Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Premablock green II-SRx PRx FBU FKU-65-125-Kyla

This EPD covers multiple products, including dimensions DN 65, 80, 100 and 125
from

PREMA AB

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-09060
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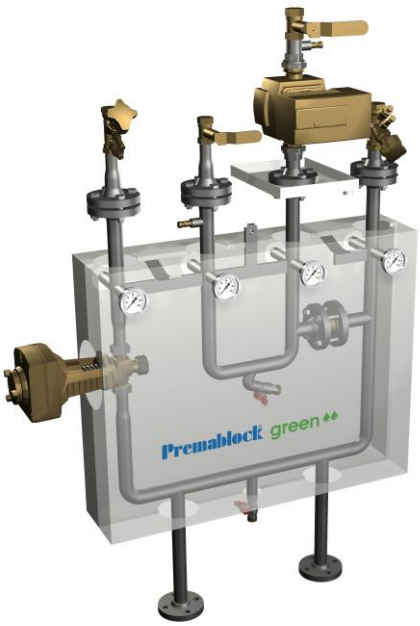
An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): Construction Products 2019:14, Version 1.2.5 and EN 15804:2012 + A2:2019 Sustainability of Construction Works
PCR review was conducted by: The Technical Committee on the International EPD ® System. Contact via www.environdec.com info@environdec.com
Life Cycle Assessment (LCA)
LCA accountability: Kristin Fransson, AFRY, www.afry.com
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: Marcus Wendin, Miljögiraff AB, (marcus@miljogiraff.se) Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: PREMA AB
Contact: Thomas Winge
Description of the organisation: PREMA provides solutions for regulating heating and cooling, as well as heat recovery in buildings and industrial processes. Our focus is on installations with high demands on energy efficiency and operational reliability. Our solutions are based on our high-quality, flexible and service-friendly Premablock® system for prefabricated facility-adapted shunt units and associated accessory products such as system liquid degassers, mixing units, expansion systems and particle filters.
Name and location of production site(s): PREMA Kalmar, Franska vägen 17, SE- 393 56 Kalmar, Sweden

Product information

Product name:
Premablock green II-SRx PRx FBU FKU-65-125-Kyla

Product description:
Premablock green II-SRx PRx FBU FKU-65-125-Kyla is a functional hydraulic circuit, so-called shunt unit, composed of several components to regulate temperature, as well as mix and distribute flows in systems for water-borne cooling. The expected lifetime of the product is typically 25-30 yrs.

Premablock® shunt units are adapted for low internal pressure drops, which reduces the pumps' energy consumption and gives the control valves good authority. Low internal pressure drops are achieved by giving the pipe assembly sufficient dimension, using soft pipe bends, and placing any tapers in direct connection with control valves and pumps, thereby preventing energy losses due to turbulent flow and self-circulation. Energy loss due to involuntary heat transfer between the primary and secondary system is also minimized thanks to a built-in thermal heat barrier.
The chosen operating scenarios for calculation of annual energy consumption are defined based on the maximum flow PREMA recommends for each pipe dimension. The circulation pump must manage a pressure drop of 3 m for the secondary system as well as the pressure drop in the shunt unit. The shunt unit's part of the total pressure drop is reported for each scenario. Energy consumption is reported both when the pump is run in fixed and variable delta-p mode. Load profiles are based on recommendations for EU Directive 2009/125/EC with the following operational parameters and load profile:

Operational data	
Liquid	water (pure)
Water temperature	20°C
Density	0.9983 kg/dm^3
Kinematic viscosity	1.005 mm^2/s
Vapor pressure	0.02337 bar
Load profile (common to all scenarios)	
Operational time	8760 hours/year
100% flow	6% of operational time
75% flow	15% of operational time
50% flow	35% of operational time
25% flow	44% of operational time

The results and information on material content in this EPD is calculated based on a Premablock green II-SRx PRx FBU FKU-65-125-Kyla, DN80, with a total weight of 179.6 kg which is considered a

representative product. Main results for operational use are given for Premablock green II-SRx PRx FBU FKU-65-125-Kyla DN80, Δp variable.

The following standard configurations of Premablock green II-SRx PRx FBU FKU-65-125-Kyla, including scenarios for operational energy use (B6) are included in the EPD:

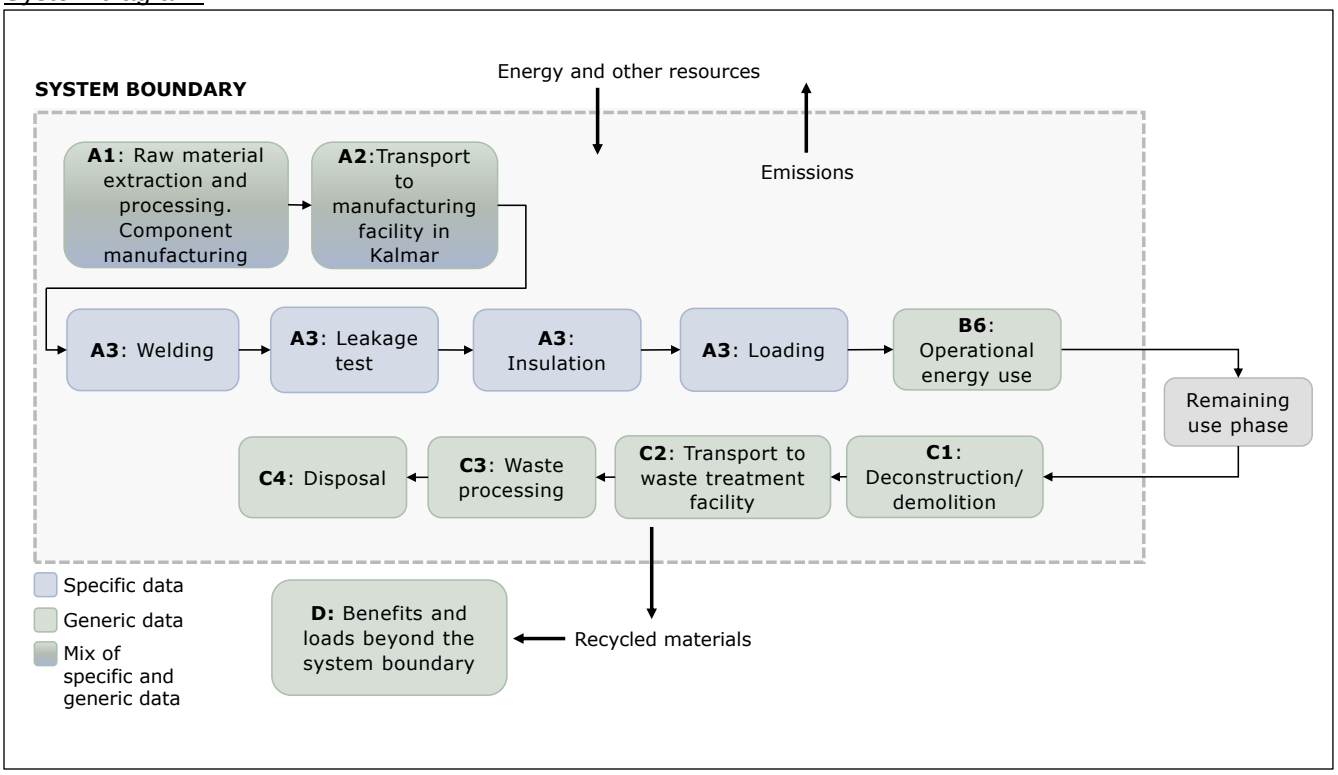
Dimension of the shunt unit	Flow (l/s)	Head (m)	Energy consumption pump, Δp variable (kWh/yrs)	Energy consumption pump, Δp constant (kWh/yrs)	Weight standard configuration(kg)
DN65	4.2	4.0 of which 1.0 in the shunt unit	904	2346	144.4
DN80	7.6	3.81 of which 0.81 in the shunt unit	1467	3826	179.6
DN100	13.0	3.94 of which 0.94 in the shunt unit	2668	8124	233.4
DN125	20.0	3.88 of which 0.88 in the shunt unit	3812	9660	321.0

UN CPC code:
4325
Geographical scope:
Raw materials and components (A1) are sourced globally while manufacturing of the final product (A3) is made in Sweden. More than 95% of the use phase (B6) and waste management of the product (C1-C4) takes place in Sweden and Sweden is therefore selected as a model for both operational energy use and end-of-life.

LCA information

Premablock green II-SRx PRx FBU FKU-65-125-Kyla
Declared unit:
1 kg of shunt unit. Calculations based on the representative product Premablock green II-SRx PRx FBU FKU-65-125-Kyla, DN80.
Reference service life:
The RSL of the shunt units is 25 years. This value is an average based on experience. The actual service life of the product can be shorter or longer.
Time representativeness:
The LCA is based on average production data from 2020, 2021 and 2022 which are considered to be average years of production.
Cut-off criteria:
More than 95% of total inflows of mass and energy are included in the study.
Database(s) and LCA software used:
Ecoinvent 3.8 and SimaPro 9.3
Description of system boundaries:
Cradle to gate with options, modules C1–C4, module D and with optional module B6 (A1–A3 + B6 + C + D).
LCA practitioner:
AFRY Sustainability consulting, Sweden, www.afry.com

System diagram:



Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	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
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	ND	X	X	X	X	X
Geography	GLO/ EU	GLO/ EU	SE								SE		SE	SE	SE	SE	SE
Specific data used	3.1% of the total GWP-GHG impact stems from specific data (A2 and A3)					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	3.2%					-	-	-	-	-	-	-	-	-	-	-	-

A1: Raw Material
This stage includes production of raw materials for components as well as component manufacturing. Transportation of raw materials to component manufacturing is also included in this module.

A2: Transport
This stage includes transportation of raw components PREMA's manufacturing facility.

A3: Manufacturing
This stage includes welding, pressure test, insulation and loading at PREMA. It also includes treatment of waste generated from the manufacturing processes up to the end-of-waste state. The electricity used in manufacturing is 100% renewable with a mix of 85% hydro power, 3.75% wind power, 3.75% biomass, 3.75% geothermal and 3.75% solar energy.

The climate impact of the electricity mix is 27.1 g CO2 eq./kWh.

B6: Operational energy use
This stage includes impacts from electricity use. The chosen operating scenarios for calculation of energy consumption are defined based on the maximum flow PREMA recommends for each pipe dimension. Energy consumption is reported both when the pump is run in fixed and variable delta-p mode. Results are calculated per 25 years and kg shunt unit.

C1: Deconstruction
This stage includes impacts related to removing the shunt units at product end-of-life. The environmental impacts generated during

this phase are very low and therefore can be neglected.

C2: Waste Transport
Includes the transportation of the discarded product to a waste treatment facility. The transport distance was assumed to be 100 km.

C3: Waste Processing
This stage includes sorting processes. An Ecoinvent process for sorting of waste iron has been used as proxy for these processes.

C4: Waste disposal
This stage includes waste disposal processes such as landfilling or incineration. 5% of the components are assumed to be reused. Of the remaining 95% of the metals are assumed to be recycled and 5% are assumed to be sent to landfill, while plastics, rubbers and other materials are assumed to be incinerated.

D: Benefits and loads outside the system boundary
This stage includes benefits and burdens associated with recovery/recycling that affects previous or future life cycles. For this product it includes benefits from the recycling of metals and incineration of waste.

Content information for Premablock green II-SRx PRx FBU FKU-65-125-Kyla, DN80

Product components	Weight, kg	Post-consumer material, weight-%*	Biogenic material, weight-% and kg C/kg
Steel, low-alloyed	92.2		
Steel, un-alloyed	3.6		
Brass	6.2		
Stainless steel	4.8		
Cast iron	57.7		
Insulation/glass fibre	2.3		
Plastics	1.1		
Aluminium	8.2		
Copper	0.6		
Paper	2.9		
Glass	0.05		
Other (rubbers, synthetics)	1.1		
TOTAL	179.6		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C/kg**
Wood packaging	18.5	10.3	0.21
EUR pallet**	22.6	12.5	0.14
TOTAL	**41.1**	**22.8**	**0.35**

*Share of post-consumer material is unknown. Average values from Ecoinvent datasets have been used for modeling

**The weight of the EUR pallet as well biogenic carbon has been divided with amount times of use until discarded (9).

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
Lead	231-100-4	7439-92-1	0.065%

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804

B6 is calculated for DN80, variable pressure per kg and use for 25 years.

Results per kg shunt unit								
Indicator	**Unit**	**A1-A3**	**B6**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	5.05E+00	1.06E-01	0.00E+00	1.66E-02	8.54E-04	6.65E-02	-1.39E+00
GWP-biogenic	kg CO_2 eq.	-1.63E-01	3.78E-03	0.00E+00	1.42E-05	2.35E-05	2.05E-04	2.81E-03
GWP-luluc	kg CO_2 eq.	1.81E-02	7.94E-03	0.00E+00	6.53E-06	1.83E-06	7.94E-07	-2.32E-03
GWP-total	kg CO_2 eq.	4.92E+00	1.18E-01	0.00E+00	1.66E-02	8.80E-04	6.67E-02	-1.39E+00
ODP	kg CFC 11 eq.	4.37E-07	4.91E-09	0.00E+00	3.85E-09	5.38E-11	2.44E-10	-5.26E-08
AP	mol H^+ eq.	4.46E-02	5.35E-04	0.00E+00	6.75E-05	5.15E-06	1.76E-05	-1.69E-02
EP-freshwater	kg P eq.	3.80E-03	4.65E-05	0.00E+00	1.07E-06	7.85E-07	2.29E-07	-1.25E-03
EP-marine	kg N eq.	7.31E-03	1.62E-04	0.00E+00	2.03E-05	1.04E-06	9.42E-06	-1.74E-03
EP-terrestrial	mol N eq.	6.44E-02	1.49E-03	0.00E+00	2.22E-04	9.88E-06	8.23E-05	-2.02E-02
POCP	kg NMVOC eq.	2.19E-02	3.40E-04	0.00E+00	6.80E-05	2.77E-06	2.04E-05	-7.17E-03
ADP-minerals& metals*	kg Sb eq.	6.72E-04	1.99E-06	0.00E+00	5.78E-08	8.01E-09	5.27E-09	-2.73E-04
ADP-fossil*	MJ	6.07E+01	1.53E+01	0.00E+00	2.51E-01	1.73E-02	1.92E-02	-1.34E+01
WDP	m^3	1.63E+00	1.89E-01	0.00E+00	7.52E-04	1.96E-04	3.46E-03	-3.33E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption							

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Potential environmental impact – additional mandatory and voluntary indicators

B6 is calculated for DN80, variable pressure per kg and use for 25 years.

Results per kg shunt unit								
Indicator	**Unit**	**A1-A3**	**B6**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	5.08E+00	1.14E-01	0.00E+00	1.66E-02	8.56E-04	6.65E-02	-1.39E+00

Use of resources

B6 is calculated for DN80, variable pressure per kg and use for 25 years.

Results per kg shunt unit								
Indicator	**Unit**	**A1-A3**	**B6**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	2.01E+01	6.31E+00	0.00E+00	3.54E-03	3.27E-03	5.42E-04	-2.02E+00
PERM	MJ	3.07E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.01E+01	6.31E+00	0.00E+00	3.54E-03	3.27E-03	5.42E-04	-2.02E+00
PENRE	MJ	6.45E+01	1.53E+01	0.00E+00	2.67E-01	1.82E-02	2.07E-02	-1.42E+01
PENRM	MJ	7.35E-01	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	6.52E+01	1.53E+01	0.00E+00	2.67E-01	1.82E-02	2.07E-02	-1.42E+01
SM	kg	7.89E-01	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0
FW	m^3	8.47E-02	7.08E-01	0.00E+00	4.16E-05	5.06E-06	1.18E-04	-9.53E-03
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water							

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Waste indicators

B6 is calculated for DN80, variable pressure per kg and use for 25 years.

Results per kg shunt unit								
Indicator	**Unit**	**A1-A3**	**B6**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	0	0	0	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0	0	0	0

Output flow indicators

Results per kg shunt unit								
Indicator	**Unit**	**A1-A3**	**B6**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0	0	0	0	0	5.00E-02	0
Material for recycling	kg	1.46E-01	0	0	0	0	9.17E-01	0
Materials for energy recovery	kg	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0

Additional information

Energy use operating phase

Below are results for environmental impact in operational use phase (B6) based on the operating scenarios defined in the section Product description.

Potential environmental impact B6– mandatory indicators according to EN 15804 – results for reference service life of 25 years

		Results per kg shunt unit and a service life of 25 years							
Indicator	**Unit**	**DN65, ΔP variable**	**DN65M, ΔP constant**	**DN80M, ΔP variable**	**DN80M, ΔP constant**	**DN100, ΔP variable**	**DN100, ΔP constant**	**DN125, ΔP variable**	**DN125, ΔP constant**
GWP-fossil	kg CO_2 eq.	8.14E-02	2.11E-01	1.06E-01	2.77E-01	1.49E-01	4.53E-01	1.54E-01	3.91E-01
GWP-biogenic	kg CO_2 eq.	2.90E-03	7.52E-03	3.78E-03	9.86E-03	5.29E-03	1.61E-02	5.50E-03	1.39E-02
GWP-luluc	kg CO_2 eq.	6.09E-03	1.58E-02	7.94E-03	2.07E-02	1.11E-02	3.38E-02	1.15E-02	2.93E-02
GWP-total	kg CO_2 eq.	9.06E-02	2.35E-01	1.18E-01	3.08E-01	1.66E-01	5.04E-01	1.72E-01	4.36E-01
ODP	kg CFC 11 eq.	3.76E-09	9.77E-09	4.91E-09	1.28E-08	6.87E-09	2.09E-08	7.14E-09	1.81E-08
AP	mol H^+ eq.	4.10E-04	1.06E-03	5.35E-04	1.40E-03	7.49E-04	2.28E-03	7.78E-04	1.97E-03
EP-freshwater	kg PO_4^{3-} eq.	1.09E-04	2.84E-04	1.43E-04	3.72E-04	2.00E-04	6.08E-04	2.07E-04	5.26E-04
EP-freshwater	kg P eq.	3.56E-05	9.24E-05	4.65E-05	1.21E-04	6.50E-05	1.98E-04	6.75E-05	1.71E-04
EP-marine	kg N eq.	1.24E-04	3.22E-04	1.62E-04	4.22E-04	2.27E-04	6.90E-04	2.35E-04	5.97E-04
EP-terrestrial	mol N eq.	1.14E-03	2.96E-03	1.49E-03	3.89E-03	2.09E-03	6.35E-03	2.17E-03	5.49E-03
POCP	kg NMVOC eq.	2.61E-04	6.76E-04	3.40E-04	8.87E-04	4.76E-04	1.45E-03	4.94E-04	1.25E-03
ADP-minerals&metals*	kg Sb eq.	1.53E-06	3.96E-06	1.99E-06	5.19E-06	2.79E-06	8.48E-06	2.89E-06	7.34E-06
ADP-fossil*	MJ	1.17E+01	3.04E+01	1.53E+01	3.99E+01	2.14E+01	6.52E+01	2.22E+01	5.63E+01
WDP	m^3	1.45E-01	3.76E-01	1.89E-01	4.93E-01	2.65E-01	8.06E-01	2.75E-01	6.97E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

Potential environmental impact B6– mandatory indicators according to EN 15804 – results per year of use

To facilitate for comparison with other shunt units, results for operational energy use are also given per year.

		Results per year and kg shunt unit							
Indicator	**Unit**	**DN65, ΔP variable**	**DN65M, ΔP constant**	**DN80M, ΔP variable**	**DN80M, ΔP constant**	**DN100, ΔP variable**	**DN100, ΔP constant**	**DN125, ΔP variable**	**DN125, ΔP constant**
GWP-fossil	kg CO_2 eq.	3.26E-03	8.45E-03	4.25E-03	1.11E-02	5.94E-03	1.81E-02	6.18E-03	1.56E-02
GWP-biogenic	kg CO_2 eq.	1.16E-04	3.01E-04	1.51E-04	3.95E-04	2.12E-04	6.45E-04	2.20E-04	5.57E-04
GWP-luluc	kg CO_2 eq.	2.43E-04	6.32E-04	3.18E-04	8.28E-04	4.44E-04	1.35E-03	4.62E-04	1.17E-03
GWP-total	kg CO_2 eq.	3.63E-03	9.41E-03	4.73E-03	1.23E-02	6.62E-03	2.02E-02	6.88E-03	1.74E-02
ODP	kg CFC 11 eq.	1.51E-10	3.91E-10	1.96E-10	5.12E-10	2.75E-10	8.37E-10	2.86E-10	7.24E-10
AP	mol H^+ eq.	1.64E-05	4.26E-05	2.14E-05	5.58E-05	3.00E-05	9.12E-05	3.11E-05	7.89E-05
EP-freshwater	kg PO_4^{3-} eq.	4.37E-06	1.13E-05	5.71E-06	1.49E-05	7.98E-06	2.43E-05	8.30E-06	2.10E-05
EP-freshwater	kg P eq.	4.96E-06	1.29E-05	6.48E-06	1.69E-05	9.06E-06	2.76E-05	9.42E-06	2.39E-05
EP-marine	kg N eq.	4.57E-05	1.19E-04	5.96E-05	1.55E-04	8.34E-05	2.54E-04	8.67E-05	2.20E-04
EP-terrestrial	mol N eq.	1.04E-05	2.70E-05	1.36E-05	3.55E-05	1.90E-05	5.79E-05	1.98E-05	5.01E-05
POCP	kg NMVOC eq.	6.10E-08	1.58E-07	7.96E-08	2.08E-07	1.11E-07	3.39E-07	1.16E-07	2.93E-07
ADP-minerals&metals*	kg Sb eq.	4.69E-01	1.22E+00	6.12E-01	1.60E+00	8.56E-01	2.61E+00	8.89E-01	2.25E+00
ADP-fossil*	MJ	5.80E-03	1.51E-02	7.57E-03	1.97E-02	1.06E-02	3.23E-02	1.10E-02	2.79E-02
WDP	m^3	4.96E-06	1.29E-05	6.48E-06	1.69E-05	9.06E-06	2.76E-05	9.42E-06	2.39E-05
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

Other information and instructions

With the Premablock® system for pre-fabricated shunt units, PREMA can offer solutions for a variety of regulation needs in heating and cooling, as well as heat recovery. Some common examples are:

- Regulation of room heating or room cooling
- Control of heating when connecting systems to district heating and the return temperature of the heating system should be lowered
- Regulation of cooling with equipment which do not require low-temperature cooling but can primarily use the return water in the property's cooling system
- Pre-shunting
- Pre-heating and post-heating batteries
- Control of heat recovery via liquid-coupled batteries
- Regulation of heating and cooling in systems requiring different media in primary and secondary circuits
- Pick-up of free-cooling
- Tip-heating with excess heat
- Emergency cooling of secondary systems with high demands on cooling reliability
- Regulation of energy management in heating or cooling centers.

The Premablock® system is recognized for being high quality, flexible and service friendly. With the Premablock® system, customers get the maximum possible control over the design of pipe connections and make on components. The fact that all components are easily accessible also makes it easy to service Premablock® shunt units. Premablock® shunt units consist only of quality components from large and reputable manufacturers. All production takes place in our own premises, which gives us good control over both quality and delivery precision. We use TIG technology in welding and all shunt units are pressure tested with liquid before delivery.

Each shunt unit we supply is 100 percent adapted to the unique pressure and temperature conditions that apply to its location in the facility. Only in this way can we guarantee that it will be integrated into the system with the highest possible performance. Thanks to the system's low pipe pressure drop, our customers can also rely on the highest possible energy efficiency and low operating costs as a result.

In dialogue with our customers, we also develop tools to make it easier to work with our shunt units. Examples of this are our dimensioning and calculation software, ShuntLogik®, our MagiCAD plugins for AutoCAD and Revit as well as our database of 3D cad/BIM models. Our goal is to make it easy and fun to work with our products.

Instructions on functional designs and proper use of the product:

- https://prema.se/support/produktkatalog/shuntgrupper-utan-vaxlare/

Instructions for proper maintenance and service of the product:

- https://prema.se/support/tillverkaredeklarationer/

Information on recycling:

- https://prema.se/support/demontering-och-atervinning/

Other information on sustainability at PREMA:

- https://prema.se/hallbarhet/
- https://prema.se/uppforandekod/
- https://prema.se/var-miljopolicy/
- https://prema.se/var-kvalitetspolicy/
- https://prema.se/var-arbetsmiljopolicy/

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