

DIN EN 17969:2026-09 (E)

Earth-moving machinery - Safety - Contamination protective systems

Contents

Page

European foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and abbreviations	8
3.1 Terms and definitions	8
3.2 Abbreviations	10
4 Safety requirements and/or protective/risk reduction measures	10
4.1 General	10
4.2 General requirements	10
4.2.1 Requirements for the operator's cab	10
4.2.2 Requirements for providing breathing air	10
4.2.3 Overpressure of the cab	11
4.2.4 Information on operating condition of protective ventilation system	12
4.2.5 Noise at the operator's station	12
4.2.6 Visibility	12
4.2.7 Vibration	13
4.2.8 Access	13
4.2.9 Maintenance	13
4.2.10 Filter unit handling	13
4.2.11 Ventilation system mounting	13
4.2.12 Requirements for control devices	13
4.2.13 Moving parts	14
4.2.14 Protection against electrical hazards	14
4.2.15 Electromagnetic compatibility	15
4.3 Special provisions for machinery with particle filter units or gas filter units	15
4.3.1 Common provisions	15
4.3.2 Requirements for particle protective ventilation system	16
4.3.3 Requirements for gas protective ventilation system	16
4.4 Special provisions for machinery with breathing compressed air unit as protective ventilation systems	17
4.4.1 Air characteristics	17
4.4.2 Pressure indicator	18
4.4.3 Air bottles fixing	18
4.4.4 Cylinder pressure control	18
4.4.5 Protection of the components for breathing compressed air unit as protective ventilation systems	18
4.4.6 Protection of the fittings outside the operator station	18
5 Verification of the safety requirements and/or protective/risk reduction measures	18
6 Information for use	21
6.1 General	21
6.2 Operator's manual	21
6.2.1 General	21
6.2.2 Operator's manual for operation, maintenance and application of the filters	22
6.2.3 Information concerning airborne noise emission	22

6.3	Marking	23
6.3.1	Protective ventilation system	23
6.3.2	Filters	23
6.3.3	Contaminant filtration warning	23
Annex A (informative) List of significant hazards		24
Annex B (informative) Non-exhaustive list of possible configurations for contamination protective system		27
Annex C (informative) Cab overpressure vs relative wind speed		30
Annex D (normative) Determination of the nominal airflow of the protective ventilation system		31
Annex E (normative) Determination of the protection capacity of the gas filters		32
E.1	General	32
E.2	Test procedure	32
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered		38
Annex ZB (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2023/1230 aimed to be covered		41
Bibliography		45