ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804 for:

BASIC-FLO A, UF, P

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-02117
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Programme information

PRODUCT CATEGORY RULES (PCR): PCR 2012:01 Construction products and construction services; version 2.32 of 2020-07-01, valid until 2020-12-31

PCR REVIEW WAS CONDUCTED BY: Technical Committee of the International EPD® System. Contact via info@environdec.com

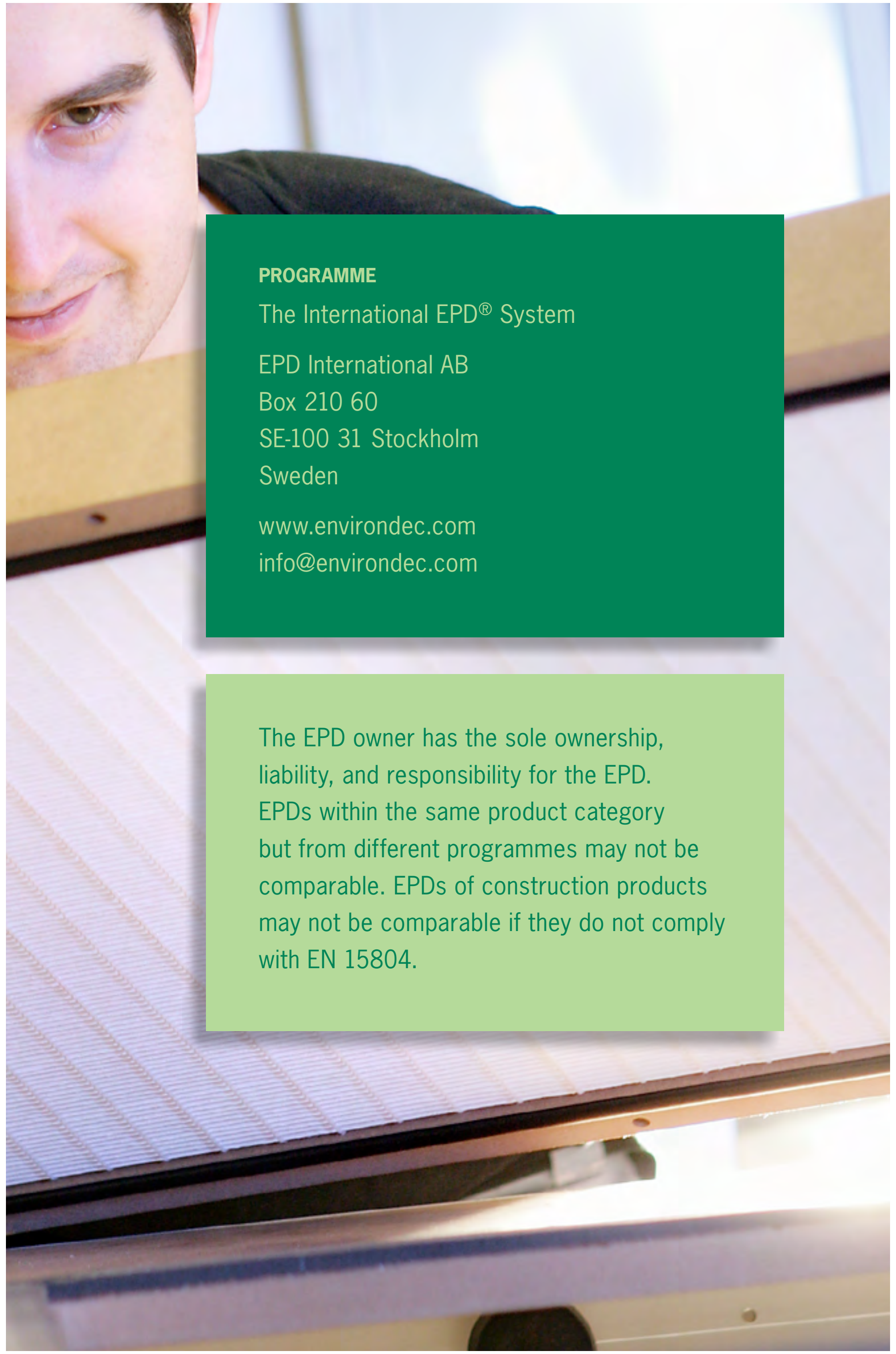
INDEPENDENT THIRD-PARTY VERIFICATION OF THE DECLARATION AND DATA, ACCORDING TO ISO 14025:2006: ☐ EPD process certification ☑ EPD verification

LCA STUDY CONDUCTED BY: IVL Swedish Environmental Research Institute.

THIRD PARTY VERIFIER: Martyna Mikusinska, Sweco

IN CASE OF RECOGNISED INDIVIDUAL VERIFIERS:
APPROVED BY: The International EPD® System

PROCEDURE FOR FOLLOW-UP OF DATA DURING EPD VALIDITY INVOLVES THIRD PARTY VERIFIER: ☐ Yes ☑ No



PROGRAMME

The International EPD® System

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The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Company information

As a leading manufacturer of premium clean air solutions, Camfil provides commercial and industrial solutions for air filtration and air pollution control that improves worker and equipment productivity, minimises energy use, benefits human health and the environment. More information about the organisation can be found on the website in the section About Camfil.

ISO 9001
ISO 14001

EUROVENT CERTIFIED PERFORMANCE
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Basic-Flo A, UF, P

Basic-Flo A, UF, P is a bag filter produced by Camfil Svenska AB (Trosa, Sweden) with dimensions according to EN 15805, and filtration classes according to ISO 16890. It consists of a galvanized steel frame and synthetic media, for the particle filtration of air and other gases.

Bag filters, or pocket filters, are used in HVAC applications as final filters in industrial, commercial and residential applications, and also serves as prefilters in HEPA installations to improve indoor air quality and comfort.

The filters in the supply air are used in first and second filter stages, either as complete filtration solution for these applications or as prefilters for cleanroom process applications. The filters are also used in the exhaust air or in recirculation systems to protect the air handling units. Bag filters have a significantly higher dust holding capacity and longer lifetime than other filters.

The service life of bag filters is dependent on the end user preferences. It may vary also for different types of installation and geographical location of the site, where the filter is installed. However, 1 year is an average lifetime of the filter, based on dust loading and related to its pressure drop increase, which results in high energy consumption. In addition, VDI 6022 recommends filter change after 1 year for the first filter stage for hygienic reasons.

UN CPC CODE

CPC 2.1: 43914 – Filtering or purifying machinery and apparatus, for liquids or gases, except oil filters, petrol filters and air intake filters for internal combustion engines. HS 2017: 842139 – Machinery; for filtering or purifying gases, other than intake air filters for internal combustion engines.

BASIC-FLO A, UF, P ATTRIBUTES

- Full module standard size: 592x592 mm (WxH)
- Available in many different sizes, for more information see product information
- Depth: 370–600 mm
- Frame material: Galvanized steel
- Media: Synthetic

Life Cycle Analysis

The life cycle stages included in the assessment are A1-A4 and B6 (Operational energy use). The scope of the EPDs generated corresponds to the so-called cradle-to-gate with options, as described in the PCR for construction products and construction services (v 2.32) used. This means that additional life cycle stages except the mandatory stages A1-A3 are also included, which is A4 (Transport) and B6 (Operational energy).

FUNCTIONAL UNIT / DECLARED UNIT: 1 bag filter.

REFERENCE SERVICE LIFE: One year.

TIME REPRESENTATIVENESS: Data collection was performed during 2019 and 2020. Data for the processes in A3 represent data for the year 2019. Age of background data range between year 2014 and 2019.

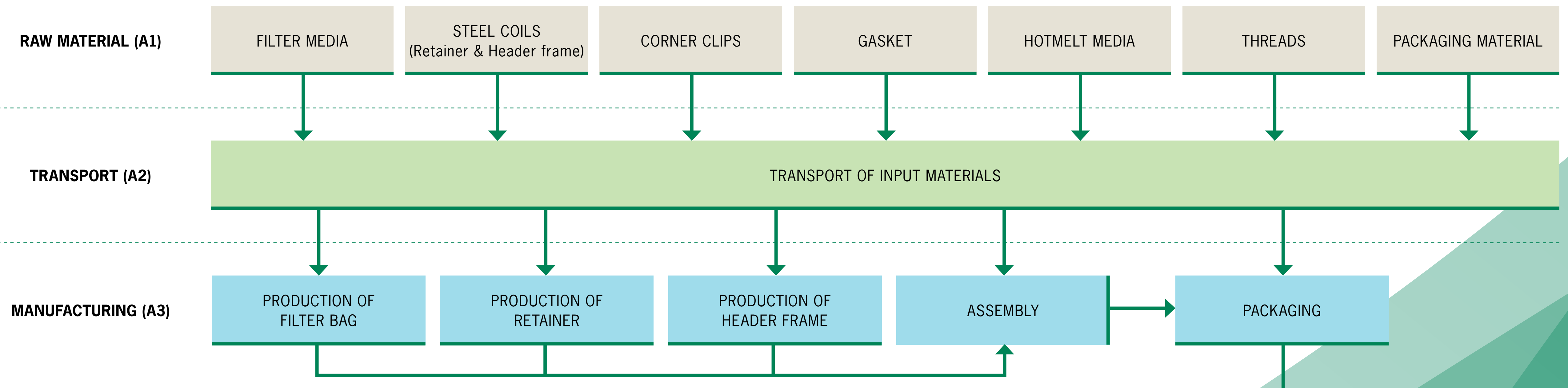
LCA SOFTWARE USED: GaBi ts professional version 9.2.1, Service Pack 40.

DATABASE USED: Thinkstep Database SP 40, Ecoinvent v. 3.5.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USAGE STAGE							END OF LIFE STAGE				RESOURCE RECOVERY STAGE
Raw materials	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	**X**	**X**	**X**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**X**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**

GEOGRAPHICAL SCOPE: Europe and Sweden – production of materials and components (A1) and transportation to the manufacturing site (A2); Sweden – manufacturing (A3), transport to the customer (A4) and use (B6).

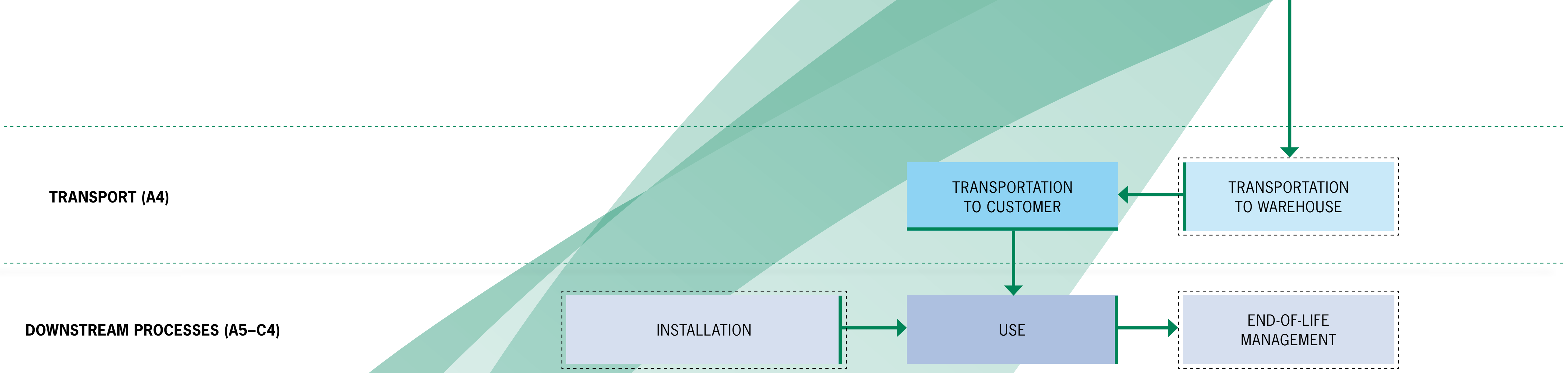
Description of system boundaries:



MODULE A1 covers extraction and processing of raw materials, as well as production of the materials and components used for production of bag filters: filter media, steel coils, corner clips, gasket, hotmelt media, threads and packaging material.

MODULE A2 covers transportation of the materials and components to the production site in Trosa (Sweden).

MODULE A3 covers production of the bag filters at the production site in Trosa. This stage includes electricity consumption for bag assembly and filter assembly, as well as electricity used to bend steel coil during production of a header frame and retainer for each filter bag.



MODULE A4 covers transportation of the filter bag to the customer. An average transport distance to the customer is assumed to be representative for the year 2019.

MODULE B6 covers electricity consumption during use phase of the bag filter during one year. Calculation of electricity consumption was performed according to Eurovent 4/21-2018.

CUT-OFF CRITERIA:

Close to 100% of all raw material used in the production has been included in the model calculations. In other words, the study applies a cut-off criterion of maximum 5%, which complies with the maximum cut-off criteria established by the standard.

Recycled material enters the system boundaries without any burden from previous life cycles. Recycling processes and transports of the material to the production site are included.

EXCLUDED LIFECYCLE STAGES:

- Impact from production and maintenance of infrastructure and equipment used for the manufacturing of the products was excluded from the study (since it was assumed to have a minor share per one product). However, the electricity used by that equipment was included.
- Business travel of personnel.
- Travel to and from work by personnel.
- The study does not fully cover a cradle-to-grave perspective as the deconstruction, transport to a waste management site and the waste management of the filters are not included.

NOT INCLUDED

Content declaration

ALL MATERIALS / COMPONENTS	SUBSTANCES	WEIGHT %	ENVIRONMENTAL CLASS	HEALTH CLASS
Steel-frame		26.3-37.8%		
Steel, Galv.	Steel, Galv. Z100 MAC	(100%)	No	No
Filter media Basic-Flo		27.6-37.8%		
Filter media Basic-Flo	Polypropylene	(60-70%)	No	No
Filter media Basic-Flo	Polyester	(0-20%)	No	No
Hot melt		3.1-3.5%		
Hot melt	Wax	(<20%)	No	No
Hot melt	Polymer	(<40%)	No	No
Hot melt	Ester with glycerol	(<0,5%) <0,045%	No	No
Hot melt	Antioxinant	(<50%)	No	No
Thread		0.39-0.54%		
Thread	Polyester	(100%)	No	No

PACKAGING

Distribution packaging: cardboard box and labels (PET).

RECYCLED MATERIAL

Provenience of recycled materials (pre-consumer or post-consumer) in the product: N/A.

Environmental performance

A7/370

Potential environmental impact

BASIC-FLO A7/370 — Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
Abiotic Depletion (ADP elements) [kg Sb eq.]	$6.81 \cdot 10^{-5}$	$6.35 \cdot 10^{-9}$	$1.87 \cdot 10^{-8}$	**$6.81 \cdot 10^{-5}$**	*$6.07 \cdot 10^{-9}$*	*$1.18 \cdot 10^{-4}$*	$1.87 \cdot 10^{-4}$
Abiotic Depletion (ADP fossil) [MJ]	83.1	1.07	$2.35 \cdot 10^{-2}$	**84.2**	*$9.79 \cdot 10^{-1}$*	*$6.32 \cdot 10^{2}$*	$7.17 \cdot 10^{2}$
Acidification Potential (AP) [kg SO_2 eq.]	$1.15 \cdot 10^{-2}$	$2.20 \cdot 10^{-4}$	$1.52 \cdot 10^{-5}$	**$1.17 \cdot 10^{-2}$**	*$1.79 \cdot 10^{-4}$*	*$2.93 \cdot 10^{-1}$*	$3.05 \cdot 10^{-1}$
Eutrophication Potential (EP) [kg Phosphate eq.]	$9.98 \cdot 10^{-4}$	$5.39 \cdot 10^{-5}$	$2.93 \cdot 10^{-6}$	**$1.05 \cdot 10^{-3}$**	*$4.38 \cdot 10^{-5}$*	*$5.50 \cdot 10^{-2}$*	$5.61 \cdot 10^{-2}$
Global Warming Potential (GWP 100 years) [kg CO_2 eq.]	5.32	$7.88 \cdot 10^{-2}$	$1.26 \cdot 10^{-1}$	**5.52**	*$7.22 \cdot 10^{-2}$*	*89.9*	95.5
Global Warming Potential (GWP 100 years), excl biogenic carbon [kg CO_2 eq.]	5.28	$7.91 \cdot 10^{-2}$	$1.26 \cdot 10^{-1}$	**5.49**	*$7.26 \cdot 10^{-2}$*	*94.3*	99.9
Ozone depletion [kg CFC-11 eq.]	$3.61 \cdot 10^{-8}$	$1.81 \cdot 10^{-17}$	$1.92 \cdot 10^{-15}$	**$3.61 \cdot 10^{-8}$**	*$1.67 \cdot 10^{-17}$*	*$2.95 \cdot 10^{-12}$*	$3.61 \cdot 10^{-8}$
Photochemical Ozone Creation Potential (POCP) [kg Ethene eq.]	$1.76 \cdot 10^{-3}$	**$-4.80 \cdot 10^{-5}$	$9.10 \cdot 10^{-7}$	**$1.71 \cdot 10^{-3}$**	*$-6.42 \cdot 10^{-5}$*	*$3.60 \cdot 10^{-2}$*	$3.76 \cdot 10^{-2}$

** A1-A3 mandatory stages for external reporting.*

*** The negative values for POCP for module A2 and A4 can be explained by the fact that NO has a reducing POCP effect as it reduces the ozone level. During night NO and O_2 react to NO_2 and O_2 and a reduction of the POCP is taking place. So net negative impacts occur when NO > NO_2.*

P7/380

Potential environmental impact

BASIC-FLO P7/380 — Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
Abiotic Depletion (ADP elements) [kg Sb eq.]	$8.58 \cdot 10^{-5}$	$8.88 \cdot 10^{-9}$	$2.66 \cdot 10^{-8}$	**$8.58 \cdot 10^{-5}$**	*$8.03 \cdot 10^{-9}$*	*$1.18 \cdot 10^{-4}$*	$2.04 \cdot 10^{-4}$
Abiotic Depletion (ADP fossil) [MJ]	$1.24 \cdot 10^{2}$	1.49	$4.80 \cdot 10^{-2}$	**$1.26 \cdot 10^{2}$**	*1.29*	*$6.32 \cdot 10^{2}$*	$7.58 \cdot 10^{2}$
Acidification Potential (AP) [kg SO_2 eq.]	$1.53 \cdot 10^{-2}$	$3.01 \cdot 10^{-4}$	$3.29 \cdot 10^{-5}$	**$1.56 \cdot 10^{-2}$**	*$2.36 \cdot 10^{-4}$*	*$2.93 \cdot 10^{-1}$*	$3.09 \cdot 10^{-1}$
Eutrophication Potential (EP) [kg Phosphate eq.]	$1.37 \cdot 10^{-3}$	$7.36 \cdot 10^{-5}$	$6.54 \cdot 10^{-6}$	**$1.45 \cdot 10^{-3}$**	*$5.79 \cdot 10^{-5}$*	*$5.50 \cdot 10^{-2}$*	$5.65 \cdot 10^{-2}$
Global Warming Potential (GWP 100 years) [kg CO_2 eq.]	7.46	$1.10 \cdot 10^{-1}$	$2.86 \cdot 10^{-1}$	**7.86**	*$9.55 \cdot 10^{-2}$*	*89.9*	97.9
Global Warming Potential (GWP 100 years), excl biogenic carbon [kg CO_2 eq.]	7.42	$1.10 \cdot 10^{-1}$	$2.86 \cdot 10^{-1}$	**7.82**	*$9.59 \cdot 10^{-2}$*	*94.3*	$1.0 \cdot 10^{2}$
Ozone depletion [kg CFC-11 eq.]	$4.54 \cdot 10^{-8}$	$2.52 \cdot 10^{-17}$	$2.61 \cdot 10^{-15}$	**$4.54 \cdot 10^{-8}$**	*$2.21 \cdot 10^{-17}$*	*$2.95 \cdot 10^{-12}$*	$4.54 \cdot 10^{-8}$
Photochemical Ozone Creation Potential (POCP) [kg Ethene eq.]	$2.36 \cdot 10^{-3}$	**$-6.79 \cdot 10^{-5}$	$1.95 \cdot 10^{-6}$	**$2.29 \cdot 10^{-3}$**	*$-8.49 \cdot 10^{-5}$*	*$3.60 \cdot 10^{-2}$*	$3.82 \cdot 10^{-2}$

** A1-A3 mandatory stages for external reporting.*

*** The negative values for POCP for module A2 and A4 can be explained by the fact that NO has a reducing POCP effect as it reduces the ozone level. During night NO and O_2 react to NO_2 and O_2 and a reduction of the POCP is taking place. So net negative impacts occur when NO > NO_2.*

A7

Potential environmental impact

BASIC-FLO A7 — Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
Abiotic Depletion (ADP elements) [kg Sb eq.]	$6.84 \cdot 10^{-5}$	$7.77 \cdot 10^{-9}$	$2.13 \cdot 10^{-8}$	**$6.84 \cdot 10^{-5}$**	*$7.05 \cdot 10^{-9}$*	*$1.15 \cdot 10^{-4}$*	$1.83 \cdot 10^{-4}$
Abiotic Depletion (ADP fossil) [MJ]	$1.13 \cdot 10^{2}$	1.30	$3.49 \cdot 10^{-2}$	**$1.14 \cdot 10^{2}$**	*1.14*	*$6.12 \cdot 10^{2}$*	$7.28 \cdot 10^{2}$
Acidification Potential (AP) [kg SO_2 eq.]	$1.29 \cdot 10^{-2}$	$2.57 \cdot 10^{-4}$	$2.36 \cdot 10^{-5}$	**$1.32 \cdot 10^{-2}$**	*$2.08 \cdot 10^{-4}$*	*$2.84 \cdot 10^{-1}$*	$2.97 \cdot 10^{-1}$
Eutrophication Potential (EP) [kg Phosphate eq.]	$1.21 \cdot 10^{-3}$	$6.30 \cdot 10^{-5}$	$4.67 \cdot 10^{-6}$	**$1.28 \cdot 10^{-3}$**	*$5.09 \cdot 10^{-5}$*	*$5.32 \cdot 10^{-2}$*	$5.45 \cdot 10^{-2}$
Global Warming Potential (GWP 100 years) [kg CO_2 eq.]	6.60	$9.58 \cdot 10^{-2}$	$2.03 \cdot 10^{-1}$	**6.90**	*$8.39 \cdot 10^{-2}$*	*87.1*	94.1
Global Warming Potential (GWP 100 years), excl biogenic carbon [kg CO_2 eq.]	6.56	$9.62 \cdot 10^{-2}$	$2.03 \cdot 10^{-1}$	**6.86**	*$8.43 \cdot 10^{-2}$*	*91.4*	98.3
Ozone depletion [kg CFC-11 eq.]	$3.61 \cdot 10^{-8}$	$2.20 \cdot 10^{-17}$	$2.12 \cdot 10^{-15}$	**$3.61 \cdot 10^{-8}$**	*$1.94 \cdot 10^{-17}$*	*$2.86 \cdot 10^{-12}$*	$3.61 \cdot 10^{-8}$
Photochemical Ozone Creation Potential (POCP) [kg Ethene eq.]	$1.99 \cdot 10^{-3}$	**$-5.99 \cdot 10^{-5}$	$1.40 \cdot 10^{-6}$	**$1.93 \cdot 10^{-3}$**	*$-7.46 \cdot 10^{-5}$*	*$3.48 \cdot 10^{-2}$*	$3.67 \cdot 10^{-2}$

** A1-A3 mandatory stages for external reporting.*

*** The negative values for POCP for module A2 and A4 can be explained by the fact that NO has a reducing POCP effect as it reduces the ozone level. During night NO and O_2 react to NO_2 and O_2 and a reduction of the POCP is taking place. So net negative impacts occur when NO > NO_2.*

UF7

Potential environmental impact

BASIC-FLO UF7 Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
Abiotic Depletion (ADP elements) [kg Sb eq.]	$7.73 \cdot 10^{-5}$	$9.46 \cdot 10^{-9}$	$2.63 \cdot 10^{-8}$	**$7.73 \cdot 10^{-5}$**	*$8.30 \cdot 10^{-9}$*	*$1.06 \cdot 10^{-4}$*	$1.83 \cdot 10^{-4}$
Abiotic Depletion (ADP fossil) [MJ]	$1.43 \cdot 10^{2}$	1.57	$5.34 \cdot 10^{-2}$	**$1.45 \cdot 10^{2}$**	*1.34*	*$5.65 \cdot 10^{2}$*	$7.11 \cdot 10^{2}$
Acidification Potential (AP) [kg SO_2 eq.]	$1.52 \cdot 10^{-2}$	$3.08 \cdot 10^{-4}$	$3.71 \cdot 10^{-5}$	**$1.55 \cdot 10^{-2}$**	*$2.44 \cdot 10^{-4}$*	*$2.63 \cdot 10^{-1}$*	$2.78 \cdot 10^{-1}$
Eutrophication Potential (EP) [kg Phosphate eq.]	$1.46 \cdot 10^{-3}$	$7.53 \cdot 10^{-5}$	$7.42 \cdot 10^{-6}$	**$1.54 \cdot 10^{-3}$**	*$5.99 \cdot 10^{-5}$*	*$4.92 \cdot 10^{-2}$*	$5.08 \cdot 10^{-2}$
Global Warming Potential (GWP 100 years) [kg CO_2 eq.]	8.10	$1.16 \cdot 10^{-1}$	$3.26 \cdot 10^{-1}$	**8.54**	*$9.87 \cdot 10^{-2}$*	*80.5*	89.1
Global Warming Potential (GWP 100 years), excl biogenic carbon [kg CO_2 eq.]	8.05	$1.17 \cdot 10^{-1}$	$3.26 \cdot 10^{-1}$	**8.49**	*$9.92 \cdot 10^{-2}$*	*84.4*	93.0
Ozone depletion [kg CFC-11 eq.]	$4.07 \cdot 10^{-8}$	$2.67 \cdot 10^{-17}$	$2.53 \cdot 10^{-15}$	**$4.07 \cdot 10^{-8}$**	*$2.29 \cdot 10^{-17}$*	*$2.64 \cdot 10^{-12}$*	$4.07 \cdot 10^{-8}$
Photochemical Ozone Creation Potential (POCP) [kg Ethene eq.]	$2.36 \cdot 10^{-3}$	**$-7.35 \cdot 10^{-5}$	$2.19 \cdot 10^{-6}$	**$2.29 \cdot 10^{-3}$**	$-8.78 \cdot 10^{-5}$	*$3.22 \cdot 10^{-2}$*	$3.44 \cdot 10^{-2}$

** A1-A3 mandatory stages for external reporting.*

*** The negative values for POCP for module A2 and A4 can be explained by the fact that NO has a reducing POCP effect as it reduces the ozone level. During night NO and O_2 react to NO_2 and O_2 and a reduction of the POCP is taking place. So net negative impacts occur when NO > NO_2.*

A7/370

Use of resources

BASIC-FLO A7/370 Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
01. Use of renewable primary energy (PERE) [MJ]	6.41	$5.66{\cdot}10^{-2}$	$5.93{\cdot}10^{-1}$	**7.06**	*$5.52{\cdot}10^{-2}$*	*$6.84{\cdot}10^{3}$*	$6.84{\cdot}10^{3}$
02. Primary energy resources used as raw materials (PERM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
03. Total use of renewable primary energy resources (PERT) [MJ]	6.41	$5.66{\cdot}10^{-2}$	$5.93{\cdot}10^{-1}$	**7.06**	*$5.52{\cdot}10^{-2}$*	*$6.84{\cdot}10^{3}$*	$6.84{\cdot}10^{3}$
04. Use of non-renewable primary energy (PENRE) [MJ]	86.6	1.07	$2.76{\cdot}10^{-2}$	**87.7**	*$9.82{\cdot}10^{-1}$*	*$7.88{\cdot}10^{3}$*	$7.97{\cdot}10^{3}$
05. Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
06. Total use of non-renewable primary energy resources (PENRT) [MJ]	86.6	1.07	$2.76{\cdot}10^{-2}$	**87.7**	*$9.82{\cdot}10^{-1}$*	*$7.88{\cdot}10^{3}$*	$7.97{\cdot}10^{3}$
07. Input of secondary material (SM) [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
08. Use of renewable secondary fuels (RSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
09. Use of non-renewable secondary fuels (NRSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
10. Use of net fresh water (FW) [m^3]	$1.40{\cdot}10^{-2}$	$6.56{\cdot}10^{-5}$	$1.17{\cdot}10^{-3}$	**$1.52{\cdot}10^{-2}$**	*$6.39{\cdot}10^{-5}$*	*11.8*	11.8

** A1-A3 mandatory stages for external reporting.*

Use of resources

P7/380

BASIC-FLO P7/380 Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
01. Use of renewable primary energy (PERE) [MJ]	10.1	$7.93·10^{-2}$	$8.10·10^{-1}$	**11.0**	*$7.29·10^{-2}$*	*$6.84·10^{3}$*	$6.85·10^{3}$
02. Primary energy resources used as raw materials (PERM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
03. Total use of renewable primary energy resources (PERT) [MJ]	10.1	$7.93·10^{-2}$	$8.10·10^{-1}$	**11.0**	*$7.29·10^{-2}$*	*$6.84·10^{3}$*	$6.85·10^{3}$
04. Use of non-renewable primary energy (PENRE) [MJ]	$1.29·10^{2}$	1.49	$5.66·10^{-2}$	**$1.31·10^{2}$**	*1.30*	*$7.88·10^{3}$*	$8.01·10^{3}$
05. Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
06. Total use of non-renewable primary energy resources (PENRT) [MJ]	$1.29·10^{2}$	1.49	$5.66·10^{-2}$	**$1.31·10^{2}$**	*1.30*	*$7.88·10^{3}$*	$8.01·10^{3}$
07. Input of secondary material (SM) [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
08. Use of renewable secondary fuels (RSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
09. Use of non-renewable secondary fuels (NRSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
10. Use of net fresh water (FW) [m^3]	$1.98·10^{-2}$	$9.20·10^{-5}$	$1.84·10^{-3}$	**$2.17·10^{-2}$**	*$8.44·10^{-5}$*	*11.8*	11.8

** A1-A3 mandatory stages for external reporting.*

A7

Use of resources

BASIC-FLO A7 Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
01. Use of renewable primary energy (PERE) [MJ]	9.62	$6.95 \cdot 10^{-2}$	$6.55 \cdot 10^{-1}$	**10.3**	*$6.41 \cdot 10^{-2}$*	*$6.62 \cdot 10^{3}$*	$6.63 \cdot 10^{3}$
02. Primary energy resources used as raw materials (PERM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
03. Total use of renewable primary energy resources (PERT) [MJ]	9.62	$6.95 \cdot 10^{-2}$	$6.55 \cdot 10^{-1}$	**10.3**	*$6.41 \cdot 10^{-2}$*	*$6.62 \cdot 10^{3}$*	$6.63 \cdot 10^{3}$
04. Use of non-renewable primary energy (PENRE) [MJ]	$1.18 \cdot 10^{2}$	1.30	$4.12 \cdot 10^{-2}$	**$1.19 \cdot 10^{2}$**	*1.14*	*$7.63 \cdot 10^{3}$*	$7.75 \cdot 10^{3}$
05. Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
06. Total use of non-renewable primary energy resources (PENRT) [MJ]	$1.18 \cdot 10^{2}$	1.30	$4.12 \cdot 10^{-2}$	**$1.19 \cdot 10^{2}$**	*1.14*	*$7.63 \cdot 10^{3}$*	$7.75 \cdot 10^{3}$
07. Input of secondary material (SM) [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
08. Use of renewable secondary fuels (RSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
09. Use of non-renewable secondary fuels (NRSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
10. Use of net fresh water (FW) [m^3]	$1.89 \cdot 10^{-2}$	$8.06 \cdot 10^{-5}$	$1.43 \cdot 10^{-3}$	**$2.04 \cdot 10^{-2}$**	*$7.42 \cdot 10^{-5}$*	*11.4*	11.4

** A1-A3 mandatory stages for external reporting.*

UF7

Use of resources

BASIC-FLO UF7 Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	*A4*	*B6*	TOTAL
01. Use of renewable primary energy (PERE) [MJ]	12.5	$8.46 \cdot 10^{-2}$	$7.85 \cdot 10^{-1}$	**13.4**	*$7.54 \cdot 10^{-2}$*	*$6.12 \cdot 10^{3}$*	$6.13 \cdot 10^{3}$
02. Primary energy resources used as raw materials (PERM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
03. Total use of renewable primary energy resources (PERT) [MJ]	12.5	$8.46 \cdot 10^{-2}$	$7.85 \cdot 10^{-1}$	**13.4**	*$7.54 \cdot 10^{-2}$*	*$6.12 \cdot 10^{3}$*	$6.13 \cdot 10^{3}$
04. Use of non-renewable primary energy (PENRE) [MJ]	$1.49 \cdot 10^{2}$	1.58	$6.31 \cdot 10^{-2}$	**$1.51 \cdot 10^{2}$**	*1.34*	*$7.05 \cdot 10^{3}$*	$7.20 \cdot 10^{3}$
05. Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
06. Total use of non-renewable primary energy resources (PENRT) [MJ]	$1.49 \cdot 10^{2}$	1.58	$6.31 \cdot 10^{-2}$	**$1.51 \cdot 10^{2}$**	*1.34*	*$7.05 \cdot 10^{3}$*	$7.20 \cdot 10^{3}$
07. Input of secondary material (SM) [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
08. Use of renewable secondary fuels (RSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
09. Use of non-renewable secondary fuels (NRSF) [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
10. Use of net fresh water (FW) [m^3]	$2.33 \cdot 10^{-2}$	$9.82 \cdot 10^{-5}$	$1.89 \cdot 10^{-3}$	**$2.53 \cdot 10^{-2}$**	*$8.73 \cdot 10^{-5}$*	*10.5*	10.6

** A1-A3 mandatory stages for external reporting.*

Waste production and output flows

A7/370 P7/380

BASIC-FLO	Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	A4	B6	TOTAL
A7/370	01. Hazardous waste disposed (HWD) [kg]	$2.88 \cdot 10^{-8}$	$4.67 \cdot 10^{-8}$	$2.00 \cdot 10^{-10}$	**$7.57 \cdot 10^{-8}$**	*$4.57 \cdot 10^{-8}$*	*$2.49 \cdot 10^{-6}$*	$2.61 \cdot 10^{-6}$
	02. Non-hazardous waste disposed (NHWD) [kg]	$2.32 \cdot 10^{-2}$	$1.60 \cdot 10^{-4}$	$1.08 \cdot 10^{-3}$	**$2.44 \cdot 10^{-2}$**	*$1.50 \cdot 10^{-4}$*	*11.8*	11.8
	03. Radioactive waste disposed (RWD) [kg]	$1.33 \cdot 10^{-3}$	$1.31 \cdot 10^{-6}$	$1.67 \cdot 10^{-6}$	**$1.33 \cdot 10^{-3}$**	*$1.22 \cdot 10^{-6}$*	*3.02*	3.02
	04. Components for reuse [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	05. Materials for recycling [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	06. Materials for energy recovery [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	07. Exported energy [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
P7/380	01. Hazardous waste disposed (HWD) [kg]	$4.03 \cdot 10^{-8}$	$6.55 \cdot 10^{-8}$	$4.04 \cdot 10^{-10}$	**$1.06 \cdot 10^{-7}$**	*$6.04 \cdot 10^{-8}$*	*$2.49 \cdot 10^{-6}$*	$2.65 \cdot 10^{-6}$
	02. Non-hazardous waste disposed (NHWD) [kg]	$3.79 \cdot 10^{-2}$	$2.24 \cdot 10^{-4}$	$2.36 \cdot 10^{-3}$	**$4.05 \cdot 10^{-2}$**	*$1.99 \cdot 10^{-4}$*	*11.8*	11.8
	03. Radioactive waste disposed (RWD) [kg]	$1.95 \cdot 10^{-3}$	$1.83 \cdot 10^{-6}$	$3.56 \cdot 10^{-6}$	**$1.96 \cdot 10^{-3}$**	*$1.61 \cdot 10^{-6}$*	*3.02*	3.02
	04. Components for reuse [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	05. Materials for recycling [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	06. Materials for energy recovery [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	07. Exported energy [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00

** A1-A3 mandatory stages for external reporting.*

Waste production and output flows

A7 UF7

BASIC-FLO	Filter class ePM2,5 70%	A1	A2	A3	*A1-A3	A4	B6	TOTAL
A7	01. Hazardous waste disposed (HWD) [kg]	$3.94 \cdot 10^{-8}$	$5.74 \cdot 10^{-8}$	$2.95 \cdot 10^{-10}$	**$9.71 \cdot 10^{-8}$**	*$5.31 \cdot 10^{-8}$*	*$2.41 \cdot 10^{-6}$*	$2.56 \cdot 10^{-6}$
	02. Non-hazardous waste disposed (NHWD) [kg]	$3.69 \cdot 10^{-2}$	$1.96 \cdot 10^{-4}$	$1.69 \cdot 10^{-3}$	**$3.88 \cdot 10^{-2}$**	*$1.75 \cdot 10^{-4}$*	*11.4*	11.5
	03. Radioactive waste disposed (RWD) [kg]	$1.80 \cdot 10^{-3}$	$1.60 \cdot 10^{-6}$	$2.56 \cdot 10^{-6}$	**$1.80 \cdot 10^{-3}$**	*$1.41 \cdot 10^{-6}$*	*2.92*	2.93
	04. Components for reuse [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	05. Materials for recycling [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	06. Materials for energy recovery [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	07. Exported energy [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
UF7	01. Hazardous waste disposed (HWD) [kg]	$4.83 \cdot 10^{-8}$	$6.99 \cdot 10^{-8}$	$4.48 \cdot 10^{-10}$	**$1.19 \cdot 10^{-7}$**	*$6.25 \cdot 10^{-8}$*	*$2.23 \cdot 10^{-6}$*	$2.41 \cdot 10^{-6}$
	02. Non-hazardous waste disposed (NHWD) [kg]	$4.86 \cdot 10^{-2}$	$2.38 \cdot 10^{-4}$	$2.67 \cdot 10^{-3}$	**$5.15 \cdot 10^{-2}$**	*$2.06 \cdot 10^{-4}$*	*10.5*	10.6
	03. Radioactive waste disposed (RWD) [kg]	$2.26 \cdot 10^{-3}$	$1.94 \cdot 10^{-6}$	$3.99 \cdot 10^{-6}$	**$2.27 \cdot 10^{-3}$**	*$1.66 \cdot 10^{-6}$*	*2.70*	2.70
	04. Components for reuse [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	05. Materials for recycling [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	06. Materials for energy recovery [kg]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00
	07. Exported energy [MJ]	0.00	0.00	0.00	**0.00**	*0.00*	*0.00*	0.00

* *A1-A3 mandatory stages for external reporting.*

USE OF THE PRODUCT

To ensure the efficient and sustainable performance of the filter, the end user is obliged to guarantee specific operational conditions. Detailed information about the use of Basic-Flo A, UF, P is included in product data sheet for Basic-Flo.

INSTRUCTIONS FOR STORAGE, HANDLING AND MAINTENANCE

Construction of the bag filter requires a certain method for storing, handling and maintaining the product. Our recommendations are described in Handling and maintenance instruction for bag filters.

FILTER LIFETIME

Bag filters are designed to serve efficiently during a certain period, which depends on several factors. An unambiguous way to define the adequate filter lifetime is described in standard EN 13053.
This method is dependent on the filter resistance and is determined by the final pressure drop. According to EN 13053, the final pressure drop is reached when the initial pressure drop has increased by 100 Pa (initial dP + 100 Pa), or initial pressure drop x3 (whichever is lower). Another way to specify the lifetime of the filter is described in the guideline VDI 6022. This method is derived from hygienic concerns and recommends filter change after 1 year for the first filter stage.

END OF LIFE

Construction of the Basic-Flo A, UF, P makes the filter suitable for one-time use only. Moreover, filter fixed assembly is a limiting factor to dismount specific parts of the product. The recommended method of disposal of filters with steel frame is by incineration, which takes place in certified facilities where the steel can be recycled after the incineration.

SUSTAINABILITY

The mission of Camfil is to protect the health of people, processes & the environment, hence the organization has been sustainable from day one of its inception. Camfil is committed to sustainability from design to delivery and across the complete product life cycle. Complex information about how Camfil addresses environmental concerns are described on the website and can be found in the section Sustainability.

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We firmly believe that the best solutions for our customers are the best solutions for our planet, too. That's why every step of the way – from design to delivery and across the product life cycle – we consider the impact of what we do on people and on the world around us. Through a fresh approach to problem-solving, innovative design, precise process control and a strong customer focus we aim to conserve more, use less and find better ways – so we can all breathe easier.

The Camfil Group is headquartered in Stockholm, Sweden, and has manufacturing sites, R&D centres and local sales offices worldwide, and are growing. We proudly serve and support customers in a wide variety of industries and in communities across the world. To discover how Camfil can help you to protect people, processes and the environment, visit us at

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