



HAND DRYER

NOFER

Family Product

Models CONCEPT3 / CONCEPT3
BEHIND THE MIRROR

Models FUGA / FUGA EVO

Models VELTIA / VJET

Models VELTIA TRIBLADE / VJET
TRIBLADE

AUTOMATIC HAND DRYER NOFER



High speed automatic Hand dryer Product family representative and description

FUGA EVO / FUGA EVO: 01931.S-800 W-10sec.
CONCEPT3: CONCEPT3 0191.S-1150 W-12s. 1.89 l/min.
VELTIA/V-JET: VJET 01303.W-1760 W-10s.
VELTIA/V-JET TRIBLADE: VJET TRIBLADE 01305.W-1760 W-8s.

Contact Information

NOFER, S.L. www.nofer.com
 Avenida de la Fama, 118
 08940 Cornellà de Llobregat
 Tel +34 934 742 423

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Summary table: Environmental Parameters, in which products have a specific contribution.
 Contribution detailed in VERDE, LEED and BREEM sections.

Support Documentation ■ **Certifications :** DAP, CSR, REACH, GRI ■ **Self-declared** ■ **Potential**

Category	Icon	Parameter	Value/Description	Value/Description	Value/Description	Value/Description	Value/Description	Value/Description	Value/Description
Site Mobility		Solar Reflectance Index SRI	Rainwater Management	Exterior Lighting	...				
Energy Atmosphere		Embodied Energy	Greenhouse gases	Energy Demand Reduction	Equipment Efficiency	Other Polluting gases	Renewable energy	Energy management	...
Materials		Accredited location	Pre-consumer recycled content	Post-consumer recycled content	Potential reuse	Certified wood	Construction waste	Chemical composition	...
Water		Consumption < reference	Water management	...					
Indoor Environment		Low emitting VOC's	Low emitting formaldehyde	Comfort control	Lighting comfort	Acoustic comfort	Air quality	...	
Innovation		Innovation	...						

NOTES:

- The information included in this document shows product compliance with environmental certification (VERDE, LEED or BREEAM) criteria. The analysis is performed based on the information provided by manufacturer. To ensure the compliance of these credits, it will be necessary during the process of any of the certifications to verify the validity of the information and data provided by the company.
- This document does not constitute a product certification, nor does it guarantee compliance with local regulations.
- The conclusions of this study apply only to products included in this report, and are subject to the invariability of product technical conditions.
- The validity of this document is subject to supporting documents expiration date, regulations variation, and environmental certification systems updates.
- This document informs about products possible contribution to VERDE, LEED or BREEAM certifications. However, the final decision on whether or not a product meets certification requirements is exclusive to certification bodies: GBCI (Green Business Certification Inc.) for LEED certification and BREEAM ES for BREEAM certification.

Table of contents

CREDIT SUMMARY LEED v4	4
WATER EFFICIENCY (WE)	5
• WE Indoor water use reduction.....	5
ENERGY & ATMOSPHERE (EA).....	7
• EA Minimum energy performance (prerequisite).....	7
• EA Optimize energy performance (credit).....	7
• EA Energy performance (EBOM v4.1).....	7
MATERIALS & RESOURCES (MR)	10
• MR Waste performance.....	10
INNOVATION (ID).....	11
• ID Innovation	11
REGIONAL PRIORITY (RP).....	12
• RP Regional Priority	12

CREDIT SUMMARY LEED v4



WATER EFFICIENCY (WE)

WE Indoor water use reduction (pre-requisite & credit)



ENERGY & ATMOSPHERE (EA)

EA Minimum energy performance (prerequisite)
EA Optimize energy performance (credit)



MATERIALS & RESOURCES (MR)

MR Waste Performance



INNOVATION (ID)

ID Innovation. Exemplary performance



REGIONAL PRIORITY (RP)

RP Regional Priority

Environmental LEED Categories



(LT)
Location & Transportation



(SS)
Sustainable Sites



(WE)
Water Efficiency



(EA)
Energy & Atmosphere



(MR)
Material & Resources



(IEQ) Indoor Environmental Quality



(ID)
Innovation



(RP)
Regional Priority

LEED (v4-v4.1) Rating Systems

EB Existing Building
NC New Construction
CI Commercial Interiors
CS Core & Shell
SNC School New Construction
SEB School Existing Building
MMR Multifamily Mid Rise

RNC Retail New Construction
REB Retail Existing Building
RCI Retail Commercial Interiors
HC Healthcare
HNC Hospitality-New Constr.
HEB Hospitality-Existing Building
HCI Hospitality-Commercial Int.

DCNC Data Center NC
DCEB Data Center EB
WNC Warehouse NC
WEB Warehouse EB
NDP Neighborhood Devel. Plan
ND Neighborhood Develop.
HM Homes

CREDIT SUMMARY

LEED v4



CATEGORY

WATER EFFICIENCY (WE)

WE Indoor water use reduction

(EB, NC, CI, CS,SNC, SEB, RNC, REB, RCI, HC, HNC, HEB, HCI, DCNC, DCEB, WNC, WEB)

Intend To reduce indoor water consumption.

Compliance information The Hand dryer series COCEPT3 are integrated within the lavatory faucet. Water consumption of the lavatory faucet is 1,89 l/min, which can contribute to the compliance of the credit requirements through water savings.

LEED Requirements Reduce in aggregate indoor water consumption by 20% from the baseline.

For additional points under the credit, further reduce (over 25%) fixture and fitting water use from the calculated baseline in WE Prerequisite Indoor Water Use Reduction.

See the following table for LEED baseline:

Commercial Fixtures, Fittings, and Appliances	Current Baseline (SI units)
Toilets (Water Closet)	6 l/discharge
Urinary	1.9 l/min
Lavatory faucet (public use)	1.9 l/min
Lavatory faucet (private use)	8.3 l/min
Kitchen faucets (excluding pot filling faucet)	8.3 l/min
Shower	9.5 l/min

NOTE: LEED EBOM v4.1 score will be obtained depending on the ARC score, which depends on the comparison of the building's water consumption with the water consumption of similar buildings.

Exemplary Performance (extra point):

- LEED BD+C y LEED CI: Achieve at least 55% water saving compared to the baseline building.
- LEED EBOM: Achieve at least 35% water saving compared to the baseline building.

Example N/A

Support Documentation *Data Sheet Concept 3*

Reference Standards

- Energy Policy Act (EPAAct) of 1992 and as amended: eere.energy.gov/femp/regulations/epact1992.html
- EPAAct 2005: eere.energy.gov/femp/regulations/epact2005.html
- International Association of Plumbing and Mechanical Officials Publication IAPMO/ANSI UPC 1-2006, Uniform Plumbing Code 2006, Section 402.0, Water-Conserving Fixtures and Fittings: iapmo.org
- International Code Council, International Plumbing Code 2006, Section 604, Design of Building Water. Distribution System: iccsafe.org
- ENERGY STAR: energystar.gov
- Consortium for Energy Efficiency: cee1.org
- WaterSense: epa.gov/watersense
- IgCC/ASHRAE 189.1 cooling tower and evaporative condenser requirements: ashrae.org/resources--publications/bookstore/standard-189-1





CATEGORY ENERGY & ATMOSPHERE (EA)

- ◆ EA Minimum energy performance (prerequisite)
- ◆ EA Optimize energy performance (credit)
- ◆ EA Energy performance (EBOM v4.1).
(SNC, NC, CS, RNC, HNC, DCNC, WNC, CI, RCI, HCI, HC,MMR, EB, SEB, REB, HEB, DCEB, WEB)

Intend To reduce the environmental and economic harms of excessive energy use by achieving a level of energy efficiency for the building and its systems.

Compliance information NOFER hand dryers have a power between 0,8 & 1,76 kw, depending on the model, which are below conventional hand dryers and also require a reduced drying time, between 8 & 12 seconds. Thus contributing to the energy reduction of the building's consumption.

NOTE LEED BD+ C & LEED CI: Process loads, such as office equipment and other equipment, must be estimated to justify the LEED requirements in the energy model. They will depend of the type of building or type of space and must be assumed identical in the calculation of the proposed building and the reference building, except in those cases where an innovation has been implemented and it's accepted by the certifying authority. Variations such as power, schedules, or sequence of the equipment installed in the baseline building compared to the proposed building, may be allowed by the certifying authority, based on the documentation of the installed equipment in the proposed design represents a significant verifiable from the conventional practice.

Note: The final result to determine the total points depends on the design of the building, its location, orientation, materials, definition of the envelope and the systems used.

LEED Requirements

BD+C & CI, Option: Energy Modeling

To show through energy modeling, the energy efficiency of the proposed building compared with a baseline building (defined according to the ANSI / ASHRAE / IESNA 90,1-2.010 standard, Appendix G, with errata).

Savings of 2-5% must be demonstrated for the prerequisite and 3-60% for the credit, which vary depending on the rating system. These savings have a score between 1 and 30.

EBOM rating system: The energy efficiency will be valued against energy bills with:

- Valid typologies for Energy Star Portfolio Manager: Score or Rating of Energy Star Portfolio Manager.
- Non valid typologies for Energy Star Portfolio Manager:
 - Compare with the national average of buildings of the same type. If the average is not available, it can be compared with three buildings of the same typology.
 - Comparison with the historical data on the building's consumption.
- LEEDv4.1: Score obtained in the ARC tool from data obtained from similar buildings.

Exemplary performance (extra points):

- LEED BD+C, option 1:
- Achieve at least 54% energy savings compared to the baseline building.

- LEED CI: Achieve energy savings of 32% compared to the reference building.
- LEED EBOM:
 - Valid projects for Energy Star Portfolio Manager: Obtain a score of 97 in Energy Star Portfolio Manager.
 - Non valid projects for Energy Star Portfolio Manager: Compare them with three similar buildings and with the historical consumption and obtain a 47% saving.

Example

The case study corresponds to a typical 8 floor office building located in Madrid of 6,000 m² conditioned area and 10 m²/person occupancy level. The total energy demand of HVAC, DHW, lighting and miscellaneous equipment is = 1984 MBTU/year (Data obtained by modeling the building with eQuest 3-65).

Building occupancy is established as typical occupancy.

- Full time occupants: 600 people
- Number of uses of the hand dryer 3 uses /person/day
- Number of working days per year: 250.

The total energy to cover the needs of HVAC, DHW, lighting and miscellaneous equipment for the reference building (coinciding with the one proposed for this case study) is = 1984 MBTU/year.

The total consumption as process load of a standard type hand dryer (power 2.400 W drying time 35 sec): $600 \times 3 \times 250 \times 2400 \times 35 \text{ kW} / 3600 \text{ s/h} = 10.500 \text{ kWh/year} = 35,8 \text{ MBTU/year}$

The total energy of the baseline building adding the process loads: $1984 + 35,8 \text{ MBTU} = 2.019,8 \text{ MBTU/year}$.

Hand dryer CONCEPT3 / CONCEPT3 BEHIND THE MIRROR. 1150W-12 sec.:

Total consumption as process load:

$600 \times 3 \times 250 \times 12 \text{ s} \times 1,15 \text{ kW} / 3600 \text{ s/h} = 1725 \text{ kWh/year} = 5,89 \text{ MBTU/year}$.

Total energy of the building adding the process loads of the hand dryer: 1989,9 MBTU.

The improvement obtained in the proposed building compared to the baseline is 1,5%.

Hand dryer FUGA 800W-10 sec.:

Total consumption as process load: $600 \times 3 \times 250 \times 10 \text{ s} \times 0,8 \text{ kW} / 3600 \text{ s/h} = 1000 \text{ kWh/year} = 3,4 \text{ MBTU/year}$.

Total energy of the building adding the process loads of the hand dryer: 1987,4 MBTU.

The improvement obtained in the proposed building compared to the baseline is 2%.

Hand dryer VELTIA / VJET 1760W-10 sec.:

Total consumption as process load: $600 \times 3 \times 250 \times 10 \text{ s} \times 1,76 \text{ kW} / 3600 \text{ s/h} = 2200 \text{ kWh/year} = 7,5 \text{ MBTU/year}$.

Total energy of the building adding the process loads of the hand dryer: 1991,5 MBTU.

The improvement obtained in the proposed building compared to the baseline is 1,4%.

Hand dryer VELTIA / VJET TRIBLADE 1760W-8 sec.:

Total consumption as process load:

$600 \times 3 \times 250 \times 8 \text{ s} \times 1,76 \text{ kW} / 3600 \text{ s/h} = 1760 \text{ kWh/year} = 6 \text{ MBTU/year}$.

Total energy of the building adding the process loads of the hand dryer: 1990 MBTU.

The improvement obtained in the proposed building compared to the baseline is 1,5%.

**Support
Documentation**

Data sheet Concept3, Concept3 Behind the Mirror, Fuga, Veltia y Vjet.

**Reference
Standards**

ASHRAE 90.1-2010





CATEGORY MATERIALS & RESOURCES (MR)

MR Waste performance (EB, SEB, REB, HEB, DCEB, WEB) – v4.1

Intend	To track and reduce the waste that is generated by building occupants, as well as the percentage of it that is disposed in landfills and incinerators.
Compliance information	Hand dryers can replace paper towels, reducing waste generation. They therefore contribute to improve the credit score.
LEED Requirements	<p>LEEDv4.1 pilot requirements:</p> <p>To have storage spaces for recyclable waste (at least paper, cardboard, glass, plastics and metals), as well as batteries and lamps, for proper management.</p> <p>Analyze and count the waste that is generated and that is recycled per year. These values will be entered in the ARC tool, which will calculate the score based on the waste generated and the waste recycled.</p>
Example	N/A
Support Documentation	<i>Data sheet</i>
Reference Standards	NA



CATEGORY INNOVATION (ID)

ID Innovation
(NC, CS, SNC, RNC, HC, HNC, DCNC, WNC, CI, RCI, HCI, EB, SEB, REB, HEB, DCEB, WEB)

Intend	To encourage projects to achieve exceptional or innovative performance in meeting LEED requirements.
Compliance information	NOFER can contribute to meet the requisites of exemplary performance in the following credits: <ul style="list-style-type: none"> • WE – Efficiency in the indoor water use. • EA – Optimize energy performance
LEED Requirements	Option 3: Exemplary performance (EP) Some LEED credits give the option of obtaining an extra point for Exemplary performance if the requirements of that credit are exceeded, reaching the values defined by LEED as Exemplary Performance (EP).
Example	N/A
Support Documentation	See specific credits.
Reference Standards	See specific credits.



CATEGORÍA REGIONAL PRIORITY (RP)



RP Regional Priority

(NC, CS, SNC, RNC, HC, HNC, DCNC, WNC, CI, RCI, HCI, EB, SEB, REB, HEB, DCEB, WEB)

Intend	To value the achievement of credits that address geographically specific environmental, social equity, and public health priorities.
Compliance Information	In some locations of Spain, WE c2 credit Indoor water use reduction can qualify for Regional Priority, as long as the savings percentage exceeds 40% (4 points). A database of RP credits and their geographic applicability is available on the USGBC website: https://www.usgbc.org/regional-priority-credits .
LEED Requirements	<p>Depending on the priorities, in terms of sustainability, in the different regions, some credits have been established as Regional Priority which can be obtained automatically by demonstrating compliance with the credit, with a certain level of compliance.</p> <p>Depending on its locations, projects can obtain the following Regional Priority credits:</p> <ul style="list-style-type: none"> • WE Indoor water use reduction • EA Optimize energy performance
Example	N/A
Support Documentation	See specific credits.
Reference Standards	See specific credits.