

# **Draught beer systems, which one to choose?**

**A comparison of different draught beer systems,  
regarding the complete picture: packaging, transport,  
installation technique and costs**



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# Extract

## Introduction

If you want to serve draught beer in a bar, there are several options regarding the packaging and the draught beer equipment for the bar. But what solution & combination best fits your situation? Because of all the possibilities, there is no easy answer to this question.

To provide more insight, we have compared the different packaging methods for draught beer. We have also compared the different draught beer systems that can be used in the bar. Finally, we have compared the financial consequences of different combinations of packaging methods and draught beer installations.



## Cost breakdown

There are a number of factors that influence the total operation costs of draught beer:

- Packaging & filling (including cleaning, filling and transport equipment)
- Draught installation
- Waste beer & CO<sub>2</sub> usage
- Labour cost (exchanging packaging / transport)

Labour cost is defined as the time needed to transport the beer to the bar and to exchange the packaging in the bar. In this comparison, we focus on the out-of-pocket costs and therefore we do not consider the time difference in transport and exchange of packaging.

## Packaging & filling

Packaging and filling costs depend on the type and size of the packaging. For draught beer, there are four commonly used solutions:

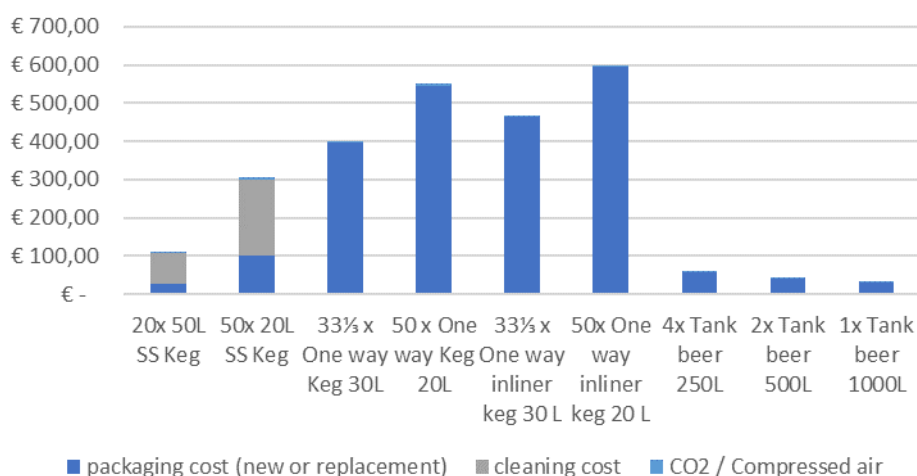
- Stainless-steel kegs are very durable. The most commonly used keg sizes in Europe are 50-litre kegs and 20-litre kegs. You will need to invest in a number of kegs to keep the beer flowing. The bare minimum for new breweries is a ratio of 3 to 1 per pouring account (connected keg), but more likely it will be a ratio of 4 to 1.
- One-way kegs do not need to be cleaned and do not need to be returned. For this you only have the cost for the keg and the cost for CO<sub>2</sub>.
- There are also one-way kegs with an inliner. This is an airtight bag that holds the beer. With the airtight bag, you do not need CO<sub>2</sub> because you can pressurize the keg with compressed air. Moreover, this means that the beer cannot be over-carbonated.
- Tank beer also uses an inliner. Because the beer goes into the inliner, you only need to exchange the inliner. You initially need to invest in a tank beer installation and delivery unit.



All the different packaging solutions have different sizes. To compare them, the costs are calculated based on a unified volume of 1,000 litres.

The 50-litre stainless-steel keg and tank beer solutions have a considerably lower cost for packaging and filling; however, both require an initial investment.

Packaging and filling cost 1.000 liter



## Different draught beer systems and costs

The ideal packaging for a bar is determined by a number of factors:

- Volume sold
- Period packaging can be connected to the tap
- Beer loss when exchanging the packaging

The above factors also depend on the different packaging systems and different draught beer systems available. The following draught beer systems are compared:

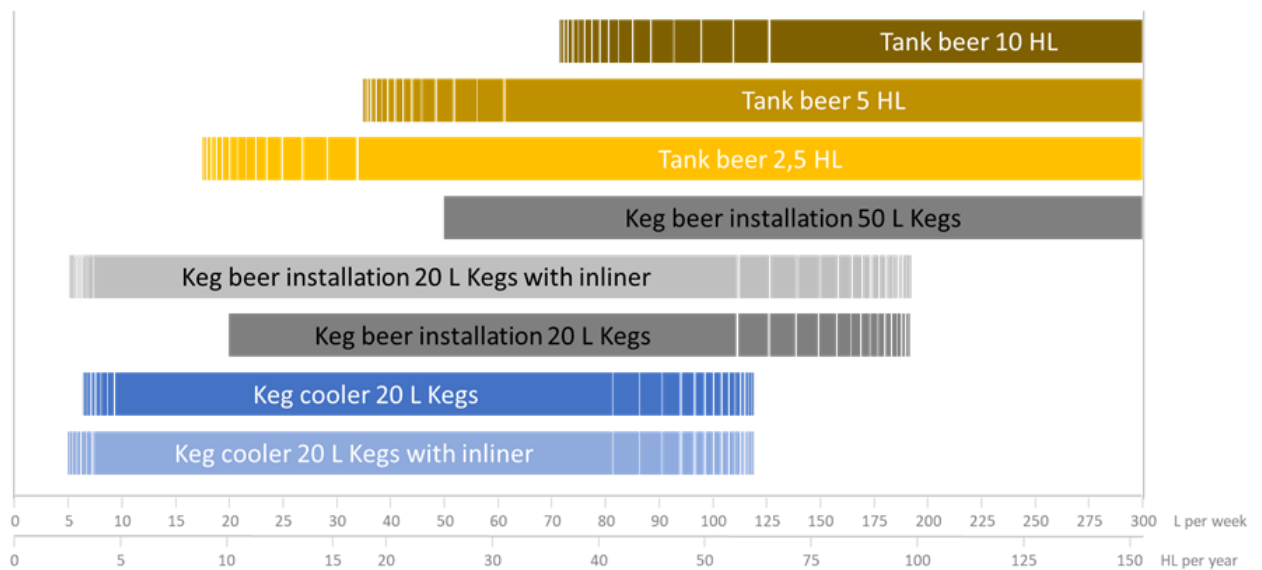
- A keg cooler (or kegerator) under the bar is the simplest way to have draught beer in a bar. Usually the cooler has space for (multiple) sets of two 20-litre kegs. One connected, one to exchange. Because the keg is directly under the tap, the beer line is very short. Because of the short beer lines and cooled beer, the CO<sub>2</sub> pressure needed is low, which increases the open time of the keg when connected. Usually this is 2 to 3 weeks.
- If you use one-way kegs with an inliner in combination with a keg cooler, you can pressurize the kegs with compressed air instead of CO<sub>2</sub>. Because no CO<sub>2</sub> is added to the beer, it cannot become over-carbonated. The average time a keg with an inliner can be connected is 3-4 weeks.
- A keg beer installation in a cellar has the advantage that you do not need space underneath your bar and you do not need to cool your kegs. They can be stored in a separate room (preferably between 10 and 16 degrees Celsius) The beer and beer lines are cooled by a beer cooler. As the keg is not cooled, the CO<sub>2</sub> pressure to push out the beer needs to be higher. A beer spiral is used to reduce the beer flow speed and to cool the beer. The longer length of the beer line increases the amount of beer necessary to fill up the line again after a keg change to get a steady beer flow. Since the kegs are not cooled and the CO<sub>2</sub> pressure is higher, a keg needs to be empty within 3-5 days.
- If you use one-way kegs with an inliner in combination with a keg beer installation, you can pressurize the kegs with compressed air instead of CO<sub>2</sub>. Because no CO<sub>2</sub> is added to the beer, it cannot become over-carbonated and your beer loss will be much lower. The average time a keg with an inliner can be connected is 3-4 weeks.
- A tank beer installation can be placed in the bar or the cellar. The tanks and the beer lines are cooled. The beer is always cooled (also during transport and storage) and no additional CO<sub>2</sub> is added when it is dispensed. Fresh beer remains fresh for 6 to 8 weeks, and if it's pasteurized even up to 12 weeks.

## Draught volume per type of installation

To choose a draught beer system, you first need to know how much beer you expect to pour. Each system has a minimum based on the maximum open time of the packaging and size of the package.

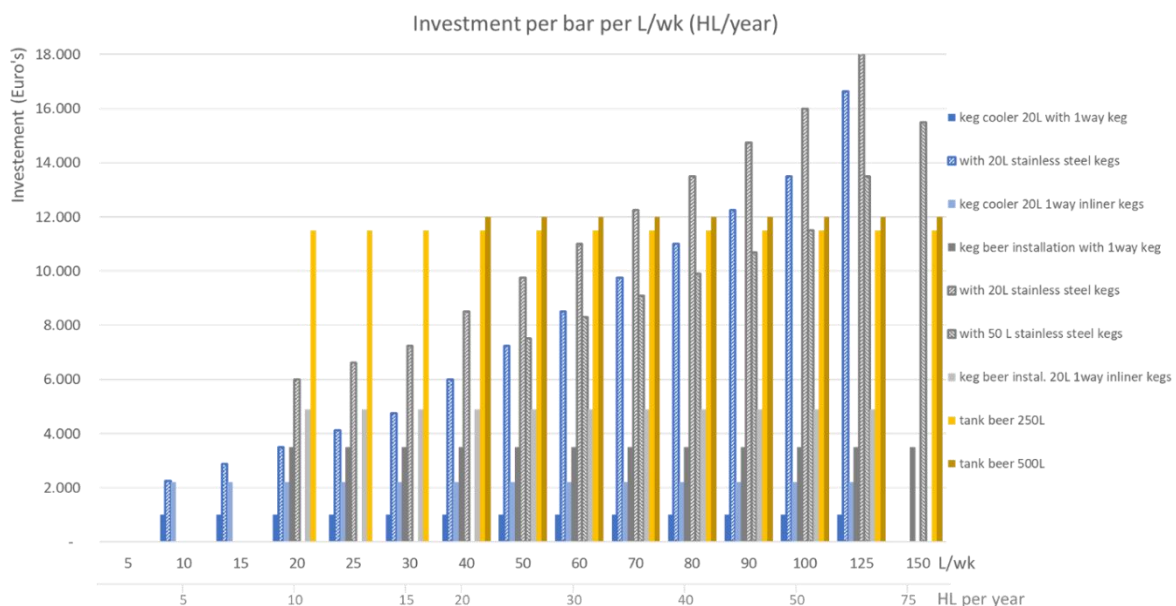
The maximum you can pour with an installation is harder to estimate. This also depends on the peak volumes you have.

Minimum / Maximum pouring volumes Draft beer installations



## Initial investment per type of installation

To compare the total costs of a type of installation, you have to look at the equipment needed in the bar and the type of packaging used. To use stainless-steel kegs, you need to invest in a float of kegs up front. For tank beer, you need to invest in tanks. One-way kegs can be bought when needed, so they require much less initial investment.



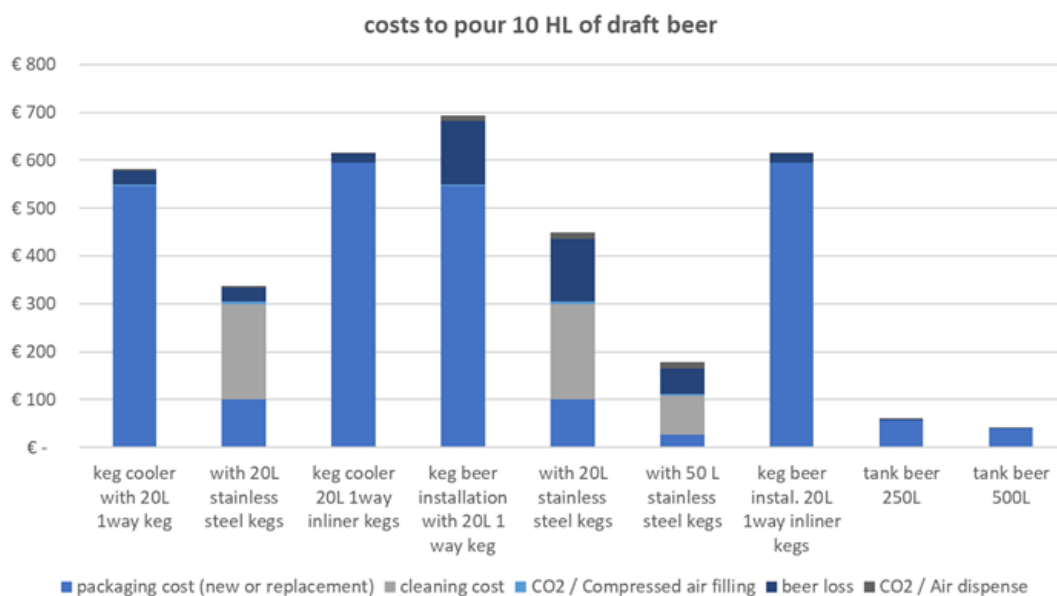
As you can see, the keg cooler in combination with one-way kegs has by far the lowest investment. It's interesting to see that, although tank beer installations cost more than draught beer installations, from 70 L per week onwards the required float of stainless-steel kegs costs more than a tank beer installation.

In the comparison, we considered an average keg float ratio of 4:1 for stainless-steel kegs.

## Packaging costs and beer loss pouring 10 HL of draught beer

Besides the initial costs for the installation, you also need to take into consideration the cost for packaging, filling and beer loss when pouring. This not only depends on the type of packaging but also the type of installation.

The cost to pour 10 HL of beer varies from 40 euros (500 L tank beer installation) to nearly 700 euros (20 L one-way kegs in a draught beer installation).



## Return on investment (ROI)

Based on the required investment for the different systems, the packaging cost and beer loss, a return on investment calculation in hectoliters is made. An ROI calculation is made for stainless-steel kegs or a tank beer installation versus one-way kegs. This is done for both a keg cooler and keg beer installation.

Since the number of bars also has an influence, this is also taken into consideration.

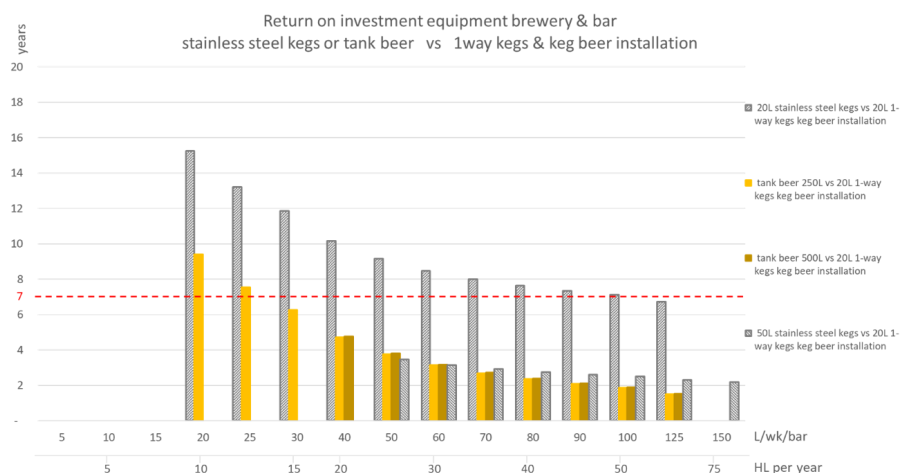


## Conclusion

If you want to pour up to 60 litres of draught beer per week in one bar, the most economical way is to use one-way kegs and a keg cooler. When the number of bars increases, 20-liter stainless-steel kegs still have a return on investment of 6 to 7 years. It is then more interesting to invest in small tank beer installations.



From 60 litres per week it becomes more interesting to use a keg beer or tank beer installation. Here 20-litre stainless-steel kegs are also less interesting. The best return on investment, however, is with a tank beer installation. When the number of bars increases, the difference between 50-litre stainless-steel kegs and tank beer decreases and the turning point shifts to 70 litres per week. This makes 50-litre stainless-steel kegs interesting for bars serving 60-80 litres of beer per week. If the number of bars increases to 100, this point gradually shifts to 125 litres per week (65 HL per year).



Because tank beer is a relatively new draught beer system for many countries, the 50-litre stainless-steel kegs are currently the standard for a lot of breweries.

However, in more and more countries the legislation states that one person is not allowed to lift over 25 kg. This in combination with the financial advantages is making many breweries shift towards tank beer instead of stainless-steel kegs for higher volume bars.

**“You will have the best return on investment with a tank beer installation!”**



**// Cold and fresh beer, always on tap! //**

Fresh draught beer from the tap - Unsplash



# What do we compare?

*If you want to serve draught beer in a bar, there are several options for packaging and for the draught beer equipment. But what solution fits your situation best? Because of all the possible solutions and combinations, there is no easy answer to this question. In this whitepaper, the different solutions are compared from a technical and operational point of view, from the brewery to the tap.*

## Introduction

First, we will compare the different packaging options for draught beer. We will compare their characteristics, method of handling, costs and initial investments.

Then we will compare the different draught beer systems that can be used in the bar. Here also we will look at their characteristics, method of handling, costs and initial investments.

Then we will also look at the influence of different combinations of packaging methods and draught beer installations and their return on investment.

Using various graphs, we will try to give you an overview of the different solutions and characteristics to make it easier to choose the solution(s) that best fit your situation.



## Cost breakdown

There are a number of factors that influence the total operation costs of draught beer:

- Packaging & filling (including cleaning, filling and transport equipment)
- Draught beer installation
- Waste beer & CO<sub>2</sub> usage
- Labour cost (exchanging packaging / transport)

Labour cost is defined as the time needed to transport the beer to the bar and to exchange packaging in the bar. For instance, you need less time if you use 50-litre kegs than if you use 20-litre kegs (fewer kegs to exchange). Tank beer again costs you less time than 50-litre kegs.

As this comparison focuses on the out-of-pocket costs, we do not consider the time difference to transport and exchange packaging.

**“Given all the possible solutions and combinations, determining which draught beer system fits you best is complicated!”**

# Packaging and filling

Packaging and filling costs depend on the type and size of packaging. For draught beer there are four commonly used solutions:

## Keg beer in returnable stainless-steel kegs

Stainless steel kegs are very durable. The most commonly used keg sizes in Europe are 50-litre kegs and 20-litre kegs. A 50-litre keg costs around 100 euros and a 20-litre keg around 75 euros. A stainless-steel keg can be reused multiple times (on average 120 times').

You will need a number of kegs to keep the beer flowing. The bare minimum for new breweries is a ratio of 3 to 1<sup>ii</sup> per pouring account (connected keg). One is connected, the other spare or empty and ready to be picked up and the other is on route or in the brewery to be filled. With a ratio of 3 to 1 you will be calling your customers constantly to see if you can collect any kegs. As soon as you have someone distributing the kegs for you or expand outside your initial territory, you need a ratio of at least 4 or 5 to 1. And the larger the territory becomes, the larger this number will be. This is your "float". These are the kegs moving around without you having any influence on them. This is also the most dangerous part of your keg's life.

Research has shown<sup>iii</sup> that 5% of all kegs are lost every year. Although the deposit is commonly 30 euros, you still lose 45 to 70 euros per lost keg.

Moreover, each keg needs to be cleaned before filling. A small keg cleaning and filling line to clean 12-20 kegs per hour costs around 15,000 euros. Labour costs, chemicals, water and energy will cost approximately 3-5 euros per keg. A completely automated washing line will do this a lot cheaper (reuse of waste water, less labour etc.) but will cost a lot more in upfront investment. Keg lines that have a capacity from 60 to 90 kegs per hour start at 200,000 euros. Cleaning and filling costs will then be lower.

To fill a keg, it first needs to be pressurized with CO<sub>2</sub>. One kg of CO<sub>2</sub> is  $1/1.98 \times 1000 = 505$  litre CO<sub>2</sub> at 1 bar. Ten kg of CO<sub>2</sub> costs approximately 25 euros. The costs to fill a 50-litre keg with CO<sub>2</sub> are 25 cents. For a 20-litre keg, you need 10 cents worth of CO<sub>2</sub>.



# Cost schedule

## Cost per filled keg

Based on the estimate that you can refill a keg 10-20 times per year (on average 15 times), the costs per filled keg are:

50L Stainless-steel keg	Ratio 3 to 1	Ratio 4 to 1	Ratio 5 to 1
Replacement (lost) (5%/15* amount of kegs * (price p/keg- deposit))	€ 0.93	€ 1.17	€ 1.40
cleaning (1* 3-5 euros)	€ 4.00	€ 4.00	€ 4.00
Replacement (due to use) (1/120 * price p/keg)	€ 0.83	€ 0.83	€ 0.83
CO <sub>2</sub> (50/505*(25/10))	€ 0.25	€ 0.25	€ 0.25
	€ 6.01	€ 6.25	€ 6.48

20L Stainless-steel keg	Ratio 3 to 1	Ratio 4 to 1	Ratio 5 to 1
Replacement (lost) (5%/15* amount of kegs * (price p/keg- deposit))	€ 0.60	€ 0.75	€ 0.90
cleaning (1* 3-5 euros)	€ 4.00	€ 4.00	€ 4.00
Replacement (due to use) (1/120 * price p/keg)	€ 0.63	€ 0.63	€ 0.63
CO <sub>2</sub> (20/505*(25/10))	€ 0.10	€ 0.10	€ 0.10
	€ 5.32	€ 5.47	€ 5.62

## Initial investment

Besides the cleaning and filling line, a base investment for the float of kegs is necessary. The number of kegs depends on the volume sold in bars and float ratio. Based on an average refill of a keg of 15 times per year (once every 3-4 weeks), the cost for the keg float per volume of beer sold in a year is:

Initial investment per 10 HL/year	Ratio 3 to 1	Ratio 4 to 1	Ratio 5 to 1
50L Stainless-steel keg	€ 533	€ 667	€ 800
20L Stainless-steel keg	€ 1,000	€ 1,250	€ 1,500

## Keg beer in one-way PET kegs

The calculation for one-way kegs is much easier. These kegs do not need to be cleaned and do not need to be returned. For this you only need the cost for the keg and the cost for CO<sub>2</sub>. A 20 litre one-way PET keg costs 10.90 euros<sup>iv</sup>. A 30-litre keg 11.90 euros.

The costs for a base system to fill a keg are low, starting at just 100 euros. To fill a 30-litre keg, you need about 15 cents worth of CO<sub>2</sub>. For a 20-litre keg, it's 10 cents.



## Keg beer in one-way PET kegs with an airtight bag

The cost for a 20-litre one-way PET keg with an inliner is 11.90 euros<sup>v</sup>. A 30-litre keg costs 13.90 euros. With these you do not need CO<sub>2</sub>. Due to the airtight bag, you can pressurize the keg with compressed air.

The energy needed to compress air is approximately 0.1 kWh per m<sup>3</sup> (1000 litre) per bar<sup>vi</sup>. The average cost of 18 cents per kW is negligible. The initial cost for an oil-free stainless-steel compressor is 1,400 euros.

## Tank beer

To use tank beer, you will need a tank beer installation in the bar and a delivery installation on a truck. You can also tap beer directly from a transport or event tank, in which case you would only need a transport tank. However, for this comparison we compare the costs of a tank beer installation in a bar with a minimum of two tanks and a delivery system. The installation costs are described in the chapter on bar installations. In order to deliver beer to a bar, the costs of the delivery system depend on the number of bars you need to supply. To start with tank beer, you will need a transport tank and filling hose<sup>vii</sup>. This will cost around 12,000 euros. When the number of bars with tank beer increases, it is more convenient to use a delivery unit with additional transport tanks. This can be done with a basic delivery unit or with a certified delivery unit with which you can deliver tank beer to up to 30 bars. The costs for an automated delivery unit including transport tanks vary from 50 to 100,000 euro. Depending on the chosen options, the filling will also be quicker.

The most commonly used tanks in a bar hold 250, 500 and 1000 litres. The cost to fill a tank includes an inliner for the tank (between 10 and 15 euros) and an inliner for the transport tank. The most commonly used transport tank holds 1,000 litres.

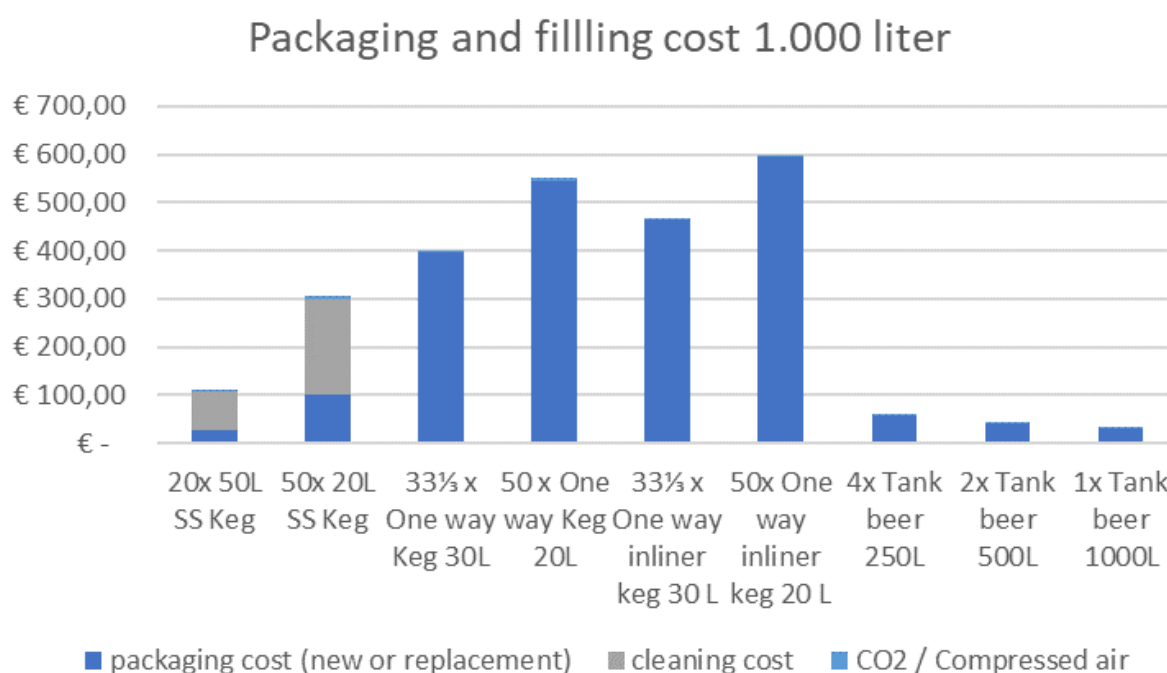
You do not need CO<sub>2</sub> because, due to the airtight bag, you can pressurize the keg with compressed air.

The energy needed to compress air is approximately 0.1 kWh per m<sup>3</sup> (1000 litre) per bar. With an average cost of 18 cents per kW, this cost is negligible.



# Cost comparison for cleaning and filling

All the different packaging solutions have different sizes. To compare them, the costs are calculated based on a unified volume of 1,000 litres.



50-litre stainless-steel kegs and tank beer have a considerably lower cost for packaging and filling. However, both require an initial investment.

## Different draught beer systems and costs

The ideal package for a bar is determined by a number of factors:

- Volume sold
- Period packaging can be connected to the tap
- Beer loss when exchanging packaging

The above factors depend on the different packaging systems and different draught beer systems available. The following draught beer systems are compared:

**“50-litre stainless-steel kegs and tank beer have a considerably lower cost for packaging and filling. However, both need an initial investment!”**



## Keg cooler / kegerator directly under the bar

A keg cooler (or kegerator) under the bar is the simplest way to have draught beer in a bar. Usually the cooler has space for (multiple) sets of two 20-litre kegs – one connected, one to exchange. Because the keg is directly under the tap, the beer line is very short. Moreover, no beer spiral is necessary to reduce the beer-flow speed. Therefore, there is minimum beer waste when the keg needs to be exchanged. When a keg is exchanged, you will lose approximately 1-2 small (0.25 cl) glasses (you need to fill the beer line again and get a steady beer flow).

A small keg cooler / kegerator costs around 1,000 euros. A cooler for four kegs costs around 1,500 euros (without the faucet / sink). It takes about 24 hours to cool a keg. Because of the short beer lines and cooled beer, the required CO<sub>2</sub> pressure is also low, around 0.7 Bar. This also prevents the beer from carbonating quickly, which increases the open time of the keg when it is connected. Usually this is two to three weeks. This means that you can already use this system from 1.5-2 litres per day (20L/2-3 weeks).

If you pour more than 40 litres a day per connected keg, you will need to store cooled kegs externally.

If you use one-way kegs with an inliner, you can pressurize the kegs with compressed air instead of CO<sub>2</sub>. Because the compressed air pushes on the outside of the bag (inliner), the beer flow will just stop when the keg is empty instead of blowing CO<sub>2</sub> through the beer lines. This will not only save you the cost of CO<sub>2</sub>, you will also have very limited beer loss (only one glass because of the beer flow interruption). You just need to invest in a compressor. A small, silent, oil-free stainless-steel compressor will cost around 1,200 euros. Because no CO<sub>2</sub> is added to the beer, it cannot become over-carbonated. The average time a keg with an inliner can be connected is 3-4 weeks<sup>viii</sup>. This means that you can already use a keg cooler in combination with one-way kegs with an inliner from 1-1.5 litres per day (20L/3-4 weeks).



## A traditional keg beer installation (cellar or cold room)

A keg beer installation in a cellar has the advantage that you do not need space underneath your bar and you do not need to store your kegs cooled. They can be stored in any room (preferably between 10 and 16 degrees Celsius). The beer and beer lines are cooled by a beer cooler. Because the keg is not cooled, more CO<sub>2</sub> pressure is needed to push the beer out. Usually between 2 and 3 bar (depending on the temperature of the keg). This also allows you to store the kegs further away from the bar. The beer spiral is used to reduce the beer flow speed and to cool the beer. Usually the length of the beer spiral is determined during installation, based on the distance to the bar and average temperature of the storage.

A traditional keg beer installation – consisting of a small cooler and pump, pressure reducer, 10-15 metres of python and a beer spiral – costs around 3,500 euros.

Because the beer line is longer, more beer is needed to fill up the line again after a keg change and to get a steady beer flow – around 6 to 8 small glasses (25 cl).

Since the kegs are not cooled and the CO<sub>2</sub> pressure is higher, a keg needs to be empty within 3-5 days. This means that you can use this system if you pour on average at least 4-7 litres per day (20L/3-5 days).

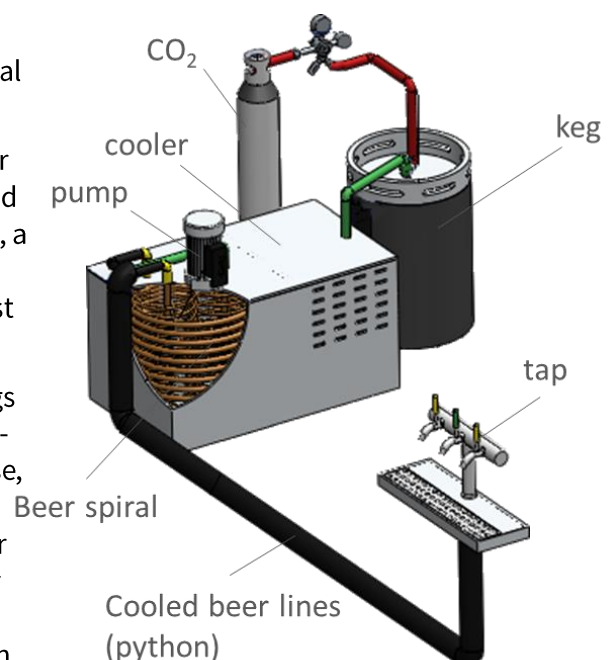
*The fact that the kegs are not cooled can have an effect on the taste. This is especially important if you want to serve **Brewery Fresh Beer**. See also the whitepaper about*

*[“How to serve brewery fresh beer”](#).*

You can also place the kegs in a cold room. In this case, you can use a smaller cooler, just for the beer lines. You also need to invest in a cold room, which makes the total investment higher.

The amount of beer needed to fill up the line again after a keg change and to get a steady beer flow is still around 6 to 8 small glasses (25 cl). Because the kegs are cooled, a keg can often last up to 7 days. This means that this system is already useable if you pour on average at least 3 litres per day (20L/1 week) with a 20 L keg.

In a keg beer installation, you can also use one-way kegs with an inliner. You only need an extra oil-free stainless-steel compressor (costs around 1,400 euros). In this case, you will significantly reduce beer loss and CO<sub>2</sub> use. You will have only one glass of beer loss because of the beer flow interruption instead of 5-6 glasses. Moreover, your beer will stay fresh longer, around 3-4 weeks, which means that this system is already useable if you pour on average at least 1-1.5 litres per day (20L/3-4 weeks).



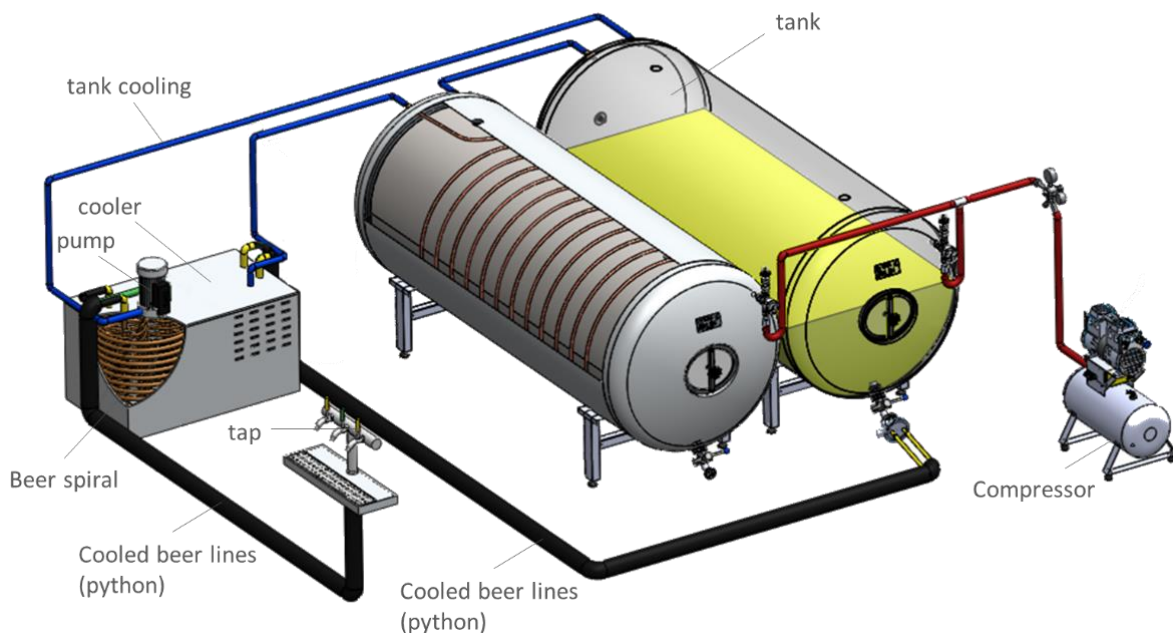
## Tank beer installation

An insulated tank beer installation can be placed in the bar or the cellar. The beer and the beer lines are cooled by a beer cooler. Due to the airtight inliner, the beer is pushed out using compressed air, so you will save on CO<sub>2</sub>. The pressure is determined by the distance of the installation to the bar. No beer is lost due to the airtight inliner. You will only have one glass of beer loss because of the beer flow interruption.

A basic insulated tank beer installation, consisting of two tanks, a compressor, a beer cooler and pump, a pressure reducer, 10-15 metres of python and a beer spiral, costs around 12,000 euros.

Because the beer is always cooled (also during transport and storage) and no additional CO<sub>2</sub> is added during dispensing, the taste of the beer is not compromised. Fresh beer remains fresh for 6 to 8 weeks, and if pasteurized it stays fresh for up to 12 weeks<sup>ix</sup>.

Because of the long time the beer remains fresh, you can use a tank beer system of 2 x 250 litres even if you only pour on average 3-6 litres per day (250L/6-12 weeks).



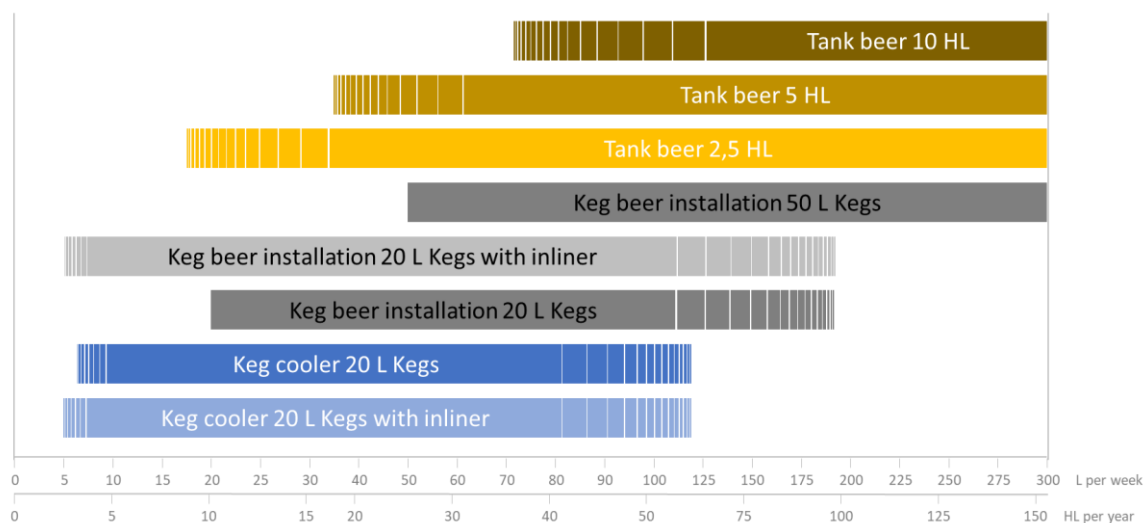
# Comparison of the installations

## Draught volume per type of installation

To choose a draught beer system, you first need to know how much beer you expect to pour. Each system has a minimum based on the maximum open time of the packaging and size of the package. For instance, a 50-litre stainless-steel keg connected to a draught beer installation preferably needs to be empty in 3-5 days. This means that you need to empty at least one keg a week (50 litres). In a keg cooler, beer in a 20-litre stainless-steel keg can be kept fresh for 2-3 weeks, which means that you only need to pour 7-10 litres a week.

The maximum you can pour with an installation is harder to estimate. This also depends on your peak volumes. Usually you do not sell the same amount of beer every day of the week. Often for one or two days the beer sales are high and the other days of the week they're considerably lower. In this comparison, we therefore considered that a total week's volume is the equivalent of three busy days (1 day peak, 1 day 75%, 5 days 25%). The year volume is also based on this consideration.

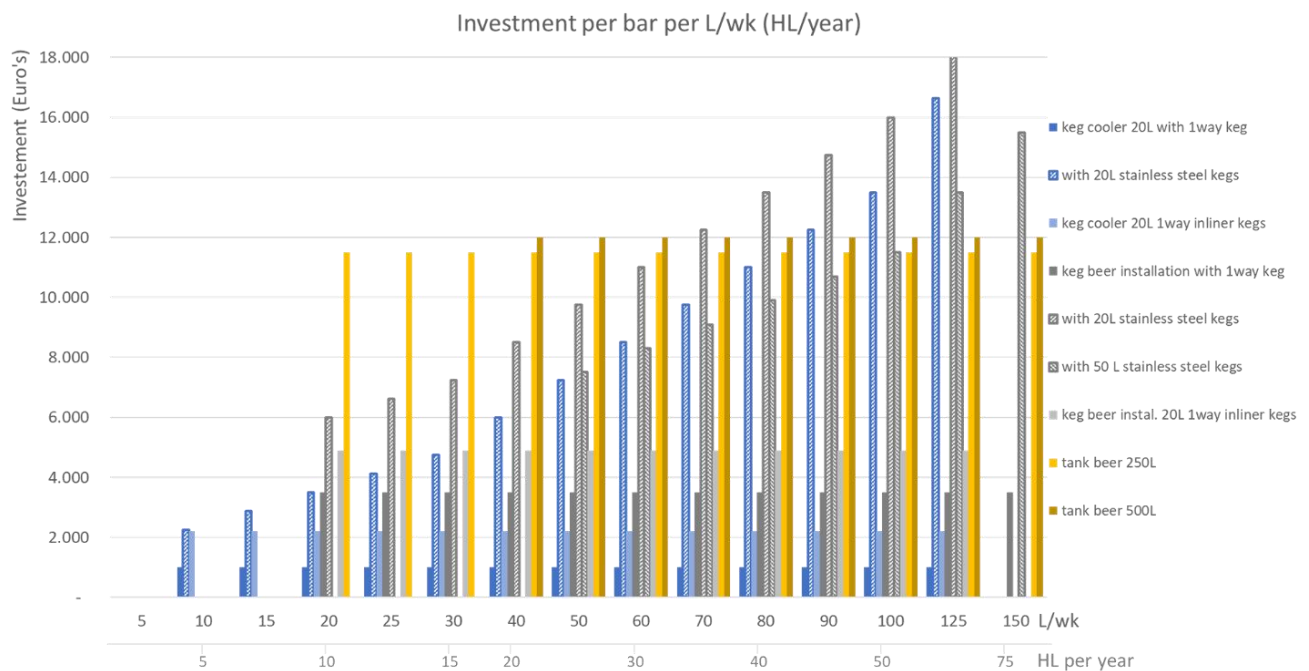
Minimum / Maximum pouring volumes Draft beer installations



**“To choose a draught beer system, you first need to know how much beer you expect to pour!”**

# Initial investment per type of installation

To compare the costs of an installation, you have to look at the equipment needed in the bar and the type of packaging used. To use stainless-steel kegs, you need to invest in a float of kegs up front. For tank beer, you need to invest in tanks. One-way kegs can be bought when needed, so there the initial investment is much lower. In the comparison, we considered an average keg float ratio of 4:1.

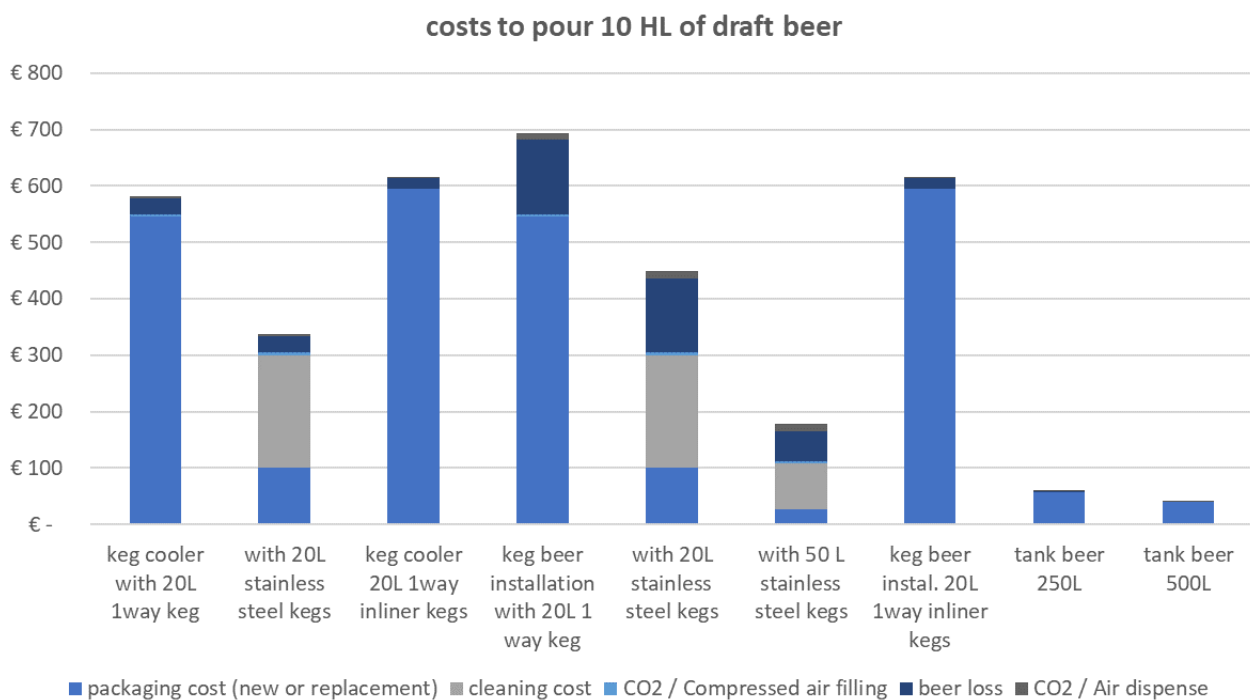


As you can see, the keg cooler in combination with one-way kegs has by far the lowest investment. It is interesting to see that, although tank beer installations cost more than draught beer installations, from 70 L per week onwards the required float of stainless-steel kegs costs more than a tank beer installation.

**“From 70L per week onwards, the required float of stainless-steel kegs costs more than a tank beer installation!”**

# Packaging costs and beer loss pouring 10 HL draught beer

Besides the initial costs for the installation, you also need to take into consideration the costs for packaging, filling and beer loss when pouring. This not only depends on the type of packaging, but also the type of installation. Using a 20 L one-way keg in a keg cooler, for instance, is much more efficient than in a keg beer installation because a keg cooler has a much shorter beer line. For the cost comparison, we consider the cost per litre of beer to be 1.5 euros. As you can see, the costs to pour 10 HL of beer vary from 40 euros (500 L tank beer installation) to nearly 700 euros (20 L one-way kegs in a draught beer installation).



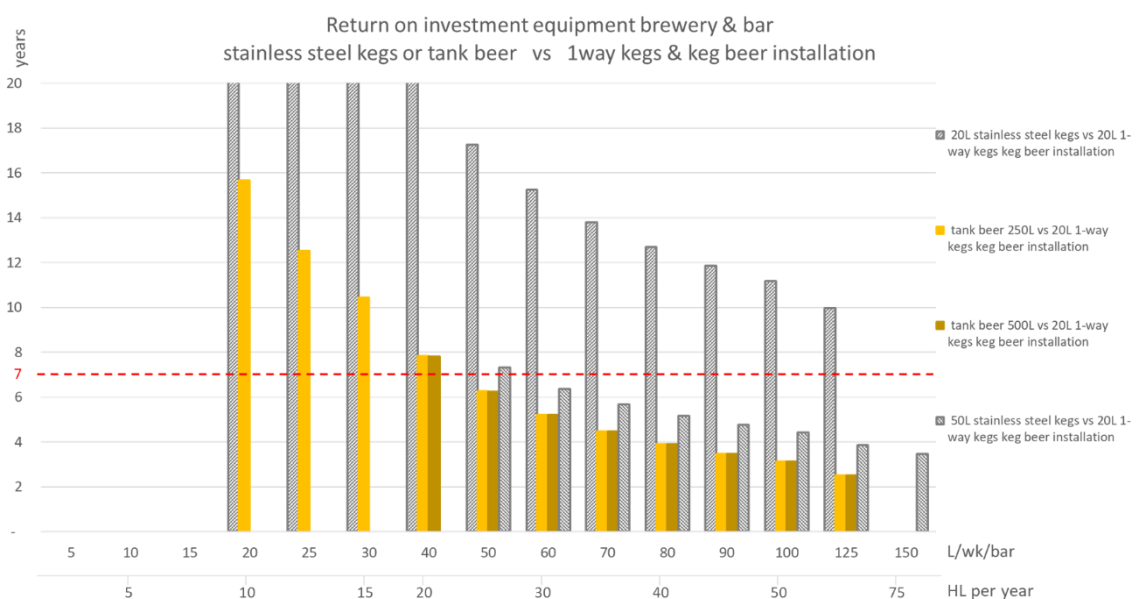
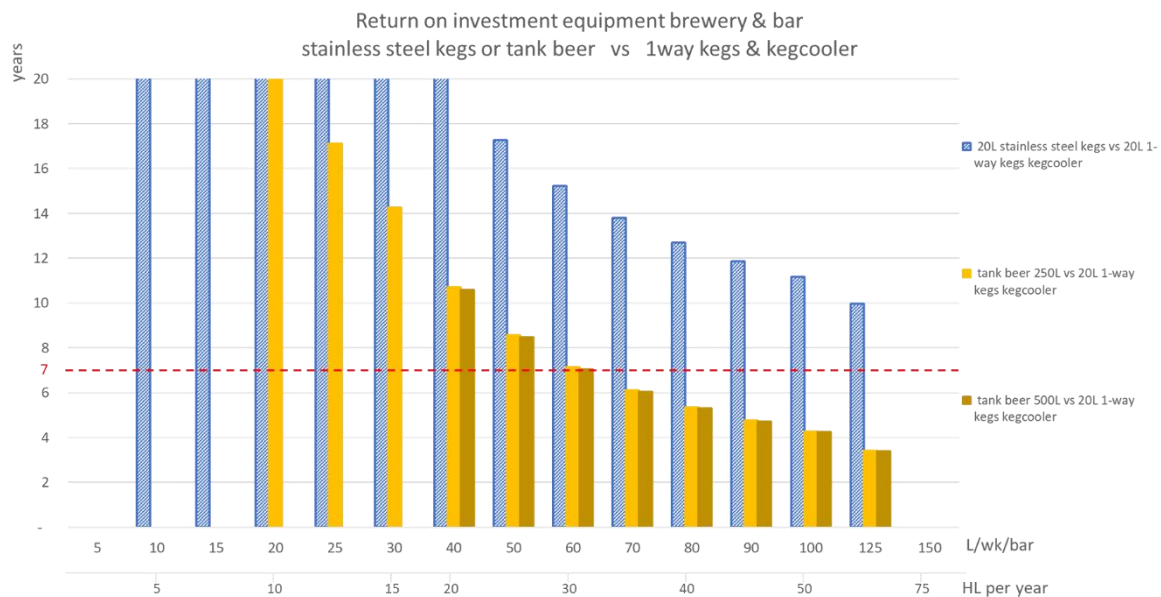
**“The costs to pour 10 HL of beer vary from 40 euros (500 L tank beer installation) to nearly 700 euros (20 L one-way kegs in a draught beer installation)!”**



# Return on investment

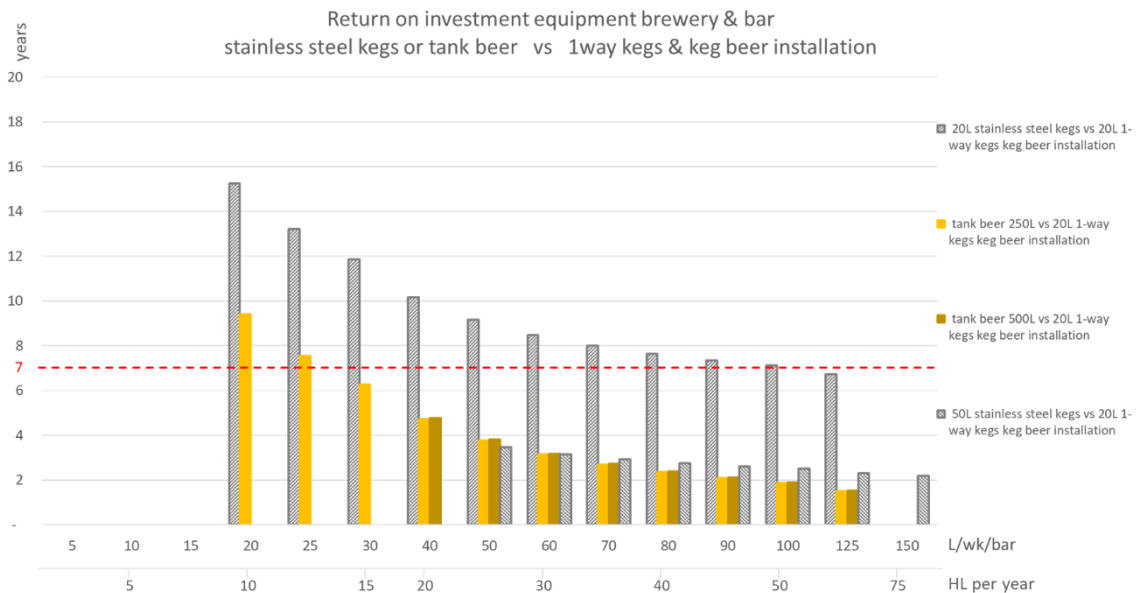
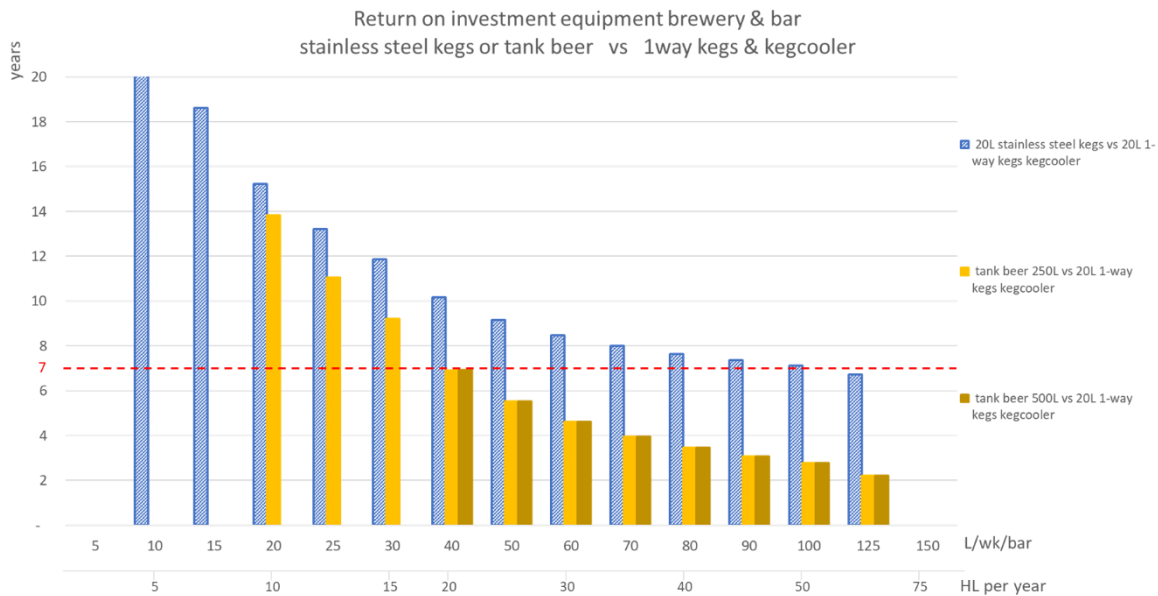
Based on the required investment for the different systems, the packaging costs and beer loss, we have calculated the return on investment in hectolitres. The ROI is calculated for stainless-steel kegs or tank beer installations versus one-way kegs; this is done for both a keg cooler and keg beer installation. Because the investment depends on the number of bars, below three variants are shown (1 bar, 3 bars and 5 bars).

## ROI for draught beer installations in 1 bar



**“The most economical way to serve up to 60 litres per week of draught beer in one bar is to use the one-way kegs and a keg cooler!”**

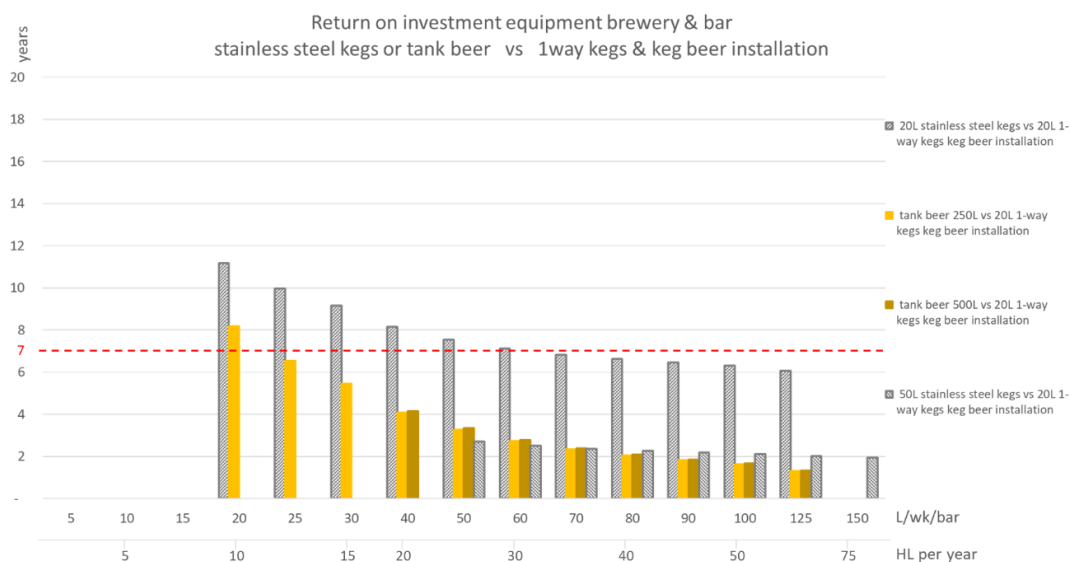
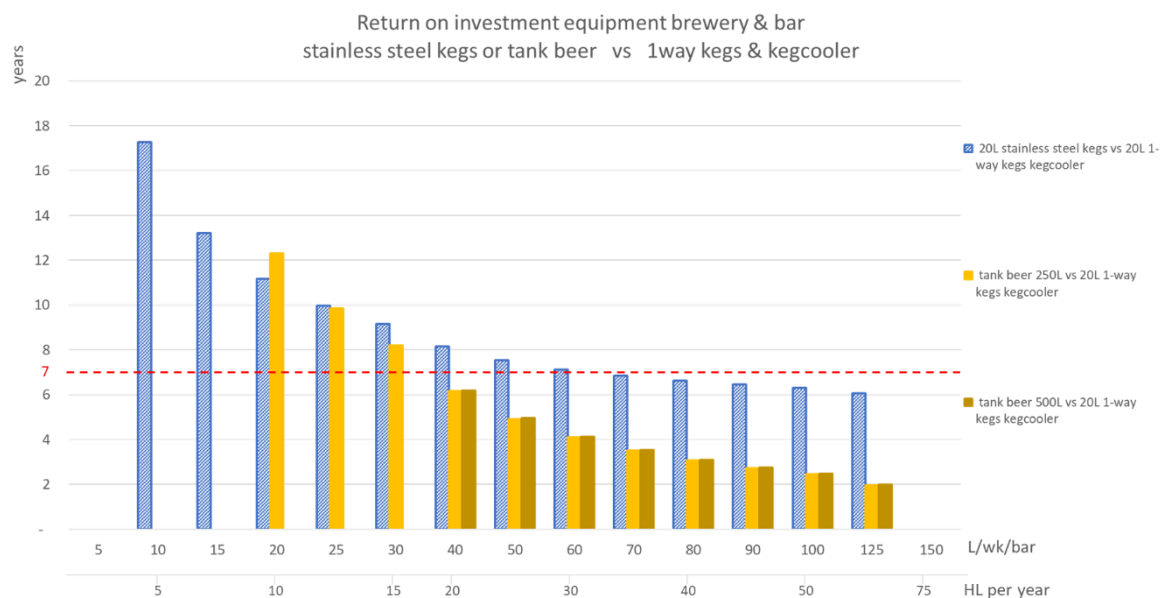
# ROI for draught beer installations in 3 bars



**“The ROI for tank beer in 3 bars  
is between 2 and 5 years!”**



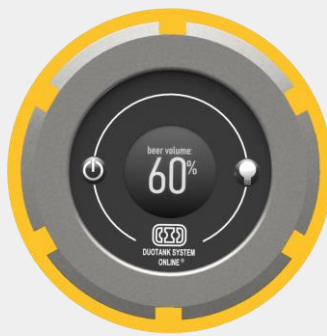
# ROI for draught beer installations in 5 bars



# Conclusion

If you want to have up to 60 litres of draught beer per week in one bar, the most economical way is to use one-way kegs and a keg cooler. Even when the number of bars increases, 20-litre stainless-steel kegs still are less interesting because they have a return on investment of 6 to 7 years.

It is then more interesting to invest in small tank beer installations. The return on investment for tank beer with three bars is just 5 years. If the litres per week increases, this even drops to 2 or 3 years.

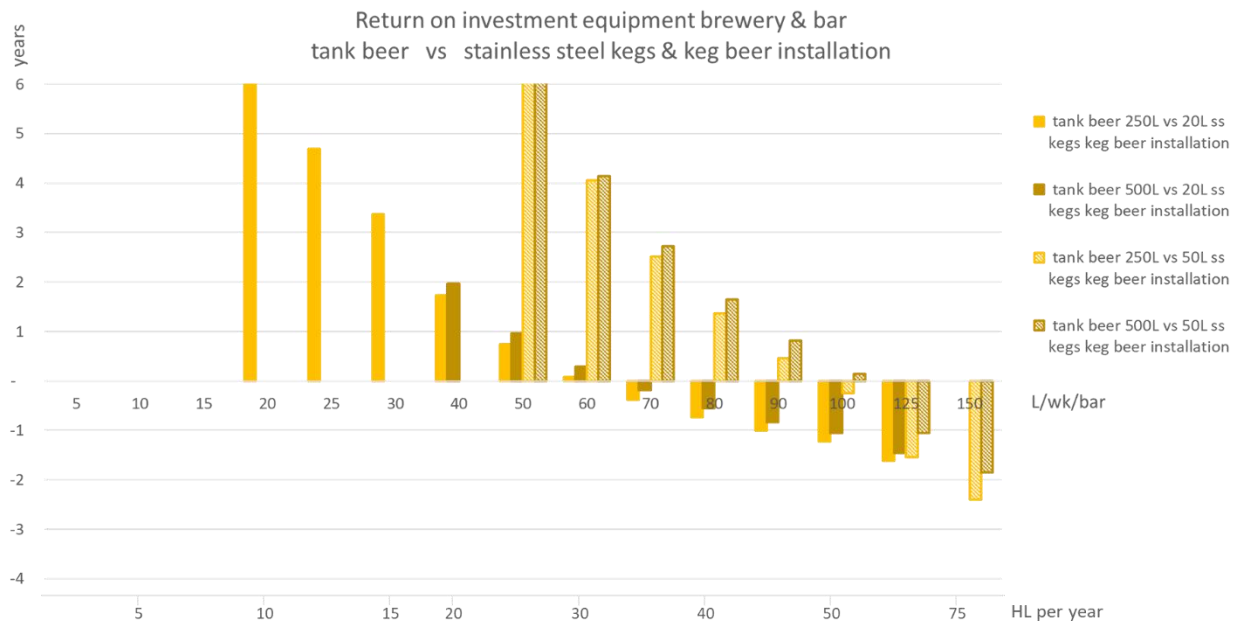


*Often bars order small volumes of beer because they do not have enough space or do not want to keep a large stock. For the brewery, this is not so interesting because it means that you need to deliver more often (higher costs). With a tank beer installation, you have a solution for this. An online tank volume measuring sensor tells you how much beer is still in the tank, so that you can spread payments without having the risk that your beer is sold without you knowing it.*

From 60 litres per week, it also becomes interesting to use a keg beer installation. In this scenario, 20-litre stainless-steel kegs are less interesting. However, you will have the best return on investment with a tank beer installation. When the number of bars increases, the difference between 50-litre stainless-steel kegs and tank beer decreases and the turning point where tank beer is more interesting shifts to 70 litres per week. This makes 50-litre stainless-steel kegs interesting for bars serving 60-80 litres of beer per week. If the number of bars increases to 100, this point gradually shifts to 125 litres per week (65 HL per year).

For volumes above 70 HL a year, tank beer is always more interesting.

**“A tank beer installation has the best return on investment!”**



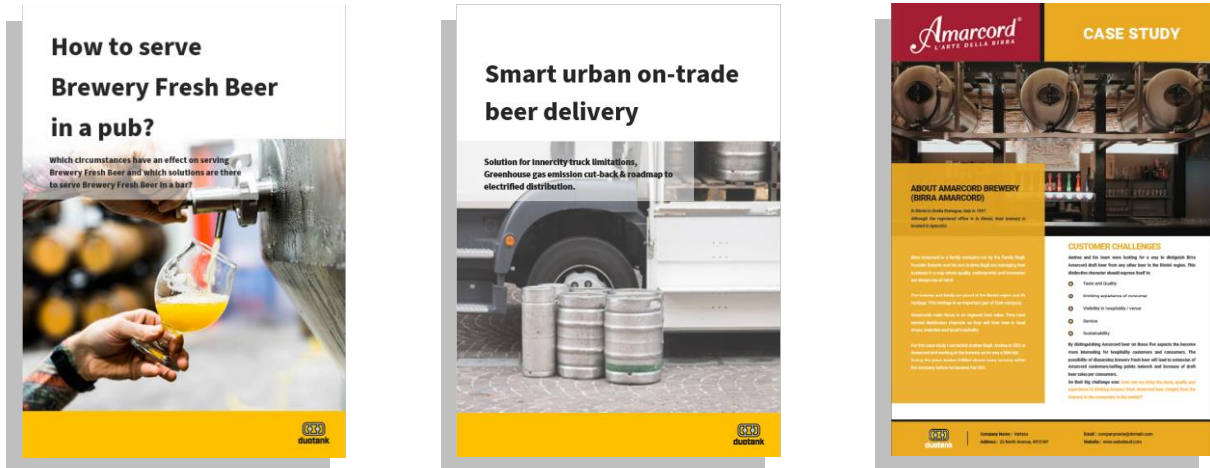
Tank beer is a relatively new draught beer possibility for many countries, which is why the 50-litre stainless-steel kegs used to be the standard for a lot of breweries.

However, the weight of a 50-litre stainless-steel keg (which when filled weighs about 63 kg) is increasingly becoming a problem. Legislation in a lot of countries now states that one person is not allowed to lift over 25 kg. Although legislation differs per country, it's often based on the EN 1005-2 or ISO 11228-1 directives or the American NIOSH method of maximum acceptable load to lift<sup>x</sup>. Under ideal circumstances, you are allowed to lift 23 kg alone and around 43 kg with two people. This means that unloading from a truck can still be done with a lifting aid, but placing the kegs in a cellar or connecting them becomes problematic.

This, in combination with the financial advantages, has caused more and more breweries to shift towards tank beer instead of stainless-steel kegs for higher volume bars.

**“Legislation on the maximum weight that one person is allowed to lift, in combination with the financial advantages, is causing more and more breweries to shift from keg beer to tank beer!”**

## More information:



## Resources:

- i. Keg production with a commitment - Website Blefakegs  
<https://www.blefakegs.com/about-blefa/sustainability/>
- ii. <https://www.equippedbrewer.com/equipment-and-supplies/keg-management-creating-a-long-term-growth-strategy>
- iii. The Lost Kegs: Why It Pays to Track  
<https://www.slg.com/blog/lost-kegs-why-it-pays-to-track/>
- iv. <https://www.keykegshop.eu/keykeg.html>
- v. <https://www.keykegshop.eu/keykeg.html>
- vi. Perslucht – energie efficiency, omgevingsdienst ijmmond, 2015  
[https://www.odijmond.nl/publish/pages/2920/factsheet\\_perslucht\\_2015.pdf](https://www.odijmond.nl/publish/pages/2920/factsheet_perslucht_2015.pdf)
- vii. Factsheet Duotank Del Pos EN\_191021.pdf
- viii. <https://www.keykeg.com/en/faq>
- ix. Tank beer support AB Inbev;  
<https://www.horecasupport.nl/ondersteuning/tapsystemen-en-service/kelderbier/>
- x. <http://www.euronorm.net/content/template2.php?itemID=2308>



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