

# The world's first intelligent shower



 multishower

The image features a vibrant blue background. In the lower-left quadrant, there are overlapping geometric shapes in shades of green and lime green. A large, semi-circular shape in a darker green is positioned in the foreground, partially overlapping a larger, lighter green shape. The text is centered within the darker green semi-circle.

”The standard of  
tomorrow within  
the shower technique”

# For a nice comfortable shower experience

THE PURPOSE OF TAKING a shower is always to get wet. Very wet. Fast. Sometimes we take a shower to cool down, other times we use the water from the shower as massage on our bodies.

All these nice experiences demand a great deal of water, a conventional shower uses 18-25 l/min. Multishower only uses 9 l/min. The challenge for Finn Thorvald Larsen was to develop a water saving shower without losing comfort and a nice shower experience. According to him other "economy" showers were not good enough. The water mixed with air does not feel good on the body, so with Multishower Mr Larsen put the comfort into focus.

It is a complicated process to create a positive shower experience. It is about water quantity, pressure, temperature, distribution pattern and effective anti-calcification etc. A good and comfortable shower demands an optimal combination of these elements. Let us look at every component, exactly as Finn Thorvald Larsen did when he developed Multishower.

## Water quantity

As previously mentioned, traditional shower installations giving good comfort require a 'huge' amount of water, 18-25 l/min flow rate to be precise. Quantity of water is clearly the most important factor for obtaining high shower comfort.

A reduction of only half, as obtained through the use of throttle brackets or thimbles will cause very negative reactions from the public.

## Pressure

Pressure loss caused by the throttle will reduce both water velocity and kinetic energy.

The water impact on the skin will thus be greatly reduced, again contributing to the loss of comfort.

## Temperature

The positive thermal effect is reduced by the increased temperature drop downwards in the shower zone.

Most "economy showers" have an additional disadvantage because they crush the water into very small particles that

create a formidable heat-exchange with the surrounding air, thus giving even a larger temperature drop downward in the shower zone.

## Distribution pattern

Combined with all the above factors, the distribution pattern and the structure of the water jet is also an important factor in composing a comfortable shower. The water jets must not be placed too close or too far apart.

Neither must the jets be too thin or needle like, nor too thick or too slack. This requirement creates a difficult harmonising process in relation to the given water volume.

## Anti-calcification

The vane like screw surrounded by the valve in the nozzle constitutes the patented structure and leaves a relatively large ring formation for the water outlet. This prevents calcium deposits from blocking or choking the shower head, as experienced in all shower heads using the traditional sieve plate.



## Strong reasons for choosing Multishower and FTL Water Saving Technology™

Installing a Multishower can be one of the best investments you have made for a long time. There are several reasons for that:

### Improved economy

The investment cost is recovered quickly by the savings you make after the installation.

### A powerful environmental case

Reduced consumption is a strong and solid argument for companies that actively take measures to reduce their negative influence on the environment.

### Calcium deposits do not develop

The design of the Multishower means that the nozzle is wide, which avoids

calcium accretion, which otherwise would make the shower ineffective, less refreshing and finally unusable.

### Contains fewer parts

Multishower contains fewer and more reliable parts, which gives it a considerably longer life than conventional showers.

### Pleasant experience

Due to the unique quality Multishower gives a more pleasant shower experience than the conventional showers.

### Five years of guarantee

Each Multishower has a five-year factory warranty.

### A safe shower – no risk for legionella bacteria

The spreading of the legionella bacteria is increased by showers mixing water with air. The FTL Water Saving Technology™ does not include air. As a result many hospitals are now using the Multishower.



# Multishower saves resources – yours and the whole world's

THE ACCESS OF FRESH WATER in the world reduces at the same time as the water waste radically increases. In the western world we are using more hot water than ever per person – water that costs a lot to heat, in money and also when it comes to reducing carbon dioxide emission.

Many of us are trying to reduce the energy waste. Multishower is one step to the right direction – Multishower reduces the water waste/hot water waste with 40-

60 percent. The benefit is huge, both for the wallet and the environment!

Environmental thinking is an important part in today's business marketing.

The effort to reach an ecological and durable society is a commitment to many people and government all over the world. Customers are asking for products and service which are environmental friendly.

With Multishower you are not just

saving money, but you are also showing your customers that you respect the environment, that you have made an effort to get a durable society made.

Together with every Multishower there is a sticker showing your engagement for the environment and the saving of water.

**Show your customers that you care!**

MultiShower was nominated to the Nordic environmental price 2008 (the Nordic Ministry Council)



norden

Nordiska ministerrådet



## Everybody can do something

Not only one person can solve the world's problems with lack of water and high energy waste. But if everybody should do something we would get far! Multishower saves not only money and hot water, but also gives a nice and comfortable feeling – and the investment cost is low.

*Nobody can do everything – but everybody can do something!*

## Calcification

For most of the industrialised world, ground water is the main source of fresh water. Many of the reservoirs consist of calcareous rocks, over the years they have dissolved calcium in the water. Calcareous water causes problems when used in apparatus and equipment with narrow channels and nozzles. The traditional shower heads are thus not spared.

We have all experienced taking a shower where holes in the sieve plate

are choked with calcium deposits, leaving only a few holes unclogged, causing the water to exit from the few unclogged holes, squirting a few thin jets in all directions. Where throttles are installed, this will almost guarantee that the shower head will eventually not function at all.

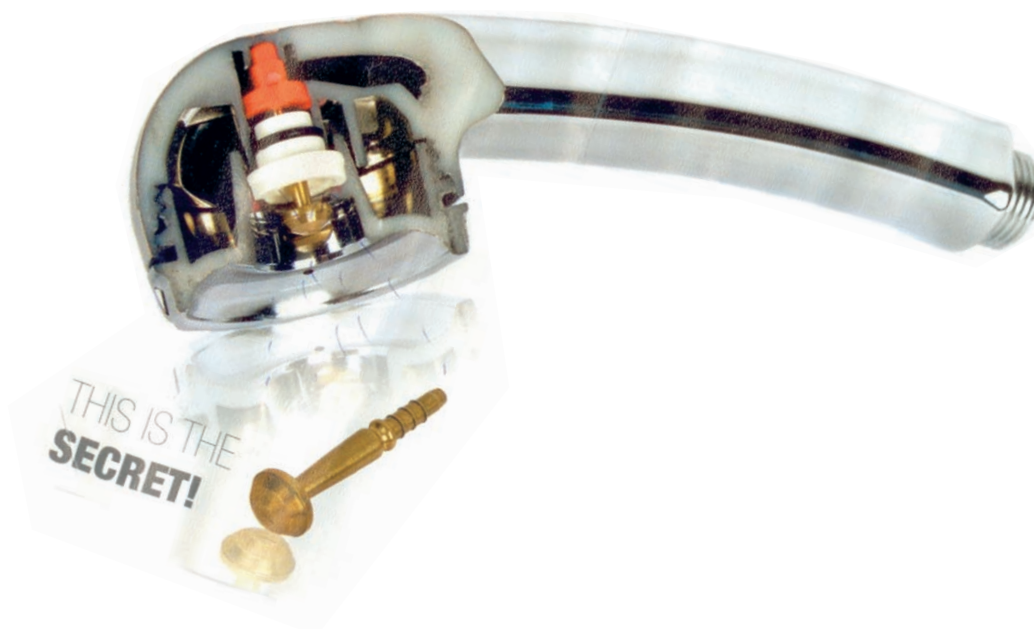
With FTL Water Saving Technology™ the problem is solved. The vane like screw surrounded by the valve in the nozzle constitutes the patented

structure and leaves a relatively large ring formation for the water outlet.

This prevents calcium deposits from blocking or choking the shower head, as experienced in all shower heads using the traditional sieve plate.

Multishowers FTL Water Saving Technology™ means a better shower comfort, a long lasting shower that needs a minimum of maintenance.





# Turbine vane – a revolution within the shower market

TO MAKE “EFFICIENT WATER” with the strainer plate found on all previous conventional showers was unthinkable. The solution was found in the use of a turbine-vane screw.

The water comes through the shower handle at full pressure and velocity down through the stem of the screw and is deflected backwards into an expansion chamber. This action causes the water to be exposed to periodic and partial under and over pressure.

The action of under and over pressure takes place with a pulse frequency of

30-40 times per second. To put it very simple, the whole concept entails that the Multishower is able to turn on and off the water 30-40 times per second, with the purpose to maintain pressure, temperature and comfort with the least amount of water possible.

### Stepless adjustment

Adjusting the screw axially up or down changes the jet pattern of the water leaving the shower completely step-less and adjusted to your own comfort needs. You may choose between soft, large drops, strong

jets or a rapidly pulsating massage jet.

The advance geometry in the turbine-vane screw provides this unique interplay between the law of physics.

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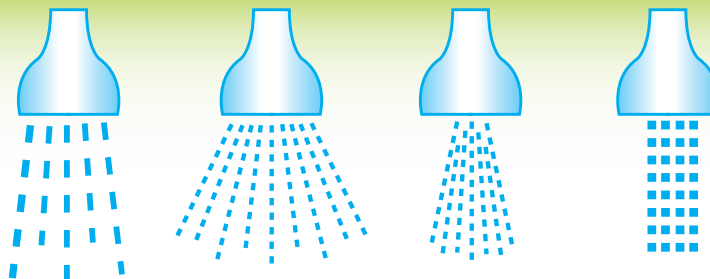
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# FTL Water Saving Technology™



A WHOLE NEW world patented water- and energy saving shower technology.

The worlds first intelligent shower handle – the technique is actually inside the handle itself.

The global search and the need for new water- and energy saving techniques are enormous.

The Norwegian scientist and inventor, Finn Thorvald Larsen, has turned the whole shower industry upside down with his unique new technology.

**FTL Water Saving Technology™ - tomorrows new world standard in shower technique.**

Due to its unique advantages the new patented technology is expected to become a whole new standard within the entire shower industry worldwide.

All other showers are based on same

technique. Only the designs are different. Multishower and FTL Water Saving Technology™ is a complete new way of thinking showers.

Some countries already have laws that regulates the allowed maximum amount of water consumption per minute in shower handles that are sold. In USA, for example, the maximum water consumption allowed for shower handles is approximately 6 litres per minute.

With Multishower the shower comfort increases although the water and energy consumption and costs can be cut by 40-60 percent.

Independent studies have shown that the majority of people actually rates the shower experience higher when using FTL water saving technology™ equipped multishower handles, than using showers with traditional shower technique.



## Best in test!

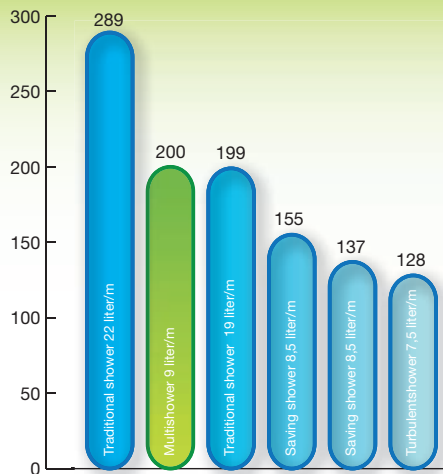
**Multishower is tested by NBI - Norsk Byggeforsknings-Instituttet**

Best in test, combination water- and energy waste, in relation to shower comfort.

In relation to water waste, Multishower has more than 50 percent better comfort than other water saving showers on the market.

**Points for comfort:**

<b>Traditional showers</b>	12
<b>Saving showers</b>	16
<b>Multishower</b>	22



The FTL Water Saving Technology™ is a globally patented technique.



# Background to the development of Multishower and FTL Water Saving Technology™

WITH INCREASING GLOBAL water consumption and the need of huge water savings the Norwegian inventor and scientist Finn Thorvald Larsen made a decision to totally rethink the whole shower concept. The aim was to develop a new intelligent water saving shower technology.

The traditional shower with the strainer plate and holes is not made to meet all the parameters required for an up-to-date environmentally profiled shower product. Mr Larsen therefore decided to follow new ideas for the technical design, and the strainer plate was dropped.

The experience of a comfortable shower is strongly tied to the quantity of water used. High water consumption however does not ensure an efficient shower. There is a clear connection between output and comfort. An important criteria for Finn Thorvald Larsen therefore, was to be able to "extract the maximum effect from the water".

There are many examples showing that research and technical innovation have actually gathered ideas from nature. Similarly, Finn Thorvald Larsen studied the rain. The solution was found in a

'play with the water' concept, through a completely new way of handling the water and thereby a completely new structural design.

He noticed that in a real cloud-burst, the water come as large, juicy drops at very high speed. As in a cloud-burst, Finn Thorvald Larsen wanted to have a water structure with high kinetic energy:  $K = \frac{1}{2} Mv^2$ , that is, large drops at high speed. And opposed to other conventional showers, he did not want the water to hang together.



## The man behind Multishower



FINN THORVALD LARSEN, the inventor of Multishower, is an engineer and researcher, 62 years of age, born and raised just outside Oslo, the capital of Norway.

During his many years at the Norwegian company Norgas he worked with different developing projects around the world. Many times he dealt with problems regarding lack of fresh water and consumption of energy. He learned about water consumption and

problems regarding shortage of water as well as a high warm water consumption, to which the modern world is heading today. He became committed – how could he contribute?

It took him four years of product development before he could answer that question. His idea was to form a new and revolutionary shower – a shower that should be as comfortable to use, or even more comfortable, than a traditional shower - but considerably more water- and energy economizing.

Today his water saving Multishower is to be found on the market, equipped with a unique water- and energy saving technique. The experience of the shower is even more relaxing than with the traditional showers. The centre of the shower is the turbine wing screw,

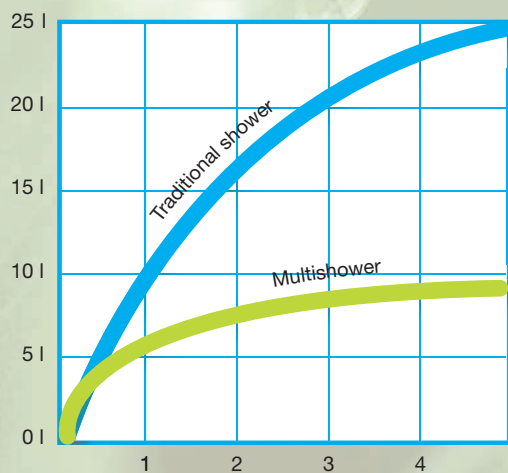
which switch the water on and off 30-40 times per second. In that way the shower can keep the pressure, temperature and comfort with the least possible amount of water.

Multishower has reached a great response world-wide. Some say it is a revolution within the water- and energy savings.

The Multishowers can be found in tenant-owners' associations, in apartments, hotels and conference establishments, at schools and in hospitals and in offices around the world.

Finn Thorvald Larsen is very pleased with his invention, which he considers to be of great potential, introducing a new standard into a world that demands durable and long-termed solutions of energy- and water waste.

## Water waste



Multishower only uses 6-9 l/min, while traditional showers use 15-25 l/min.

In contrast to other water-saving showers with the same water waste, Multishower gives a higher shower comfort based on the sensational shower technology.

**"The standard of tomorrow within the shower technique"**

**"60 % of the world's hot water is used for showering – a giant waste of resources and energy"**

### **CALCULATOR**

Calculate with our online calculator on [www.multishower.com](http://www.multishower.com) – here you can calculate the actual savings in consideration to number of showers, water consumption, price and cost of energy.

# A conservative industry

A STUDY of the showers in the market reveals an industry that is conservative and traditional in its thought processes. The shower looks in principle just like they did for the last 100 years. The water runs through a pipe, into the head and out through the strainer plate with holes in a set pattern.

The design offers quite limited possibilities for adjustment to the present and future requirement. Conventional showers meet only one, or at the most two of the parameters characterising a 'good and modern' shower.

In this context, Multishower has

chosen to disregard looks, as this is considered to be only a form of packaging. At Multishower, we are talking about the ability of the shower to handle the water effectively and economically without any compromise on the high level of shower comfort.



## The water saving shower techniques on the market

<p><b>1. Shower with "filter"</b></p> <ul style="list-style-type: none"> <li>+ saves water</li> <li>- bad pressure</li> <li>- a feeling of not enough water while showering</li> <li>- calcification</li> <li>- dirt closing the holes in the strainer</li> </ul>	<p><b>2. Shower mixing water with air</b></p> <ul style="list-style-type: none"> <li>+ saves water</li> <li>+ good pressure</li> <li>- sharp water squirt gives an unpleasant shower experience</li> <li>- risk for legionella bacteria</li> </ul>	<p><b>3. FTL Water Saving Technology</b></p> <ul style="list-style-type: none"> <li>+ saves water</li> <li>+ more pleasant shower experience compared to conventional showers</li> <li>+ smart technique with a few durable parts give the shower a long life</li> <li>+ no calcification</li> <li>+ affordable price (you quickly gain the investment)</li> <li>+ 5 years of guarantee</li> </ul>
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## Unique qualities

- ✓ **A LOW CONSUMPTION AND A GOOD ECONOMY.** Compared to a conventional shower Multishower uses half water and energy consumption for heating the water.
- ✓ **NO CALCIFYING.** Thanks to its unique construction Multishower never calcifies which eventually always happens with traditional showers.
- ✓ **BETTER WATER PRESSURE.** It gives a regular and maximum pressure at 0.5 Bar.
- ✓ **NO LEGIONELLA BACTERIA.** Multishower does not mix water and air, which is an advantage to health. Water/air showers have proved to increase the risk of spreading the feared legionella bacteria. It is a fact that there is less risk for bacteria in Multishower, in comparison with traditional showers. Many hospitals already switched to Multishower.
- ✓ **LONG LIFE.** Thanks to the unique maintenance free construction all Multishower products have at least five years of warranty.
- ✓ **THE PRICE.** Competitive pricing makes the investment quickly gained through obtained water and energy savings.
- ✓ **ENVIRONMENTAL ARGUMENT.** Multishower Energy Saving Technology™ saves energy and hot water, contributing to both less carbon dioxide emission as well as less water waste.
- ✓ **A BETTER EXPERIENCE.** According to independent tests Multishower is experienced as more comfortable than conventional shower technique.
- ✓ **NO SENSITIVITY FOR TRADE CONDITIONS.** The sales are not less during depression. An investment in

# References

## Hotels

*"During the last year we at the Scandic Hotel have changed most of the showers to Multishower, with only positive reactions from our guests. The Multishowers work like normal showers, the difference is that they lower the energy- and water waste with 50 percent. The Multishowers satisfy the customers and the staff. We can therefore highly recommend them."*

**Scandic Hotell, Oslo**

*"At the Oslo Plaza, a five star hotel, the comfort for the customer is always a priority. When we discovered the Multishower concept we decided to give it a chance and installed one in a suite. After one month we felt very pleased and we have now installed the Multishower in all the rooms of the hotel. The design, the possibilities of adjustments together with the comfort satisfy the customer. At the same time we will save at least 100.000 NOK every year."*

**Oslo Plaza**

Radisson Hotels & Resorts have used the Multishowers for some years now and have given a great testimonial through hotel surveys which concludes with no

complaints on the shower-comfort of their guests.

Other hotel chains choosing Multishower are Rica, Clarion, Rainbow and Choice.

## Cruiser liners

*"At a cruiser liner it is very important with sufficient hot water for all guests. After we had changed to Multishower we had no problems at all on our journeys. Also we have been highly commended for using water saving showers – many people are conscious of the environment."*

**Hurtigruten**

More cruiser line companies have chosen Multishower to the ships, among others all ships within the Disney Cruises.

## Tenant owners' associations

*"We thought a great deal about the environment when we decided to change into Multishower. Then we discovered that there is also money to save – from April to December we saved more than 100.000 SEK in energy and water costs."*

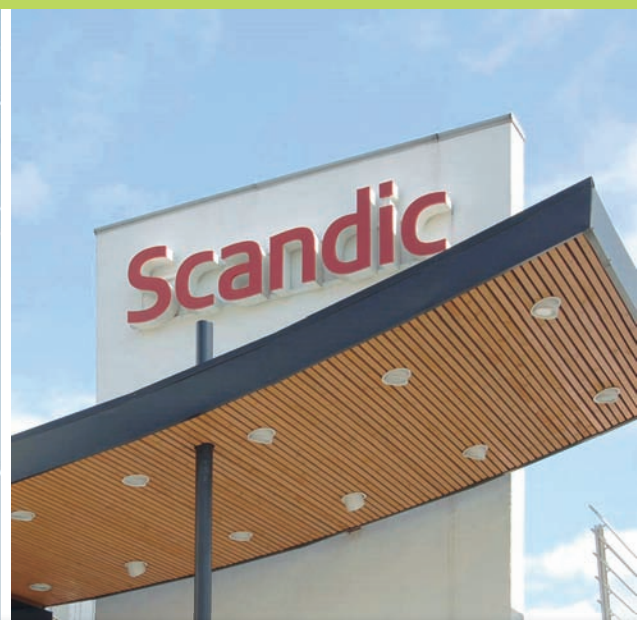
**Brf Tre Källor**

Many other tenant owners' associations have changed to Multishower and with great results.

## Institutions and authorities

In a few years the Multishower has become the leading water saving shower on the market. The first proof for quality and functionality was seen when many big energy companies sponsored their customers with Multishowers handles. Norwegian authorities also bought a big amount of showers for inhabitants, to install in their homes.

During 2008 the Multishower tailored solutions for governments and royalties, for example the royal family in Sweden and their palace.



# Price list

All prices quoted in euro excluding VAT.

Quantity	MS Galant	MS Cadet	MS Captain	MS Perlator	MS Hose
15-100	57,00	43,50	37,50	6,50	13,50
101-250	54,29	41,43	35,71	6,19	12,86
251-500	51,70	39,46	34,01	5,90	12,25
501-1000	49,24	37,58	32,39	5,62	11,66
1000-5000	46,89	35,78	30,85	5,35	11,11
5000-10000	44,24	33,76	29,10	5,05	10,48

10000 and above according to agreement or seperate quotation.


With reservation for price adjustments.

We can offer tailor-made financial solutions for companies, hotels and tenant owners' associations.  
Even installation costs could be included in the financing deal.



## 5 years warranty

The ESS-solution of Multishower reduces your energy costs with 40-60 percent. The technique behind Multishower also removes the calcification, which after a couple of years hits all conventional showers with the risk of making them useless. Multishower does not suffer from calcification and can therefore be used longer. Hence we offer five years of factory guarantee for each Multishower handle. The Multishower hose comes with a ten year factory warranty.

The image features a solid blue background. In the lower half, there are several overlapping green shapes: a large light green triangle pointing downwards, a medium green circle, and a darker green circle. The text is centered within the overlapping area of these shapes.

"60% of the world's hot water is used for showering – a giant waste of resources and energy"



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