

EPD Electrical drives and pneumatic cylinders

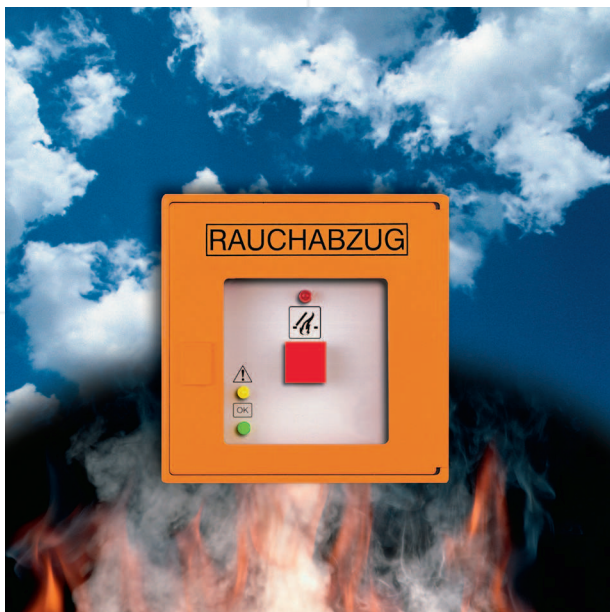
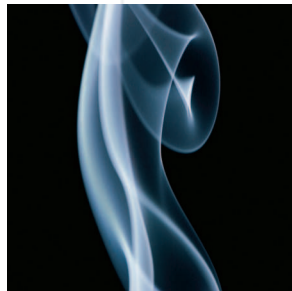
Short version

Environmental Product Declaration

in accordance with ISO 14025 and EN 15804

Electrical drives and pneumatic cylinders for SHEV and ventilation systems

Aumüller Aumatic GmbH



Declaration code
M-EPD-AZR-GB-001

Note: This EPD based on the model-EPD Electrical drives and pneumatic cylinders



Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Electrical drives and pneumatic cylinders for SHEV and ventilation systems



Summary (Part 1 of 2)

Programme operator	ift Rosenheim GmbH Theodor-Gietl-Strasse 7-9 D-83026 Rosenheim		LCA prepared by	Life Cycle Engineering Experts Berliner Allee 58 D-64295 Darmstadt	
Declaration holder	Aumüller Aumatic GmbH Gemeindewald 11 86672 Thierhaupten				

LCA results – drives per Watt of power		Product stage	Construction stage		Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE _{n renw}) in MJ		4.48	0.05	-	-	-	-	4.48
Primary energy – renewable (PE _{renw}) in MJ		1.08	3.02E-3	-	-	-	-	1.08
Global warming potential (GWP 100) in kg CO ₂ -equiv.		0.34	3.73E-3	-	-	-	-	0.34
Ozone depletion potential (ODP) in kg R11-equiv.		6.42E-9	7.77E-14	-	-	-	-	6.42E-9
Acidification potential (AP) in kg SO ₂ -equiv.		1.56E-3	1.54E-5	-	-	-	-	1.56E-3
Eutrophication potential (EP) in kg PO ₄₃ -equiv.		1.22E-4	3.69E-6	-	-	-	-	1.22E-4
Photochemical ozone creation potential (POCP) in kg C ₂ H ₄ -equiv.		1.04E-4	-5.08E-6	-	-	-	-	1.04E-4
Abiotic depletion potential (elements) (ADP _{el}) in kg Sb-equiv.		2.35E-6	1.72E-10	-	-	-	-	2.35E-6
Abiotic depletion potential (fossil) (ADP _{fos}) in MJ		4.61	0.05	-	-	-	-	4.61
Water consumption in m ³		1.74	2.27E-4	-	-	-	-	1.74

The values expressed as [-] cannot be shown since they are inexistent or marginal. Sections that are not relevant are described in the Annex.

Prof. Ulrich Sieberath Director of Institute	Dipl.-Ing. (FH) Florian Stich, Verifier

Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Electrical drives and pneumatic cylinders for SHEV and ventilation systems



Summary (Part 1 of 2)

Declaration code	M-EPD-AZR-GB-001
Designation of declared product	Electrical drives Pneumatic cylinders
Scope	Smoke and heat exhaust ventilation systems, or their components, which, through their interaction, exhaust smoke and heat from buildings. Smoke and heat control systems. Ventilation systems for maintaining specific air change rates

Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	D
-	3.20	-	-	5.97E-3	-	-	-3.18
-	0.63	-	-	3.53E-4	-	-	-0.80
-	0.23	-	-	4.36E-4	-	-	-0.26
-	1.25E-10	-	-	9.08E-15	-	-	-6.39E-9
-	3.86E-4	-	-	1.79E-6	-	-	-1.33E-3
-	4.39E-5	-	-	4.31E-7	-	-	-9.55E-5
-	2.75E-5	-	-	-5.94E-7	-	-	-8.06E-5
-	3.56E-8	-	-	2.07E-11	-	-	-1.11E-6
-	3.20	-	-	0.01	-	-	-3.18
-	0.47	-	-	2.65E-5	-	-	-1.58

The table shows an extract of the environmental impacts. All values required as per EN 15804 are presented in the detailed version

Basis

- EN ISO 14025:2011
- EN 15804:2012

Guidance on preparing Type III Environmental Product Declarations.

This Declaration is based on the PCR document "Building components for smoke and heat control systems" PCR-RW-1.1 : 2013

Validity

This verified Environmental Product Declaration applies solely to the specified products and is valid for a period of 5 years from the date of issue.

The declaration holder assumes full liability for the underlying data, certificates and verifications.

Publication date:
18 December 2013

Date of issue:
19 December 2013

Next revision:
18 December 2018

LCA basis

The LCA was prepared in accordance with EN ISO 14040 and EN ISO 14044. The base data include both averaged data collected from two manufacturers and generic data from the "GaBi 6" database. LCA calculations were based on the "cradle to grave" life cycle including all upstream processes (e.g. raw material extraction, etc.).

Notes on publication

The "Conditions and Guidance on the Use of IFT Test Documents" apply.

Environmental Product Declaration in accordance with ISO 14025 and EN 15804

Electrical drives and pneumatic cylinders for SHEVS and ventilation systems



Summary (Part 2 of 2)

Programme operator	ift Rosenheim GmbH Theodor-Gietl-Strasse 7-9 D - 83026 Rosenheim		LCA prepared by	Life Cycle Engineering Experts Berliner Allee 58 D-64295 Darmstadt	
Declaration holder	Aumüller Aumatic GmbH Gemeindewald 11 86672 Thierhaupten				

LCA results – cylinders per mm diameter		Product stage	Construction stage		Use stage			
		A1 – A3	A4	A5	B1	B2	B3	B4
Primary energy – non-renewable (PE _{n renw}) in MJ		5.55	0.07	-	-	-	-	5.55
Primary energy – renewable (PE _{renw}) in MJ		1.45	4.14E-3	-	-	-	-	1.45
Global warming potential (GWP 100) in kg CO ₂ -equiv.		0.41	5.11E-3	-	-	-	-	0.41
Ozone depletion potential (ODP) in kg R11-equiv.		6.57E-9	1.06E-13	-	-	-	-	6.57E-9
Acidification potential (AP) in kg SO ₂ -equiv.		1.74E-3	2.1E-5	-	-	-	-	1.74E-3
Eutrophication potential (EP) in kg PO ₄ ³⁻ -equiv.		1.26E-4	5.05E-6	-	-	-	-	1.26E-4
Photochemical ozone creation potential (POCP) in kg C ₂ H ₄ -equiv.		1.13E-3	-6.95E-6	-	-	-	-	1.13E-3
Abiotic depletion potential (elements) (ADP _{el}) in kg Sb-equiv.		2.19E-6	2.35E-10	-	-	-	-	2.19E-6
Abiotic depletion potential (fossil) (ADP _{fos}) in MJ		5.68	0.07	-	-	-	-	5.68
Water consumption in m ³		2.24	3.11E-4	-	-	-	-	2.24

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Use stage			End-of-life stage				Recycling potential
B5	B6	B7	C1	C2	C3	C4	D
-	1161.00	-	-	8.17E-3	-0.07	-	-3.48
-	226.70	-	-	4.83E-4	-0.01	-	-0.98
-	83.09	-	-	5.97E-4	-6.02E-3	-	-0.29
-	4.52E-8	-	-	1.24E-14	-9.75E-11	-	-6.66E-9
-	0.14	-	-	2.46E-6	-2.56E-5	-	-1.43E-3
-	0.02	-	-	5.90E-7	-2.64E-6	-	-8.93E-5
-	9.98E-3	-	-	-8.12E-7	-1.71E-6	-	-8.09E-5
-	1.29E-5	-	-	2.75E-11	-2.53E-8	-	-7.86E-7
-	1161.00	-	-	8.17E-3	-0.07	-	-3.48
-	170.20	-	-	3.63E-5	-0.02	-	-1.97

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