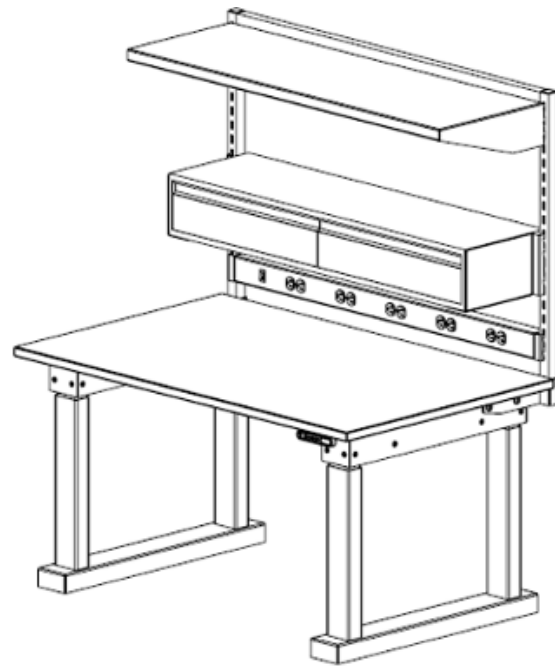
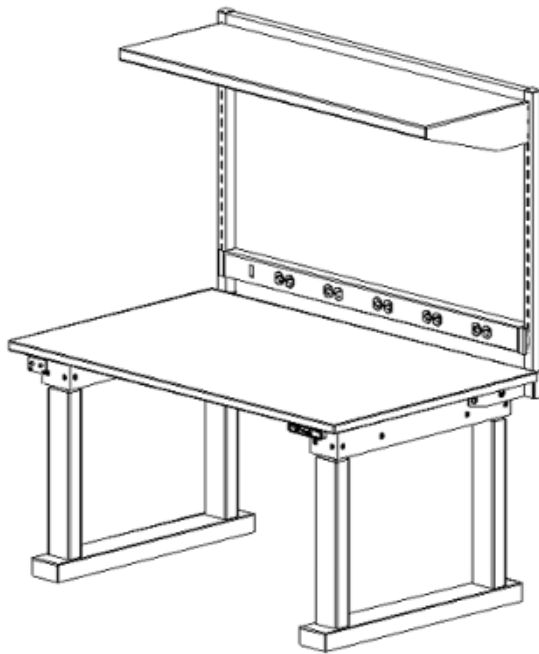




Workstations

Workspace

Environmental Product Declaration

Date of Issue: 11/12/2025

Date of Expiration: 11/12/2030

PRODUCT CATEGORY RULE

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814 v2 (2025)

Product Sub-Category: Desking

FUNCTIONAL UNIT

1 m² of physical floor space for a period of 10 years (2.15 units of BTS-WRK-10, 2.15 units of BTS-WRK-11, 2.21 units of BTS-WRK-12)

Number of occupants: 1

This study covers 3 configurations with product codes: BTS-WRK-10, BTS-WRK-11, BTS-WRK-12. All workstations include steel framing components, steel shelf, power bar, LED light assembly, white laminate surface, and slotted uprights. Additionally, BTS-WRK-11 includes steel drawer cabinet. The lift system for the height-adjustable worksurface requires 0.0075 kWh per hour of use, and the LED light requires 0.0259 kWh per hour of use.

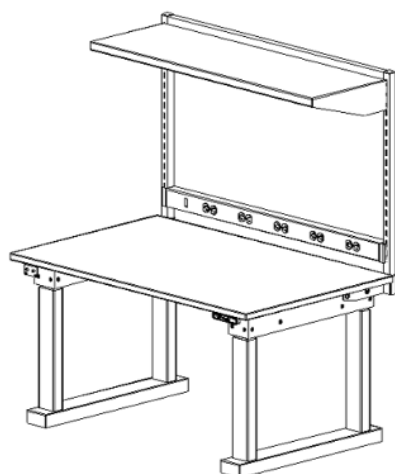


**Certified
Environmental
Product Declaration**

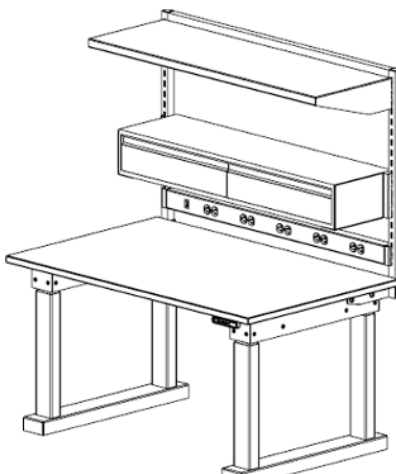
www.nsf.org

The PCR this EPD was based on was written to determine the potential environmental impacts of a furniture workspace product from cradle-to-gate with options. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioners' assumptions, the source of the data used in the study, and the specifics of the product modeled.

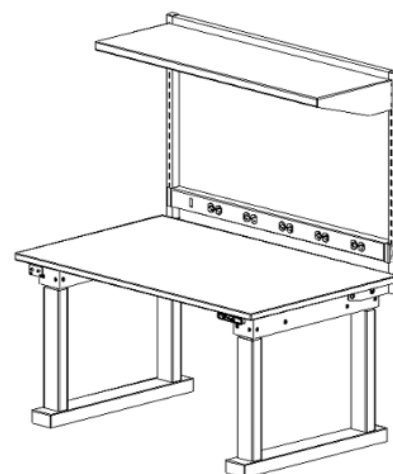
Product Name	Repair Room Workstation (BTS-WRK-10) Backstage/Fulfillment Workstation (BTS-WRK-11) Repair Room Workstation (BTS-WRK-12)	
Manufacturer Name and Address	Bench-Tek Solutions 525 Aldo Ave Santa Clara, CA 95054	
Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org	
Declaration Number	EPD11155	
Reference PCR and Version Number	BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814 v2 (2025)	
EPD Type	Product Specific	
EPD Scope	Cradle-to-Gate with Options (A1-A3, A4-A5, B1, B4, C1-C4)	
Functional Unit	1 m ² of physical floor space for a period of 10 years 2.15 units of BTS-WRK-10 2.15 units of BTS-WRK-11 2.21 units of BTS-WRK-12	
Product's intended Application and Use	Desking	
Product RSL	5 years	
Markets of Applicability	North America	
Date of Issue	11/12/2025	
Period of Validity	5 years from date of issue	
Year of reported manufacturer primary data	2023	
LCA Software and Version Number	Sphera LCA for Experts (fka GaBi) 10.9	
LCI Database and Version Number	Managed Life Cycle Content Version 2025.1 (formerly GaBi)	
LCIA Methodology and Version Number	TRACI 2.2, IPCC AR6 GWP100	
Overall Data Quality Assessment Score	1.7	
The sub-category PCR review was conducted by:	Industrial Ecology Consultants Thomas P. Gloria, PhD, t.gloria@industrial-ecology.com	
This declaration was independently verified in accordance with ISO 14025: 2006. ISO 21930:2017 serves as the core PCR. Sub-category PCR: NSF Office Furniture Workspace Product Category Rule ☐ Internal ☒ External	Joseph Geigig – EcoForm joseph@ecoform.com	
This life cycle assessment was conducted in accordance with ISO 14044:2006/AMD 1:2007/AMD 2:2020 and the reference PCR by:	WAP Sustainability	
This life cycle assessment was independently verified in accordance with ISO 14044:2006/AMD 1:2007/AMD 2:2020 and the reference PCR by:	Joseph Geigig – EcoForm joseph@ecoform.com	
Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. The PCR this EPD was based on was written to determine the potential environmental impacts of a furniture workspace product from cradle-to-gate with options. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioners' assumptions, the source of the data used in the study, and the specifics of the product modeled. Additionally, comparisons should be based on the same functional unit.		



BTS-WRK-10



BTS-WRK-11



BTS-WRK-12

Company Description

Bench-Tek Solutions is a leading manufacturer of high-quality workbenches and custom industrial furniture, including workstations, carts, and racks. We serve a wide range of industries, including advanced manufacturing, life sciences, tech, and laboratory environments.

Product Description

BTS-WRK-10, BTS-WRK-11, and BTS-WRK-12 are ergonomic workstations with heavy duty lifting columns. Dimensions for the workstations:

- BTS-WRK-10 and BTS-WRK-11: 30"D x 48"L x 25.6"-51.2H.
- BTS-WRK-12: 30"D x 46.75"L x 25.6"-51.2H

All workstations include steel framing components, steel shelf, power bar, LED light assembly, white laminate surface, and slotted uprights. Additionally, BTS-WRK-11 includes a steel drawer cabinet.

	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Product Category	Desking	Desking	Desking
Number of Occupants	1	1	1
Floor Area	0.929 m ²	0.929 m ²	0.905 m ²
Components Included	Steel base, steel brackets/supports, steel shelf, power bar, LED light, lift system, particleboard top, steel uprights, and hardware kit	Steel base, steel brackets/supports, steel shelf, steel drawer, power bar, LED light, lift system, particleboard top, steel uprights, and hardware kit	Steel base, steel brackets/supports, steel shelf, power bar, LED light, lift system, particleboard top, steel uprights, and hardware kit
Defining Features	Worksurface, adjustable-height, integrated paneling (steel uprights) for work area delineation, task lighting	Worksurface, adjustable-height, integrated paneling (steel uprights) for work area delineation, included storage, task lighting	Worksurface, adjustable-height, integrated paneling (steel uprights) for work area delineation, task lighting
Energy Usage	Lift Kit: 0.0075 kWh/hr Lighting: 0.0259 kWh/hr	Lift Kit: 0.0075 kWh/hr Lighting: 0.0259 kWh/hr	Lift Kit: 0.0075 kWh/hr Lighting: 0.0259 kWh/hr
Recycled Content²	Pre-Consumer 16% Post-Consumer 0%	Pre-Consumer 17% Post-Consumer 0%	Pre-Consumer 16% Post-Consumer 0%

Product Composition

² Because no primary data were available on recycled content, and dataset documentation on source of recycled content is unclear, it is assumed all recycled content is pre-consumer recycled content.



This composition of the workstations are provided in the tables below. This EPD represents specific configurations. The workstations have a 12-year warranty, but Bench-Tek has not had the products tested to ANSI/BIFMA X5.5 or ANSI/BIFMA X5.6. Therefore, per PCR requirements, a product RSL of 5 years is assumed and 1 replacement is required for each workstation over the 10-year analysis period.

Because Bench-Tek's workstations have a warranty greater than 10 years, they believe this reasonably supports the assumption that their workstations will not be replaced over a 10-year period. In addition to product life cycle results per functional unit including replacements, as required by the PCR, life cycle results are additionally presented in the Appendix per 1 workstation without replacements.

The source of recycled content is unknown, so it is assumed all recycled content is pre-consumer recycled content.

BTS-WRK-10

The product has a total area of 0.929 m² and a reference service life of 5 years. To meet the functional unit, 2.15 units of BTS-WRK-10 are required.

Material	Mass per Product (kg)	Mass per Functional Unit (kg)	Percent of Product (%)	Recycled Content, Pre-Consumer (%)	Recycled Content, Post-Consumer (%)
Steel	64.9	140	67.2%	23%	0%
Particle Board	18.1	39.1	18.8%	0%	0%
Stainless Steel	16.8	36.1	1.7%	5%	0%
Motor	2.90	6.24	3.0%	0%	0%
Powder Coat	1.07	2.30	1.1%	0%	0%
Aluminum	1.40	3.01	1.4%	0%	0%
Cable	1.34	2.88	1.4%	0%	0%
Other	5.15	11.1	5.3%	8%	0%
Total	96.6	208	100%	16%	0%

BTS-WRK-11

The product has a total area of 0.929 m² and a reference service life of 5 years. To meet the functional unit, 2.15 units of BTS-WRK-11 are required.

Material	Mass per Product (kg)	Mass per Functional Unit (kg)	Percent of Product (%)	Recycled Content, Pre-Consumer (%)	Recycled Content, Post-Consumer (%)
Steel	86.7	187	71.7%	23%	0%
Particle Board	18.1	39.1	15.0%	0%	0%
Stainless Steel	3.04	6.54	2.5%	5%	0%
Motor	2.90	6.24	2.4%	0%	0%
Powder Coat	1.83	3.94	1.5%	0%	0%
Aluminum	1.40	3.01	1.2%	0%	0%
Cable	1.34	2.88	1.1%	0%	0%
Other	5.60	12.1	4.6%	8%	0%
Total	121	260	100%	17%	0%



BTS-WRK-12

The product has a total area of 0.905 m² and a reference service life of 5 years. To meet the functional unit, 2.21 units of BTS-WRK-12 are required.

Material	Mass per Product (kg)	Mass per Functional Unit (kg)	Percent of Product (%)	Recycled Content, Pre-Consumer (%)	Recycled Content, Post-Consumer (%)
Steel	64.9	143	67.6%	23%	0%
Particle Board	17.6	39.0	18.4%	0%	0%
Stainless Steel	1.68	3.71	1.7%	5%	0%
Motor	2.90	6.41	3.0%	0%	0%
Powder Coat	1.07	2.36	1.1%	0%	0%
Aluminum	1.40	3.09	1.5%	0%	0%
Cable	1.34	2.96	1.4%	0%	0%
Other	5.15	11.4	5.4%	8%	0%
Total	96.1	212	100%	16%	0%

Selection of Impact Parameters

Environmental Impacts were calculated using the LCA for Experts software platform. Impact results have been calculated using IPCC AR6 and TRACI 2.2 characterization factors. Results presented in this report are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

Abbreviation	Parameter	Unit
GWPincl	Global warming potential, including biogenic carbon	kg CO ₂ eq
GWPexcl	Global warming potential, excluding biogenic carbon	kg CO ₂ eq
AP	Acidification potential of soil and water	kg SO ₂ eq
EPfw	Eutrophication potential, freshwater	kg P eq
EPmarine	Eutrophication potential, marine	kg N eq
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq
SFP	Smog Formation Potential	kg O ₃ eq

Abbreviation	Parameter	Unit
BCRP	Biogenic Carbon Removal from Product	kg CO ₂
BCEP	Biogenic Carbon Emission from Product	kg CO ₂
BCRK	Biogenic Carbon Removal from Packaging	kg CO ₂
BCEK	Biogenic Carbon Emission from Packaging	kg CO ₂
BCEW	Biogenic Carbon Emission from Combustion of Waste from Renewable Sources	kg CO ₂
CCE	Calcination Carbon Emissions	kg CO ₂
CCR	Carbonation Carbon Removals	kg CO ₂
CWNR	Carbon Emissions from Combustion of Waste from Non-Renewable Sources	kg CO ₂

In addition to the environmental parameters above, the following resource use and waste categories are also disclosed.

Abbreviation	Parameter	Unit
Resource Use		
RPRE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ
RPRM	Use of renewable primary energy resources used as raw materials	MJ
NRPRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ
NRPRM	Use of non-renewable primary energy resources used as raw materials	MJ
SM	Use of secondary materials	kg
RSF	Use of renewable secondary fuels	MJ
NRSF	Use of non-renewable secondary fuels	MJ
RE	Recovered energy	MJ
FW	Net use of fresh water	m ³
Waste Parameters and Output Flows		
HWD	Disposed-of-hazardous waste	kg
NHWD	Disposed-of non-hazardous waste	kg
HLRW	High-level radioactive waste, conditioned, to final repository	kg
ILLRW	Intermediate- and low-level radioactive waste, conditioned, to final repository	kg
CRU	Components for reuse	kg
MR	Materials for recycling	kg
MER	Materials for energy recovery	kg
EEE	Exported electrical energy	MJ
EET	Exported thermal energy	MJ
Additional Indicators		
PED	Total use of renewable and non-renewable primary energy resources	MJ, net calorific value
FW	Net use of fresh water ³	m ³

Life Cycle Assessment Information

Allocation

³ Water usage from electricity generation is included in FW impacts.

General principles of allocation were based on ISO 14040/44. For co-products at the manufacturing facility, allocation based on total production by annual revenue for each product was adopted. As a default, secondary MLC datasets use a physical basis for allocation. Throughout the study recycled materials were accounted for via the cut-off method. Under this method, impacts and benefits associated with the previous life of a raw material from recycled stock are excluded from the system boundary. Additionally, impacts and benefits associated with secondary functions of materials at end of life are also excluded (i.e., production into a third life or energy generation from the incineration plant). The study does include the impacts associated with reprocessing and preparation of recycled materials that are part of the bill of materials of the products under study.

Cut-Off Criteria

Cumulative excluded material inputs, energy inputs, and environmental impacts must not exceed 5% based on total weight, energy use, or environmental impact of the functional unit. Inputs or outputs greater than 1% (based on total mass of the final product) were included within the scope of analysis. Material inputs less than 1% were included if sufficient data was available to warrant inclusion and/or the material input was thought to have significant environmental impact. Cumulative excluded material inputs and environmental impacts are less than 5% based on total weight and impact of the functional unit.

The list of excluded inputs include:

- As the tools used during the installation of the product are multi-use tools and can be reused after each installation, the per-functional unit impacts are considered negligible and therefore are not included.
- Items like labels, inks, stickers, adhesives, etc. may have been excluded from the product and packaging BOMs due to their small mass compared to the total product and packaging.
- Some material and energy inputs may have been excluded within the Sphera Managed Life Cycle Content (MLC) datasets used for this project. All MLC datasets have been critically reviewed and conform to the exclusion requirements of the PCR.

Life Cycle Assessment Scenarios

Values in the scenario tables below are reported per declared unit unless otherwise stated.

A4: Transportation to the Building Site

Parameter	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Default Transportation Type	Truck	Truck	Truck
Fuel Type	Diesel	Diesel	Diesel
Fuel Consumption* (l/100 km)	42	42	42
Transport Distance (km)	1,250	1,250	1,250
Capacity Utilization* (%)	67	67	67
Weight for Transport, Including Packaging (kg)	122	174	125

* Fuel efficiency and capacity utilization are derived from the default parameter values in the secondary MLC dataset in absence of primary data.

A5: Installation in the Building

Parameter	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Electricity Consumption (kWh)	0.627	0.627	0.691
Product Loss (kg)	0	0	0
Waste materials at the construction site before waste processing, generated by product installation (kg)	18.3	43.8	18.8
Output materials resulting from on-site waste processing (kg)	18.3	43.8	18.8
Distance to Waste Processing (km)	32	32	32
Biogenic Carbon in Packaging (kg CO ₂)	30.2	71.3	31.0

No ancillary materials, freshwater, other resources, or energy carriers other than electricity are required for installation. Furthermore, no direct emissions to air are generated upon installation.

B1: Use, per 1 Product

Parameter	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Per the PCR, no energy use is modeled for use phase. However, electricity consumption for one is estimated for the following components:			
Lighting: 0.0259 kWh per hour when the light is turned on the entire duration			
Lift Kit: 0.00750 kWh per hour for one cycle of lifting the product up and down			

B4: Replacements

Parameter	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Reference Service Life (Years)	5	5	5
Replacement Cycle (Years)	10	10	10
Replacement Cycles Included in B4	1	1	1
Electricity Consumption (kWh)	0.627	0.627	0.691

No worn parts, ancillary materials, freshwater, other resources, or energy carriers other than electricity are required for replacement. Furthermore, no direct emissions to air are generated upon replacement.

C1-C4: End of Life

Parameter	BTS-WRK-10	BTS-WRK-11	BTS-WRK-12
Product Waste Collected as Mixed Construction Waste (kg)	104	130	106
Product Waste to Recycling (kg)	34.2	42.9	35.0
Distance to Waste Recycling (km)	32	32	32
Product Waste to Landfill (kg)	55.8	69.9	56.9
Distance to Waste Landfill (km)	32	32	32
Product Waste to Incineration (kg)	14.0	17.4	14.3
Distance to Waste Incineration (km)	32	32	32

LCA Results – BTS-WRK-10

All results are given per functional unit, which is 1 m² of physical floor space for a period of 10 years. To fulfill the functional unit, 2.15 units of product are required.

IPCC AR6, TRACI Results

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPindl	kg CO ₂ eq	7.44E+02	3.14E+02	1.25E+01	1.83E+01	0	3.72E+02	0	2.73E-01	8.31E+00	1.86E+01
GWPexcl	kg CO ₂ eq	8.21E+02	3.71E+02	1.25E+01	1.00E+01	0	4.10E+02	0	2.72E-01	3.29E+00	1.30E+01
AP	kg SO ₂ eq	2.54E+00	1.13E+00	5.74E-02	3.05E-02	0	1.27E+00	0	7.71E-04	6.59E-03	4.12E-02
EPfw	kg P eq	1.20E-03	4.59E-04	1.01E-05	4.24E-05	0	6.00E-04	0	2.22E-07	-9.30E-07	8.93E-05
EPmarine	kg N eq	1.06E+00	4.49E-01	5.34E-02	1.06E-02	0	5.32E-01	0	6.97E-04	5.06E-03	1.36E-02
ODP	kg CFC 11 eq	1.81E-07	9.03E-08	3.52E-12	3.88E-12	0	9.03E-08	0	7.69E-14	-9.20E-13	3.97E-12
SFP	kg O ₃ eq	3.43E+01	1.52E+01	1.31E+00	1.96E-01	0	1.71E+01	0	1.73E-02	1.79E-01	2.54E-01

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
BCRP	kg CO ₂	6.81E+01	3.40E+01	0	0	0	3.40E+01	0	0	0	0
BCEP	kg CO ₂	6.81E+01	0	0	0	0	3.40E+01	0	0	1.12E+01	2.29E+01
BCRK	kg CO ₂	6.04E+01	3.02E+01	0	0	0	3.02E+01	0	0	0	0
BCEK	kg CO ₂	6.04E+01	0	0	3.02E+01	0	3.02E+01	0	0	0	0
BCEW	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCE	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCR	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CWNR	kg CO ₂	0	0	0	0	0	0	0	0	0	0

LCI Indicators

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
RPRE	MJ	5.29E+03	2.63E+03	6.65E+00	2.25E+00	0	2.64E+03	0	1.45E-01	2.27E+00	2.80E+00
RPRM	MJ	6.38E+02	3.19E+02	0	0	0	3.19E+02	0	0	0	0
NRPRE	MJ	7.78E+03	3.68E+03	1.60E+02	1.12E+01	0	3.89E+03	0	3.50E+00	2.08E+01	1.97E+01
NRPRM	MJ	1.29E+03	6.45E+02	0	0	0	6.45E+02	0	0	0	0
SM	kg	5.91E+01	2.95E+01	0	0	0	2.95E+01	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0
RE	MJ	0	0	0	0	0	0	0	0	0	0
HWD	kg	2.93E-03	1.46E-03	2.65E-08	4.56E-09	0	1.46E-03	0	5.80E-10	4.91E-09	4.72E-09
NHWD	kg	1.63E+02	1.83E+01	1.64E-02	7.52E+00	0	8.15E+01	0	3.58E-04	1.34E+00	5.43E+01
HLRW	kg	2.16E-04	1.05E-04	6.53E-07	7.28E-07	0	1.08E-04	0	1.43E-08	1.05E-06	2.47E-07
ILLRW	kg	1.87E-01	9.15E-02	5.49E-04	6.10E-04	0	9.37E-02	0	1.20E-05	8.78E-04	2.17E-04
CRU	kg	0	0	0	0	0	0	0	0	0	0
MR	kg	9.55E+01	1.22E+01	0	4.56E+00	0	4.78E+01	0	0	3.10E+01	0
MER	kg	7.78E+00	0	0	0	0	3.89E+00	0	0	0	3.89E+00
EEE	MJ	5.14E+01	3.24E-01	0	9.66E+00	0	2.57E+01	0	0	0	1.57E+01
EET	MJ	1.60E+01	1.31E-01	0	2.87E+00	0	8.01E+00	0	0	0	5.01E+00
PED	MJ	1.31E+04	6.31E+03	1.67E+02	1.34E+01	0	6.54E+03	0	3.64E+00	2.30E+01	2.25E+01
FW	m ³	2.30E+01	1.15E+01	7.18E-03	1.17E-02	0	1.15E+01	0	1.57E-04	2.98E-02	4.00E-03

LCA Results – BTS-WRK-11

All results are given per functional unit, which is 1 m² of physical floor space for a period of 10 years. To fulfill the functional unit, 2.15 units of product are required.

IPCC AR6, TRACI Results

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPincl	kg CO ₂ eq	8.74E+02	3.48E+02	1.79E+01	4.28E+01	0	4.37E+02	0	3.42E-01	9.23E+00	1.89E+01
GWPexcl	kg CO ₂ eq	1.01E+03	4.48E+02	1.78E+01	2.34E+01	0	5.07E+02	0	3.41E-01	4.21E+00	1.33E+01
AP	kg SO ₂ eq	3.22E+00	1.40E+00	8.19E-02	7.11E-02	0	1.61E+00	0	9.68E-04	7.90E-03	4.28E-02
EPfw	kg P eq	2.10E-03	8.25E-04	1.45E-05	1.08E-04	0	1.05E-03	0	2.78E-07	-1.25E-06	1.03E-04
EPmarine	kg N eq	1.39E+00	5.71E-01	7.62E-02	2.46E-02	0	6.93E-01	0	8.74E-04	5.98E-03	1.44E-02
ODP	kg CFC 11 eq	1.72E-07	8.61E-08	5.02E-12	5.36E-12	0	8.61E-08	0	9.64E-14	-1.35E-12	4.96E-12
SFP	kg O ₃ eq	4.42E+01	1.93E+01	1.88E+00	4.53E-01	0	2.21E+01	0	2.17E-02	2.12E-01	2.84E-01

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
BCRP	kg CO ₂	6.81E+01	3.40E+01	0	0	0	3.40E+01	0	0	0	0
BCEP	kg CO ₂	6.81E+01	0	0	0	0	3.40E+01	0	0	1.12E+01	2.29E+01
BCRK	kg CO ₂	1.43E+02	7.13E+01	0	0	0	7.13E+01	0	0	0	0
BCEK	kg CO ₂	1.43E+02	0	0	7.13E+01	0	7.13E+01	0	0	0	0
BCEW	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCE	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCR	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CWNR	kg CO ₂	0	0	0	0	0	0	0	0	0	0

LCI Indicators

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
RPRE	MJ	4.23E+03	2.10E+03	9.50E+00	3.24E+00	0	2.12E+03	0	1.83E-01	2.96E+00	3.50E+00
RPRM	MJ	1.51E+03	7.53E+02	0	0	0	7.53E+02	0	0	0	0
NRPRE	MJ	9.71E+03	4.55E+03	2.28E+02	1.95E+01	0	4.85E+03	0	4.39E+00	2.70E+01	2.47E+01
NRPRM	MJ	1.49E+03	7.45E+02	0	0	0	7.45E+02	0	0	0	0
SM	kg	8.02E+01	4.01E+01	0	0	0	4.01E+01	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0
RE	MJ	0	0	0	0	0	0	0	0	0	0
HWD	kg	5.11E-03	2.55E-03	3.79E-08	6.52E-09	0	2.55E-03	0	7.28E-10	6.36E-09	5.90E-09
NHWD	kg	2.21E+02	2.14E+01	2.34E-02	1.83E+01	0	1.10E+02	0	4.49E-04	1.75E+00	6.90E+01
HLRW	kg	2.68E-04	1.30E-04	9.32E-07	8.73E-07	0	1.34E-04	0	1.79E-08	1.37E-06	3.08E-07
ILLRW	kg	2.29E-01	1.12E-01	7.84E-04	7.35E-04	0	1.15E-01	0	1.51E-05	1.15E-03	2.71E-04
CRU	kg	0	0	0	0	0	0	0	0	0	0
MR	kg	1.23E+02	1.11E+01	0	1.10E+01	0	6.15E+01	0	0	3.94E+01	0
MER	kg	8.19E+00	0	0	0	0	4.09E+00	0	0	0	4.09E+00
EEE	MJ	8.10E+01	3.64E-01	0	2.33E+01	0	4.05E+01	0	0	0	1.68E+01
EET	MJ	2.52E+01	1.47E-01	0	7.00E+00	0	1.26E+01	0	0	0	5.46E+00
PED	MJ	1.39E+04	6.65E+03	2.38E+02	2.27E+01	0	6.97E+03	0	4.57E+00	2.99E+01	2.82E+01
FW	m ³	2.95E+01	1.47E+01	1.03E-02	2.52E-02	0	1.48E+01	0	1.97E-04	3.64E-02	4.53E-03

LCA Results – BTS-WRK-12

All results are given per functional unit, which is 1 m² of physical floor space for a period of 10 years. To fulfill the functional unit, 2.15 units of product are required.

IPCC AR6, TRACI Results

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPindl	kg CO ₂ eq	7.60E+02	3.21E+02	1.28E+01	1.88E+01	0	3.80E+02	0	2.78E-01	8.38E+00	1.86E+01
GWPexcl	kg CO ₂ eq	8.39E+02	3.80E+02	1.27E+01	1.03E+01	0	4.20E+02	0	2.77E-01	3.37E+00	1.30E+01
AP	kg SO ₂ eq	2.60E+00	1.16E+00	5.86E-02	3.13E-02	0	1.30E+00	0	7.88E-04	6.69E-03	4.13E-02
EPfw	kg P eq	1.23E-03	4.70E-04	1.04E-05	4.35E-05	0	6.14E-04	0	2.26E-07	-9.55E-07	9.06E-05
EPmarine	kg N eq	1.09E+00	4.59E-01	5.46E-02	1.08E-02	0	5.44E-01	0	7.11E-04	5.13E-03	1.36E-02
ODP	kg CFC 11 eq	1.80E-07	9.02E-08	3.59E-12	3.98E-12	0	9.02E-08	0	7.85E-14	-9.54E-13	4.05E-12
SFP	kg O ₃ eq	3.50E+01	1.55E+01	1.34E+00	2.01E-01	0	1.75E+01	0	1.77E-02	1.82E-01	2.56E-01

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
BCRP	kg CO ₂	6.80E+01	3.40E+01	0	0	0	3.40E+01	0	0	0	0
BCEP	kg CO ₂	6.80E+01	0	0	0	0	3.40E+01	0	0	1.11E+01	2.28E+01
BCRK	kg CO ₂	6.20E+01	3.10E+01	0	0	0	3.10E+01	0	0	0	0
BCEK	kg CO ₂	6.20E+01	0	0	3.10E+01	0	3.10E+01	0	0	0	0
BCEW	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCE	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CCR	kg CO ₂	0	0	0	0	0	0	0	0	0	0
CWNR	kg CO ₂	0	0	0	0	0	0	0	0	0	0

LCI Indicators

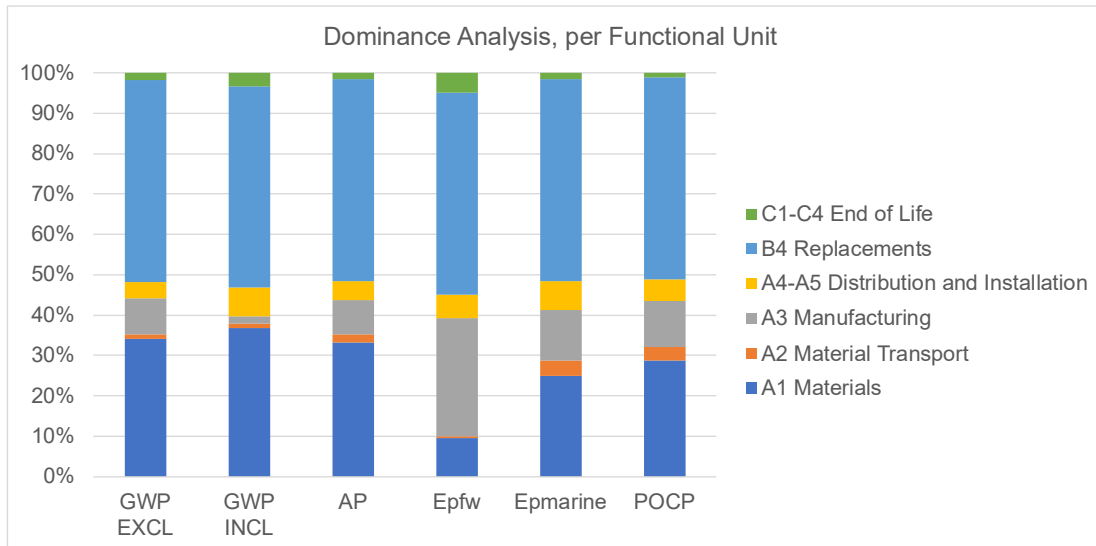
Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
RPRE	MJ	5.34E+03	2.65E+03	6.80E+00	2.31E+00	0	2.67E+03	0	1.49E-01	2.32E+00	2.86E+00
RPRM	MJ	6.55E+02	3.28E+02	0	0	0	3.28E+02	0	0	0	0
NRPRE	MJ	7.99E+03	3.78E+03	1.64E+02	1.15E+01	0	4.00E+03	0	3.57E+00	2.13E+01	2.01E+01
NRPRM	MJ	1.30E+03	6.51E+02	0	0	0	6.51E+02	0	0	0	0
SM	kg	6.06E+01	3.03E+01	0	0	0	3.03E+01	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0
RE	MJ	0	0	0	0	0	0	0	0	0	0
HWD	kg	3.00E-03	1.50E-03	2.71E-08	4.68E-09	0	1.50E-03	0	5.92E-10	5.02E-09	4.82E-09
NHWD	kg	1.67E+02	1.88E+01	1.67E-02	7.72E+00	0	8.34E+01	0	3.65E-04	1.37E+00	5.55E+01
HLRW	kg	2.21E-04	1.08E-04	6.67E-07	7.47E-07	0	1.10E-04	0	1.46E-08	1.07E-06	2.52E-07
ILLRW	kg	1.92E-01	9.34E-02	5.61E-04	6.26E-04	0	9.58E-02	0	1.22E-05	8.99E-04	2.22E-04
CRU	kg	0	0	0	0	0	0	0	0	0	0
MR	kg	9.76E+01	1.23E+01	0	4.68E+00	0	4.88E+01	0	0	3.18E+01	0
MER	kg	7.81E+00	0	0	0	0	3.90E+00	0	0	0	3.90E+00
EEE	MJ	5.21E+01	3.33E-01	0	9.92E+00	0	2.61E+01	0	0	0	1.58E+01
EET	MJ	1.63E+01	1.34E-01	0	2.95E+00	0	8.13E+00	0	0	0	5.05E+00
PED	MJ	1.33E+04	6.43E+03	1.70E+02	1.38E+01	0	6.66E+03	0	3.72E+00	2.36E+01	2.30E+01
FW	m ³	2.36E+01	1.18E+01	7.34E-03	1.20E-02	0	1.18E+01	0	1.60E-04	3.03E-02	4.05E-03

Interpretation

A dominance analysis was performed for the product to show which of the life cycle stages contributes to the majority of the impacts. Results are shown for IPCC AR6 GWP and TRACI 2.2 impact categories.

Overall, the dominance analysis shows the vast majority of the impacts are coming from the replacements (B4) and raw materials (A1) stages. Additionally, manufacturing (A3) contributes significantly to life cycle EPfw, EPmarine and POCP.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of workstations. The dominance analysis for BTS-WRK-11 is shown in the figure below, and contribution for other workstations are similar. For most of the LCIA indicators, the top material impacts are steel and electronics, depending on the indicator.



Additional Environmental Information

Bench-Tek Solutions is committed to building durable, long-lasting products that help minimize environmental impact over their lifecycle. As part of our sustainability efforts, our facility operates on 90%⁴ solar power for manufacturing, and we actively reduce material waste through zero-waste practices across our operations.

No substances required to be reported as hazardous per relevant regulations in the applicable market were identified during the LCA associated with the production or disposal of this product.

Additional explanatory information may be provided upon request from the manufacturer.

⁴ Percent solar represents the portion of on-site generated solar power at the time the study was published. For life cycle assessment results, the portion of on-site generated solar used is representative of the reference period for the study.

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ISO 14044:2006 Environmental management - Life cycle assessment – Requirements and guidelines.

Appendix: LCA Results per 1 Product

Because Bench-Tek's workstations have a warranty greater than 10 years, they believe this reasonably supports the assumption that their workstations will not be replaced over a 10-year period. In addition to product LCIA results per functional unit including replacements, as required by the PCR, life cycle results are additionally presented per 1 workstation without replacements. Results do not include replacements and are not normalized to 1 m².

IPCC AR6, TRACI Results per 1 Product – BTS-WRK-10

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPincl	kg CO ₂ eq	3.45E+02	2.91E+02	1.16E+01	1.70E+01	0	0	0	2.53E-01	7.72E+00	1.73E+01
GWPexcl	kg CO ₂ eq	3.81E+02	3.45E+02	1.16E+01	9.31E+00	0	0	0	2.52E-01	3.05E+00	1.21E+01
AP	kg SO ₂ eq	1.18E+00	1.05E+00	5.33E-02	2.83E-02	0	0	0	7.17E-04	6.12E-03	3.82E-02
EPfw	kg P eq	5.58E-04	4.26E-04	9.42E-06	3.94E-05	0	0	0	2.06E-07	-8.64E-07	8.30E-05
EPmarine	kg N eq	4.94E-01	4.17E-01	4.96E-02	9.81E-03	0	0	0	6.47E-04	4.70E-03	1.26E-02
ODP	kg CFC 11 eq	8.39E-08	8.39E-08	3.27E-12	3.60E-12	0	0	0	7.14E-14	-8.55E-13	3.69E-12
SFP	kg O ₃ eq	1.59E+01	1.41E+01	1.22E+00	1.82E-01	0	0	0	1.61E-02	1.66E-01	2.36E-01

IPCC AR6, TRACI Results per 1 Product – BTS-WRK-11

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPincl	kg CO ₂ eq	4.06E+02	3.23E+02	1.66E+01	3.98E+01	0	0	0	3.18E-01	8.58E+00	1.76E+01
GWPexcl	kg CO ₂ eq	4.71E+02	4.16E+02	1.65E+01	2.17E+01	0	0	0	3.17E-01	3.92E+00	1.24E+01
AP	kg SO ₂ eq	3.22E+00	1.40E+00	8.19E-02	7.11E-02	0	1.61E+00	0	9.68E-04	7.90E-03	4.28E-02
EPfw	kg P eq	2.10E-03	8.25E-04	1.45E-05	1.08E-04	0	1.05E-03	0	2.78E-07	-1.25E-06	1.03E-04
EPmarine	kg N eq	1.39E+00	5.71E-01	7.62E-02	2.46E-02	0	6.93E-01	0	8.74E-04	5.98E-03	1.44E-02
ODP	kg CFC 11 eq	1.72E-07	8.61E-08	5.02E-12	5.36E-12	0	8.61E-08	0	9.64E-14	-1.35E-12	4.96E-12
SFP	kg O ₃ eq	4.42E+01	1.93E+01	1.88E+00	4.53E-01	0	2.21E+01	0	2.17E-02	2.12E-01	2.84E-01

IPCC AR6, TRACI Results per 1 Product – BTS-WRK-12

Impact Category	Unit	Total	A1-A3	A4	A5	B1	B4	C1	C2	C3	C4
GWPincl	kg CO ₂ eq	3.44E+02	2.91E+02	1.16E+01	1.70E+01	0	0	0	2.52E-01	7.58E+00	1.68E+01
GWPexcl	kg CO ₂ eq	3.80E+02	3.44E+02	1.15E+01	9.30E+00	0	0	0	2.51E-01	3.05E+00	1.18E+01
AP	kg SO ₂ eq	1.17E+00	1.05E+00	5.31E-02	2.83E-02	0	0	0	7.13E-04	6.05E-03	3.73E-02
EPfw	kg P eq	5.55E-04	4.25E-04	9.37E-06	3.94E-05	0	0	0	2.05E-07	-8.64E-07	8.20E-05
EPmarine	kg N eq	4.92E-01	4.15E-01	4.94E-02	9.81E-03	0	0	0	6.44E-04	4.64E-03	1.23E-02
ODP	kg CFC 11 eq	8.16E-08	8.16E-08	3.25E-12	3.60E-12	0	0	0	7.10E-14	-8.63E-13	3.67E-12
SFP	kg O ₃ eq	1.59E+01	1.40E+01	1.21E+00	1.82E-01	0	0	0	1.60E-02	1.64E-01	2.32E-01

Interpretation

A dominance analysis was performed for results per 1 product to show which of the life cycle stages contributes to the majority of the impacts. Results are shown for BTS-WRK-11 for IPCC AR6 GWP and TRACI 2.2 impact categories, and contribution for other workstations are similar.

Overall, the dominance analysis shows the vast majority of the impacts are coming from raw materials (A1), manufacturing (A3), and installation (A5) stages. The production of the raw materials (steel, electronics), production and disposal of packaging, and manufacturing energy drive results for all workstations.