

Product Environmental Profile

golf Enclosures - Surface & Flush Mounted



Company information

Hager

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A question concerning the Product Environmental Profile:
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References covered

golf Enclosures - Surface & Flush Mounted including accessories VSXXXXX,
VFXXXXX, VZXXXXX

Methodology

PEP has been performed according to the PCR version PEP-PCR-ed4-2021 09 06 and PSR version PSR-0005-ed3-2023 06 06 issued by the PEP ecopassport program.

For further information, please see the website of the program www.pep-ecopassport.org

Reference product

Reference product identification

VS312PE

Use scenario based on :

PSR product Category : PSR-0005-ed3-2023 06 06

PSR5 - 3.12 Enclosures

Functional unit

Protect persons during 20 years against direct contact with live parts and allow grouping monitoring, control and protection devices in a single enclosure having the following dimensions 501.5x281.5x98.5mm, while protecting against mechanical impacts (IK07) and the penetration of solid objects ((IP40 with door, IP30 without door)

The functional unit is based on the use scenario recommended by the PCR for the category of the reference product.

Materials and substances

All useful measures have been adopted to ensure that the materials used in the composition of the product do not contain any substances banned by the legislation in force at the time of marketing.

Plastics			Metals			Others		
	g	%		g	%		g	%
HI PS	1440.09	66.5%	Stainless steel	228.00	10.5%	Cardboard	259.24	12.0%
PS	30.72	1.4%	Steel	7.19	0.3%	Wood	51.55	2.4%
PC	29.88	1.4%	Copper	1.79	<0.1%	Tetrabromobisphenol A	51.50	2.4%
PE-LD	20.53	0.9%	Zinc	1.26	<0.1%	Antimony	17.00	0.8%
ABS	13.28	0.6%	Lead	0.35	<0.1%	iron pellet	8.40	0.4%
			Silicon	0.06	<0.1%	Other	4.89	0.2%
Total mass of reference product with raw material packaging :			2165.71 g					
Total mass of reference product (Product + packaging)			2062.115 g					

System Boudaries

The environmental information included in the PEP covers all the stages of the life cycle, from "cradle to grave".

Manufacturing			Distribution	Installation	Use							End of life			Module D	
Raw material extraction and processing	Transport to the manufacturer	Manufacturing	Distribution to the place of operation	Installation on the place of operation	Use or application of the product installed	Maintenance	Repair	Replacement	Restoration	Energy requirements during the use stage	Water requirements during the use stage	Deinstallation	Transport to the waste treatment site	Treatment of waste in view of its reuse, recovery and/or recycling	Disposal	Benefits and loads beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Life cycle stages																

Manufacturing

These products are manufactured by a site that has received an environmental certification ISO 14001.

This phase takes into account raw materials, manufacturing processes, production offcuts and their end-of-life treatment, upstream transport of materials and sub-assemblies to the manufacturing site, and transport from the manufacturing site to the final logistics platform.

Distribution

The packaging has been designed in accordance with current regulations. In particular, the European directive 94/62/CE relative to packaging and packaging waste.

The used packaging is 100% recyclable or recoverable. Packaging and logistic flows are continuously improved in order to reduce their impact.

This phase taken into account the transport of the finished product, including packaging, to its place of use.

Installation

Installation processes

The processes to install the product are not considered in this study because of their weak impact compared to the other life cycles steps.

This phase only take into account the impact of the the packaging waste treatment is taken into account.

Installation elements (non delivered with the product)

Elements non delivered with the product and needed to install the product are not considered.

Use

Power loss / load dependent			
Active mode		Inactive mode	
Watt	% of time	Watt	% of time
0	0%	0	0%

Power consumption / not load dependent					
Active Sleep phase		Passive Sleep phase		Turn off phase	
Watt	% of time	Watt	% of time	Watt	% of time
0	0%	0	0%	0	0%

For the considered scenario, the product has no energy consumption.

Energy model of the use phase :

Europe

Consumables and maintenance :

None

End of life

Considering the complexity of the recycling channels for electric and electronic equipment impacts, we rely mainly on ESR modules (datasets for WEEE product end of life).

The recycling potential of the product is: 75%. The calculation of this rate is based on the method of the IEC/TR 62635.

Environmental impacts

Evaluation of the environmental impact covers the following life cycle stages: raw materials + manufacturing (RMM), distribution (D), installation (I), use (U) and end of life (EoL).

All calculations are done with EIME software version 6.2.1 with the database version CODDE© 2024-04 .

Indicators set : Indicators for PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v1.0

PEP representative of the covered products marketed in: Europe

Energy models considered for each phase

Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End Of Life C1-C4
Europe	-	Europe	Europe	Europe

Environmental impact indicators

Indicators	Unit	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End Of Life C1-C4	GLOBAL	Module D
Acidification (PEF-AP)	mole H+ eq	3.21E-02	2.45E-03	7.41E-04	0.00E+00	1.08E-02	4.61E-02	-9.90E-03
Climate change - Total (PEF-GWP)	kg CO2 eq.	6.57E+00	3.62E-01	3.12E-01	0.00E+00	2.72E+00	9.96E+00	-2.25E+00
Climate change-Biogenic (PEF-GWPb)	kg CO2 eq.	-3.13E-01	0.00E+00	5.59E-02	0.00E+00	4.10E-02	-2.16E-01	-1.59E-01
Climate change-Fossil (PEF-GWpf)	kg CO2 eq.	6.88E+00	3.62E-01	2.56E-01	0.00E+00	2.67E+00	1.02E+01	-2.09E+00
Climate change-Land use and land use change (PEF-GWPlu)	kg CO2 eq.	4.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-05	0.00E+00
Ecotoxicity, freshwater (PEF-CTUe)	CTUe	2.88E+01	2.37E-01	3.48E+00	0.00E+00	6.35E+00	3.89E+01	-5.89E+00
EF-particulate Matter (PEF-PM)	Incidence of diseases	4.85E-07	1.87E-08	4.10E-09	0.00E+00	7.86E-08	5.86E-07	-7.89E-08
Eutrophication, freshwater (PEF-Epf)	kg P eq.	5.00E-05	1.36E-07	3.38E-06	0.00E+00	1.18E-05	6.53E-05	-2.42E-04
Eutrophication marine (PEF-Epm)	kg N eq.	4.74E-03	1.08E-03	3.22E-04	0.00E+00	2.21E-03	8.35E-03	-1.19E-03
Eutrophication, terrestrial (PEF-Ept)	mole of N eq.	5.06E-02	1.18E-02	2.02E-03	0.00E+00	2.50E-02	8.94E-02	-1.36E-02
Human toxicity, cancer (PEF-CTUh-c)	CTUh	1.24E-07	6.37E-12	2.66E-08	0.00E+00	1.21E-09	1.52E-07	-4.49E-09
Human toxicity, non-cancer (PEF-CTUh-nc)	CTUh	8.05E-08	1.23E-10	7.83E-10	0.00E+00	1.56E-08	9.70E-08	-3.05E-08
Ionising radiation, human health (PEF-IR)	kg Bq U235 eq.	4.06E+00	8.83E-04	3.83E-02	0.00E+00	1.13E-01	4.21E+00	-2.68E-01
Land use (PEF-LU)	No dimension	1.08E+00	0.00E+00	6.42E-04	0.00E+00	2.87E+00	3.95E+00	-3.17E+01
Ozone depletion (PEF-ODP)	kg CFC-11 eq.	5.31E-07	5.55E-10	3.12E-09	0.00E+00	1.93E-07	7.28E-07	-3.44E-08
Photochemical ozone formation - human health (PEF-POCP)	kg of NMVOC eq.	1.68E-02	2.98E-03	4.72E-04	0.00E+00	6.36E-03	2.67E-02	-5.20E-03
Resource use, fossils (PEF-ADPf)	MJ	1.44E+02	5.05E+00	2.34E+00	0.00E+00	2.25E+01	1.74E+02	-4.37E+01
Resource use, minerals and metals (PEF-ADPe)	kg Sb eq	1.41E-02	1.43E-08	5.82E-09	0.00E+00	5.95E-06	1.41E-02	-1.15E-05
Water use (PEF-WU)	m3 eq.	2.67E+00	1.38E-03	1.92E-02	0.00E+00	1.92E+02	1.94E+02	-1.69E+02

Resource use indicators

Indicators	Unit	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End Of Life C1-C4	GLOBAL	Module D
Net use of fresh water	m ³	6.22E-02	3.20E-05	4.48E-04	0.00E+00	6.66E+00	6.72E+00	-3.48E+00
Total use of primary energy	MJ	1.54E+02	5.06E+00	2.65E+00	0.00E+00	2.39E+01	1.85E+02	-4.88E+01
Total use of non renewable primary energy resources	MJ	1.44E+02	5.05E+00	2.34E+00	0.00E+00	2.25E+01	1.74E+02	-4.37E+01
Total use of renewable primary energy resources	MJ	9.51E+00	6.75E-03	3.13E-01	0.00E+00	1.37E+00	1.12E+01	-5.13E+00
Use of non-renewable primary energy, excluding non renewable primary energy resources used as raw materials	MJ	7.95E+01	5.05E+00	2.34E+00	0.00E+00	2.25E+01	1.09E+02	-4.37E+01
Use of non-renewable primary energy resources as raw materials	MJ	6.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E+01	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	kg	3.84E+00	6.75E-03	3.13E-01	0.00E+00	1.37E+00	5.53E+00	-5.13E+00
Use of renewable primary energy resources as raw materials	MJ	5.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary materials	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Waste category indicators

Indicators	Unit	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End Of Life C1-C4	GLOBAL	Module D
Hazardous waste disposed	kg	1.54E+01	0.00E+00	5.90E-03	0.00E+00	7.04E-19	1.54E+01	-7.16E-04
Non-hazardous waste disposed	kg	2.51E+00	1.27E-02	1.06E-01	0.00E+00	3.24E-04	2.63E+00	-3.31E-01
Radioactive waste disposed	kg	1.57E-03	9.06E-06	1.24E-05	0.00E+00	2.31E-07	1.59E-03	-2.72E-04

Output flow indicators

Indicators	Unit	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End Of Life C1-C4	GLOBAL	Module D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	1.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-02	0.00E+00
Materials for energy recovery	kg	2.35E-02	0.00E+00	2.36E-02	0.00E+00	0.00E+00	4.71E-02	0.00E+00
Materials for recycling	kg	9.47E-02	0.00E+00	4.19E-03	0.00E+00	0.00E+00	9.89E-02	0.00E+00

Biogenic carbon content

Packaging	Unit	Cardboard	Paper	Wood	Sum
Biogenic carbon content (ratio)	%	2.80E+01	3.78E+01	3.95E+01	
Mass	kg	2.59E-01	1.83E-03	5.16E-02	3.13E-01
Biogenic carbon content (declared unit)	kg of C	7.26E-02	6.93E-04	2.04E-02	9.37E-02
Biogenic carbon content (functional unit)	kg of C	7.26E-02	6.93E-04	2.04E-02	9.37E-02
Source		ADEME	APESA/RECORD	EN 16485	


Product	Unit	Cardboard	Paper	Wood	Sum
Mass	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content (declared unit)	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content (functional unit)	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Extrapolation rules

The extrapolation rule is defined according to product weight.

Please refer to the attached appendix for the extrapolation factors for each phase of the products covered by this PEP.

Verification

Registration N°: HAGE-00840-V01.03-EN	Drafting Rules	PEP-PCR-ed4-2021 09 06
	Supplemented by	PSR-0005-ed3-2023 06 06
Verifier accreditation N°: VH36	Information and reference documents: www.pep-ecopassport.org	
Date of issue: 7-2024	Validity period:	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006		
Internal ● External ○		
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)		
PEPs are compliant with XP C08-100-1:2016 or EN 50693:2019		
The elements of the present PEP cannot be compared with elements from another program.		
Document in compliance with ISO 14025 : 2006 « Environmental labels and declarations. Type III environmental declarations »		

Nota :

The picture has no contractual value.

All numerical values indicated in this document may vary and depend of many factors such as the tolerance related to materials, the usage and environment conditions of the products, installation characteristics ... , real values for a product in a concrete application may therefore change.

The usage time mentioned in this document is an average duration chosen for the need of the calculations. This value cannot be assimilated to the minimum, average or real life time.

The responsibility of the company, issuing this document, can never be engaged if differences would be noticed between the values given by this document and real ones, whatever the causes and/or consequences would be.

Appendix: Extrapolation factors calculated for each phase, according to the extrapolation rules based on the weight of the products.

COMMERCIAL REF	WEIGHT / pc (in g)	MANUFACTURING	DISTRIBUTION	INSTALLATION	USE	EOL
VF104PA	660.00	0.33	0.33	0.33	1.00	0.33
VF104PD	650.00	0.32	0.32	0.32	1.00	0.32
VF104PE	652.00	0.32	0.32	0.32	1.00	0.32
VF104PEB	526.00	0.26	0.26	0.26	1.00	0.26
VF104PEH	652.00	0.32	0.32	0.32	1.00	0.32
VF104PF	652.00	0.32	0.32	0.32	1.00	0.32
VF104PJ	658.00	0.32	0.32	0.32	1.00	0.32
VF104PM	650.00	0.32	0.32	0.32	1.00	0.32
VF104PP	660.00	0.33	0.33	0.33	1.00	0.33
VF104PR	711.00	0.35	0.35	0.35	1.00	0.35
VF104PS	650.00	0.32	0.32	0.32	1.00	0.32
VF104PT	740.00	0.36	0.36	0.36	1.00	0.36
VF104PY	625.00	0.31	0.31	0.31	1.00	0.31
VF104TA	645.00	0.32	0.32	0.32	1.00	0.32
VF104TD	660.00	0.33	0.33	0.33	1.00	0.33
VF104TE	652.00	0.32	0.32	0.32	1.00	0.32
VF104TF	642.00	0.32	0.32	0.32	1.00	0.32
VF104TJ	650.00	0.32	0.32	0.32	1.00	0.32
VF104TM	650.00	0.32	0.32	0.32	1.00	0.32
VF104TP	670.00	0.33	0.33	0.33	1.00	0.33
VF104TR	725.00	0.36	0.36	0.36	1.00	0.36
VF104TS	650.00	0.32	0.32	0.32	1.00	0.32
VF104TT	740.00	0.36	0.36	0.36	1.00	0.36
VF108PA	825.00	0.41	0.41	0.41	1.00	0.41
VF108PD	820.00	0.40	0.40	0.40	1.00	0.40
VF108PE	841.00	0.41	0.41	0.41	1.00	0.41
VF108PEB	670.00	0.33	0.33	0.33	1.00	0.33
VF108PEH	841.00	0.41	0.41	0.41	1.00	0.41
VF108PF	630.00	0.31	0.31	0.31	1.00	0.31
VF108PJ	802.00	0.40	0.40	0.40	1.00	0.40
VF108PM	800.00	0.39	0.39	0.39	1.00	0.39
VF108PP	850.00	0.42	0.42	0.42	1.00	0.42
VF108PR	898.00	0.44	0.44	0.44	1.00	0.44
VF108PS	780.00	0.38	0.38	0.38	1.00	0.38
VF108PT	910.00	0.45	0.45	0.45	1.00	0.45
VF108PY	870.00	0.43	0.43	0.43	1.00	0.43
VF108TA	860.00	0.42	0.42	0.42	1.00	0.42
VF108TD	826.00	0.41	0.41	0.41	1.00	0.41
VF108TE	841.00	0.41	0.41	0.41	1.00	0.41
VF108TF	821.00	0.40	0.40	0.40	1.00	0.40
VF108TJ	817.00	0.40	0.40	0.40	1.00	0.40
VF108TM	800.00	0.39	0.39	0.39	1.00	0.39
VF108TP	860.00	0.42	0.42	0.42	1.00	0.42
VF108TR	927.00	0.46	0.46	0.46	1.00	0.46
VF108TS	810.00	0.40	0.40	0.40	1.00	0.40
VF108TT	920.00	0.45	0.45	0.45	1.00	0.45
VF112ICT	1300.00	0.64	0.64	0.64	1.00	0.64
VF112PA	1330.00	0.66	0.66	0.66	1.00	0.66
VF112PD	1328.00	0.65	0.65	0.65	1.00	0.65
VF112PE	1300.00	0.64	0.64	0.64	1.00	0.64
VF112PEB	1020.00	0.50	0.50	0.50	1.00	0.50
VF112PEH	1300.00	0.64	0.64	0.64	1.00	0.64
VF112PF	1214.00	0.60	0.60	0.60	1.00	0.60
VF112PJ	1224.00	0.60	0.60	0.60	1.00	0.60
VF112PM	1250.00	0.62	0.62	0.62	1.00	0.62
VF112PP	1380.00	0.68	0.68	0.68	1.00	0.68
VF112PR	1402.00	0.69	0.69	0.69	1.00	0.69
VF112PS	1420.00	0.70	0.70	0.70	1.00	0.70
VF112PT	1440.00	0.71	0.71	0.71	1.00	0.71
VF112PY	1380.00	0.68	0.68	0.68	1.00	0.68
VF112PZG	1100.00	0.54	0.54	0.54	1.00	0.54
VF112TA	1300.00	0.64	0.64	0.64	1.00	0.64
VF112TD	1319.00	0.65	0.65	0.65	1.00	0.65
VF112TE	1300.00	0.64	0.64	0.64	1.00	0.64
VF112TF	1249.00	0.62	0.62	0.62	1.00	0.62
VF112TJ	1235.00	0.61	0.61	0.61	1.00	0.61
VF112TM	1100.00	0.54	0.54	0.54	1.00	0.54
VF112TP	1410.00	0.69	0.69	0.69	1.00	0.69
VF112TR	1414.00	0.70	0.70	0.70	1.00	0.70
VF112TS	1400.00	0.69	0.69	0.69	1.00	0.69
VF112TT	1470.00	0.72	0.72	0.72	1.00	0.72
VF112TY	1410.00	0.69	0.69	0.69	1.00	0.69
VF118PA	1780.00	0.88	0.88	0.88	1.00	0.88
VF118PD	1748.00	0.86	0.86	0.86	1.00	0.86
VF118PEH	1840.00	0.91	0.91	0.91	1.00	0.91
VF118PEB	1840.00	0.91	0.91	0.91	1.00	0.91
VF118PF	1650.00	0.81	0.81	0.81	1.00	0.81
VF118PJ	1686.00	0.83	0.83	0.83	1.00	0.83
VF118PJ1	1766.00	0.87	0.87	0.87	1.00	0.87
VF118PM	1790.00	0.88	0.88	0.88	1.00	0.88
VF118PP	1840.00	0.91	0.91	0.91	1.00	0.91
VF118PR	1892.00	0.93	0.93	0.93	1.00	0.93
VF118PS	1800.00	0.89	0.89	0.89	1.00	0.89
VF118PT	1810.00	0.89	0.89	0.89	1.00	0.89
VF118PY	1870.00	0.92	0.92	0.92	1.00	0.92
VF118TA	1810.00	0.89	0.89	0.89	1.00	0.89
VF118TD	1770.00	0.87	0.87	0.87	1.00	0.87
VF118TES	1840.00	0.91	0.91	0.91	1.00	0.91
VF118TF	1652.00	0.81	0.81	0.81	1.00	0.81
VF118TJ	1688.00	0.83	0.83	0.83	1.00	0.83
VF118TJ1	1760.00	0.87	0.87	0.87	1.00	0.87
VF118TM	1750.00	0.86	0.86	0.86	1.00	0.86
VF118TP	1870.00	0.92	0.92	0.92	1.00	0.92
VF118TR	1844.00	0.91	0.91	0.91	1.00	0.91
VF118TS	1850.00	0.91	0.91	0.91	1.00	0.91
VF118TT	1840.00	0.91	0.91	0.91	1.00	0.91

COMMERCIAL REF	WEIGHT / pc (in g)	MANUFACTURING	DISTRIBUTION	INSTALLATION	USE	EOL
VF122PD	1910.00	0.94	0.94	0.94	1.00	0.94
VF122PF	1830.00	0.90	0.90	0.90	1.00	0.90
VF122PJ	2000.00	0.99	0.99	0.99	1.00	0.99
VF122PM	2010.00	0.99	0.99	0.99	1.00	0.99
VF122PP	2040.00	1.00	1.00	1.00	1.00	1.00
VF122PS	2000.00	0.99	0.99	0.99	1.00	0.99
VF122PY	2070.00	1.02	1.02	1.02	1.00	1.02
VF122TA	2030.00	1.00	1.00	1.00	1.00	1.00
VF122TD	1960.00	0.97	0.97	0.97	1.00	0.97
VF122TF	1870.00	0.92	0.92	0.92	1.00	0.92
VF122TJ	2000.00	0.99	0.99	0.99	1.00	0.99
VF122TM	2050.00	1.01	1.01	1.01	1.00	1.01
VF122TP	2080.00	1.02	1.02	1.02	1.00	1.02
VF122TS	2040.00	1.00	1.00	1.00	1.00	1.00
VF122TA	1950.00	0.96	0.96	0.96	1.00	0.96
VF122PD	1874.00	0.92	0.92	0.92	1.00	0.92
VF122PE	1900.00	0.94	0.94	0.94	1.00	0.94
VF122PEB	1500.00	0.74	0.74	0.74	1.00	0.74
VF122PEH	1900.00	0.94	0.94	0.94	1.00	0.94
VF122PF	1720.00	0.85	0.85	0.85	1.00	0.85
VF122PJ	1750.00	0.86	0.86	0.86	1.00	0.86
VF122PM	1873.00	0.92	0.92	0.92	1.00	0.92
VF122PP	2130.00	1.05	1.05	1.05	1.00	1.05
VF122PR	2162.00	1.07	1.07	1.07	1.00	1.07
VF122PS	1960.00	0.97	0.97	0.97	1.00	0.97
VF122PT	2110.00	1.04	1.04	1.04	1.00	1.04
VF122PY	2090.00	1.02	1.02	1.02	1.00	1.02
VF122PZB	1520.00	0.75	0.75	0.75	1.00	0.75
VF122PZG	1520.00	0.75	0.75	0.75	1.00	0.75
VF122TA	1940.00	0.96	0.96	0.96	1.00	0.96
VF122TAE	3600.00	1.77	1.77	1.77	1.00	1.77
VF122TD	1919.00	0.95	0.95	0.95	1.00	0.95
VF122TE	1900.00	0.94	0.94	0.94	1.00	0.94
VF122TF	1747.00	0.86	0.86	0.86	1.00	0.86
VF122TJ	1832.00	0.90	0.90	0.90	1.00	0.90
VF122TM	2010.00	0.99	0.99	0.99	1.00	0.99
VF122TP	2170.00	1.07	1.07	1.07	1.00	1.07
VF122TR	2153.00	1.06	1.06	1.06	1.00	1.06
VF122TS	2000.00	0.99	0.99	0.99	1.00	0.99
VF122TT	2000.00	0.99	0.99	0.99	1.00	0.99
VF122TY	2120.00	1.04	1.04	1.04	1.00	1.04
VF122WV1	3476.00	1.71	1.71	1.71	1.00	1.71
VF128PA	2540.00	1.25	1.25	1.25	1.00	1.25
VF128PD	2455.00	1.21	1.21	1.21	1.00	1.21
VF128PE	2560.00	1.26	1.26	1.26	1.00	1.26
VF128PEH	2560.00	1.26	1.26	1.26	1.00	1.26
VF128PF	2192.00	1.08	1.08	1.08	1.00	1.08
VF128PJ	2360.00	1.16	1.16	1.16	1.00	1.16
VF128PJ1	2482.00	1.22	1.22	1.22	1.00	1.22
VF128PM	2450.00	1.21	1.21	1.21	1.00	1.21
VF128PP	2570.00	1.27	1.27	1.27	1.00	1.27
VF128PR	2752.00	1.36	1.36	1.36	1.00	1.36
VF128PS	2600.00	1.28	1.28	1.28	1.00	1.28
VF128PT	2870.00	1.32	1.32	1.32	1.00	1.32
VF128PY	2730.00	1.34	1.34	1.34	1.00	1.34
VF128PZB	1520.00	0.75	0.75	0.75	1.00	0.75
VF128PZD	2543.00	1.25	1.25	1.25	1.00	1.25
VF128PZF	2780.00	1.37	1.37	1.37	1.00	1.37
VF128PZG	2435.00	1.20	1.20	1.20	1.00	1.20
VF128TA	2730.00	1.34	1.34	1.34	1.00	1.34
VF128TA	2610.00	1.29	1.29	1.29	1.00	1.29
VF128TD	2480.00	1.22	1.22	1.22	1.00	1.22
VF128TES	2630.00	1.30	1.30	1.30	1.00	1.30
VF128TF	2264.00	1.12	1.12	1.12	1.00	1.12
VF128TJ	2230.00	1.10	1.10	1.10	1.00	1.10
VF128TJ1	2570.00	1.27	1.27	1.27	1.00	1.27
VF128TM	2450.00	1.21	1.21	1.21	1.00	1.21
VF128TP	2640.00	1.30	1.30	1.30	1.00	1.30
VF128TR	2750.00	1.35	1.35	1.35	1.00	1.35
VF128TS	3000.00	1.48	1.48	1.48	1.00	1.48
VF128TY	2670.00	1.32	1.32	1.32	1.00	1.32
VF312ICT	4091.00	2.02	2.02	2.02	1.00	2.02

COMMERCIAL REF	WEIGHT / pc (in g)	MANUFACTURING	DISTRIBUTION	INSTALLATION	USE	EOI
VS104TE	502	0.25	0.25	0.25	1.00	0.25
VS104TF	499	0.25	0.25	0.25	1.00	0.25
VS104TJ	490	0.24	0.24	0.24	1.00	0.24
VS104TM	500	0.25	0.25	0.25	1.00	0.25
VS104TP	510	0.25	0.25	0.25	1.00	0.25
VS104TR	496	0.24	0.24	0.24	1.00	0.24
VS104TS	480	0.24	0.24	0.24	1.00	0.24
VS104TT	535	0.26	0.26	0.26	1.00	0.26
VS108PA	670	0.33	0.33	0.33	1.00	0.33
VS108PD	646	0.32	0.32	0.32	1.00	0.32
VS108PE	650	0.32	0.32	0.32	1.00	0.32
VS108PEB	530	0.26	0.26	0.26	1.00	0.26
VS108PF	635	0.31	0.31	0.31	1.00	0.31
VS108PJ	622	0.31	0.31	0.31	1.00	0.31
VS108PM	650	0.32	0.32	0.32	1.00	0.32
VS108PP	660	0.33	0.33	0.33	1.00	0.33
VS108PR	705	0.35	0.35	0.35	1.00	0.35
VS108PT	685	0.34	0.34	0.34	1.00	0.34
VS108PY	680	0.33	0.33	0.33	1.00	0.33
VS108TA	680	0.33	0.33	0.33	1.00	0.33
VS108TD	660	0.33	0.33	0.33	1.00	0.33
VS108TE	660	0.33	0.33	0.33	1.00	0.33
VS108TF	623	0.31	0.31	0.31	1.00	0.31
VS108TJ	653	0.32	0.32	0.32	1.00	0.32
VS108TM	660	0.33	0.33	0.33	1.00	0.33
VS108TP	670	0.33	0.33	0.33	1.00	0.33
VS108TR	698	0.34	0.34	0.34	1.00	0.34
VS108TS	640	0.32	0.32	0.32	1.00	0.32
VS108TT	700	0.34	0.34	0.34	1.00	0.34
VS112PA	1100	0.54	0.54	0.54	1.00	0.54
VS112PD	1062	0.52	0.52	0.52	1.00	0.52
VS112PE	1060	0.52	0.52	0.52	1.00	0.52
VS112PEB	1170	0.58	0.58	0.58	1.00	0.58
VS112PF	1064	0.52	0.52	0.52	1.00	0.52
VS112PJ	1054	0.52	0.52	0.52	1.00	0.52
VS112PM	1050	0.52	0.52	0.52	1.00	0.52
VS112PP	1140	0.56	0.56	0.56	1.00	0.56
VS112PR	1139	0.56	0.56	0.56	1.00	0.56
VS112PS	1150	0.57	0.57	0.57	1.00	0.57
VS112PT	1190	0.59	0.59	0.59	1.00	0.59
VS112PY	1140	0.56	0.56	0.56	1.00	0.56
VS112TA	1130	0.56	0.56	0.56	1.00	0.56
VS112TD	1109	0.55	0.55	0.55	1.00	0.55
VS112TE	1090	0.54	0.54	0.54	1.00	0.54
VS112TF	1066	0.53	0.53	0.53	1.00	0.53
VS112TJ	1072	0.53	0.53	0.53	1.00	0.53
VS112TM	1105	0.54	0.54	0.54	1.00	0.54
VS112TP	1170	0.58	0.58	0.58	1.00	0.58
VS112TR	1146	0.56	0.56	0.56	1.00	0.56
VS112TS	1150	0.57	0.57	0.57	1.00	0.57
VS112TT	1220	0.60	0.60	0.60	1.00	0.60
VS112TY	1170	0.58	0.58	0.58	1.00	0.58
VS118PA	1490	0.73	0.73	0.73	1.00	0.73
VS118PD	1460	0.72	0.72	0.72	1.00	0.72
VS118PES	1550	0.76	0.76	0.76	1.00	0.76
VS118PF	1440	0.71	0.71	0.71	1.00	0.71
VS118PJ	1480	0.73	0.73	0.73	1.00	0.73
VS118PJ1	1551	0.76	0.76	0.76	1.00	0.76
VS118PM	1550	0.77	0.77	0.77	1.00	0.77
VS118PP	1560	0.77	0.77	0.77	1.00	0.77
VS118PS	1580	0.78	0.78	0.78	1.00	0.78
VS118PT	1670	0.82	0.82	0.82	1.00	0.82
VS118PY	1550	0.76	0.76	0.76	1.00	0.76
VS118TA	1520	0.75	0.75	0.75	1.00	0.75
VS118TD	1510	0.74	0.74	0.74	1.00	0.74
VS118TES	1580	0.78	0.78	0.78	1.00	0.78
VS118TF	1417	0.70	0.70	0.70	1.00	0.70
VS118TJ	1478	0.73	0.73	0.73	1.00	0.73
VS118TJ1	1544	0.76	0.76	0.76	1.00	0.76
VS118TM	1525	0.75	0.75	0.75	1.00	0.75
VS118TP	1590	0.78	0.78	0.78	1.00	0.78
VS118TS	1570	0.77	0.77	0.77	1.00	0.77
VS118TT	1670	0.82	0.82	0.82	1.00	0.82
VS122PD	1710	0.84	0.84	0.84	1.00	0.84
VS122PF	1720	0.85	0.85	0.85	1.00	0.85
VS122PJ	1732	0.85	0.85	0.85	1.00	0.85
VS122PM	1860	0.92	0.92	0.92	1.00	0.92
VS122PP	1830	0.90	0.90	0.90	1.00	0.90
VS122PS	1900	0.94	0.94	0.94	1.00	0.94
VS122PY	1860	0.92	0.92	0.92	1.00	0.92
VS122TA	1810	0.89	0.89	0.89	1.00	0.89
VS122TD	1780	0.88	0.88	0.88	1.00	0.88
VS122TF	1760	0.87	0.87	0.87	1.00	0.87
VS122TJ	1729	0.85	0.85	0.85	1.00	0.85
VS122TM	1900	0.94	0.94	0.94	1.00	0.94
VS122TP	1870	0.92	0.92	0.92	1.00	0.92
VS212PA	1620	0.80	0.80	0.80	1.00	0.80
VS212PD	1590	0.78	0.78	0.78	1.00	0.78
VS212PE	1600	0.79	0.79	0.79	1.00	0.79
VS212PEB	1330	0.66	0.66	0.66	1.00	0.66

COMMERCIAL REF	WEIGHT / pc (in g)	MANUFACTURING	DISTRIBUTION	INSTALLATION	USE	EOI
VS212PF	1530	0.75	0.75	0.75	1.00	0.75
VS212PJ	1530	0.75	0.75	0.75	1.00	0.75
VS212PM	1650	0.81	0.81	0.81	1.00	0.81
VS212PP	1810	0.89	0.89	0.89	1.00	0.89
VS212PR	1828	0.90	0.90	0.90	1.00	0.90
VS212PS	1690	0.83	0.83	0.83	1.00	0.83
VS212PT	1700	0.84	0.84	0.84	1.00	0.84
VS212PY	1717	0.85	0.85	0.85	1.00	0.85
VS212PZB	1150	0.57	0.57	0.57	1.00	0.57
VS212TA	1660	0.82	0.82	0.82	1.00	0.82
VS212TD	1619	0.80	0.80	0.80	1.00	0.80
VS212TE	1600	0.79	0.79	0.79	1.00	0.79
VS212TF	1549	0.76	0.76	0.76	1.00	0.76
VS212TJ	1580	0.78	0.78	0.78	1.00	0.78
VS212TM	1650	0.81	0.81	0.81	1.00	0.81
VS212TP	1850	0.91	0.91	0.91	1.00	0.91
VS212TR	1776	0.87	0.87	0.87	1.00	0.87
VS212TS	1650	0.81	0.81	0.81	1.00	0.81
VS212TT	1740	0.86	0.86	0.86	1.00	0.86
VS212TY	1800	0.89	0.89	0.89	1.00	0.89
VS212WP1	3166	1.56	1.56	1.56	1.00	1.56
VS212WP2	3700	1.82	1.82	1.82	1.00	1.82
VS218PA	2150	1.06	1.06	1.06	1.00	1.06
VS218PD	2140	1.05	1.05	1.05	1.00	1.05
VS218PDE	2000	0.99	0.99	0.99	1.00	0.99
VS218PES	2190	1.08	1.08	1.08	1.00	1.08
VS218PF	2050	1.01	1.01	1.01	1.00	1.01
VS218PJ	2075	1.02	1.02	1.02	1.00	1.02
VS218PJ1	2286	1.13	1.13	1.13	1.00	1.13
VS218PM	2200	1.08	1.08	1.08	1.00	1.08
VS218PP	2200	1.08	1.08	1.08	1.00	1.08
VS218PS	2160	1.06	1.06	1.06	1.00	1.06
VS218PT	2505	1.23	1.23	1.23	1.00	1.23
VS218PY	2320	1.14	1.14	1.14	1.00	1.14
VS218PZD	2067	1.02	1.02	1.02	1.00	1.02
VS218PZE	2140	1.05	1.05	1.05	1.00	1.05
VS218PZF	2067	1.02	1.02	1.02	1.00	1.02
VS218TA	2180	1.07	1.07	1.07	1.00	1.07
VS218TD	2140	1.05	1.05	1.05	1.00	1.05
VS218TES	2220	1.09	1.09	1.09	1.00	1.09
VS218TF	2067	1.02	1.02	1.02	1.00	1.02
VS218TJ	2121	1.04	1.04	1.04	1.00	1.04
VS218TJ1	2345	1.16	1.16	1.16	1.00	1.16
VS218TM	2340	1.15	1.15	1.15	1.00	1.15
VS218TP	2320	1.10	1.10	1.10	1.00	1.10
VS218TS	2320	1.14	1.14	1.14	1.00	1.14
VS218TT	2505	1.23	1.23	1.23	1.00	1.23
VS218TY	2350	1.16	1.16	1.16	1.00	1.16
VS312PA	2090	1.03	1.03	1.03	1.00	1.03
VS312PD	2042	1.01	1.01	1.01	1.00	1.01
VS312PE	2030	1.00	1.00	1.00	1.00	1.00
VS312PF	2000	0.99	0.99	0.99	1.00	0.99
VS312PJ	2179	1.07	1.07	1.07	1.00	1.07
VS312PM	2150	1.06	1.06	1.06	1.00	1.06
VS312PP	2290	1.13	1.13	1.13	1.00	1.13
VS312PR	2352	1.16	1.16	1.16	1.00	1.16
VS312PS	2120	1.09	1.09	1.09	1.00	1.09
VS312PT	2042	1.01	1.01	1.01	1.00	1.01
VS312PY	2330	1.15	1.15	1.15	1.00	1.15
VS312TA	2130	1.05	1.05	1.05	1.00	1.05
VS312TD	2060	1.01	1.01	1.01	1.00	1.01
VS312TE	2070	1.02	1.02	1.02	1.00	1.02
VS312TF	2022	1.00	1.00	1.00	1.00	1.00
VS312TJ	2053	1.01	1.01	1.01	1.00	1.01
VS312TM	2195	1.08	1.08	1.08	1.00	1.08
VS312TP	2330	1.15	1.15	1.15	1.00	1.15
VS312TR	2348	1.16	1.16	1.16	1.00	1.16
VS312TT	2365	1.17	1.17	1.17	1.00	1.17
VS312TY	2370	1.17	1.17	1.17	1.00	1.17
VS312WP1	4040	1.99	1.99	1.99	1.00	1.99
VS318PA	2890	1.42	1.42	1.42	1.00	1.42
VS318PD	2819	1.39	1.39	1.39	1.00	1.39
VS318PES	2900	1.43	1.43	1.43	1.00	1.43
VS318PF	2712	1.34	1.34	1.34	1.00	1.34
VS318PJ	2740	1.35	1.35	1.35	1.00	1.35
VS318PM	3000	1.48	1.48	1.48	1.00	1.48
VS318PP	2900	1.43	1.43	1.43	1.00	1.43
VS318PS	2940	1.45	1.45	1.45	1.00	1.45
VS318PT	3345	1.65	1.65	1.65	1.00	1.65
VS318PY	3170	1.56	1.56	1.56	1.00	1.56
VS318PZD	2800	1.38	1.38	1.38	1.00	1.38
VS318PZF	2840	1.40	1.40	1.40	1.00	1.40
VS318TA	2970	1.46	1.46	1.46	1.00	1.46
VS318TD	2890	1.42	1.42	1.42	1.00	1.42
VS318TES	2980	1.47	1.47	1.47	1.00	1.47
VS318TF						

COMMERCIAL REF	WEIGHT / pc (in g)	MANUFACTURING	DISTRIBUTION	INSTALLATION	USE	EOL
VZ670N	1150	0.57	0.57	0.57	1.00	0.57
VZ671N	655	0.32	0.32	0.32	1.00	0.32
VZ683N	122	0.06	0.06	0.06	1.00	0.06
VZ685N	429	0.21	0.21	0.21	1.00	0.21
VZ688N	350	0.17	0.17	0.17	1.00	0.17
VZ689N	420	0.21	0.21	0.21	1.00	0.21
VZ690N	750	0.37	0.37	0.37	1.00	0.37
VZ691N	186	0.09	0.09	0.09	1.00	0.09
VZ693N	55	0.03	0.03	0.03	1.00	0.03
VZ694N	82	0.04	0.04	0.04	1.00	0.04
VZ696N	50	0.02	0.02	0.02	1.00	0.02
VZ699N	60	0.03	0.03	0.03	1.00	0.03
VZ701N	17	0.01	0.01	0.01	1.00	0.01
VZ702N	23	0.01	0.01	0.01	1.00	0.01
VZ703N	30	0.01	0.01	0.01	1.00	0.01
VZ704N	50	0.02	0.02	0.02	1.00	0.02
VZ705N	13	0.01	0.01	0.01	1.00	0.01
VZ706N	25	0.01	0.01	0.01	1.00	0.01
VZ707N	35	0.02	0.02	0.02	1.00	0.02
VZ708N	55	0.03	0.03	0.03	1.00	0.03
VZ710	95	0.05	0.05	0.05	1.00	0.05
VZ768N	700	0.34	0.34	0.34	1.00	0.34
VZ769N	950	0.47	0.47	0.47	1.00	0.47
VZ786N	23	0.01	0.01	0.01	1.00	0.01
VZ787N	150	0.07	0.07	0.07	1.00	0.07
VZ788N	23	0.01	0.01	0.01	1.00	0.01
VZ789N	7	0.00	0.00	0.00	1.00	0.00
VZ790N	30	0.01	0.01	0.01	1.00	0.01
VZ791N	70	0.03	0.03	0.03	1.00	0.03
VZ792N	120	0.06	0.06	0.06	1.00	0.06
VZ793N	150	0.07	0.07	0.07	1.00	0.07
VZ794N	22	0.01	0.01	0.01	1.00	0.01
VZ796N	70	0.03	0.03	0.03	1.00	0.03
VZ797N	110	0.05	0.05	0.05	1.00	0.05
VZ822N	550	0.27	0.27	0.27	1.00	0.27
VZ823N	750	0.37	0.37	0.37	1.00	0.37
VZ824N	1015	0.50	0.50	0.50	1.00	0.50
VZ825N	1350	0.67	0.67	0.67	1.00	0.67
VZ826N	700	0.34	0.34	0.34	1.00	0.34
VZ829N	1670	0.82	0.82	0.82	1.00	0.82
VZ842N	60	0.03	0.03	0.03	1.00	0.03
VZ849N	280	0.14	0.14	0.14	1.00	0.14
VZ850N	280	0.14	0.14	0.14	1.00	0.14
VZ851N	100	0.05	0.05	0.05	1.00	0.05
VZ852N	139	0.07	0.07	0.07	1.00	0.07
VZ853N	131	0.06	0.06	0.06	1.00	0.06
VZ854N	97.8	0.05	0.05	0.05	1.00	0.05
VZ855N	500	0.25	0.25	0.25	1.00	0.25
VZ857N	400	0.20	0.20	0.20	1.00	0.20
VZ858N	504	0.25	0.25	0.25	1.00	0.25
VZ859N	680	0.33	0.33	0.33	1.00	0.33
VZ860N	860	0.42	0.42	0.42	1.00	0.42
VZ861N	280	0.14	0.14	0.14	1.00	0.14
VZ862N	4	0.00	0.00	0.00	1.00	0.00
VZ864	106.9	0.05	0.05	0.05	1.00	0.05
VZ865	32	0.02	0.02	0.02	1.00	0.02
VZ866	49	0.02	0.02	0.02	1.00	0.02
VZ867	49	0.02	0.02	0.02	1.00	0.02