

JOST Werke AG



Environmental Report 2019

Dear reader,

The JOST Environmental Report provides you with an overview of the environmental performance of JOST's global production sites.

This report shows the development of JOST's corporate environmental indicators and presents our performance in active environmental protection. In addition, we inform you about indirect environmental impact.

In our daily efforts to achieve the best performance in our products and processes, we harmonize environmental protection objectives with economic aspects to ensure an ecologically compatible, global supply for our partners. Within the scope of our business activities, our aim is to at least reduce the burden on the environment if it cannot be avoided 100%.

About JOST

JOST is a leading global producer and supplier of safety-critical systems for the commercial vehicle industry with the core brands JOST, ROCKINGER, TRIDEC, Edbro and Quicke.

JOST's global leadership position is driven by the strength of its brands, its long-standing client relationships serviced through its global distribution network as well as by its efficient and asset-light business model. With sales and production facilities in more than 20 countries across five continents, JOST has direct access to all major truck, trailer and agricultural tractor manufacturers worldwide as well as relevant end customers in the commercial vehicle industry.

JOST currently employs more 3,500 staff across the world. The holding company JOST Werke AG has been listed on the Frankfurt Stock Exchange since July 20, 2017.

Sustainability

Corporate social responsibility is a prerequisite for achieving sustained commercial success against international competition. This means that both the Company and its managers and employees must comply with the laws applicable in their part of the world, respect fundamental ethical values, use ecological resources responsibly and demonstrate a high standard of conduct at all times. Maintaining a link between economic value creation and ecological and social responsibility is therefore vital. We expect sustainability to help us stay competitive, drive innovation and, as a result, keep evolving in the future.

Operating a commercially viable business while taking responsibility for our customers, employees, society and environment has been at the heart of the JOST Werke Group's philosophy for more than 60 years. We are conscious of the impact that our business activity has on the environment and on society. We are convinced that our focus on sustainability issues not only serves society and the environment but also makes a decisive contribution to JOST's long-term commercial success.

Our production has set itself the target of minimizing the use of energy and resources. This enables us not only to generate cost advantages but also to make our production processes more environmentally friendly. When it comes to the various possible applications of our products, our product development efforts also aim to create new solutions that minimize their environmental impact when in use.

Innovations 2019

We were able to market our bio-lubricant, which we developed in-house, for the first time during the 2019 fiscal year. This product is a high-performance lubricant that biodegrades quickly in accordance with the OECD 301 B development test and is thus classified as "readily biodegradable". Our goal is to convert our lubricant portfolio to sustainable alternatives within two years. We have already been able to fully convert the LubeTronic 5-Point lubrication system to the new product within the first year.

Another environmentally-friendly development is the introduction of our new tire inflation system. This system is used to control the pressure of tires and can top them up to maintain a constant pressure.

This reduces fuel consumption when driving, which has a positive effect on CO_2 emissions.

Our research and development activities are also focused on reducing the carbon footprint and weight of our products. This includes the development of the OPTIMA weight-optimized landing gear for long-distance transport during the 2019 fiscal year.

Climate and the environment

We are keen to keep our environmental impact as low as possible and avoid it where possible in the course of our business activities. As a result, integrated quality and environmental management is part and parcel of the culture of JOST. It is our goal is to make our production sites safe and sustainable. Our quality and environmental management teams are responsible for making sure that this goal is met.

In 2019 JOST operated in 19 production plants worldwide and was represented in 21 countries. A structured program of employee training, combined with regular appraisals of health, safety, quality and environmental management, supports the implementation of established standards and policies and helps with the early identification of any areas in need of intervention. As part of our risk management system, we systematically identify and seek to minimize risks and potential hazards. On-site experts check compliance with local standards and the regulations that govern the safe operation of the plant. In addition, regular external audits are carried out for the purposes of certification in accordance with the DIN ISO 9001 quality management standard, the DIN ISO 14001 environmental management standard, the OHSAS 18001 occupational health and safety management standard and the IATF 16949 automotive industry standard. If the results of the audits show potential for improvement, we implement the appropriate measures.

We are committed to increasing the scope of certification in our plants and we plan to certify all our production sites in accordance with the ISO 14001 environmental management standard. At least one new plant will be added each year. At present, 68% of our production plants are currently ISO 14001-certified, which equates to 13 of our 19 sites (2018: 63%). TRIDEC BV in the Netherlands was ISO 14001-certified for the first time during the 2019 fiscal year, which meant that we reached our target for the year under review.

We again received no environmental complaints related to our activities during the 2019 fiscal year (2018: 0). There were no environmental offenses and no sanctions.

Materials used

Because the commercial and environmental impacts of resource consumption are closely linked, they often point in the same direction. For example, efficiency measures often have a positive impact on the environment by minimizing the consumption of resources. The greatest environmental risks in the production of our products are to be found in the upstream value chain, in iron smelting or in forges and foundries that generate high climate-relevant emissions during the production of steel products.

Approximately 64 percent of the materials we use are pre-processed steel and iron products. A detailed study carried out in 2018 by "Drive Sustainability, the Responsible Minerals Initiative" on the sustainability risks of various raw materials assessed the environmental damage from the introduction of hazardous chemicals or acids into the environment during steel extraction and processing as low. In contrast, it judged the environmental damage from carbon emissions to be high. It also rated the risk of endangering nature reserves during iron extraction as high.

JOST has only limited control over these risks, as our influence is restricted to our choice of direct suppliers and we have no reliable overview of and only limited control over the suppliers of our suppliers. However, our Code of Conduct for suppliers does require them to uphold sustainability standards and to exercise control over their own supply chain. We also visit our top 5 suppliers at regular intervals.

Ecological indicators

The general goal of our climate and environmental responsibilities is to continually improve our environmental performance indicators.

Our environmental management system tracks and monitors our performance with regard to energy consumption, waste volume, water consumption and climate-relevant emissions on an annual basis.

In doing so, we focus on the following core indicators:



Energy and Resource Flows JOST World 2019

The following graphs show the values of the energy and resource flows as well as the CO₂ emissions per production hour of the manufacturing sites of JOST Werke AG in total for the year 2019. A direct comparison with the figures for previous years is not possible, as the list of sites included has changed.

The key figures and their performance compared to previous years.

Indicator ^{*1}	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	121	124	126	
Natural Gas Consumption	kWh / Production hour	110	106	98	
Water Consumption	m ³ / Production hour	0,340	0,239	0,232	
CO ₂ -Emission	kg CO _{2eq} / Production hour	0,090	0,089	0,085	
Total Waste	t	17.403	17.479	15.097	
Scrap	% of total waste	73,3	73,3	73,2	
Hazardous Waste	% of total waste	8,1	8,5	8,2	
Non-Hazardous Waste	% of total waste	18,6	18,2	18,6	
*1 - A direct comparison with the key figures of	of previous years is not possible, as the number of sites included	has changed from 2018 to 2019. The JOS	T Otomotiv site was integrated in 20	19.	



Natural Gas consumption development



Water consumption development



Development CO₂-Emissions



% of total waste





2019



Site - JOST-Werke Deutschland GmbH (Neu-Isenburg)

The Neu-Isenburg site mainly produces fifth wheel couplings (SK). The central administration of JOST is also located at this site.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	6,25	6,73	7,01	
Natural Gas Consumption	kWh / Production hour	14,25	14,71	15,05	
Water Consumption	m ³ / Production hour	0,0156 0,0155		0,0163	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0056	0,0059	0,0061	
Total Waste	t	958	895	997	
Scrap	% of total waste	35	42	36	
Hazardous Waste	% of total waste	9	10	9	
Non-Hazardous Waste	% of total waste	56	48	55	

The key figures and their development compared to previous years.



in kWh / Production hour





in kWh / Production hour







The CO_2 emission during the production of a fifth wheel coupling is mainly determined by the material used (approx. 83% of CO_2 emission).

The use of the material is necessary to meet the requirements for stability, safety and durability.

Development CO₂-Emissions in kg CO_{2eq} / Production hour





CO₂-Emission 0,23 kg CO_{2eq} per production unit of fifth wheel couplings.



Site - JOST-Werke Deutschland GmbH (Wolframs-Eschenbach)

At the Wolframs-Eschenbach site, mainly landing gears are manufactured.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	9,94	10,02	9,53	
Natural Gas Consumption ^{*1}	kWh / Production hour	15,96	14,00	13,97	
Water Consumption	m ³ / Production hour	0,0224	0,0240	0,0245	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0076	0,0072	0,0070	
Total Waste	t	966	1.112	1.024	
Scrap	% of total waste	73	71	72	
Hazardous Waste	% of total waste	8	7	8	
Non-Hazardous Waste	% of total waste	19	21	21	

The key figures and their development compared to previous years.

*1 - Natural Gas Consumption includes district heating. Indicators updated due to a transmission error for the years 20017 to 2019



Water consumption development in m³ / Production hour 0,0224 0,0240 0,0245





Natural Gas consumption development

in kWh / Production hour







Similar to a fifth wheel coupling, the CO_2 emission during the production of landing gear is mainly determined by the material used. This proportion is even greater than in the case of fifth wheel couplings. (94% of CO_2 emissions)

The use of the material is necessary to ensure the requirements of stability, safety and durability.

CO₂-Emission 0,09 kg CO_{2eq} per production unit of landing gear.



2017 4,88 4,87 0,0059 0,0031 123 71 12 17

Site - ROCKINGER Agriculture GmbH (Waltershausen)

ROCKINGER manufactures various trailer couplings and systems for agriculture and forestry at its Waltershausen site.

Indicator	Unit	2019	2018	
Power Consumption	kWh / Production hour	5,19	5,06	
Natural Gas Consumption	kWh / Production hour	4,30	5,13	
Water Consumption	m ³ / Production hour	0,0057	0,0059	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0032	0,0033	
Total Waste	t	168	128	
Scrap	% of total waste	68	70	
Hazardous Waste	% of total waste	14	9	
Non-Hazardous Waste	% of total waste	18	20	

Tł





Natural Gas consumption development

in kWh / Production hour





2018

2017

2019







% of total waste



Since its foundation in 1875 by master blacksmith Johann Rockinger, ROCKINGER has played a decisive role in the technical development of tow bars. The company name stands for the highest product quality in this industry.



Site - JOST Hungária Kft (Veszprém)

At JOST Hungária the products are kingpins, trailer couplings (road), turntable assemblies/swivel bearings and container technology products.

The key figures and their development compared to previous years.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	6,08	6,02	6,25	
Natural Gas Consumption	kWh / Production hour	6,86	6,32	6,94	
Water Consumption	m ³ / Production hour	0,0202	0,0184		
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0042	0,0043		
Total Waste	t	1.719	1.935	1.802	
Scrap	% of total waste	85 87		88	
Hazardous Waste	% of total waste	7 7		6	
Non-Hazardous Waste	% of total waste	8	6	6	



Natural Gas consumption development

in kWh / Production hour









in kg CO_{2eq} / Production hour







% of total waste





Site - JOST Polska Sp. z o.o. (Nowa Sól)

Fifth wheel couplings, landing gear, drawbars and axles are manufactured at the site in Poland.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	7,80	8,28	8,57	
Natural Gas Consumption	kWh / Production hour	9,05 10,24		9,90	
Water Consumption	m ³ / Production hour	0,0247	0,0254	0,0279	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0095	0,0103	0,0104	
Total Waste	t	1.573	1.899	1.715	
Scrap	% of total waste	56	60	55	
Hazardous Waste	% of total waste	9	7	9	
Non-Hazardous Waste	% of total waste	35 33		35	

The key figures and their development compared to previous years.













 Waste development

 in t / Production hour

 1.573
 1.899

 1.573
 1.715

 2019
 2018
 2017









0

Site - JOST (China) Auto Component Co., Ltd. (Wuhan)

Landing gears, kingpins and fifth wheels are manufactured at the site in Wuhan.

The key figures and their development compared to previous years. 2018 Indicator Unit 2019 2017 kWh / Production hour 10,66 8,38 6,55 **Power Consumption** Natural Gas Consumption kWh / Production hour 9,39 4,80 -Water Consumption m³ / Production hour 0,1336 0,0407 0,0256 kg CO_{2eq} / Production hour CO₂-Emissions 0,0101 0,0141 0,0064 Total Waste 3.855 4.292 3.823 ŧ 71 Scrap % of total waste 81 75 Hazardous Waste % of total waste 2 2 Non-Hazardous Waste % of total waste 23 26 19



Natural Gas consumption development









Development CO₂-Emissions in kg CO_{2eq} / Production hour



% of total waste





Site - JOST Ibérica S.A. (Cadrete/Zaragoza)

JOST IBÉRICA S.A. was founded in 1983. They produce fifth wheel couplings and trailer couplings.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	1,42	1,36	1,54	
Natural Gas Consumption	kWh / Production hour	0,66	1,29	0,88	
Water Consumption	m ³ / Production hour	0,0062	0,0077	0,0069	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0006	0,0007	0,0007	
Total Waste	t	5	4	8	
Scrap	% of total waste	2	0	-	
Hazardous Waste	% of total waste	12	-	-	
Non-Hazardous Waste	% of total waste	86	100	100	

The key figures and their development compared to previous years.





Natural Gas consumption development

in kWh / Production hour











in kg CO_{2eq} / Production hour







Site - JOST India Auto Component Pvt. Ltd. (Jamshedpur)

Since 2008, mainly fifth wheel couplings and axles have been produced at the JOST site in Jamshedpur.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	2,90	2,12	2,72	
Natural Gas Consumption	kWh / Production hour	1,99	1,96	2,24	
Water Consumption	m ³ / Production hour	0,0029	0,0014	0,0017	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0014	0,0010	0,0013	
Total Waste	t	844	1.029	1.162	
Scrap	% of total waste	96	82	84	
Hazardous Waste	% of total waste	0	0	0	
Non-Hazardous Waste	% of total waste	4	18	16	

The key figures and their development compared to previous years.







Natural Gas consumption development

in kWh / Production hour











Development CO₂-Emissions

in kg CO_{2eq} / Production hour



% of total waste





Site - 000 JOST TAT (Naberezhnye Chelny)

Fifth wheel couplings are assembled at the JOST site in Tatarstan (Russia).

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	6,54	6,81	5,73	
Natural Gas Consumption	kWh / Production hour	-	-	-	
Water Consumption	m ³ / Production hour	-	-	-	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0031	0,0033	0,0027	
Total Waste	t	7	14	10	
Scrap	% of total waste	7	1	1	
Hazardous Waste	% of total waste	1	7	0	
Non-Hazardous Waste	% of total waste	92	92	99	

The key figures and their development compared to previous years.







Water consumption development

in m³ / Production hour

0

2018

0

2017

0

2019

Natural Gas consumption development

in kWh / Production hour





Waste development in t / Production hour







As this is a rented location within a large industrial complex, the individual energy and water use cannot be determined.



Site - JOST International Corporation (Grand Haven)

JOST International Corp. was founded in 1980 in Grand Haven (Michigan). Here, mainly landing gear is manufactured.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	4,76	5,97	5,89	
Natural Gas Consumption	kWh / Production hour	0,12	0,13	0,12	
Water Consumption	m ³ / Production hour	0,0051	0,0066	0,0065	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0023	0,0029	0,0029	
Total Waste	t	809	-	-	
Scrap	% of total waste	91	-	-	
Hazardous Waste	% of total waste	-	-	-	
Non-Hazardous Waste	% of total waste	9		-	

The key figures and their development compared to previous years.







Natural Gas consumption development

in kWh / Production hour









in kg CO_{2eq} / Production hour







Site - JOST International Corporation (Greeneville)

In 2000, the JOST facility was established in Greeneville (Tennessee). Since then, it has mainly produced fifth wheel couplings.

Indicator	Unit	2019	2018	2017	
Power Consumption	kWh / Production hour	8,41	8,48	10,55	
Natural Gas Consumption	kWh / Production hour	0,08	0,08	0,07	
Water Consumption	m ³ / Production hour	0,0301	0,0018	0,0064	
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0041	0,0041	0,0051	
Total Waste	t	1.796	1.205	435	
Scrap	% of total waste	79	98	89	
Hazardous Waste	% of total waste	-	-	-	
Non-Hazardous Waste	% of total waste	21	2	11	

The key figures and their development compared to previous years.







in kWh / Production hour













in kg CO_{2eq} / Production hour









Site - TRIDEC B.V. (Son - Holland)

TRIDEC has been part of JOST since 2008 and manufactures mechanical, hydraulic and electronic steering systems as well as axle suspensions for commercial vehicles at its site in the Netherlands.

The	key	figures	and	their	deve	lopment	compar	ed to	previous	years.
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Indicator	Unit	2019	2018	2017
Power Consumption	kWh / Production hour	1,60	1,82	1,53
Natural Gas Consumption	kWh / Production hour	2,64	2,39	2,24
Water Consumption	m ³ / Production hour	0,0025	0,0025	0,0024
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0017	0,0017	0,0015
Total Waste	t	67	69	94
Scrap	% of total waste	45	40	58
Hazardous Waste	% of total waste	4	9	-
Non-Hazardous Waste	% of total waste	51	51	42







in kWh / Production hour 2,64 2,39 2,24





Waste development
in t / Production hour946769201920182017

The environmental management system at the site in Son (Netherlands) was successfully certified in 2019 according to the DIN ISO 14001:2015 standard.

 Development CO2-Emissions in kg CO2eq / Production hour

 0,0017
 0,0017

 0,0017
 0,0015

 2019
 2018
 2017





Site - TRIDEC Portugal (Murtede)

TRIDEC has been part of JOST since 2008 and manufactures basic components for mechanical, hydraulic and electronic steering systems as well as axle suspensions for commercial vehicles at its site in Portugal.

Indicator	Unit	2019	2018	2017
Power Consumption	kWh / Production hour	5,77	7,80	8,03
Natural Gas Consumption	kWh / Production hour	-	0,00	0,00
Water Consumption	m ³ / Production hour	0,0082	0,0076	0,0085
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0024	0,0032	0,0033
Total Waste	t	838	620	501
Scrap	% of total waste	89	92	91
Hazardous Waste	% of total waste	1	6	2
Non-Hazardous Waste	% of total waste	10	6	7

The key figures and their development compared to previous years.











Development CO₂-Emissions in kg CO_{2eq} / Production hour 0,0032 0,0033



Waste development in t / Production hour



% of total waste





Site - JOST UK (Bolton)

The Bolton site manufactures front, underfloor, tipper and trailer push cylinders and custom hydraulic kits under the EDBRO brand name.

Indicator	Unit	2019	2018	2017
Power Consumption	kWh / Production hour	37,34	36,56	42,36
Natural Gas Consumption	kWh / Production hour	44,60	45,03	41,68
Water Consumption	m ³ / Production hour	0,0577	0,0704	0,0783
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0275	0,0275	0,0278
Total Waste	t	1.428	1.557	1.286
Scrap	% of total waste	37	37	36
Hazardous Waste	% of total waste	58	58	59
Non-Hazardous Waste	% of total waste	5	5	5

The key figures and their development compared to previous years.

















% of total waste





Site - JOST Otomotiv Sanayi Ticaret A. Ş. (Kemalpaşa Izmir)

The 2019 reporting year will be the first to report on the site established in Turkey in 2018. The main products manufactured there are JOST fifth wheel couplings and container technology.

The key figures and their	development compared to previou	us years.		
Indicator	Unit	2019	2018	2017
Power Consumption	kWh / Production hour	2,45	4,14	-
Natural Gas Consumption	kWh / Production hour	-	-	-
Water Consumption	m ³ / Production hour	0,0016	0,0046	-
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0007	0,0012	-
Total Waste	t	116	83	-
Scrap	% of total waste	96	88	-
Hazardous Waste	% of total waste	-	-	-
Non-Hazardous Waste	% of total waste	4	12	-

Power consumption development



Natural Gas consumption development

in kWh / Production hour







Waste development







Development CO₂-Emissions



% of total waste





Site - JOST BRASIL Sistemas Automotivos Ltda. (Caxias do Sul)

The JOST products fifth wheel couplings, kingpins and landing gear are manufactured at this location in a joint venture (49% JOST).

Indicator	Unit	2019	2018	2017
Power Consumption	kWh / Production hour	3,92	4,48	4,83
Natural Gas Consumption	kWh / Production hour	-	-	-
Water Consumption	m ³ / Production hour	0,0034	0,0040	0,0031
CO ₂ -Emissions	kg CO _{2eq} / Production hour	0,0019	0,0021	0,0023
Total Waste	t	2.255	2.636	2.115
Scrap	% of total waste	88	91	90
Hazardous Waste	% of total waste	1	0	0
Non-Hazardous Waste	% of total waste	11	8	10

The key figures and their development compared to previous years.







Natural Gas consumption development

in kWh / Production hour









Development CO₂-Emissions in kg CO_{2eg} / Production hour



% of total waste





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