  |
| Corrosion resistant               | WEH® Products are designed for use in temperate climate zones - with low levels of humidity and salinity in the air. An accelerated formation of rust or corrosion may occur at or near the sea. Therefore, reduce the inspection interval recommended for normal use and send in the WEH® Product for maintenance immediately if you notice increased soot, rust or corrosion.  |  |  |  |
| Storage / life time of components | There are certain requirements for every WEH® Product.  WEH® Products are generally products which may be subject to wear and fatigue during operation and depending on your individual application/use. For details - in particular regarding the corresponding minimum inspection and maintenance intervals - please refer to the respective operating instructions for the WEH® Product.  |  |  |  |



### Further explanations

| Subject   | Definition   |
|---|--|
| Technical data  | Unless otherwise stated, the technical data in catalogs, data sheets and operating instructions are based on tests with nitrogen that are in the development phase or at the end of development. Leakage data are based on measurements with helium.   |
| Intended use  | For the intended use of WEH® Products, please refer to the respective operating instructions. The following applications are generally excluded for WEH® H₂ and CNG products, unless these are expressly permitted in the operating instructions:  • aerospace applications, e.g. in aircrafts • shipping applications • applications offshore and in littoral areas • applications within defense and weapons technology  |
| Safe product selection                                | Our WEH® Products are designed to be operated by qualified professional users (insofar as WEH® Products are also designed to be operated by other users in individual cases, this is explicitly stated in the corresponding operating instructions). Please note that WEH does not know your system and therefore - also due to the large number of different potential applications of WEH® Products - cannot perform tests on all potential types of application. You alone are responsible for the selection, configuration and suitability of WEH® Products, especially according to the requirements of your system. Before purchasing WEH® Products, please particularly ensure that our products are compatible with your intended use, your performance data, your material and fluids, your system concept and your system limits according to our product specifications. Please also consider your technical and legal requirements for operation, handling and maintenance. The quality and safety of WEH® Products is our highest priority. For this reason, WEH® Products may not be used outside the specifications in the relevant data sheets and product descriptions. If you are not sure whether the WEH® Product is suitable for your system and intended use, please contact us in advance. We also strongly recommend that you refrain from using third-party spare parts or a combination of WEH® Products with unsuitable third-party products. You alone are responsible for reviewing the suitability of third-party products. WEH® Products and WEH® Spare parts comply with our quality and safety standards. |
| Explanation on the<br>Pressure Equipment<br>Directive | In general, WEH® Products with a maximum allowable operating pressure of more than 0.5 bar (PS) fall within the scope of application of the Pressure Equipment Directive 2014/68/EU, are generally classified as pressure accessories in accordance with Article 2 (5) of the same and are considered to be similar to piping. These WEH® Products may not be used as safety accessories. Furthermore, it is pointed out, that these WEH® Products are designed and placed on the market in accordance with the requirements of Article 4 (3) of the Pressure Equipment Directive 2014/68/EU.  For some products a different classification and/or categorisation is required or can be conducted on request. In these cases, if legally required, a conformity assessment procedure in accordance with Annex III of the Pressure Equipment Directive 2014/68/EU can and will also be conducted and the conformity can be declared by means of an EU Declaration of Conformity in accordance with Annex IV of the Pressure Equipment Directive 2014/68/EU. In these cases, the EU Declaration of Conformity is enclosed with the product.  |
| External change<br>management                         | WEH reserves the right to update, optimise and adjust its products continuously. This may result in corresponding changes of the product. Customers will be informed proactively or unsolicited by WEH only in individual cases about product updates, product optimisations and/or product adaptations that have been carried out. You are free to contact WEH at any time to request information about any product updates, product optimisations and/or product adjustments.  |



### Symbols

| Туре  | Pneumatic - NC | Pneumatic - NO | Manual           |
|---|----------------|----------------|------------------|
| Shut-off valve                              | (P)            | (P)            | — <del>—</del> — |
| Shut-off valve with venting                 | - X            |                |                  |
| Shut-off valve with check valve             | [              | -              |                  |
| Shut-off valve with venting and check valve |                | -              |                  |