ELKAY®

Case Study

Water Consumption in Factories and Warehouses


Managing
water
properly is
important
for manufacturing
and to keep
workers
hydrated

ELKAY®

INDUSTRY AND WATER CONSUMPTION FOR ITS WORKERS

Industries around the world use water in their factories to develop and assemble building materials, auto parts and food, to name a few examples.

One of the most relevant industries is bottled water, since its demand has increased in recent years.

The top consumer of bottled water is China, with the United States and Mexico coming in second and third.

According to data from the UN, 70% of worldwide water consumption is used by the agricultural sector, 22% by the industrial sector, and 8% for personal consumption.

Reducing disposable plastic water bottle usage must be considered to help reduce industrial water usage. Every minute, 1 million plastic bottles are purchased around the world, and only an estimated 6% are recycled. Much of the trash ends up in waterways.

ELKAY®

Adding water fountains and bottle filling stations to industrial workplaces can also help reduce plastic waste, while also offering quality water for employees.

Installing these types of units also helps reduce water cooler expenses, as seen in the following example of a company with 2,000 employees.

Cost per bottle

Number of users	1000
System/method:	Garrafón
Quantity per person in one year: (1Lt per day per person)	13
Cost per Bottle/Jug:	$2
Annual Rent:	$0
Total cost per year:	$26,000

Water filling station with drinking fountain

Required units:	10
Model:	LZS8WSLK
Price per unit:	$2,257
The equipment has a filter	YES

Filters 1st year	Cost x Ud	Units
51300C	$132.00	10
	$0.00	0
Total ($)	***$1,320***	

Spare parts from next year	Cost x Ud	Units
51300C	$132	20
0	$0	0
Total ($)	***$2,640***	

Total investment first year	$23,890
Total cost next year	$2,640

Total Savings

	Saved amount	Parcentage Saved
Savings during the first year	$2,110	8%
Savings next year	$23,360	90%
Kilograms of plastic waste (PET bottles) / saved per year	4,454	

It takes 45 years to degrade a PET bottle

Only 16% of the PET bottles are recycled

ELKAY®

INDUSTRIAL REGIONS

Factories can be broadly classified according to the type of products they make, **including chemical, metallurgical, steel, cement, textiles, food and pharmaceutical.**

These create industrial zones in various parts of the world that provide jobs and boost the local economy.

Industrial zones around the world:	
Region	**Type of industry**
Shanghai, China	Communications, automobiles, electronics and biomedical equipment.
Beijing, China	Pharmaceutical, electronic and bioengineering products.
Lower Saxon, Germany	Automobiles.
Baden-Wurtemberg, Germany	Automobiles, metallurgical and electronic products.
Mid-Atlantic United States and Great Lakes region	Steel, automobiles, biotechnology, polymers, information, technology and nanotechnology.

Source: actividadeseconomicas.org

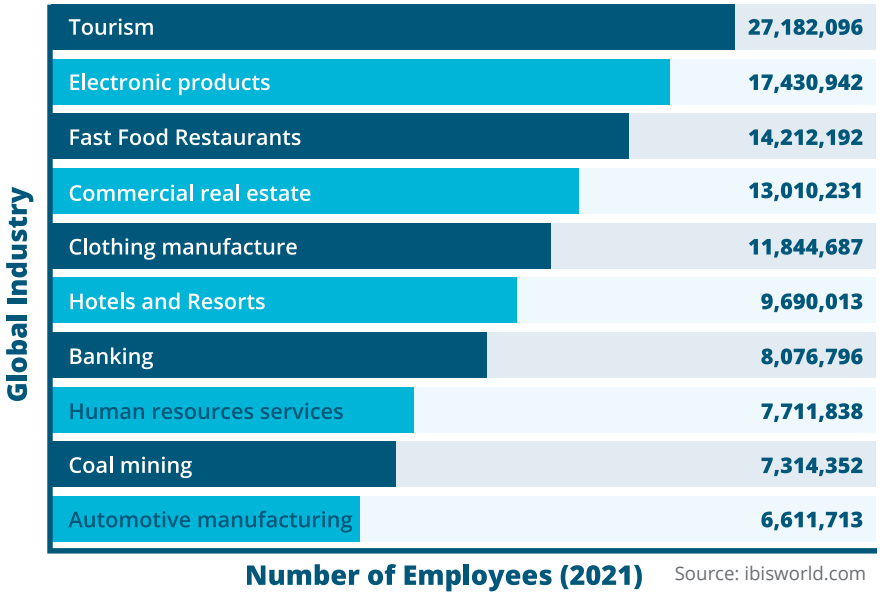
As for Latin America, **countries like Mexico have developed a strong automotive industry, while the food and beverage sector is a pillar of the Argentine economy**. In addition to this, Latin American countries have also encouraged the technology sector.

Main Latin American countries with the biggest technology companies that have more waste of water	
Brazil	48%
Argentina	19%
Mexico	14%
Chile	8%
Colombia	7%

Source: bbc.com

Warehouses play an important role in the industrial environment. They receive, organize and store materials and record both input and output for manufacturing.

Both factories and warehouses employ large numbers of people around the world. According to IBISWorld, in the industrial sector at an international level, **there are 10 major sectors that stand out in terms of job creation** (their study is based on analyzing more than 70 global industries).



Source: ibisworld.com

INSTALLATION OF WATER FOUNTAINS AND THEIR BENEFITS

Installing water fountains and bottle filling stations in factories and warehouses benefits both employees and companies, by helping workers stay hydrated and keeping productivity high.

Other benefits include:

- **Access to filtration** for cleaner water
- **Contact free options** with "hands-free" products
- **Durable,** recyclable stainless steel construction
- **No-cost access** to fresh, cleaner water
- **Reduced consumption** of bottled water and sugary drinks

In addition to installing fountains and bottle fillers, **companies should raise awareness with videos, brochures, manuals or meetings.** This helps create a commitment to proper water management.

What are the benefits of staying hydrated during the workday?

- **Helps prevent fatigue**
- **Helps maintain concentration** to perform various tasks and activities
- **Improves cognitive performance**, making it essential to learn new job skills (75% to 85% of the brain is made up of water)
- **Helps to avoid headaches** and migraines
- **Improves blood circulation**
- **Helps reduce** the risk of accidents

LEGISLATIVE CONSIDERATIONS

According to the Water and Health Research Institute (Spain), **performance and work capacity decrease when dehydration exceeds 2% of body weight.** For this reason, it is important that workspaces have bottle filling stations or water fountains.

In Mexico, **the Federal Labor Law establishes the following in its second article: the obligation to promote the conditions for decent work where the humanity and dignity of each employee is fully respected.** For this reason, access to drinking water becomes a right that must be guaranteed.

Employers are required to provide drinking water to their staff, according to the Occupational Safety and Health Administration (agency that belongs to the Department of Labor) by official provision in the United States.

In February 2018, the European Union Drinking Water Directive established that all people on the continent should have access to a clean supply of drinking water, which includes office and corporate personnel.

Similarly, **Australia established by law that an adequate supply of drinking water must be provided for workers**, and highlighted that drinking fountains should not be in bathrooms or in places where there is contamination.

Among other requirements, it states:

- **Water should be free and easily accessible**
- **Water points should be no more than 30 meters from workstations**
- **There must be one water outlet for every forty employees**
- **Quality must conform to national sanitary guidelines**

Americans, Europeans, and Australians have the security of access to safe drinking water backed by the law and municipal supplies with these legal provisions for each one.

QUALITY WATER FOR HEALTH

In 2020, Elkay presented a hygienic, efficient, and accessible initiative for employees through its "hands-free" units. The units are part of a line of water fountains and bottle filling stations that continues to be expanded with the goal of eliminating the use of PET plastic bottles.

These were developed with sensors or pedals that makes them 100% "hands-free" by avoiding any type of contact.

These hands-free units have sensors that are motion-activated; simply place your water bottle close to the sensor **and it will fill automatically.**

Activation pedals are ordered separately and installed on stainless steel outdoor units. The pedal means you can use your foot to fill your bottle, so you don't have to touch the button with your hands.

In addition to this technology, **some units have chrome mouthpieces that prevent contamination between users.**

Elkay's efforts have left a positive footprint by improving water consumption and reducing the use of PET plastic bottles through its thousands of bottle filling stations and water fountains installed around the world.

For this reason, **Elkay units are an appropriate option to help care of the health of people who work in factories and warehouses**, because they offer quality water and have the durability that these workspaces demand.

ELKAY®

Hydration in extreme work environments

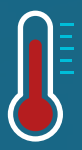
More than just thirst

Did you know ...

There are work activities that require great effort and often develop in harsh and **extreme environmental conditions**

Often the loss of water due to sweat is greater than the daily water intake, **creating dehydration**

Dehydration can negatively **influence productivity, safety and mood, reducing mental performance** along with physical symptoms



A clear example

AN EMPLOYEE IN THE METALLURGICAL INDUSTRY who works in smelting furnaces where temperatures can reach 100 °C.

EACH TIME HE ENTERS THE OVEN, his heart rate increases 35% and he can lose up to a liter of sweat over the course of an hour.

THE HIGH HEAT AND INTENSE PHYSICAL ACTIVITY mean his heart is pumping more blood to help regulate his muscles and temperature.

Elkay's drinking fountains and bottle filling stations can provide needed drinking water and withstand high temperatures.

Sources:

La importancia de la hidratación en el trabajo | *http://institutoaguaysalud.es/la-importancia-de-la-hidratacion-en-el-trabajo/*

Hidratación Industrial, más que simple sed | *https://manufactura.mx/industria/2014/07/06/hidratacion-industrial-mas-que-simple-sed*

CLICK HERE
to download this infograph

ASIA PACIFIC
asiapac.elkay.com

EUROPE & AFRICA
europe.elkay.com

LATIN AMERICA
latam.elkay.com

MIDDLE EAST
middleeast.elkay.com

ELKAY®

(05-22) F-6351-ELK