SCHAEFFLER

Do you know, how excellent our Cost Parameter Request (CPR) is?

Overview of the CPR – Version A7
User Manual for internal and external use

Herzogenaurach 2024

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Contents

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Benefits of the CPR

Advanced Working Environment

With our CPR, we create **cost and CO2e emission transparency,** which enables us to understand every **cost driver** that factors into the total price of a commodity and allows us to **calculate the product carbon footprint**. In this way, we can **assess cost deviations** better and provide a more **accurate feedback** on the supplier‘s quotation.

Competitivenes

The CPR helps to **detect potentials** where costs can be saved. Therefore, it enables us to find smart solutions to **optimize the costs** in cooperation with the suppliers, which increases the supplier's **competitiveness**. With competitive costs the suppliers can create **sales growth** with SCHAEFFLER and others.

Consulting

With the help of the CPR, we can detect weak points to **improve technology capabilities and concepts** in a sustainable manner.

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Remarks

Note:

- The data provided in the CPR will be handled absolutely **confidential** and also corresponds with the non-disclosure agreements with all our business partners.
- Please send the completed CPR-sheet back as an **Excel file**. **DO NOT** convert it to PDF, JPG or other formats.
- On the pages where there is an “Overview” button, click on it to get to the general overview of the CPR.
- Green words, that are underlined, are links. Click on them to get to the respective page they are referring to.

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Colors and Buttons

Colors:

These cells contain general **data queries** or **headlines** and can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

Subtotals are calculated automatically in these cells.

These cells contain **total prices** or **total values**.

Buttons:

By clicking this button **additional rows** can be added (e.g. if the supplier wants to enter more positions than there are rows in the CPR).

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General Structure – Cost view

Click on the headlines for further information.

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Cost Parameter Request [CPR_Version 07_31.12.2023]

Language:	English			Category:			
Drawing Number:		Supplier Name:		Production Hours per Year:		Date:	
Part Designation [drawing]:		Manufacturing Location [Country]:		Receiving plant SCHAEFFLER [Country/City]:		Supplier Contact:	
Finish part weight [kg]:		Manufacturing Location [Region/Province]:		Incoterms [Code/Place of fulfillment]:		Schaeffler Contact:	
Peak-Volume:		Manufacturing Location [City]:		Quotation Currency / Quantity Unit:	EUR 100	Price Reduction Steps:	-3% / -2% / -2%

Header

Material Costs

Pos.	Material Designation [Raw Material / Purchased Parts / External Processes]	Manufacturer / Raw Material Supplier	Substance- / Material- / Part-ID	Dimension [LxWxH, Ø,...] in mm	Procurement Type	Reimbursement [yes/no]	Reimbursement Pos. [e.g.: M1]	Part weight specification Weight unit	Net Weight per Part	Gross Weight per Part	Material Price [Base] [EUR/kg]	Material Price [Surcharges] [EUR/kg]	Purchased Parts / External Processes [Quantity] [pcs]	Purchased Parts / External Processes [Price] [EUR/pcs]	Material Overhead [%]	Scrap Rate [%]	Scrap Cost [EUR]	Material Cost [EUR/100 pcs]
M1																	0,0000	0,0000
M2																	0,0000	0,0000
M3																	0,0000	0,0000
M4																	0,0000	0,0000
M5																	0,0000	0,0000
																	0,0000	0,0000

new row

Subtotal Material Costs [EUR/100 pcs]:	0,0000
Subtotal Material Scrap Costs [EUR/100 pcs]:	0,0000

Material Costs

Manufacturing Costs

Pos.	Manufacturing Steps [Designation]	Material* [Material Cost Pos.] [e.g.: M1]	Equipment [Designation]	Cycle time [sec./Parts per Cycle]	Parts per Cycle [pcs]	OEE [%] information only	Working System Invest [EUR]	Working System Hourly Rate [EUR/h]	Working System Cost per Part [EUR]	Direct Labor Hourly Rate [EUR/h]	Headcount at Working System [%]	Labor Cost per Part [EUR]	Residual Manufacturing Overhead [%]	Scrap Rate [%]	Scrap Cost [EUR]	Manufacturing Step Cost [EUR/100 pcs]
1									0,0000			0,0000			0,0000	0,0000
2									0,0000			0,0000			0,0000	0,0000
3									0,0000			0,0000			0,0000	0,0000
4									0,0000			0,0000			0,0000	0,0000
5									0,0000			0,0000			0,0000	0,0000
									0,0000			0,0000			0,0000	0,0000

new row

*) Assemblies

Subtotal Manufacturing Costs [EUR/100 pcs]:	0,0000
Subtotal Manufacturing Scrap Costs [EUR/100 pcs]:	0,0000

Manufacturing Costs

SCHAEFFLER

General Structure – Cost view

Click on the headlines for further information.

Setup Costs

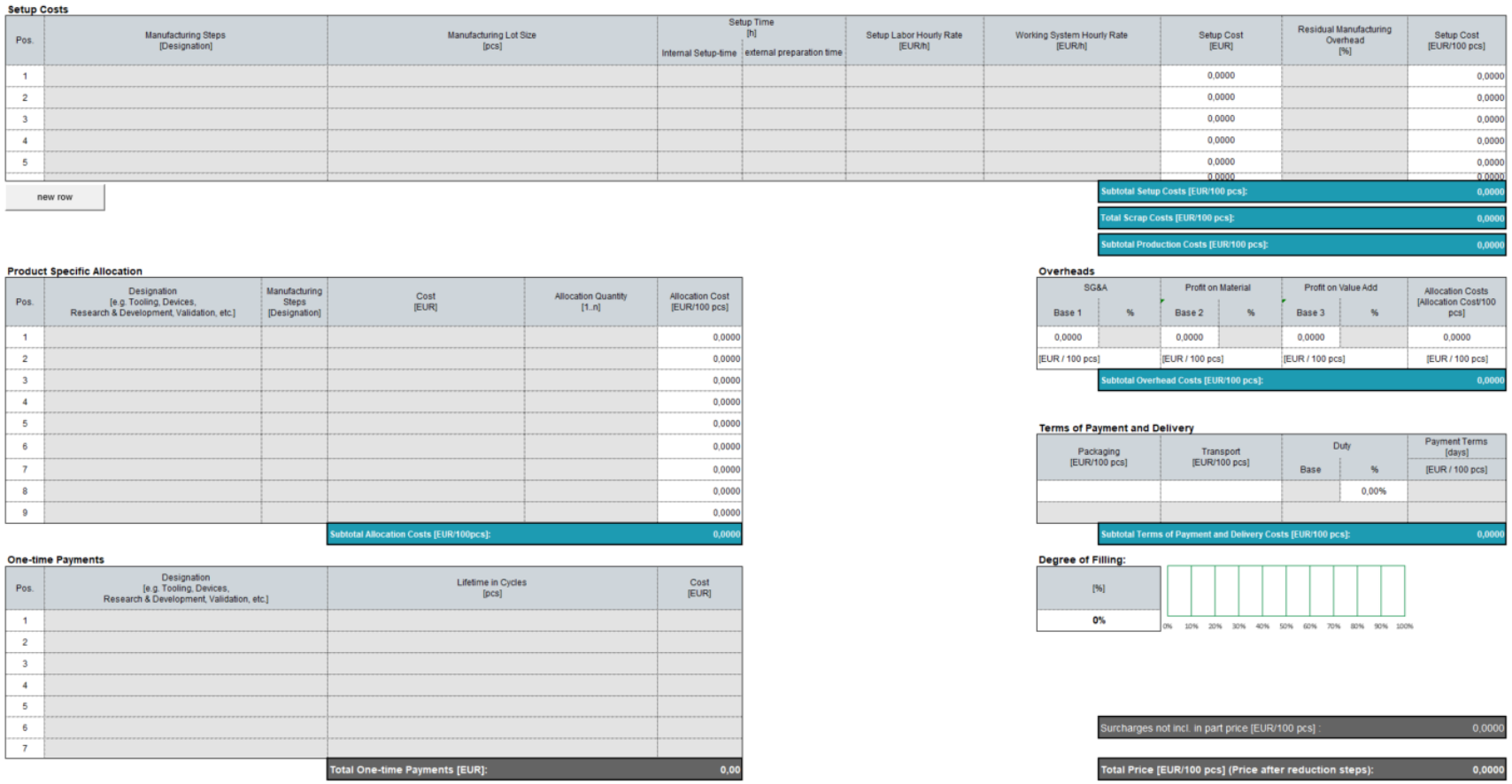
Product Specific Allocation

One-time Payments

Overheads

Terms of Payment and Delivery

Degree of Filling



Setup Costs

Pos.	Manufacturing Steps [Designation]	Manufacturing Lot Size [pcs]	Setup Time [h] Internal Setup-time	Setup Time [h] external preparation time	Setup Labor Hourly Rate [EUR/h]	Working System Hourly Rate [EUR/h]	Setup Cost [EUR]	Residual Manufacturing Overhead [%]	Setup Cost [EUR/100 pcs]
1							0,0000		0,0000
2							0,0000		0,0000
3							0,0000		0,0000
4							0,0000		0,0000
5							0,0000		0,0000
							0,0000		0,0000

new row

Subtotal Setup Costs [EUR/100 pcs]: 0,0000

Total Scrap Costs [EUR/100 pcs]: 0,0000

Subtotal Production Costs [EUR/100 pcs]: 0,0000

Product Specific Allocation

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Manufacturing Steps [Designation]	Cost [EUR]	Allocation Quantity [1..n]	Allocation Cost [EUR/100 pcs]
1					0,0000
2					0,0000
3					0,0000
4					0,0000
5					0,0000
6					0,0000
7					0,0000
8					0,0000
9					0,0000

Subtotal Allocation Costs [EUR/100pcs]: 0,0000

One-time Payments

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Lifetime in Cycles [pcs]	Cost [EUR]
1			
2			
3			
4			
5			
6			
7			

Total One-time Payments [EUR]: 0,00

Overheads

SG&A Base 1	SG&A %	Profit on Material Base 2	Profit on Material %	Profit on Value Add Base 3	Profit on Value Add %	Allocation Costs [Allocation Cost/100 pcs]
0,0000		0,0000		0,0000		0,0000
[EUR / 100 pcs]		[EUR / 100 pcs]		[EUR / 100 pcs]		[EUR / 100 pcs]

Subtotal Overhead Costs [EUR/100 pcs]: 0,0000

Terms of Payment and Delivery

Packaging [EUR/100 pcs]	Transport [EUR/100 pcs]	Duty Base	Duty %	Payment Terms [days]
			0,00%	
				[EUR / 100 pcs]

Subtotal Terms of Payment and Delivery Costs [EUR/100 pcs]: 0,0000

Degree of Filling:

[%]
0%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Surcharges not incl. in part price [EUR/100 pcs]: 0,0000

Total Price [EUR/100 pcs] (Price after reduction steps): 0,0000

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General Structure – CO2e view

Click on the headlines for further information.

Overview premises (Notification on calculation premisses of both cost and CO2e)

Energy Source	Designation	Part no.	Energy Characteristics	Datasource / Q-level	[EUR/kWh]	[kgCO2e/kWh]
Energy Source 1						
Energy Source 2						
Energy Source 3						
Energy Source 4						
Energy Source 5						

Overview premises

Material CO2e

Material CO2e

Datasource / Q-level	Part weight specification			Purchased Parts / External Processes		Material emission	Recycling rate	Origin country of material	Production process	Transportmode	Distance	Transportation emission	Emissions for logistics Material	Emission on material overhead	Emission on material scrap	Summary of material
	Weight unit	GrossWeight per Part	[kgCO2e/t]	[Quantity] [pcs]	[kgCO2e/kpcs]	[kgCO2e / 100 pcs]	[%]	[Location]	[Raw Material code]		[km]	[kgCO2e/tkm]	[kgCO2e / 100 pcs]	[%]	[kgCO2e / 100 pcs]	[kgCO2e / 100 pcs]
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
Total value Material CO2e [kgCO2e / 100 pcs]:																**0,0000**

Manufacturing CO2e

Manufacturing CO2e

Energy Source A	Energy CO2e-rate	Net power output working system	Summary Source A	Energy Source B	Energy CO2e-rate	Net power output working system	Summary Source B	Energy Source C	Energy CO2e-rate	Net power output working system	Summary Source C	Residual Manuf. OH	Manufacturing scrap	Summary of manufacturing
[t]	[kgCO2e/kWh]	[kW]	[kgCO2e/h]	[t]	[kgCO2e/kWh]	[kW]	[kgCO2e/h]	[t]	[kgCO2e/kWh]	[kW]	[kgCO2e/h]	[%]	[kgCO2e / 100 pcs]	[kgCO2e / 100 pcs]
														0,00
														0,00
														0,00
														0,00
														0,00
														0,00
Total value Manufacturing CO2e [kgCO2e / 100 pcs]:														**0,0000**

SCHAEFFLER

General Structure – CO2e view

Click on the headlines for further information.

Setup CO2e

Product specific allocation

Overheads

Terms of delivery and pricing

Declaration on CO2e-Emissions

Setup CO2e

Energy Source A [l]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source A [kgCO2e/h]	Energy Source B [l]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source B [kgCO2e/h]	Energy Source C [l]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source C [kgCO2e/h]	Residual Manuf. OH [%]	Setup scrap [kgCO2e / 100 pcs]	Summary of setup [kgCO2e / 100 pcs]
														0,00
														0,00
														0,00
														0,00
														0,00
														0,00

Total value Setup CO2e [kgCO2e / 100 pcs]: 0,0000

One-time effects CO2e

Product Specific Allocation

Pos.	Total emission of position [kgCO2e / Pos.]	Emission [kgCO2e / 100 pcs]
1		0,0000
2		0,0000
3		0,0000
4		0,0000
5		0,0000
6		0,0000
7		0,0000
8		0,0000
9		0,0000

Total value Allocation CO2e [kgCO2e / 100 pc: 0,0000

One-time effects CO2e

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Σ [kgCO2e]
1		
2		
3		
4		
5		
6		
7		
8		
9		

Total value One-time effects [kgCO 0

Overheads

CCF	SG&A		R&D		Other PCF Scope 3 upstream		Other PCF Scope 3 direct		Other PCF Scope 3 downstream	
Total value	Base €	%	Base €	%	CCF	%	CCF	%	CCF	%
	0		0		0		0		0	
[tCO2e]	[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]	

Total value Overheads CO2e [kgCO2e / 100 pcs]: 0,0000

Base € * kg CO2e in production mat. Material

Terms of delivery and packaging

Packaging-Material [kgCO2e / 100 pcs]	Transportmode	From [City]	To [City]	Distance [km]	Transportation emission [kgCO2e/km]	Emissions for logistics [kgCO2e / 100 pcs]
						0
						0
						0

Total value Terms of delivery and packaging CO2e [kgCO2 0,0000

Declaration on CO2e-Emissions [kgCO2e / 100 pcs]

Σ Scope 3 (indirect) - UPSTREAM activities	
Σ Scope 2 (indirect)	
Σ Scope 1 (direct) - Reporting company	
Σ Scope 3 (indirect) - DOWNSTREAM activities	
Total value CO2e [kgCO2e / 100 pcs]	**0,0000**
Total value CO2e [kgCO2e / kg Finish part weight	**0,0000**

Remarks

Additional information to CPR for bulk steel and CO2e, given by supplier (only in English)

WE EXPECT THE COMPLETED CPR-SHEET IN EXCEL FORMAT ONLY

The supplier is prohibited from altering the document in its contents, formula references and calculation logic

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Contents

Header

Overview

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Cost Parameter Request (CPR_Version A7_31.12.2023)

Drawing Number:	
Part Designation [drawing]:	
Finish part weight [kg]:	
Peak-Volume:	

Supplier Name:	
Manufacturing Location [Country]:	
Manufacturing Location [Region/Province]:	
Manufacturing Location [City]:	

Language:	English	
Production Hours per Year:		
Receiving plant SCHAEFFLER [Country/City]:		
Incoterms [Code/Place of fulfillment]:		
Quotation Currency / Quantity Unit:	EUR	100

Category:	
Date:	
Supplier Contact:	
Schaeffler Contact:	
Price Reduction Steps:	-3% / -2% / -2%

These cells contain general **data queries** and can not be edited.

These cells need **to be filled out by the supplier.**

Header

Overview

Name	Remarks
Language	Select language of CPR headlines (available languages: German, English, Spanish, Chinese, Korean, Portuguese)
Category	Drop-down menu, select category name
Drawing Number	Document-ID of the part, based on respective drawing index (see title block of the drawing)
Part Designation (drawing)	Document description and/or additional description of the part (see title block of the drawing)
Finish part weight (kg)	Factory supplied part weight, calculated by supplier
Peak Volume	Requested maximum annual quantity at peak
Supplier Name	Legal company name of supplier
Manufacturing Location (Country/Region/City)	Planned manufacturing location (Country, Region and City) of the requested part. Select country from the drop-down list and insert region and city

Header

Overview

SCHAEFFLER

Name	Remarks
Production Hours per Year	Production hours per year reflect your available gross working hours in your company
Receiving plant SCHAEFFLER (country/city)	Please insert the country and city of the receiving plant at Schaeffler
Incoterms (Code/Place of fulfillment)	Select between FCA (Free Carrier), DAP (Delivered At Place) and DDP (Delivered Duty Paid) from the drop-down menu
Quotation Currency / Quantity Unit	All common currencies are available Quantities: 1, 100, 1000 and 10000 -> Attention: Mostly used for sum cells, but not for the input cells
Date	Date of issue of the CPR
Supplier Contact	First name and surname of the responsible contact person at the supplier
Schaeffler Contact	First name and surname of the responsible contact person at Schaeffler
Price Reduction Steps	The total price refers to the peak volume / - year after reduction steps (default value -3%, -2%, -2% can be overwritten according to closed agreement)

Material Costs

Overview

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Material Costs

Pos.	Material Designation [Raw Material / Purchased Parts / External Processes]	Manufacturer / Raw Material Supplier	Substance- / Material- / Part-ID	Dimension [LxWxH, Ø,...] in mm	Procurement Type	Reimbursement		Part weight specification			Material Price		Purchased Parts / External Processes		Material Overhead [%]	Scrap Rate [%]	Scrap Cost [EUR]	Material Cost [EUR/100 pcs]
						[yes/no]	Pos. [e.g.: M1]	Weight unit	Net Weight per Part	Gross Weight per Part	[Base] [EUR/kg]	[Surcharges] [EUR/kg]	[Quantity] [pcs]	[Price] [EUR/pcs]				
M1																	0,0000	0,0000
M2																	0,0000	0,0000
M3																	0,0000	0,0000
M4																	0,0000	0,0000
M5																	0,0000	0,0000

new row

Subtotal Material Costs [EUR/100 pcs]:	0,0000
Subtotal Material Scrap Costs [EUR/100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

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The **subtotals** are calculated automatically and separated by material- and scrap costs.

Material Costs

Overview

Name	Remarks
Material Designation	Material includes: - Substances / raw materials - External purchased parts - External (outsourced) processes
Manufacturer / Raw Material Supplier	Name of manufacturer of the respective material designation
Substance- / Material- / Part-ID	ID or specification of the respective material designation
Dimension [L×W×H, Ø, …] in mm	Dimension of the given component in mm. This cell is for information only
Procurement Type	Select the type of procurement for the respective material designation: - Purchase (Raw Material) - Purchase (Part / Component) - Purchase (External Process Step) - Provided (Raw Material) - Provided (Part / Component) - Inhouse Production (Part / Component) External procurement Provided free of charge

Material Costs

Overview

Name	Remarks
Reimbursement **[yes/no] -> Pos. [e.g.: M1]**	By selecting “yes“ the calculated amount is subtracted from the total material costs (Enter yield / scrap in separate line and refer to the associated position of raw-material). Gross or Net Weight and Material Price are used to calculate the deductible amount (see formula).
Weight unit	The weight unit can be entered in mg, g, kg or tons
Net Weight per Part	Net remaining amount of material – after deduction of waste, scrap, irretrievable losses, etc. Net weight is also mentioned in drawings.
Gross Weight per Part	Gross amount of material – before deduction of waste, scrap, irretrievable losses, etc.
Material Price [Base & Surcharges]	Base: Direct costs of material Surcharges: Material costs which are not included in the base price (e.g., scrap and alloy surcharges) – these cost will be summarized in a separate line under the total price of the CPR.

Material Costs

Overview

Name	Remarks
Purchased Parts / External Processes	Quantity: Please enter the quantity of purchased parts / external processes. Price: Please enter the price per piece of the respective purchased part / external process (see formula).
Material Overhead [%]	Costs attributable to purchasing, receiving, handling, storing and delivering materials used in assembly or production process
Scrap Rate [%]	Percentage of incurring scrap of the respective material designation This cell is for information purposes only
Scrap Cost	Material scrap costs of the respective material (see formula)
Material Cost	Total material cost of the given component per position in the selected quantity unit (see formula)
Subtotal Material Costs	Sum of the costs of all materials in the selected quantity unit
Subtotal Material Scrap Costs	Sum of material scrap costs in the selected quantity unit

Manufacturing Costs

Overview

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Manufacturing Costs

Pos.	Manufacturing Steps [Designation]	Material* [Material Cost Pos.] [e.g.: M1]	Equipment [Designation]	Cycle time [sec./Parts per Cycle]	Parts per Cycle [pcs]	OEE [%] information only	Working System Invest [EUR]	Working System Hourly Rate [EUR/h]	Working System Cost per Part [EUR]	Direct Labor Hourly Rate [EUR/h]	Headcount at Working System [%]	Labor Cost per Part [EUR]	Residual Manufacturing Overhead [%]	Scrap Rate [%]	Scrap Cost [EUR]	Manufacturing Step Cost [EUR/100 pcs]
1									0,0000			0,0000			0,0000	0,0000
2									0,0000			0,0000			0,0000	0,0000
3									0,0000			0,0000			0,0000	0,0000
4									0,0000			0,0000			0,0000	0,0000
5									0,0000			0,0000			0,0000	0,0000

new row

*) Assemblies

Subtotal Manufacturing Costs [EUR/100 pcs]:	0,0000
Subtotal Manufacturing Scrap Costs [EUR/100 pcs]:	0,0000

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The **subtotals** are calculated automatically and separated by material- and scrap costs.

Manufacturing Costs

Overview

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Name	Remarks
Manufacturing Steps	Select a manufacturing step by activating the drop-down menu. On the second tab in the CPR, you'll find an overview of all available manufacturing steps (also see the next page of this manual). **NEW:** Possibility to enter scrap cost from external processes into manufacturing steps (see formula at manufacturing steps) If you can not find the proper manufacturing step, choose "others/miscellaneous". In this case, it is essential to give further explanations in the "Equipment" cell.
Material	Link of the respective material to the process manufacturing step (e.g., assembly M1, M3, M5)
Equipment	Designation (e.g., Brand / Type) of the machine or equipment (**ONLY** in English) used in the respective manufacturing step
Cycle time	Please insert information about the duration of one cycle. Cycle time correlates with the cell "Parts per cycle"
Parts per Cycle	Number of parts that are manufactured in one cycle It is relevant for the calculation of Working System Cost per Part. (see formula)

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Manufacturing Costs – Overview of the manufacturing Steps

Here you can find all dropdown options for manufacturing steps in the CPR. They are also mentioned on a extra sheet in the CPR.

A
alpha-v-check
annealing
anti-corrosion
AOI / automated optical inspection
arc forming
array for spray
array on fixture
assembling

B
balancing
bending
blanking
blending
bonding
boring
broaching
brushing

C
calibration
carburizing
casting
chamfering
cleaning
coating
coiling
compacting
condensation
conservation
cooling
cooling lubricant system
crimping
curing
cutting

D
debinding
deburring
deep drawing
deflection test
demagnetize
dephosphating
detensioning
disassembling
DMC marking
drawing + pressing
drilling
drying
durability test

E
e-coating
eddy current
EOL test / end of line test

F
fine cutting
finishing
flashing
forging
forming
friction welding
functional test

G
gating removal
grain boundary diffusion (GBD)
gearing
glue
green machining
grinding ID
grinding OD

H
handling
HAR / hot air riveting
hardening
heat- / force-set test
heat treatment
high pressure washing
hobbing
honing
hot bar soldering
hot rolling
hot setting
hot staking
hydrogen decrepitation

I
IC test / integrated circuit test
inbound logistics
induction heating
injection
inspection
intermediate test

J
jet-milling

L
lapping
laser marking
leakage test
liquid dispensing, application (seal, paste)
loading, feeding

M
machining
magnetic property test
magnetizing
marking
material preparation and compounding
measuring
mechanical treatment
melting
micro peening
milling
mixing
molding
MPI

N
nitriding

O
oiling
others / miscellaneous
outbound logistics
overmolding

P
pack
packaging
PCB depaneling
phosphating
pickling
plating
polishing
post curing
potting
powder coating
preforming
press-fit assembly
pressing
pressure test
pretreatment

Q
quench + tempering

R
raw material inspection
reaming
reflow oven
rolling

NEW

S
sawing
selective soldering
scrap (ext. proces step)
setting
shearing
shot blasting
shot peening
sintering
sizing
skiving
SMT / surface mounted technology
software flashing
solder paste printing
soldering
sorting
spinning
spot welding
spraying
sputtering / PVD
stamping
storage of powder
straightening
stripe casting, flakes production
surface treatment

T
tempering
testing
transform
transport
trimming
tumbling
turning

U
ultrasonic cleaning
ultrasonic welding

V
varnishing
vulcanization

W
washing
welding
winding

X
x-ray

Manufacturing Costs

Overview

Name	Remarks
OEE [%] information only	OEE means “Overall Equipment Effectiveness”. It identifies the percentage of manufacturing time that is truly productive
Working System Invest	Acquisition cost of the working system
Working System Hourly Rate	Costs which a machine causes during one hour of operation correlated with utilization losses (including imputed depreciation and interest, cost of maintenance and insurance, space and energy costs of the working system and auxiliary and operating materials)
Working System Cost per Part	Machine costs per piece (see formula)
Direct Labor Hourly Rate	The labor costs (including labor burden) per hour for workers (correlated with labor utilization losses)

Manufacturing Costs

Overview

Name	Remarks
Headcount at Working System	Headcount at Working System in % (see formula)
Labor Cost per Part	Labor cost per piece (see formula)
Residual Manufacturing Overhead	Residual Manufacturing Overheads include all manufacturing costs that cannot be directly allocated (including e.g., indirect labor, general equipment and auxiliary areas, as well as indirect materials and auxiliary and operating supplies)
Scrap Rate	Percentage of scrap incurring at the respective manufacturing step This cell is for information purposes only
Scrap Cost	Cost of scrap incurring at the respective manufacturing step. Scrap costs will be accumulated in subtotal manufacturing scrap cost. (see formula)
Manufacturing Step Cost	Total cost of the respective manufacturing step per position in the selected quantity unit (see formula)
Subtotal Manufacturing Costs	Sum of the costs of all manufacturing steps in the selected quantity unit
Subtotal Manufacturing Scrap Costs	Sum of the scrap costs of all manufacturing steps in the selected quantity unit

Setup Costs

Overview

SCHAEFFLER

Setup Costs

Pos.	Manufacturing Steps [Designation]	Manufacturing Lot Size [pcs]	Setup Time [h]		Setup Labor Hourly Rate [EUR/h]	Working System Hourly Rate [EUR/h]	Setup Cost [EUR]	Residual Manufacturing Overhead [%]	Setup Cost [EUR/100 pcs]
			Internal Setup-time	external preparation time					
1							0,0000		0,0000
2							0,0000		0,0000
3							0,0000		0,0000
4							0,0000		0,0000
5							0,0000		0,0000

new row

Subtotal Setup Costs [EUR/100 pcs]:	0,0000
Total Scrap Costs [EUR/100 pcs]:	0,0000
Subtotal Production Costs [EUR/100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

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The **subtotals** are calculated automatically and separated by material- and scrap costs.

Setup Costs

Overview

Name	Remarks
Manufacturing Steps	Select a manufacturing step by activating the drop-down menu. On the second page of the Excel spreadsheet, you can find an overview of all available manufacturing steps. If you can not find the proper manufacturing step, choose “others/miscellaneous”. Note: The **manufacturing steps** in the **“Setup Costs” section refer to** the respective manufacturing steps in the **“Manufacturing Costs” section** (see p. 21).
Manufacturing Lot Size	Number of pieces per manufacturing lot
Setup Time	The setup time includes all setup processes broken down into external as well as internal time. The setup time must be filled in absolute hours
Setup Labor Hourly Rate	The labor costs (including labor burden) per hour for workers during setup (correlated with labor utilization losses)
Working System Hourly Rate	Costs which a machine causes during one hour of operation correlated with utilization losses (including imputed depreciation and interest, cost of maintenance and insurance, space cost of the working system and auxiliary and operating materials)

Setup Costs

Overview

Name	Remarks
Setup Cost (without Overheads)	Absolute setup costs including all costs caused by the setup / retooling processes of the working system (e.g., labor- and working system costs) (see formula)
Residual Manufacturing Overhead	Residual Manufacturing Overheads include all manufacturing costs that cannot be directly allocated (including e.g., indirect labor, general equipment and auxiliary areas, as well as indirect materials and auxiliary and operating supplies)
Setup Cost	Setup costs per position in the selected quantity unit (see formula)
Subtotal Setup Cost	Sum of the setup costs of all manufacturing steps in the selected quantity unit
Total Scrap Costs	Sum of material scrap costs and manufacturing scrap costs in the selected quantity unit
Subtotal Production Costs	Sum of material costs, manufacturing costs, setup costs and total scrap costs in the selected quantity unit

Product Specific Allocation

Overview

SCHAEFFLER

Product Specific Allocation

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Manufacturing Steps [Designation]	Cost [EUR]	Allocation Quantity [1..n]	Allocation Cost [EUR/100 pcs]
1					0,0000
2					0,0000
3					0,0000
4					0,0000
5					0,0000
6					0,0000
7					0,0000
8					0,0000
9					0,0000
			Subtotal Allocation Costs [EUR/100pcs]:		**0,0000**

In the headlines, the **requested information** is described. They can not be edited.

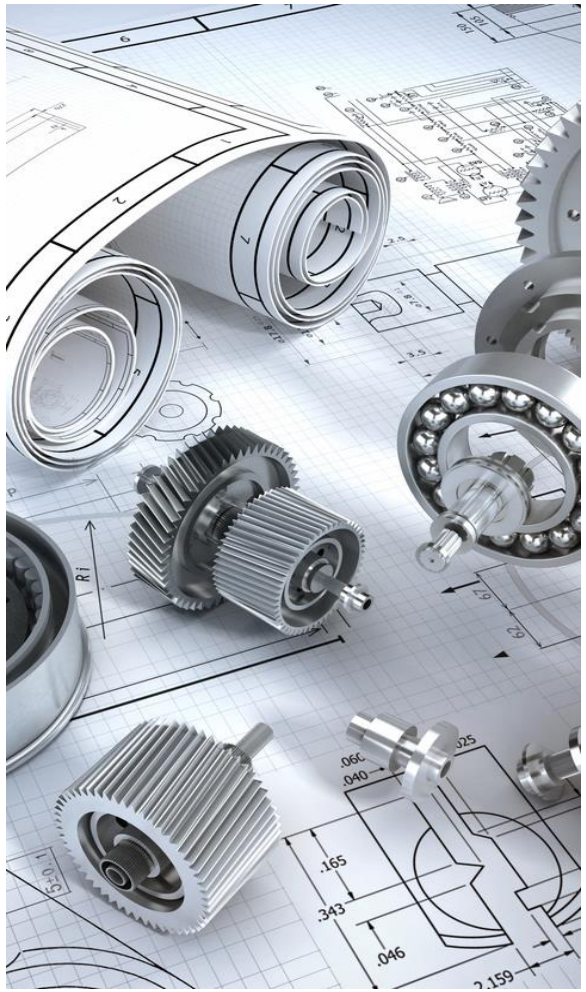
These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Product Specific Allocation

Overview



Name	Remarks
Designation	Designation of costs to be allocated in piece price (**ONLY** in English)
Manufacturing Steps	Select the manufacturing step for which the respective tool / device, etc. is needed. If you can not find the proper manufacturing step, choose “others/miscellaneous”. Note: The **manufacturing steps** in the **“Product Specific Allocation” section refer to** the respective manufacturing steps in the **“Manufacturing Costs” section** (see p. 21).
Cost	Costs of the respective designation
Allocation Quantity	Number of parts over which the costs for the respective designation are allocated
Allocation Cost	This field shows the allocation costs for the selected price quantity unit. (see formula)
Subtotal Allocation Costs	Sum of all allocation cost parameters in the selected quantity unit . This number will be considered in the Overhead cost's calculation

One-time Payments

Overview

One-time Payments

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Lifetime in Cycles [pcs]	Cost [EUR]
1			
2			
3			
4			
5			
6			
7			
		Total One-time Payments [EUR]:	**0,00**

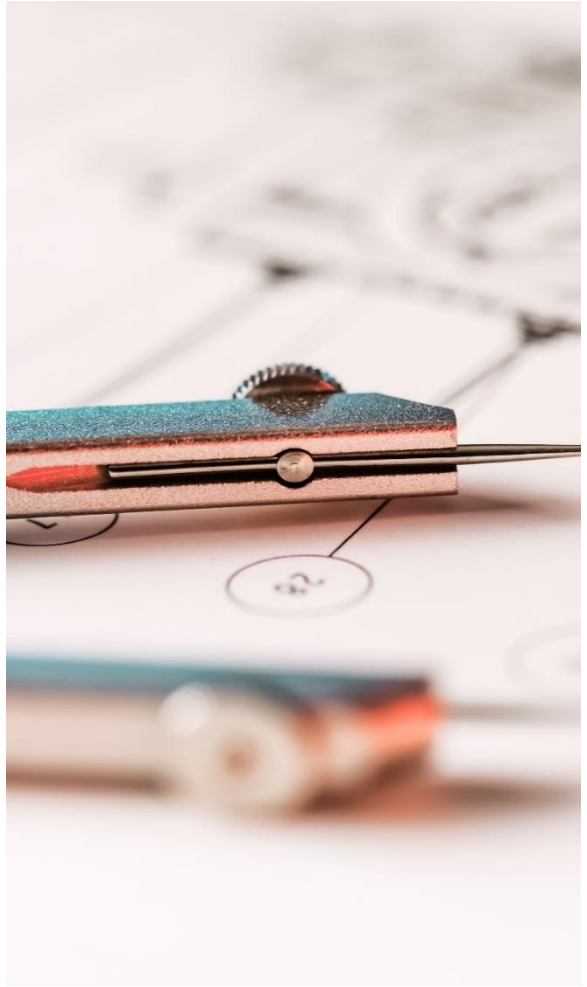
In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells contain **total prices**.

One-time payments

Overview



Name	Remarks
Designation	Exact designation of costs to be paid up front (**ONLY** in English)
Lifetime in Cycles	Lifetime of the respective tool and / or device, etc. in cycles
Cost	Costs of the respective tool, device, etc.
Total One-time Payments	Sum of all one-time payments

Overheads

Overview

Overheads

SG&A		Profit on Material		Profit on Value Add		Allocation Costs [Allocation Cost/100 pcs]
Base 1	%	Base 2	%	Base 3	%	
0,0000		0,0000		0,0000		0,0000
[EUR / 100 pcs]		[EUR / 100 pcs]		[EUR / 100 pcs]		[EUR / 100 pcs]

Subtotal Overhead Costs [EUR/100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

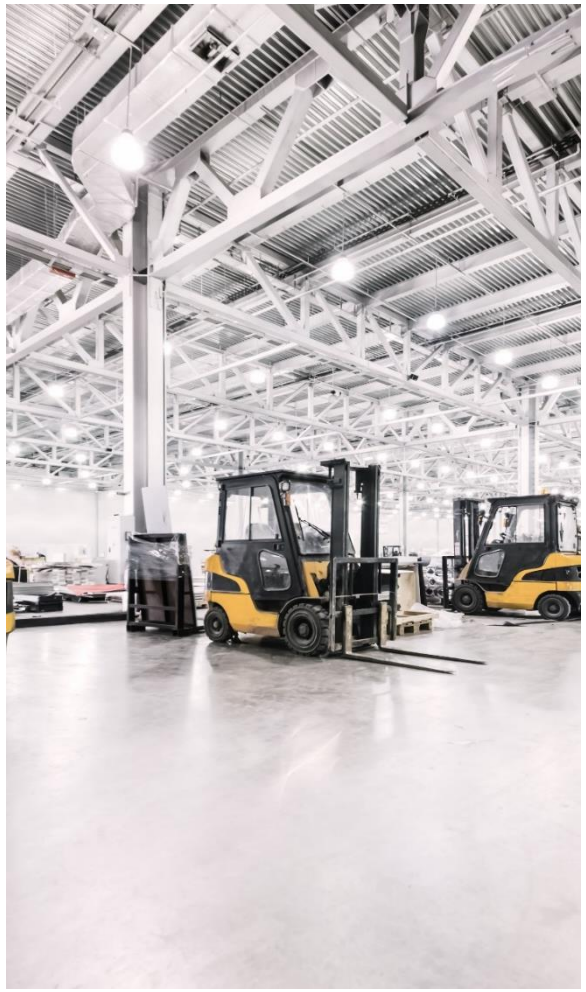
These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Overheads

Overview



Name	Remarks
SG&A	The sales, general and administration costs are expressed as a percentage of production costs. For example, they include costs for central expenses such as business function costs and costs of distribution or storage of finished goods. (see formula)
Profit on Material	Percentage of profit on total material costs without the sum of surcharges (see formula)
Profit on Value Add	Percentage of profit on the sum of manufacturing costs and setup costs (see formula)
Allocation Costs	The sum of allocation costs appears here. In the second line, the selected price unit and quantity are shown
Subtotal Overhead Costs	Sum of all overhead cost parameters in the selected quantity unit

Terms of Payment and Delivery

Overview

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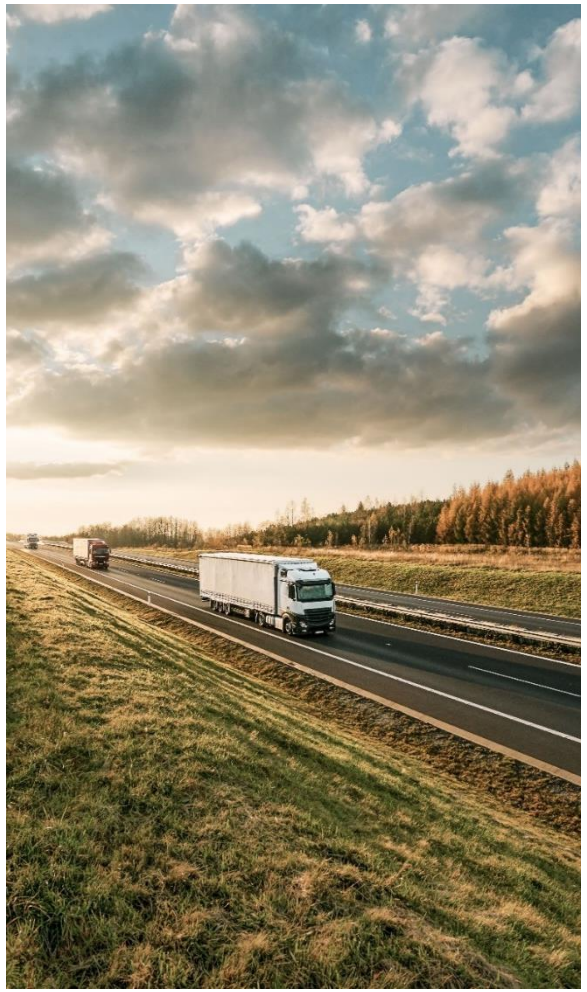
Terms of Payment and Delivery

Packaging [EUR/100 pcs]	Transport [EUR/100 pcs]	Duty		Payment Terms [days]
		Base	%	[EUR / 100 pcs]
			0,00%	
		Subtotal Terms of Payment and Delivery Costs [EUR/100 pcs]:		0,0000

In the headlines, the **requested information** is described. They can not be edited.	These cells need **to be filled out by the supplier.**	These cells are **calculated automatically** based on the data given by the supplier.	The **subtotals** are calculated automatically.

Terms of Payment and Delivery

Overview



Name	Remarks
Packaging	Costs of packaging material for the selected quantity unit (see formula)
Transport	Costs of logistics for the selected quantity unit according to Incoterms (see formula)
Duty	All efforts of customs & duty. Please state the base and the costs in the selected quantity unit, the percentage will be calculated automatically. (see formula)
Payment Terms	Conditions of Payment, please select payment days per drop-down menu in the first line. In the second line, please enter the cost
Subtotal Terms of Payment and Delivery Costs	Subtotal of all terms of payment and delivery cost parameters in the selected quantity unit

Total Price

Overview

Total Price [EUR/100 pcs] (Price after reduction steps):	0,0000

These dark grey cells contain the **total prices** w/o sum of material surcharges.

After filling in the required information, the total price for the selected quantity of pieces is calculated **automatically**.

This price refers to the **total price after** the agreed **reduction steps** on **peak volume** but **without the sum** on **material surcharges**.

Surcharges not incl. in part price [EUR/100 pcs] :	0,0000

These **surcharges**, which are being **passed directly through**, will be shown in a separate box beneath the total price

Remarks

Overview

- Additional information can be placed in the “Remarks” – Box.
- Furthermore, important background information in line with the corresponding quotation must be mentioned here.
- This section is to be filled by the supplier **ONLY** in English.
- Remarks have been moved to the CO2e-section

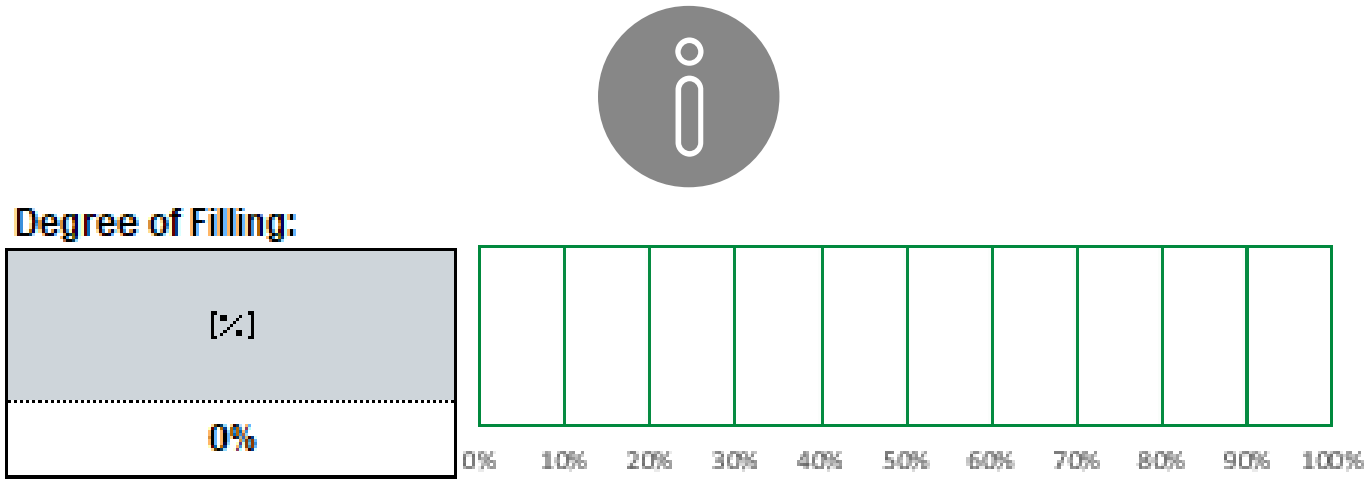
These cells need **to be filled out by the supplier.**

Remarks

Additional information to CPR for both cost and CO2e, given by supplier [only in English]

Degree of Filling

Overview



- The degree of filling / quality will be shown here.
- The degree of filling shows us your cost transparency.
- If you do not have any costs you can list in certain fields, please enter “0” in these fields to make sure that you do not negatively affect the degree of filling.
- Degree of filling now includes costs as well as CO2e

SCHAEFFLER

Contents

Introduction to the Carbon Footprint Calculation

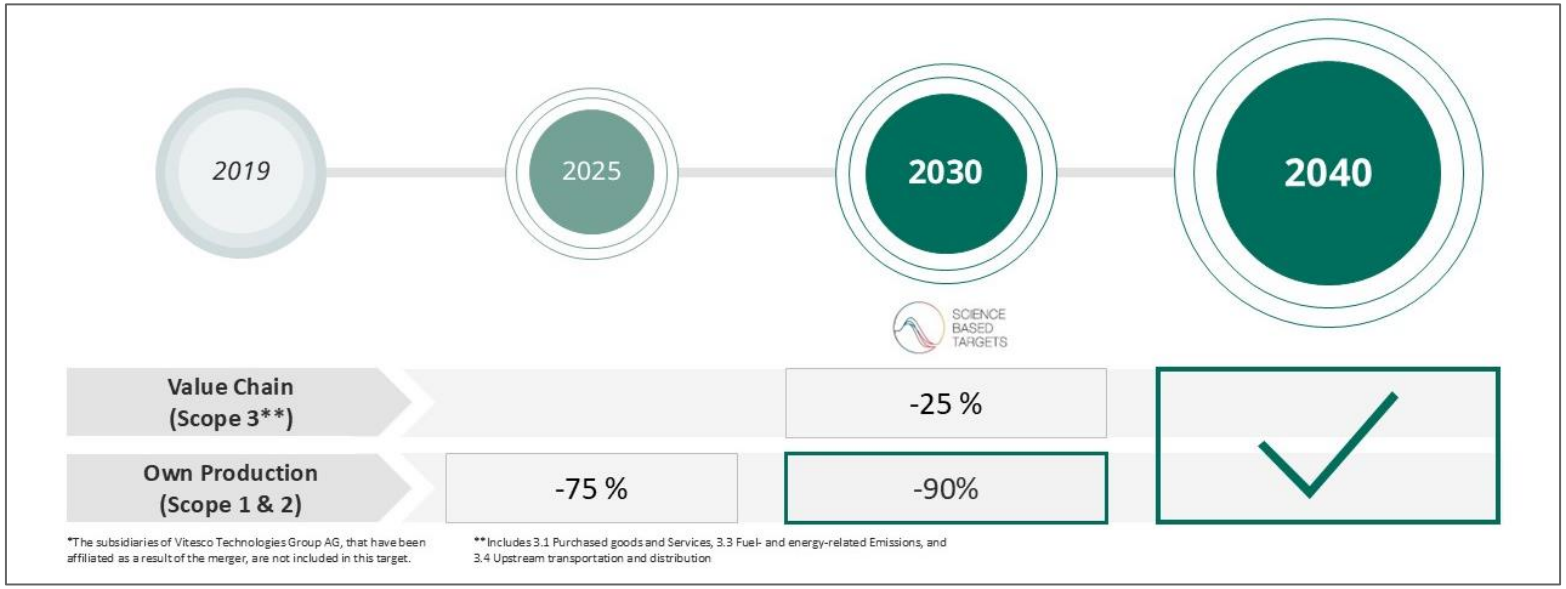
Overview

Our motivation and target

The Schaeffler Group has responded to the growing challenges of climate change and established in 2019 that it aims to achieve company-wide climate-neutral operations by 2040. The company will include the entire supply chain on this climate journey, including all its suppliers.

The individual stages set by Schaeffler are ambitious. Internal production (Scope 1 and 2 emissions) are set be climate-neutral as of 2040, with 75 percent of production emissions already eliminated by 2025.

To ensure that we can achieve our targets concerning Scope 3 upstream emissions, the CO2e emissions of each supplier must be considered.



Introduction to the Carbon Footprint Calculation

Overview

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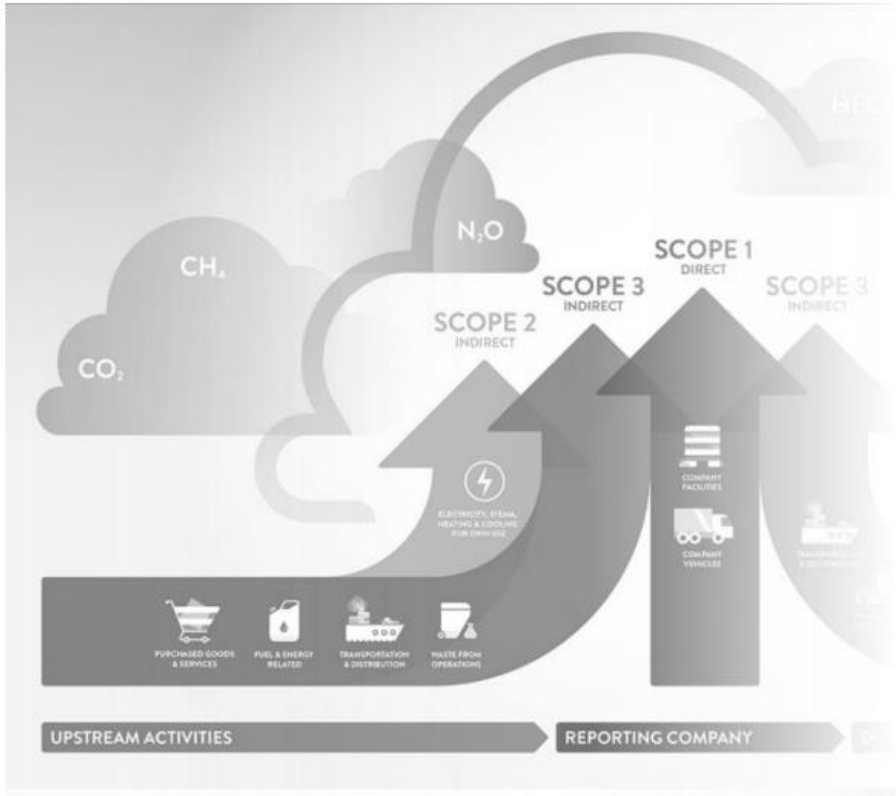
The three scopes of greenhouse gas accounting

Especially for GHG accounting and reporting purposes **three "scopes"** are defined by the globally recognized **GHG Protocol Standard**. This scope-specific approach helps to **classify direct** and **indirect emission sources** and to structure climate policies and business goals.



Scope 1: Direct GHG emissions from **own operations** (e.g. emissions from combustion in boilers or vehicles or emissions from controlled process equipment)

Scope 2: Indirect GHG emissions from **energy** (e.g. purchased or acquired electricity, steam, heat and cooling)

Scope 3: Indirect GHG emissions from the **supply chain** (e.g. extraction and production of purchased materials, component suppliers

Introduction to the Carbon Footprint Calculation

Overview

SCHAEFFLER

The Product Carbon Footprint

The **Product Carbon Footprint (PCF)** is a method to determine the climate impact of a product. As a key sustainability tool, it helps not only to meet customer requirements, but also to **track and improve the company's sustainability performance**.

The calculation of a product's carbon footprint has become increasingly important. The global climate targets aim at a decarbonized world. For this purpose, all products must be evaluated for their climate impact.

To ensure the expectations in terms of consistency, transparency, and informative value, we, as Schaeffler, and our suppliers need a **standardized basis for calculation** – the **ISO 14067**.

According to ISOs 14067/14040/14044, the carbon footprint of a product is the sum of greenhouse gas emissions (GHGs) and removals in a product system, expressed as CO2 equivalents.

1. Goal & Scope definition
Define product under scrutiny, objectives of evaluation, system boundaries and audience (internal/external)
→ Define system boundaries

2. Data collection
Investigate and create a list of all relevant inputs and outputs associated with the product
→ Analyze relevant activity data (e.g., kWh, m^3)

4. Evaluation & Interpretation
Identify opportunities of reducing negative environmental impacts in the product's life cycle
→ Validate and report results

3. Impact Assessment
Use specific emission factors to match with your activity data for the PCF calculation
→ Calculate the Product Carbon Footprint

Introduction to the Carbon Footprint Calculation

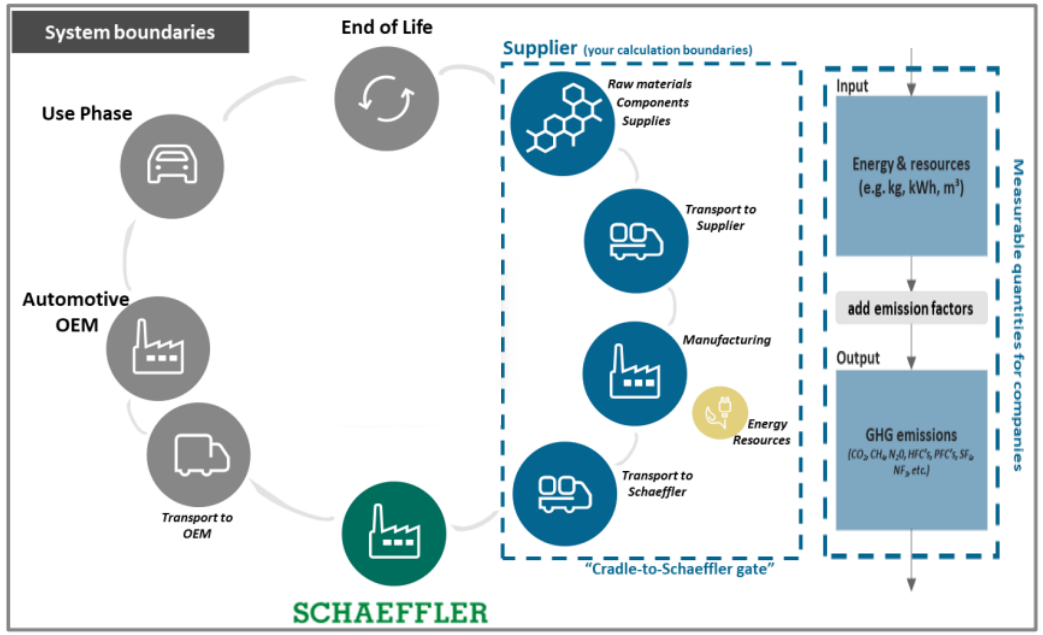
Overview

SCHAEFFLER

How to operationalize the PCF calculation

For the selection of suitable and applicable emission factors, it is recommended to contact material, component and energy suppliers. In addition, special certified emission databases can be used. In any case, a transparent and consistent selection of emission factors must be conducted.

Your calculation should include all CO2e emissions created in the production processes from “cradle to Schaeffler gate”, which means all emissions caused from the raw materials up to the transport to the respective Schaeffler plant. All emissions past that point do not belong in your PCF calculation.



Introduction to the Carbon Footprint Calculation

Overview

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Further information & background for Schaefflers sustainability strategy and PCF calculation

For more information regarding Schaeffler´s sustainability strategy, check out the recent **Online Sustainability Report**.

For detailed information about the PCF check out **Schaeffler´s PCF How-to Guide**.

For help regarding PCF calculation methodology see **GHG protocol** website and **SBTI Guidelines**.

For further information regarding specific categories, see **Product Category Rules**.

Overview Premises

Overview

SCHAEFFLER

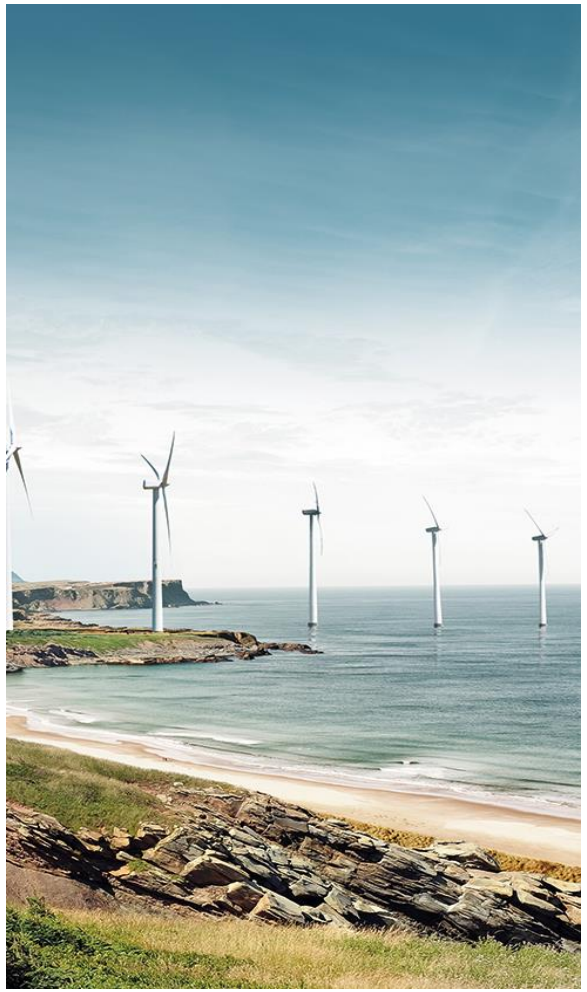
Overview premises (Notification on calculation premisses of both cost and CO2e)

Energy Source	Designation	Base unit	Energy Characteristics	Datasource / Q-level	[EUR/kWh]	[kgCO2e/kWh]
Energy Source 1						
Energy Source 2						
Energy Source 3						
Energy Source 4						
Energy Source 5						

In the headlines, the **requested information** is described. They can not be edited.	These cells need **to be filled out by the supplier.**	These cells contain **points from a list**. They can not be edited.

Overview Premises

Overview



Name	Remarks
Energy Source (1 to 5)	Five different energy sources can be entered into the CPR
Designation	The type of energy source can be selected.
Base unit	The standard unit of the respective energy source can be entered here
Energy Characteristics	State whether the calorific value of your data is based on **NCV** (= net calorific value, single energy content of an energy carrier) or **GCV** (= gross calorific value, total energy value of an energy carrier incl. combustion of gas)
Datasource / Q-level	This field describes the quality level of your data from on a scale of 1 to 10. To see which data level equals what score, use the mouseover in the CPR
CUR/kWh	Indicates the price of the energy source in the chosen currency per kilowatt-hour
kgCO2e/kWh	Indicates the CO2e emissions of the energy source in kg of CO2e per kilowatt-hour

Material CO2e

Overview

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Material CO2e

Datasource / Q-level	Part weight specification			Purchased Parts / External Processes		Material emission	Recycling rate	Origin country of material	Production process	Transportmode	Distance	Transportation emission	Emissions for logistics Material	Emission on material overhead	Emission on material scrap	Summary of material
	Weight unit	Gross Weight per Part	[kgCO2e/kt]	[Quantity] [pcs]	[kgCO2e/1pcs]	[kgCO2e / 100 pcs]	[%]	[Location]	[Iron&steel only]		[km]	[kgCO2e/tkm]	[kgCO2e / 100 pcs]	[%]	[kgCO2e / 100 pcs]	[kgCO2e / 100 pcs]
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
						0,0000							0,00000			0,00
															Total value Material CO2e [kgCO2e / 100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Material CO2e

Overview

Name	Remarks
Datasource / Q-level	Select the respective quality of the data source from the drop-down menu
Part weight specification Weight unit	The weight unit of the part weight specification selected in the material costs is being copied to this field
Part weight specification Gross Weight per Part	The gross weight of the part weight specification entered in the material costs is being copied to this field
Part weight specification kgCO2e/t	Please enter the CO2e-values in kilograms per ton
Purchased parts / external proc. Quantity	The quantity of purchased parts / external processes entered in the material costs is being copied to this field
Purchased parts / external proc. kgCO2e/1pcs	Please enter the CO2e-values per piece of purchased parts / external processes in this field
Material emission kgCO2e/100pcs	The Excel file automatically calculates the CO2e-values per 100 pieces

Material CO2e

Overview

Name	Remarks
Recycling Rate	For our information, please enter the percentage of recycled material used for that substance
Origin country of material	Enter the country where the material originates from
Production process	Please name the production route, how the steel or iron was produced.
Transport mode	Select the transport mode for the material from the dropdown menu
Distance	Enter the number of kilometers the material traveled to your production plant
Transport emissions	Enter the emissions caused by the transport in kilograms of CO2e per kilometer
Emissions for logistics material	The Excel calculates the total emissions for the logistics material in ton-kilometers (more information in the mouseover)

Material CO2e

Overview

Name	Remarks
Emission on material overhead	Emissions attributable to purchasing, receiving, handling, storing and delivering materials used in production
Emission on material scrap	Emissions on material scrap of the respective material
Summary of material	Total material emissions of the given component per position in the selected quantity unit (see formula)
Total value Material CO2e	Sum of all CO2e emissions attributed to materials

Manufacturing CO2e

Overview

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Manufacturing CO2e

Energy Source A [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source A [kgCO2e/h]	Energy Source B [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source B [kgCO2e/h]	Energy Source C [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source C [kgCO2e/h]	Residual Manuf. OH [%]	Manufacturing scrap [kgCO2e / 100 pcs]	Summary of manufacturing [kgCO2e / 100 pcs]
														0,00
														0,00
														0,00
														0,00
														0,00
													Total value Manufacturing CO2e [kgCO2e / 100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Manufacturing CO2e

Overview

Name	Remarks
Energy Source A/B/C	You can select up to three energy Sources to calculate the manufacturing costs. Put in the Number of the energy sources from the overview premises
Energy CO2e-rate	The energy CO2e-rate entered in the overview premises for the respective energy source is being copied to this field
Net power output working system	Enter the net power output of the working system The net power output is calculated by multiplying the rated power (in kilowatt) with the power utilization (in percentage)
Summary Source A/B/C	CO2e-emissions caused by the respective energy source
Residual Manufacturing overheads	Residual Manufacturing Overheads include all manufacturing emissions that cannot be directly allocated (in line with the RMOC's)
Manufacturing Scrap	Emission on scrap incurring at the respective manufacturing step. Scrap costs will be accumulated in the summary of manufacturing. (see formula)
Summary of manufacturing	Total emissions of the respective manufacturing step per position in the selected quantity unit (see formula)
Total value manufacturing CO2e	Sum of all CO2e emissions attributed to manufacturing

Setup CO2e

Overview

SCHAEFFLER

Setup CO2e

Energy Source A [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source A [kgCO2e/h]	Energy Source B [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source B [kgCO2e/h]	Energy Source C [$]	Energy CO2e-rate [kgCO2e/kWh]	Net power output working system [kW]	Summary Source C [kgCO2e/h]	Residual Manuf. OH [%]	Setup scrap [kgCO2e / 100 pcs]	Summary of setup [kgCO2e / 100 pcs]
														0,00
														0,00
														0,00
														0,00
														0,00
													Total value Setup CO2e [kgCO2e / 100 pcs]:	0,0000

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Setup CO2e

Overview

Name	Remarks
Energy Source A/B/C	You can select up to three energy Sources to calculate the setup costs. Put in the Number of the energy sources from the overview premises
Energy CO2e-rate	The energy CO2e-rate entered in the overview premises for the respective energy source is being copied to this field
Net power output working system	Enter the net power output of the working system The net power output is calculated by multiplying the rated power (in kilowatt) with the power utilization (in percentage)
Summary Source A/B/C	CO2e-emissions caused by the respective energy source
Residual Manufacturing overheads	Residual Manufacturing Overheads include all manufacturing emissions that cannot be directly allocated (in line with the RMOC's)
Setup Scrap	Emission on scrap incurring at the respective manufacturing setup step. Scrap costs will be accumulated in the summary of setup. (see formula)
Summary of Setup	Total emissions of the respective manufacturing setup step per position in the selected quantity unit (see formula)
Total value Setup CO2e	Sum of all CO2e emissions attributed to setup

Product specific allocation

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Overview

Product Specific Allocation

Pos.	Total emission of position [kgCO2e/ Pos.]	Emission [kgCO2e / 100 pcs]
1		0,0000
2		0,0000
3		0,0000
4		0,0000
5		0,0000
6		0,0000
7		0,0000
8		0,0000
9		0,0000
Total value Allocation CO2e [kgCO2e / 100 pcs]:		**0,0000**

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Product specific allocation

Overview

Name	Remarks
Total emission of position	Enter the total emission of the respective position in kg of CO2e per position
Emission	The Excel automatically calculates the emissions per 100 pieces by taking into account the allocation quantity entered in the cost part of the CPR for the respective position
Total value Allocation CO2e	Sum of all CO2e emissions attributed to product specific allocations

One-time effects CO2e

Overview

One-time effects CO2e

Pos.	Designation [e.g. Tooling, Devices, Research & Development, Validation, etc.]	Σ [kgCO2e]
1		
2		
3		
4		
5		
6		
7		
8		
9		
Total value One-time effects [kgCO2e]:		**0**

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

One-time effects CO2e

Overview

Name	Remarks
Designation	Exact designation of the CO2e originator to be considered up front and only for our information (**ONLY** in English)
Summary	Summary of one-time CO2e effects, only for information
Total value One-time effects CO2e	Sum of all CO2e emissions attributed to one-time effects

Overheads

Overview

SCHAEFFLER

Overheads

CCF	SG&A		R&D		Other PCF Scope 3 upstream		Other PCF Scope 1 direct		Other PCF Scope 3 downstream	
Total value	Base 4	‰	Base 4	‰	CCF	‰	CCF	‰	CCF	‰
	0		0		0		0		0	
[tCO2e]	[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]		[0 kgCO2e / 100 pcs]	

Total value Overheads CO2e [kgCO2e / 100 pcs]:	0,0000

Base 4 = Σ kg CO2e in production incl. Material

In the headlines, the **requested information** is described. They can not be edited.

These cells need **to be filled out by the supplier.**

These cells are **calculated automatically** based on the data given by the supplier.

The **subtotals** are calculated automatically.

Overheads

Overview

Name	Remarks
CCF	Enter your total corporate carbon footprint
SG&A	The sales, general and administration emissions are expressed as a share of production emissions in **‰**. The evaluation follows the same logic as for SG&A-cost (see formula)
R&D	The emissions for Research & Development are expressed as a share of production emissions in **‰**. (see formula)
Other PCF Scope 3 upstream	Further emissions of the PCF in Scope 3 upstream, which are not already mentioned or allocated. Data input in **‰** of the CCF. (see formula)
Other PCF Scope 1 direct	Further direct emissions of the PCF in Scope 1, which are not already mentioned or allocated. Data input in **‰** of the CCF. (see formula)
Other PCF Scope 3 downstream	Further emissions of the PCF in Scope 3 downstream, which are not already mentioned or allocated. Data input in **‰** of the CCF. (see formula)
Total value Overheads CO2e	Sum of all CO2e emissions attributed to overheads

Terms of delivery and packaging

Overview

SCHAEFFLER

Terms of delivery and packaging

Packaging-Material [kgCO2e / 100 pcs]	Transportmode	From [City]	To [City]	Distance [km]	Transportation emission [kgCO2e/tkm]	Emissions for logistics [kgCO2e / 100 pcs]
						0
						0
						0
					Total value Terms of delivery and packaging CO2e [kgCO2e / 100 pcs]:	**0,0000**

In the headlines, the **requested information** is described. They can not be edited.	These cells need **to be filled out by the supplier.**	These cells are **calculated automatically** based on the data given by the supplier.	The **subtotals** are calculated automatically.

Terms of delivery and packaging

Overview

Name	Remarks
Transportmode	Select the transport mode for the material from the dropdown menu
From/To	Enter the city from which the transport started and the city where the transport finished
Distance	Enter the distance of the transport in kilometers
Transport emission	Enter the total transport emissions per transport mode
Emission for logistics	The Excel calculates the emissions for logistics for each transport mode in kgCO2e per 100 pieces
Total value Terms of delivery and packaging CO2e	Sum of all CO2e emissions attributed to delivery and packaging

Declaration on CO2e-Emissions

Overview

Declaration on CO2e-Emissions	[kgCO2e / 100 pcs]
Σ Scope 3 (indirect) - UPSTREAM activities	
Σ Scope 2 (indirect)	
Σ Scope 1 (direct) - Reporting company	
Σ Scope 3 (indirect) - DOWNSTREAM activities	
Total value CO2e [kgCO2e / 100 pcs]	**0,0000**
Total value CO2e [kgCO2e / kg Finish part weight]	**0,0000**

These cells need **to be filled out by the supplier.**	These cells include **headlines**.	The **total CO2e values are calculated in these cells**

Declaration on CO2e-Emissions

Overview

Name	Remarks
Scope 1/2/3	For a detailed explanation on Scope 1/2/3, see p. 40
Total value CO2e	Sum of all CO2e emissions

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Contents

Formulary – Material Costs

KLICK on the **door symbol** to get **Back** to the overview of **Material Cost**

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Purchase (Raw-Material):	(Gross Weight per Part * Weight unit * Material Base Price + Material-Overhead-Rate) * Quantity Unit
Purchase (Part/Component/Ext. Processstep):	(Quantity * Price + Material-Overhead-Rate) * Quantity Unit
Provided (Raw-Material):	Calculation as „Purchase (Raw-Material)“ - (Gross Weight per Part * Weight unit * Material Base Price)
Provided (Part/Component):	Calculation as „Purchase (Part/Component…)“ - (Quantity * Price)
Reimbursement:	Max-Value of Gross- or Netweight * Weight unit *Material Base Price * Quantity Unit * (-1) [1]
Scrap Cost:	Material Cost per position * scrap rate per position
Error message:	If you fill „material price“ and „Purchased Parts / External Processes“ at once, an error message will appear [2]

1 Because of reimbursement, this amount will be subtracted

2 In SupplyOn, this error message is shown as „9999999999“

Formulary – Material CO2e

KLICK on the **door symbol** to get **Back** to the overview of **Material CO2e**

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Weight unit: The weight unit will be tranferred from the part weight specification cost tab

Gross Weight per Part: The gross-weight information as the base for CO2e-calculation will also be taken from the part weight specification cost tab

Purchased Parts / External Processes Quantity: The information about the quantity is a transferred value from the cost tab as well

Material Emission: (Gross Weight per Part * Weight unit * CO2e-value per ton) **or** (Quantity * CO2e-value per 1 piece) * Quantity Unit

Emission for Logistics Material: $\frac{\text{Part weight (calculated in kg)}}{1000}$ * Distance * Transportation emission in kgCO2e/ton-kilometre * Quantity Unit [A]

Summary of Material: (Material Emission + Emisson on material overhead) + Emission for logistics material + Emission on material scrap

A If you want to declare **Emissions for Logistics on Purchased Parts or External Processes**, please input the **Gross-Weight per Part** incl. proportionate weight of packaging etc. **into the COST-SECTION-TAB**

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Formulary – Manufacturing- and Setup Cost

KLICK on the **door symbol** to get **Back** to the overview of **Manufacturing Cost**

Working System Cost per Part:

$$\frac{\text{Working System Hourly Rate}}{3600} * \frac{\text{Cycle time}}{\text{Parts per cycle}}$$

Headcount at Working System:

$$\frac{\text{Number of workers}}{\text{Number of operated Working Systems}} * 100$$

Labor Cost per Part:

$$\frac{\text{Direct Labor Hourly Rate}}{3600} * \frac{\text{Headcount at Working System}}{100} * \frac{\text{Cycle time}}{\text{Parts per cycle}}$$

Scrap Cost per position:

$$\frac{\Sigma \text{ Manufacturing Step Costs}}{\text{Quantity Unit}} * \text{Scrap Rate of position}$$

Scrap (ext. process step):

1) Select Manufacturing Step „scrap (ext. process step)“
2) Input „**3600**“ at column „cycle time…“, „**1**“ at „Parts per Cycle“ and the **value per 1 piece** of your ext. process step into „Working System Hourly Rate“
3) After that, you can enter the percentage-value of the scrap-rate in the scrap rate column.
=> The scrap cost will be displayed but the formula will not increase the manufacturing step cost

Manufacturing Step Cost:

[(Working System Cost per Part + Labor Cost per Part) + (Residual Manufacturing Overhead)] * Quantity Unit

Setup Cost:

(Setup Labor Hourly Rate + Working System Hourly Rate) * (Internal Setup- + external preparation time) [3]

Setup Cost total:

$$\frac{(\text{Setup Cost} + \text{Residual Manufacturing Overhead})}{\text{Manufacturing Lot Size}} * \text{Quantity Unit}$$

3 If your statement of setup-cost requires a more detailed input, please splitt them to multiple positions.

Formulary – Manufacturing- and Setup CO2e

KLICK on the **door symbol** to get **Back** to the overview of **Manufacturing CO2e**

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Energy CO2e-rate: The kgCO2e/kWh-value will be transferred via VLOOKUP of the respective engergy source 1-5 [B] from the header-table „overview premises“

Summary Source A, B or C [C]: Energy CO2e-rate * Net power output working system [D]

Summary of Manufacturing: $\left(\frac{\text{Summary Source A+B+C}}{3600} * \frac{\text{Cycle time}}{\text{Parts per cycle}} + \text{Residual Manufacturing OH CO2e} + \text{Manufacturing Scrap CO2e}\right) * \text{Quantity Unit}$

Summary of Setup: $\left(\frac{(\text{Summary Source A+B+C}) * \text{Internal Setup Time}}{\text{Manufacturing Lot Size}} + \text{Residual Manufacturing OH CO2e} + \text{Setup Scrap CO2e}\right) * \text{Quantity Unit}$

B 5 different engery-sources, used by the supplier in total, can be selected and assigned with a designation via the drop-down cell. The value of CO2e (mandatory cell for calculation) as well as the monetary value can be entered.

C Per each production step, you can assign 3 different Energy Sources to 1 working-system or machine and therefore it allows you the maximum flexibility in regards to engergy and it’s mix.
E.g., a smelting oven can be operated with natural gas and electricity

D The netpower output is calculated with the rated power of the working system in total * power utilization in %

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Formulary – Allocation Costs, Overheads and misc.

KLICK on the door symbol to get Back to the overview of Product Specific Allocation Cost

Product Specific Allocation Cost: $\frac{\text{Cost}}{\text{Allocation Quantity}}$ * Quantity Unit

SG&A: Base 1[4] * Percentage of SG&A

Profit on Material: Base 2[5] * Percentage of Profit on Material

Profit on Value-Add: Base 3[6] * Percentage of Profit on Value Add

Packaging Percentage: $\frac{\text{Packaging Costs}}{\text{Subtotal Production Costs}}$

Transportation Percentage: $\frac{\text{Transportation Costs}}{\text{Subtotal Production Costs}}$

Duty Percentage: $\frac{\text{Duty Costs}}{\text{Duty Base}}$

Surcharges (not inc. in part price): Gross Weight per Part * Weight unit * Surcharge Material Price * Quantity Unit [7]

4 Base 1: Production Costs

5 Base 2: Subtotal Material Costs without sum of Surcharges

6 Base 3: Subtotal Manufacturing Costs + Subtotal Setup Costs

7 The respective material adjustment surcharges e.g., material escalator clauses, scrap- and alloy surcharges,…will be considered w/o OH and add. surcharges

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Formulary – Allocation CO2e, Overheads and misc.

KLICK on the **door symbol** to get **Back** to the overview of **Product Specific Allocation CO2e**

Product Specific Allocation Cost: $\frac{\text{Total Emission of Position}}{\text{Allocation Quantity } (taken\ from\ the\ cost\ tab)}$ * Quantity Unit

One-time effects CO2e: This is for SCHAEFFLER‘s information only in order to evaluate the overall lifetime PCF [TCO *(in this case)* = **T**otal **C**O2e of **O**wnership]

CCF: If you need to declare other, relevant emission factors, allocated to your PCF‘s, the CCF-value in tons of CO2e must be filled

SG&A: Base 4 [E] * with **per mille-value** of SG&A

R&D: Base 4 [E] * with **per mille-value** of the research & development cost

Other PCF Scope 3 up- and downstream /
Other PCF Scope 1 direct: CCF * with **per mille-value** of the respective scope

Emission for Logistics: $\frac{\text{Part weight } (taken\ from\ the\ header\ information\ at\ the\ cost\ tab)}{1000}$ * Distance * Transportation emission in kgCO2e/ton-kilometre * Quantity Unit

E Base 4: Production CO2e (includes Material-, Manufacturing- and Setup-emission values)

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Formulary – Allocation CO2e, Overheads and misc.

KLICK on the **door symbol** to get
Back to the overview of
Product Specific Allocation CO2e

Declaration on CO2e-Emissions:

In this table, the supplier additionally presents the emission values that were allocated to each respective scope according to their own methodology of measurement.

A check is carried out against the total amount of CO2 from the cost breakdown.

=> A color-coded message indicates the tolerance of the deviation

Total value CO2e [kgCO2e/pcs.]

Summary of all CO2e-values in production – herewith named as PCF per part * Quantity Unit

Total value CO2e [kgCO2e/kg f. part weight]:

$$\frac{\text{Total value CO2e [kgCO2e/pcs.]}}{\text{Part weight } (taken\ from\ the\ header\ information\ at\ the\ cost\ tab)}$$

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Glossary

- **CCF** (Corporate Carbon Footprint) - describes all direct and indirect emissions related to a company´s activities
- **CO2e** (Carbon Dioxide Equivalent) - describes the global warming potential of different greenhouse gases in terms of the amount of CO2 that would result in the same amount of warming; was created to make different greenhouse gases comparable
- **CPR** (Cost Parameter Request) – SCHAEFFLERs tool to break down the costs and CO2e emissions of their suppliers
- **GHG** (Greenhouse Gases) – describes gases that are contributing to global warming such as carbon dioxide, methane or nitrous oxide
- **OEE** (Overall Equipment Effectiveness) – describes the percentage of manufacturing time that is truly productive
- **PCF** (Product Carbon Footprint) – describes the product-specific greenhouse gas emissions that are emitted during a products life cycle
- **R&D** (Research and Development) – describes all costs/CO2e emissions related to activities regarding research and development of new products, technologies or services
- **SG&A** (Selling, General and Administrative Expenses) – describes all non-production costs incurred by a company

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Thank you!

Because yesterday we were already thinking about tomorrow.