

# DIN EN 16327:2014-07 (E)

## Fire-fighting - Positive-pressure proportioning systems (PPPS) and compressed-air foam systems (CAFS)

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
Introduction .....		5
1	Scope .....	7
2	Normative references .....	8
3	Terms and definitions .....	9
4	List of significant hazards .....	11
5	Classification and designation .....	14
5.1	Classification and designation of positive-pressure proportioning systems (PPPS) .....	14
5.2	Classification and designation of compressed-air foam systems (CAFS) .....	15
6	Safety requirements and/or protective measures .....	16
6.1	Safety requirements applying to all systems .....	16
6.1.1	General .....	16
6.1.2	Mechanical equipment .....	17
6.1.3	Electrical equipment .....	17
6.1.4	Thermal hazards .....	18
6.1.5	Ergonomic design principles .....	18
6.1.6	System failure and continuation of on-going fire-fighting operations .....	19
6.1.7	Maintenance .....	19
6.1.8	Protection against over-speed .....	19
6.1.9	Shutdown device .....	19
6.1.10	Injection of foam concentrates .....	19
6.2	Additional safety requirements for compressed-air foam systems (CAFS) .....	20
7	Performance requirements .....	20
7.1	Performance requirements applying to all systems .....	20
7.2	Additional performance requirements for positive-pressure proportioning systems (PPPS) .....	22
7.3	Additional performance requirements for compressed-air foam systems (CAFS) .....	22
8	Type test report .....	23
9	Information for users .....	24
9.1	General .....	24
9.2	Symbols, warning symbols and warning notes .....	24
9.3	Accompanying documents .....	24
9.3.1	General .....	24
9.3.2	Contents .....	24
10	Marking .....	27
Annex A (informative)	Guideline for acceptance inspection and testing of each delivered system .....	28
Annex B (informative)	Sample of a positive-pressure proportioning system (PPPS) operating range diagram .....	29

<b>Annex C (informative) Sample of a compressed-air foam system (CAFS) operating range diagram .</b>	<b>30</b>
<b>Annex D (normative) Test Procedure for finished CAFS Foam .....</b>	<b>31</b>
<b>Annex E (informative) Technical CAFS diagrams .....</b>	<b>34</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....</b>	<b>36</b>
<b>Bibliography .....</b>	<b>37</b>
<b>Figures Figure B.1- Sample diagram showing the operating range of a type PPPS 2400 positive-pressure proportioning system .....</b>	<b>29</b>
<b>Figure C.1 - Sample diagram showing the operating range of a compressed-air foam system (CAFS); maximum flows at ratio adjusted settings .....</b>	<b>30</b>
<b>Figure D.1 -- Collecting vessel for determination of expansion and drainage time .....</b>	<b>32</b>
<b>Figure D.2 -- Foam collector for expansion and drainage measurement .....</b>	<b>32</b>
<b>Figure D.3 -- Arrangement of nozzle and collecting-device during test .....</b>	<b>33</b>
<b>Figure E.1 -- Sample of a typical system diagram for CAFS with a single mixing device .....</b>	<b>34</b>
<b>Figure E.2 -- Sample of a typical CAFS with multiple mixing devices .....</b>	<b>35</b>
<b>Tables Table 1 -- List of significant hazards .....</b>	<b>12</b>
<b>Table 2 - Classification of positive-pressure proportioning systems (PPPS) .....</b>	<b>14</b>
<b>Table 3 - Classification of compressed-air foam systems (CAFS) .....</b>	<b>15</b>