Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

In order to ensure a coherent application of the Pressure Equipment Directive 2014/68/EU (PED) (which replaces Directive 97/23/EC as of 19 July 2016), Guidelines are developed and agreed by the Commission's Working Group "Pressure" (WGP).

This working group is composed of representatives of Member States, European federations, the Notified Bodies Forum and CEN and chaired by a representative of the Commission services.

Most of the PED Guidelines developed for Directive 97/23/EC are issued as a PED Guideline under the new Directive 2014/68/EU. Also new Guidelines may be issued to support the implementation of the Directive. This document includes the PED Guidelines which are endorsed by the Working Group "Pressure" (WGP).

Remarks or questions concerning this document should be addressed via the email to the unit in the European Commission dealing with the Pressure Equipment Directive:

GROW-PRESSURE-EQUIPMENT@ec.europa.eu

Status of the guidelines

The PED Guidelines are not a legally binding interpretation of the Directive. The legally binding text remains that of the Directive. However, the PED Guidelines represent a reference for ensuring consistent application of the Directive. They represent, unless indicated differently in the respective guideline text, the unanimous opinion of the Member States.

Naming convention of the PED Guidelines

The PED Guidelines are referenced with the following format X-yy

- X relates to the subject (A, B, C etc…);
- yy is a sequential number.

Remark: To facilitate the transition to the new Guidelines the sequential number is maintained as far as possible (e.g. Guideline A-24 under the new PED 2014/68/EU corresponds to Guideline 1-24 under PED 97/23/EC)

The letter "X" refers to one of the following subjects:

A. SCOPE AND EXCLUSIONS OF THE DIRECTIVE

B. CLASSIFICATION AND CATEGORIES

C. ASSEMBLIES

D. EVALUATION ASSESSMENT PROCEDURES

E. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON DESIGN

F. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON MANUFACTURING

G. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON MATERIALS

H. INTERPRETATION OF OTHER ESSENTIAL SAFETY REQUIREMENTS

I. MISCELLANEOUS

J. GENERAL-HORIZONTAL QUESTIONS

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Document history		
Version	Date	Comment
1.0	31/3/2015	Includes PED 2014-68-EU Guidelines from the WGP meeting of 11/03/2015
2.0	13/6/2016	Includes PED Guidelines adopted via written procedure on 8/1/2016 and 15/1/2016 (links will be added in next version when all guidelines are included)
3.0	3/1/2017	Includes PED Guidelines adopted via written procedure on 20/6/2016. It concerns: WPG B-19, WPG E-04, WPG F-10, WPG F-15, WPG H-05, WPG J-02, WPG J-03
4.0	12/5/2017	Includes PED Guidelines B-25 and F-19 adopted by WGP on 21/3/2017 + minor editorial corrections to A-12, A-39, B-04, B-35, I-07and I-18
5.0	12/10/2018	Includes PED Guidelines B-21 (update), B-33, C-14, E-10, H-04 and H-20 adopted by WGP on 13/9/2018 + minor editorial changes to A-46, B-41, C-13 and C-15. PED Guideline A-45 is withdrawn and therefore removed from this document.
5.1	29/10/2018	Correction , removed previous version of B-21 (duplicate).
5.2	7/01/2019	Correction, reference to E-10 instead of B-42 in the note
6.0		Includes PED Guidelines A-44, B-28, D-17, H-16 and J-09 + Correction in C-18 reference to “Annex IV”

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Table of Contents

A. SCOPE AND EXCLUSIONS 8
Guideline A-01 8
Guideline A-02 9
Guideline A-03 10
Guideline A-04 11
Guideline A-05 12
Guideline A-06 14
Guideline A-08 15
Guideline A-09 16
Guideline A-10 17
Guideline A-11 18
Guideline A-12 20
Guideline A-13 21
Guideline A-14 22
Guideline A-15 23
Guideline A-16 24
Guideline A-17 25
Guideline A-18 26
Guideline A-19 27
Guideline A-20 28
Guideline A-22 29
Guideline A-23 30
Guideline A-24 31
Guideline A-25 32
Guideline A-26 33
Guideline A-27 35
Guideline A-28 36
Guideline A-29 37
Guideline A-30 38
Guideline A-31 39
Guideline A-33 40
Guideline A-34 41
Guideline A-35 42
Guideline A-36 43
Guideline A-37 44
Guideline A-38 45
Guideline A-39 46
Guideline A-40 47
Guideline A-41 48
Guideline A-42 49
Guideline A-43 50
Guideline A-44 51
Guideline A-46 52
Guideline A-47 53
Guideline A-48 54
Guideline A-49 55

Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Guideline A-50 56
Guideline A-51 57
Guideline A-52 58
Guideline A-53 59
Guideline A–54 60
Guideline A-55 61
Guideline A-56 63
Guideline A-57 64
B. CLASSIFICATION AND CATEGORIES 66
Guideline B-01 66
Guideline B-02 67
Guideline B-03 68
Guideline B-04 69
Guideline B-05 71
Guideline B-06 72
Guideline B-08 73
Guideline B-09 74
Guideline B-10 75
Guideline B-11 76
Guideline B-12 77
Guideline B-13 78
Guideline B-14 79
Guideline B-15 80
Guideline B-16 81
Guideline B-17 82
Guideline B-18 83
Guideline B-19 84
Guideline B-21 86
Guideline B-22 87
Guideline B-23 88
Guideline B-25 89
Guideline B-26 90
Guideline B-27 91
Guideline B-28 92
Guideline B-28 93
Guideline B-29 94
Guideline B-30 95
Guideline B-32 96
Guideline B-33 97
Guideline B-34 98
Guideline B-35 99
Guideline B-36 100
Guideline B-37 101
Guideline B-38 102
Guideline B-40 103
Guideline B-41 104
C. ASSEMBLIES 107

Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Guideline C-03 107
Guideline C-04 108
Guideline C-05 109
Guideline C-06 110
Guideline C-07 111
Guideline C-11 112
Guideline C-12 113
Guideline C-13 114
Guideline C-14 115
Guideline C-15 116
Guideline C-16 117
Guideline C-18 118
Guideline C-19 119
Guideline C-20 120
D. EVALUATION ASSESSMENT PROCEDURES 121
Guideline D-01 121
Guideline D-02 122
Guideline D-03 123
Guideline D-04 124
Guideline D-06 125
Guideline D-07 126
Guideline D-09 127
Guideline D-10 128
Guideline D-11 129
Guideline D-12 130
Guideline D-13 132
Guideline D-15 133
Guideline D-17 134
E. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON DESIGN 135
Guideline E-01 135
Guideline E-02 136
Guideline E-03 137
Guideline E-04 138
Guideline E-05 139
Guideline E-06 140
Guideline E-07 141
Guideline E-08 142
Guideline E-09 143
Guideline E-10 144
F. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON MANUFACTURING 145
Guideline F-01 145
Guideline F-02 146
Guideline F-03 147
Guideline F-04 148
Guideline F-05 149
Guideline F-06 150

Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Guideline F-07 151
Guideline F-08 152
Guideline F-09 153
Guideline F-10 154
Guideline F-11 155
Guideline F-12 156
Guideline F-13 157
Guideline F-14 158
Guideline F-15 159
Guideline F-16 160
Guideline F-17 161
Guideline F-19 162
G. INTERPRETATION OF THE ESSENTIAL SAFETY REQUIREMENTS ON MATERIALS 163
Guideline G-01 163
Guideline G-02 164
Guideline G-04 165
Guideline G-05 166
Guideline G-06 168
Guideline G-07 169
Guideline G-08 170
Guideline G-09 171
Guideline G-10 172
Guideline G-11 173
Guideline G-12 174
Guideline G-13 175
Guideline G-14 176
Guideline G-15 177
Guideline G-16 178
Guideline G-17 179
Guideline G-18 182
Guideline G-19 183
Guideline G-21 185
Guideline G-22 186
Guideline G-23 187
Guideline G-24 188
Guideline G-25 189
Guideline G-26 190
Guideline G-27 191
Guideline G-28 192
Guideline G-29 193
Guideline G-30 195
H. INTERPRETATION OF OTHER ESSENTIAL SAFETY REQUIREMENTS 196
Guideline H-02 196
Guideline H-03 197
Guideline H-04 199
Guideline H-05 201

Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Guideline H-06 202
Guideline H-07 203
Guideline H-09 204
Guideline H-10 205
Guideline H-12 206
Guideline H-13 207
Guideline H-14 208
Guideline H-15 209
Guideline H-16 211
Guideline H-17 212
Guideline H-18 213
Guideline H-19 214
Guideline H-20 215
I. MISCELLANEOUS 216
Guideline I-01 216
Guideline I-02 217
Guideline I-03 218
Guideline I-04 219
Guideline I-05 220
Guideline I-06 221
Guideline I-07 222
Guideline I-08 223
Guideline I-09 224
Guideline I-10 225
Guideline I-11 226
Guideline I-12 227
Guideline I-13 228
Guideline I-14 229
Guideline I-15 230
Guideline I-16 231
Guideline I-17 232
Guideline I-18 233
Guideline I-19 234
Guideline I-20 235
Guideline I-21 236
Guideline I-22 237
Guideline I-23 238
Guideline I-24 239
J. GENERAL-HORIZONTAL QUESTIONS 241
Guideline J-01 241
Guideline J-02 242
Guideline J-03 243
Guideline J-06 244
Guideline J-08 245
Guideline J–09 246

AVA Documents Document Sharing Hub

Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

A. SCOPE AND EXCLUSIONS

Guideline A-01

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 4 paragraph 1 (a); Article 1 paragraph 2 (s)**;** Annex II, Table 2

Question	**Are portable extinguishers within the scope of the Pressure Equipment Directive or are they covered by the exclusion in Article 1 paragraph 2 (s) for equipment covered by the ADR?**
Answer	They are covered by the Pressure Equipment Directive.
Reason	Portable extinguishers are specifically mentioned in Article 4 paragraph 1 (a) (i) second indent and Annex II, Table 2 of the Pressure Equipment Directive. All fire extinguishers according UN 1044 are specifically mentioned in special provision 594 of ADR as an exclusion when appropriately packed for transport. Thus, these fire extinguishers are not covered by the exclusion in Article 1 paragraph 2 (s) of the PED.
Note	

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Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)

Guideline A-02

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 1

Question	**Are tanks intended for the transport of non-dangerous goods (as defined by ADR), which are not pressurised during carriage but are pressurised during other foreseeable operations, e.g. filling, emptying or cleaning, within the scope of PED?**
Answer	Yes. If the PS of the tank is more than 0,5 bar.
Reason	Such tanks are not excluded by Article 1 paragraph 2 (s).
Note	Refer also to PED Guidelines A-14, A-34 and H-07.

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Guideline A-03

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1; Annex I Section 3.4

Question	**Are replacements, repairs or modifications of pressure equipment in use covered by the Pressure Equipment Directive (PED) ?**
Answer	1) Entire change: the complete replacement of an item of pressure equipment by a new one is covered by the PED. 2) Repairs are not covered by the PED but are covered by national regulations (if any). 3) Pressure equipment which has been subject to important modifications that change its original characteristics, purpose and/or type after it has been put into service has to be considered as a new product covered by the directive. *This has to be assessed on a case by case basis*.
Reason	
Note 1	Operating instructions in the sense of the PED (see PED Guideline H-03) cover documentation concerning safe operation including maintenance, but not necessarily detailed information concerning repair or modification of the equipment (e.g. material certificates or qualification of welding procedures). Such information may be provided by a specific contractual agreement between manufacturer and user.
Note 2	The directive applies only to the first making available on the market and putting into service. See “Blue Guide” chapter 2

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Guideline A-04

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 3

Question	**When is a modification of a piping system not covered by the PED?**
Answer	When the content, main purpose and safety systems remain essentially the same, it may be regarded as a non important modification of an existing piping system and is therefore not covered by the PED.
Reason	See PED Guideline A-03
Note	

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Guideline A-05

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 4; Annex II

<table>
<tr><td>Question</td><td>Which conformity assessment category applies to vessel with a volume less than or equal to 0.1 litre?</td></tr>
<tr><td>Answer</td><td>
<table>
<tr><th>Vessels referred to in Article 4 (volume less than or equal to 0,1 litre)</th><th>Table in Annex II</th><th>Category

(Volume less than or equal to 0,1 litre)</th></tr>
<tr><td>1.(a)(i) first indent</td><td>1</td><td>If PS ≤ 200 bar, then Article 4.3 applies

otherwise see point 3 below</td></tr>
<tr><td>1.(a)(i) second indent</td><td>2</td><td>If PS ≤ 1000 bar, then Article 4.3 applies

otherwise see point 3 below</td></tr>
<tr><td>1.(a)(ii) first indent</td><td>3</td><td>If PS ≤ 500 bar, then Article 4.3 applies

otherwise see point 3 below</td></tr>
<tr><td>1.(a)(ii) second indent</td><td>4</td><td>If PS ≤ 1000 bar, then Article 4.3 applies

otherwise see point 3 below</td></tr>
</table>
</td></tr>
<tr><td>Reason</td><td>1. The conformity assessment categories for vessels with a volume less than or equal to 0,1 litre cannot be determined from Tables 1, 2, 3 and 4 because the Tables are not specified for volumes less than 0,1 litre. However, Article 4 paragraph 1 together with Article 4 paragraph 3 can be used to determine which vessels must satisfy the essential safety requirements and those that must be designed and manufactured according to the Sound Engineering Practice (SEP) of a Member State.
2. If a vessel has a volume less than or equal to 0,1 litre, and a value of PS above the limits defined in Article 4 paragraph 1, then the vessels must satisfy the essential safety requirements of Annex I.
3. In the absence of specific information in the Tables of Annex II for the conformity assessment of vessels described in point 2 above, the manufacturer may choose any module, or single combination of modules, set out in section 1 of Annex II.</td></tr>
<tr><td>Note</td><td></td></tr>
</table>

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Guideline A-06

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 4; Annex I, point 2.10

Question	**How will pressure gauges be classified?**
Answer	A pressure gauge may possibly be regarded as a protective device within the meaning of Annex I, point 2.10 b. The Directive does take account of these items of equipment but they are not safety accessories within the meaning of Article 2 paragraph 4. They are pressure accessories within the meaning of Article 2, paragraph 5, which may be covered by CE marking for high pressure (see also PED Guideline A-05 on Article 4 on low volume-high pressure equipment).
Reason	
Note	

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Guideline A-08

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 5

Question	**What is a pressure accessory?**
Answer	According to the definition (see Article 2 paragraph 5 pressure accessory means a device with an operational function and having an identifiable pressure-bearing housing - i.e. the device has a function additional to that of containing pressure. The pressure accessory can be attached to other pressure equipment for example by bolting, brazing, soldering or welding. A pressure accessory has a specific operational function (or functions), which could be for example: measurement, change the mechanical characteristics of the fluid flow, taking a sample, removal of sediment or gas. A pressure accessory does not necessarily have moving parts. Typical examples of pressure accessories are: valves, pressure regulators, measurement chambers, pressure gauges, water gauge glasses, filters, expansion joints and manifolds. The following examples are not pressure accessories: – safety valve (a safety accessory) – cover, collar, gasket, flange, bolt (components of a pressure equipment) – sight glass with its frames (components of a pressure equipment) – Y-shape or similar fittings (piping components)
Reason	
Note	

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Guideline A-09

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (3)

Question	**Are piping components, such as a pipe or system of pipes, tubing, fittings, expansion joints, hoses, or other pressure bearing components, considered to be piping when they are placed on the market as individual components?**
Answer	Individual piping components, such as a pipe or system of pipes, tubing, fittings, expansion bellows, hoses, or other pressure bearing components are not "piping". However, a single pipe, or a system of pipes, for specific application, may be classed as "piping", provided all appropriate manufacturing operations such as bending, forming, flanging and heat treatment, have been completed. Some piping components (e.g. expansion joints) may be considered to be pressure accessories (see PED Guideline A-08). **Remark:** Please note the definitions related to expansion joints and to expansion bellows. Expansion joints are devices containing one or more bellows used to absorb dimensional changes such as those caused by thermal expansion or contraction of a pipeline, duct or vessel. Expansion bellows are flexible elements of an expansion joint consisting of one or more convolutions and the end tangents.
Reason	
Note	

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Guideline A-10

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (s); Article 4 paragraph 1(a)(i) second indent

Question	**Are the bottles for breathing equipment covered by the Pressure Equipment Directive?**
Answer	Bottles/gas cylinders for breathing apparatus are covered by the Pressure Equipment Directive, for example : – bottles/gas cylinders for compressed air, oxygen or other breathable mixtures, such as portable cylinders for divers, fire fighters and asbestos workers The following bottles for breathing equipment are not in the scope of the Pressure Equipment Directive: – gas cylinders to be installed in oxygen/air centres of hospitals – cryogenic receptacles According to the circumstances of the transport, the requirements of ADR/RID/IMDG/ICAO may also be applicable. If the manufacturer intends bottles to be used both for breathing equipment and also for transport of dangerous goods, they shall meet the requirements of both directives and bear both the CE-mark and the π-mark (see PED Guideline A-30).
Reason	The specific reference to bottles for breathing apparatus in Article 4 limits the general exclusion in Article 1 paragraph 2 (s). Furthermore the Transportable Pressure Equipment Directive (TPED) 2010/35/EC specifically excludes gas cylinders for breathing appliances in Article 2 paragraph 1.
Note	A breathing apparatus is a personal protective equipment and therefore designed to be worn or held by an individual.

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Guideline A-11

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (j)

Question	**How can article 1 paragraph 2 (j) more specifically be understood, especially the wording "for which pressure is not a significant design factor"?**
Answer	1. Article 1 paragraph 2 (j) excludes pressurized equipment comprising casings or machinery from the scope of the PED a) if this equipment is primarily dimensioned for loads other than pressure, i.e. for which pressure is not the significant design factor and b) if it is primarily designed to move or rotate or fulfil other functions than pressure containment. 2. Such equipment may include – engines including turbines and internal combustion engines; – steam engines, gas/steam turbines, turbo-generators, compressors, pumps, actuating devices and curing moulds for tyres. 3. For such equipment, pressure can be considered as not being a significant factor, if other factors alone or together are more significant than pressure. Other factors are, e.g.: – dynamic loads with vibrations or very high number of cycles; – thermal loads together with a complicated form of structure; – stiffness of the structure because of external mechanical loads or requirements related to high weight; – requirements related to low elongation, low change of diameter or low other deformation because of functional requirements to rigidity. This shall be decided on a case by case basis, taking into account established safe industrial practice. 4. An over-dimensioning as such shall not result in exclusion from the PED with regard to Article 1 paragraph 2 (j).
Reason	
Note 1	No factor is included in the requirements of the PED. Any factor given in a guideline would therefore go beyond the PED and should be avoided.
Note 2	If a factor were used to decide whether the requirements of the PED are applicable or not, overdimensioning could result in a case where pressure equipment need not fulfil the requirements of the PED. This is not acceptable.

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Note 3	To decide on the exception with a factor of overdimensioning would consequently result in the necessity of a detailed stress analysis, especially if this factor would have been connected to the primary membrane stress. This is far beyond the present established industrial practice.
Note 4	Furthermore, there is a danger that the more important influences explained in paragraphs 1 to 3 of the above answer could be overlooked if the decision whether the pressure is a significant design factor were based on a factor of overdimensioning only.

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Guideline A-12

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (f) and 2 (j)

Question	**Are hermetically sealed and semi-hermetic compressors in the scope of the directive?**
Answer	1. Equipment classified as no higher than category I as defined by PED and falling in the scope of one of the directives as listed in article 1 paragraph 2 (f), e.g. for low voltage or machinery, is excluded from the scope of PED. This applies to hermetic and semi-hermetic compressors no higher than category I. 2. The exclusion in article 1 paragraph 2 (j) is not applicable to hermetic compressors because pressure is a significant design factor since their external envelope has as its principal function to ensure that the refrigerant is confined. 3. For semi-hermetic compressors which include moving parts and for which the external envelope is primarily designed for mechanical loads (speed and vibration), thermal load (to limit the possible deformation due to temperature), stiffness of the structure (external mechanical loads and weight of the equipment), an exclusion based on article 1 paragraph 2 (j) is to be assessed on a case by case basis (see PED Guideline A-11).
Reason	
Note	In application of the definition of "volume" given in article 2 paragraph 10, the volume of the mechanical parts is to be excluded from the volume to be taken into account but not the volume of the oil contained.

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Guideline A-13

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1

Question	**Is the pressure equipment directive applicable to vacuum insulation of pressure vessels?**
Answer	Yes.
Reason	Vacuum casings which do not have a maximum allowable pressure greater than 0.5 bar are therefore not pressure equipment in their own right. However as structural elements attached to pressurized parts, they are part of pressure equipment and any negative effects of the vacuum casing and insulation on the pressurized parts must be taken into account and avoided.
Note	

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Guideline A-14

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 1

Question	**If transport tanks for use in any mode of transport have been designed, manufactured and approved for the carriage of dangerous goods under the ADR, RID, IMDG code or the ICAO convention, will it also be necessary for them to comply with the PED when they are placed on the market?**
Answer	No. Article 1 paragraph (s) of the PED excludes transport tanks covered by Directive 2008/68/EC and Directive 2010/35/EU (ADR, RID) or the IMDG code or the ICAO convention. If a manufacturer declares that transport tanks designed, manufactured and approved for the carriage of dangerous goods under the ADR, RID, IMDG code or the ICAO convention, are intended to be used for both dangerous and non-dangerous goods then the exclusion in article 1 paragraph (s) may still apply (see PED Guideline A-30). On the other hand, if a transport tank is not designed, manufactured and approved under the ADR, RID, IMDG code or the ICAO convention, then it will be limited to the transport of non-dangerous liquids and solids. These transport tanks will not be excluded from the PED and will be covered if they are in the scope. All transport tanks covered by the agreements and conventions in article 1 paragraph (s) must be designed and built to a maximum allowable working pressure, satisfy the requirements for initial pressure testing and undergo periodical examination throughout their service life. These requirements deal with safe containment and hazards due to pressure, but primarily only for the safety of transport. With regard to the use of a transport tank, for example as a storage tank, or being emptied outside the scope of the transport codes, consideration should be given to applicable national legislation. For example, the question of safety valves in the tank itself or in the emptying station should then be considered. This paragraph does not apply to tanks bearing both CE-mark and π-mark (see PED Guideline A-30).
Reason	
Note	Refer also to PED Guideline A-02

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Guideline A-15

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 paragraph 5

Question	**Is the operational function of a pressure accessory, as described in article 2 paragraph 5 covered by the directive?**
Answer	Yes, if a pressure related hazard is identified in relation with the operational function of the pressure accessory (see also PED Guideline A-08). Examples for valves : – Where a valve is intended to be used as the sole mean of isolation of the content of an item of pressure equipment from the atmosphere, or from downstream equipment which is not designed to withstand the upstream pressure, the internal parts of the valve which contribute to the isolation must satisfy the relevant essential safety requirements in Annex 1 ; – Where a valve is intended to be fitted between a pressure vessel and pressure piping and both are designed to contain pressure, no pressure related hazard exist in relation to the operational function of the valve, therefore internal parts of the valve do not have to satisfy the relevant essential safety requirements in Annex 1. The intended use of the valve shall be described in the operating instructions, and where it is to be used as a sole mean of isolation, it shall meet the essential safety requirements of the directive.
Reason	
Note	

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Guideline A-16

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (b)

Question	**Article 1 paragraph 2 (b) excludes from the directive "networks for the supply, distribution and discharge of water and associated equipment".** **Clarification is required in respect of water, networks and associated equipment in this context?**
Answer	'Water' means: potable water, waste water and effluent, and sewage. 'Networks and associated equipment' means: complete systems for the supply distribution and discharge of water. They extend up to the point of use in buildings, industrial sites and plants, and include equipment closely related to these networks such as water meter and line valves. Pressure vessels, such as expansion vessels, however are not considered to be part of such 'networks and associated equipment' and are therefore not excluded.
Reason	
Note	For district heating water, refer to PED Guideline A-18

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Guideline A-17

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2(a)

Question	**What is the meaning of the expression "standard pressure equipment" in article 1 paragraph 2(a) on pipelines ?**
Answer	A standard pressure equipment is not specially designed and manufactured for a specific conveyance pipeline, but is intended for use in a number of applications, including other conveyance pipelines or, for example, industrial piping. Typical examples of standard pressure equipment annexed with pipelines, pressure reduction stations or compression stations may include: measuring devices, valves, pressure regulators, safety valves, filters, heat exchangers, vessels. Such equipment is covered by the directive.
Reason	
Note [x]	

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Guideline A-18

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (a)

Question	**Are pipelines for conveyance of district heating water covered by the directive?**
Answer	No. According to article 1 paragraph 2 (a) "…a system of piping designed for the conveyance of any fluid …to or from an installation (onshore or offshore) …." is excluded from the directive. This covers pipelines for district heating, whereas standard pressure equipment in e.g. boiler houses and pumping stations are included (refer to PED Guideline A-17).
Reason	
Note	

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Guideline A-19

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (f); Article 1 paragraph 2 (j)

Question	**Are fluid power components and systems using liquids or gases of group 2 covered by PED?**
Answer	For fluid power components and systems using liquids or gases of group 2 according to Article 13 paragraph 1 (b), the following applies : 1. Excluded from PED 1.1. due to exclusion of Article 1 paragraph 2 (f) (e.g. machinery directive) - piping and connecting devices for liquids of group 2 when DN ≤ 200 whatever the pressure is, and when DN > 200 and PS ≤ 500 bar - piping and connecting devices for gases of group 2 when DN ≤ 100 or PS DN ≤ 3500 bar - pressure accessories (e.g. filter housing) no higher than category I - fluid power actuators, pumps and control valves no higher than category I. 1.2. due to exclusion of Article 1 paragraph 2 (j) (refer to guideline A-11) - fluid power actuators (e.g. motors, cylinders, …) - fluid power pumps - fluid power control valves (distributors). 2. Included in the PED - all accumulators (bladder, piston and diaphragm types) - pressure equipment not excluded by (1) above.
Reason	
Note	

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Guideline A-20

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (4); Annex I Sections 2.10 and 2.11

Question	**When is a measuring or control system considered as a safety accessory under the PED?**
Answer	A measuring system alone cannot be considered as a safety accessory, as a safety accessory as defined in PED necessarily requires : - a measuring or detection function and - an activation function for correction, or shutdown, or shutdown and lockout. In order for a control system to be classified as a safety accessory, it shall be designed and placed on the market as an ultimate means of protecting pressure equipment from exceeding allowable limits, and therefore it shall meet the corresponding essential requirements of Annex I, section 2.11.
Reason	
Note	It is foreseeable that some measuring or control devices could be inadvertently used as safety accessories. Where this is possible manufacturers should include an appropriate warning in their instructions for use. See also PED Guidelines A-25 and B-16

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Guideline A-22

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (1)

Question	**What guidance can be given regarding the application of the Directive to component parts of pressure equipment such as flanges, dished ends and nozzles ?**
Answer	If these component parts are incorporated to an item of pressure equipment, the relevant requirements of the directive will apply. However, these component parts do not meet the definition of pressure equipment in Article 2 (1), therefore they shall not bear the CE mark. It is the responsibility of the pressure equipment manufacturer to ensure that the component parts enable the pressure equipment to meet the essential safety requirements of the directive. See also PED Guideline A-08
Reason	
Note	Another example of a component part is a split tee.

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Guideline A-23

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 4 paragraph 1 (a)(i)

Question	**Is the operational function of portable extinguishers covered by PED?**
Answer	No, only the aspects of pressure-related hazards are covered. (see also PED Guideline A-01)
Reason	
Note [x]	

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Guideline A-24

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2, point (12)

Question	**According to the definition of Article 2 point 12 fluids may contain a suspension of solids.** **Is a system of solid pieces or liquid drops distributed in a gas still a fluid in the sense of the PED?**
Answer	Yes
Reason	
Note	A gas containing pieces of solids or drops of liquid is also to be considered a fluid.

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Guideline A-25

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (4), Article 2 (5)

Question	**Are the sensors which are used as part of a safety system to protect pressure equipment covered by the PED?**
Answer	A sensor alone does not meet the definition of a pressure accessory, as per Article 2 (5) (see PED Guideline A-08), nor the definition of a safety accessory, as per Article 2 (4). Consequently, no CE marking (due to the PED) is to be put on the individual sensor. The conformity assessment procedure and essential safety requirements of the directive relate to the complete safety system. The requirements to the sensor may be different depending upon the safety concept employed (for example redundancy or fail safe, see Annex I point 2.11.1).
Reason	
Note	The meaning of sensor is defined in the International Vocabulary of Metrology - Basic and General Concepts and Associated Terms, published by JCGM (Joint Committee for Guides in Metrology).

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Guideline A-26

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (f)(i)

Question	**Which rules apply for pressure equipment which also meets the definition of machinery in the machinery directive or which is intended to be installed in machinery?**
Answer	The Pressure Equipment Directive (PED) applies to pressure equipment in the sense of Article 2 of the PED in general, but also the exclusions of Article 1 paragraph 2 have to be considered. Article 1 paragraph 2 (f)(i) states that: *"equipment classified as no higher than category I under Article 13 of this Directive and covered by one of the following Directives: [among others the machinery directive 2006/42EC] are excluded from the scope of this Directive".* That means, when a product which is placed on the market is covered by the machinery directive, the exclusion of Article 1 paragraph 2 (f)(i) applies to any item of pressure equipment not higher than category I which is a part of that machine (i.e. the pressure equipment directive does not apply). The exclusion also applies to items of pressure equipment not higher than category I separately placed on the market, if their intended use is to be part of machinery which must be laid down in the operating instructions. In those cases, the essential safety requirements of PED are an appropriate way to obtain the required safety level regarding the pressure hazard. Pressure equipment of higher categories than category I is within the scope of the PED even when it is machinery in the sense of the machinery directive or intended to become part of machinery. See therefore article 3 of the machinery directive 2006/42/EC: *"Where, for machinery, the hazards referred to in Annex I are wholly or partly covered more specifically by other Community Directives, this Directive shall not apply, or shall cease to apply, to that machinery in respect of such hazards from the date of implementation of those other Directives."* The PED is such a "*Community Directive"* in the sense of Article 3 of the machinery directive 2006/42/EC.
Reason	
Note 1	This does not prohibit the inclusion of CE-marked items of pressure equipment in machinery.
Note 2	The new machinery Directive 2006/42/EC no longer excludes boilers and pressure vessels from its scope.

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Note 3	See also PED Guideline A-11 for exclusion of Article 1 paragraph (j).

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Guideline A-27

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (n)

Question	**What is meant by the term mobile offshore unit?**
Answer	A mobile offshore unit is an offshore unit that is not intended to be placed permanently or long term on the field, but is designed to be moved from location to location whether or not it has a means of propulsion or of lowering legs to the seafloor (e.g. a unit used solely for exploration). For example, floating units intended for production, such as FPSO's (Floating Production, Storage and Offloading installations usually based on tanker designs) and FPP's (Floating Production Platforms based on semi-submersible vessels), are not considered to be mobile.
Reason	
Note	Items of pressure equipment specifically intended for mobile offshore units are excluded from the PED. However, items of pressure equipment intended to be installed on both FPSO’s/FPP’s and mobile offshore units are not excluded from the PED.

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Guideline A-28

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (a)

Question	**Are conveyance pipeline stations such as compressor, reduction, metering stations covered by PED?**
Answer	These stations contain pressurised systems which may include compressors, heat exchangers, valves, filters, piping, etc. When they are specifically designed for pipelines, they are considered as annexed equipment, and as such are excluded from PED, according to Article 1 paragraph 2 (a). However, this exclusion does not apply to standard pressure equipment which may be found in these stations, see PED Guideline A-17.
Reason	
Note [x]	

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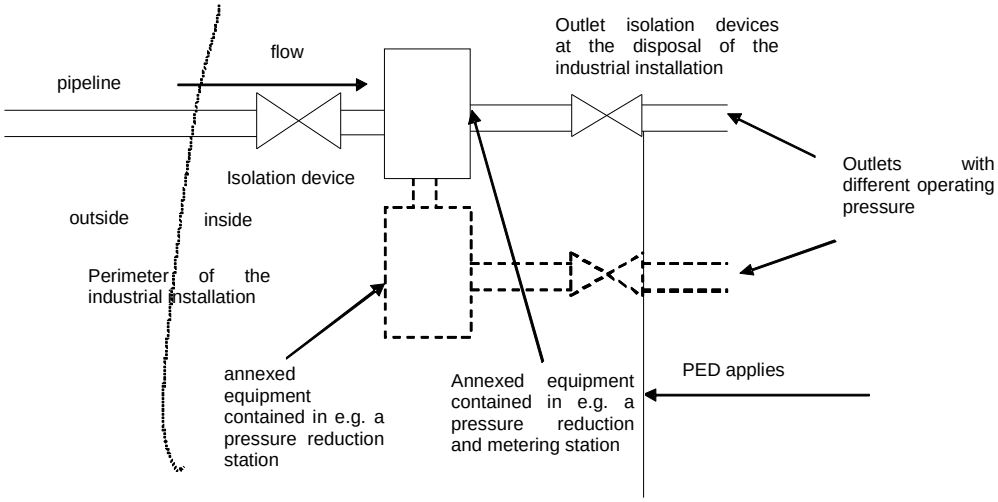
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Guideline A-29

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (a)

Question	**Where does the exclusion under Article 1 paragraph 2 (a) end when a pipeline crosses the perimeter of an industrial installation?**
Answer	The exclusion of Article 1 paragraph 2 (a) ends at the outlet isolation device of the annexed equipment contained in stations supplying the fluid to the industrial installation.  See also PED Guidelines A-28 and A-17.
Reason	
Note	The installation beyond the outlet isolation devices detailed in the above diagram, is covered by the PED; this includes any pressure equipment, any piping between individual operating units or plants, or storage facilities.

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Guideline A-30

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (s)

Question	**Is it permissible to affix both the CE marking for the PED and the π mark for the TPED on an item of pressure equipment?**
Answer	Yes This double marking proves that the item of pressure equipment complies with both directives, and can be used in both contexts without further assessment. A similar item bearing only the π mark could also be used for pressure purposes outside the scope of ADR/RID but consideration would need to be given to possible national regulations, or to PED if included in a PED assembly. Hence, if a manufacturer intends a product to be used in both contexts and designs and manufactures it accordingly so that it complies with both applicable Directives, it shall bear both markings, to the extent foreseen by each Directive (e.g. no CE marking for SEP equipment (Article 4 paragraph 3), and no π-marking for certain accessories). If the manufacturer of the product only foresees it to be used in the scope of one of the Directives, only one Directive applies and one marking (as far as applicable) shall be affixed (see also PED Guideline A-33). See also PED Guidelines A-14 and A-33.
Reason	While in principle, Article 1 paragraph 2 (s) of the PED excludes equipment covered by ADR/RID, it is not always possible for the manufacturer to know whether or not a particular item of equipment he manufactures will during its use come into the scope of these International Transport Agreements. This is in particular true for accessories, which may well be used for both purposes with no technical alterations. In such a case, it would only be possible after the user has taken the product into service, to know, which of the two Directives does not apply to the product. Until then, both Directives shall be considered to be applicable. Such double marking would not violate the provisions of Article 19 of the PED, as, up to the moment the product was placed on the market, it was not excluded from the scope of the PED. When at a later point in time the product is de facto used in the context of a transportation of dangerous goods, the fact that it bears the CE marking is insignificant.
Note	

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Guideline A-31

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (a); Article 1 paragraph 2 (j)

Question	**Are NGV (Natural Gas Vehicles) filling stations covered by the PED?**
Answer	NGV filling stations are covered by PED. They are not excluded by Article 1 paragraph 2 (a) as annexed equipment designed specifically for pipelines. However, compressors are considered machinery as specified under Article 1 paragraph 2 (j) and thus may be excluded from PED (see PED Guideline A-11).
Reason	
Note	

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Guideline A-33

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (s)

Question	**Can receptacles (in the meaning of Article 2 of Transportable Pressure Equipment Directive) that are « pi » marked be used as static pressure equipment without being CE marked?**
Answer	Yes, provided the « pi » marked receptacle has been placed on the market and used as transportable pressure equipment, it can then be used permanently as static pressure equipment without being CE marked.
Reason	
Note 1	For static use the receptacle may be subject to national regulation dealing with conditions of use, installation and periodic inspection. (see also Article 3 of TPED 2010/35/EU- On-site requirements)
Note 2	The term “static pressure equipment” has to be understood as “pressure equipment under the scope of Pressure Equipment Directive”, even though these receptacles fall under Article 1 paragraph 2 (s) of PED.
Note 3	See PED Guideline A-30 for receptacles with double CE-mark and π-mark.

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Guideline A-34

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (s); Article 4 paragraph 1 (a) and Annex II

Question	**Is a slurry tanker that is emptied by compressed air within the scope of the Pressure Equipment Directive?**
Answer	Yes, if the PS of the compressed air is greater than 0,5 bar. The PS of compressed air and internal volume of the tank determine the category according to the table 2 of Annex II.
Reason	Slurry tankers are not excluded from the scope of the PED due to Article 1 paragraph 2 (s). They are not tanks intended for carriage of dangerous goods.
Note	"Slurry tanker" is used in farms to fertilize the fields with liquid manure. It is a tank on wheels usually pulled by a tractor in the fields and from one field to another. Compressed air facilitates the emptying of the tank. See also PED Guideline A-02.

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Guideline A-35

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2(s) and Article 4 paragraph 1(a)(i)

Question	**Are propellant gas cartridges *) for fire extinguishers in the scope of the Pressure Equipment Directive?**
Answer	These cartridges when transported separately are covered by ADR and consequently excluded from PED due to Article 1 paragraph 2(s). If such cartridge is used in a fire extinguisher (a PED assembly) it is in the scope of the PED directive . For further specific information see PED Guideline C-20.
Reason	
Note	See PED Guidelines A-01 and B-14
	*) The term used in the context of the ADR is different depending on size: propellant gas cartridges can either be (non-refillable or refillable) cylinders or (non-refillable) gas cartridges.

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Guideline A-36

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2(s); Article 4 paragraph 1(a), Annex II Table 2

Question	**Are gas cylinders, which are placed on the market to be used for fixed fire extinguishing installations, covered by the Pressure Equipment Directive (PED) or by the Transportable Pressure Equipment Directive (TPED)?**
Answer	If they are transported in a pressurized condition (e.g. to or from the filling station) they are covered by the ADR convention. Such gas cylinders are therefore excluded from the PED by virtue of Article 1 paragraph 2(s). Such cylinders are covered by the TPED.
Reason	
Note 1	They do not fall under the case of Article 4 paragraph 1(a)(i) second indent, which only refers to portable extinguishers.
Note 2	If they are not transported in pressurised condition but filled/refilled at the installation site they are covered by the PED.

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Guideline A-37

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2(i)

Question	**Are items of pressure equipment such as manifolds, valves and piping used as well-control equipment and placed between a subsea well template and the processing platform for the oil and gas extraction and processing industry covered by the Pressure Equipment Directive (PED) ?**
Answer	No
Reason	The exclusion of Article 1 paragraph 2((i) applies to all the well-control equipment listed therein, plus all equipment UPSTREAM in relation to that well-control equipment.
Note 1	In some cases, processing equipment is interposed on the seabed (e.g. separators) between the equipment listed in Article 1 paragraph 2(i) and the pipeline(s). In such cases, the processing equipment is covered by the PED.
Note 2	The PED in general, and Article 1 paragraph 2(i) in particular, does not distinguish between subsea and surface equipment.
Note 3	Specific solutions to essential safety requirements shall take account of the subsea use of this equipment, as a result of the hazard analysis.

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Guideline A-38

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (3); Article 1 paragraph 2 (b), Annex II Table 7 and Table 9

Question	**Is piping in fire extinguishing systems in the scope of the Pressure Equipment Directive (PED)?**
Answer	Yes
Reason	1) Even though extinguishing gas (such as CO2 or inert gas) piping will be only momentarily pressurised during activation of the extinguishing system and such piping is open at the discharge end, it will be exposed to a pressure PS above 0,5 bar. 2) The piping of a sprinkler system is not considered to be covered by exclusion of Article 1 paragraph 2 (b), as it is not a network for the supply, distribution and discharge of water.
Note 1	The location where the pressure PS is specified shall be such to be representative of the maximum pressure to which the piping will be exposed.
Note 2	Table 7 of Annex II is to be used for classification if content is CO_2, or inert gas. For sprinkler systems, table 7 is to be used for "dry piping installation", and table 9 for water.
Note 3	The PED is limited only to pressure-related hazards. Function and performance of fire extinguishing systems are not covered by the PED. See also PED Guidelines A-09 and I-08.

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Guideline A-39

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2 (f)

Question	**Article 1 paragraph 2(f) states that all "equipment classified as no higher than category I under Article 13 of this Directive and covered by one of the following Directives: [….]" are excluded from the scope of this Directive:".** **Does this exclusion also cover assemblies?**
Answer	Yes
Reason	While the categories are defined in Article 13 for items of pressure equipment, the same categories are applied to and used in the context of Assemblies in Article 14. The Directive clearly defines a category for each assembly in Article 14 paragraph 2.6 (b) and requires that the applicable conformity assessment modules are used as per Article 14 paragraph 2. Consequently there is no problem to determine, which assemblies are excluded from the pressure equipment directive by Article 1 paragraph (f).
Note [x]	

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Guideline A-40

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (5)

Question	**What does "pressure-bearing housing" mean in the definition of pressure accessory in Article 2 (5) ?**
Answer	The term pressure-bearing housing refers to an envelope in which fluid under pressure (PS > 0,5) is contained or transported (volume V > 0). Therefore, a product whose only pressure-bearing surface is a flange or screwed fitting is not a pressure accessory but is a component of an item of pressure equipment under the Pressure Equipment Directive (PED) when used on such equipment. Typical examples of components which are not pressure accessories: Level Switch, Flush Mounted Pressure Transmitter and Thermowell.
Reason	
Note	This does not apply to such devices when employed in a safety function. See also PED Guidelines A-08, A-22, A-25 and G-19.

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Guideline A-41

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 1 paragraph 2(e), Article 1 paragraph 2(s)

Question	**Is a liquefied petroleum gas (LPG) or compressed natural gas (CNG) vessel (tank) permanently installed in an engine powered fork lift truck in the scope of the PED?**
Answer	Yes, such an LPG or CNG vessel is in the scope of the PED and must be assessed according to its maximum allowable pressure and volume.
Reason	An engine powered fork lift truck is not a motor vehicle in the sense of Directive 2007/46/EC, so the exclusion of the Article 1 paragraph 2(e) does not apply.
Note 1	Transportable gas cylinders which can also be used for fork lift trucks are in the scope of ADR and as such are excluded from the PED, due to Article 1 paragraph 2(s).
Note 2	The same applies to similar machinery not covered by Directive 2007/46/EC.

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Guideline A-42

Pressure Equipment Directive PED 2014/68/EU
Commission's Working Group "Pressure"

Guideline related to: Article 2 (3), Annex I Section 2.2.1

Question	**Is the discharge piping from a pressure safety accessory, which will be exposed to a pressure PS above 0,5 bar, in the scope of the Pressure Equipment Directive (PED) when exhausting to ambient atmosphere ?**
Answer	Yes
Reason	Even though discharge piping will be only momentarily pressurised, and such piping is open at the discharge end, it fulfils the definition of piping in Article 2 (3).
Note 1	A silencer installed in the discharge piping is excluded according to Article 1 paragraph 2(p)
Note 2	The location where the pressure PS is specified shall be such to be representative of the maximum pressure to which the piping will be exposed.

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Documents
Document Sharing Hub
Full document details: Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED)