

**VRS Machines recycle
food waste.**



VRS - Piccolo



VRS - Génie II



VRS - 150 «Swiss»

And how does it work?

Well, let us show you.

Versatile applications

VRS - machines are not just for the recycling of food waste, the possibilities of application are endless.

Experiments have shown that it is possible to process the food waste with cardboard and newspaper into powder. The powder can be pressed into pellets.

Mixing the food waste



with **carton**



and **paper**



Grinding it into coarse powder.



The coarse powder can be processed to small pellets for various purposes. At the moment, we are checking whether we can use these pellets for stoves.

The great idea

VRS - Value Recovery System shows the modern way of organic waste treatment.

From Waste.....



The VRS Machines recycle the food waste.

...to Valuables



it needs

4'000 KW/h

and retrieves the additional

4'000 liters of **Water.**

For the production of
1'000 kg of fertilizer
with a **VRS - Machine**



In comparison, the energy required to manufacture and transport one ton of nitrogen fertilizer is equivalent to the energy content of 2,000 kg of crude oil or 22,000 KW / h.

VRS - 100 «Swiss»

and

VRS - 150 «Swiss»

Technical data

Power connection:	AC 400, 3xL, N, PE, 50 Hz, CE 32A
Energy consumption:	~ 1 kW/h / 1 l of water evaporation
Dimensions:	
Length	1530 mm
Width	900 mm
Height	1070 mm
Weight	520 kg / 575 kg

Capacity of VRS - 100 «Swiss»: 100 kg/day, 2 cycle of 50 kg in about 8-11 hours

Capacity of VRS - 150 «Swiss»: 150 kg/ day, 2 cycle of 75 kg in about 8-11 hours



The VRS - 150 "Swiss" is also available as VRS - 150 "Swiss" Twin. Two VRS - 150 "Swiss" can be combined into one unit so the daily capacity gets doubled-up with convenient loading time choices.

The VRS Recycling System

is the solution to manage the food waste....

We believe that the food waste should be treated on-site rather than being transported to centralized facilities. Our concept is providing an ecological solution to manage the wet organic waste. The VRS - System turns the food waste into organic fertilizer and this creates the complete circle of recycling.

From Waste . . .



Operation principle:

- Loading with wet waste
- Adding 5 - 10 % wheat bran or saw dust
- Adding 25 - 50 gr neutralizer
- Automatic operation
 - Water evaporation
 - Sterilization
 - Grinding
- Depending on the volume and moisture level of food waste
 - 6 - 11 hour running time per cycle
- Final result:
 - Free-flowing powder
 - H₂O for flower and plants

... to Valuables!

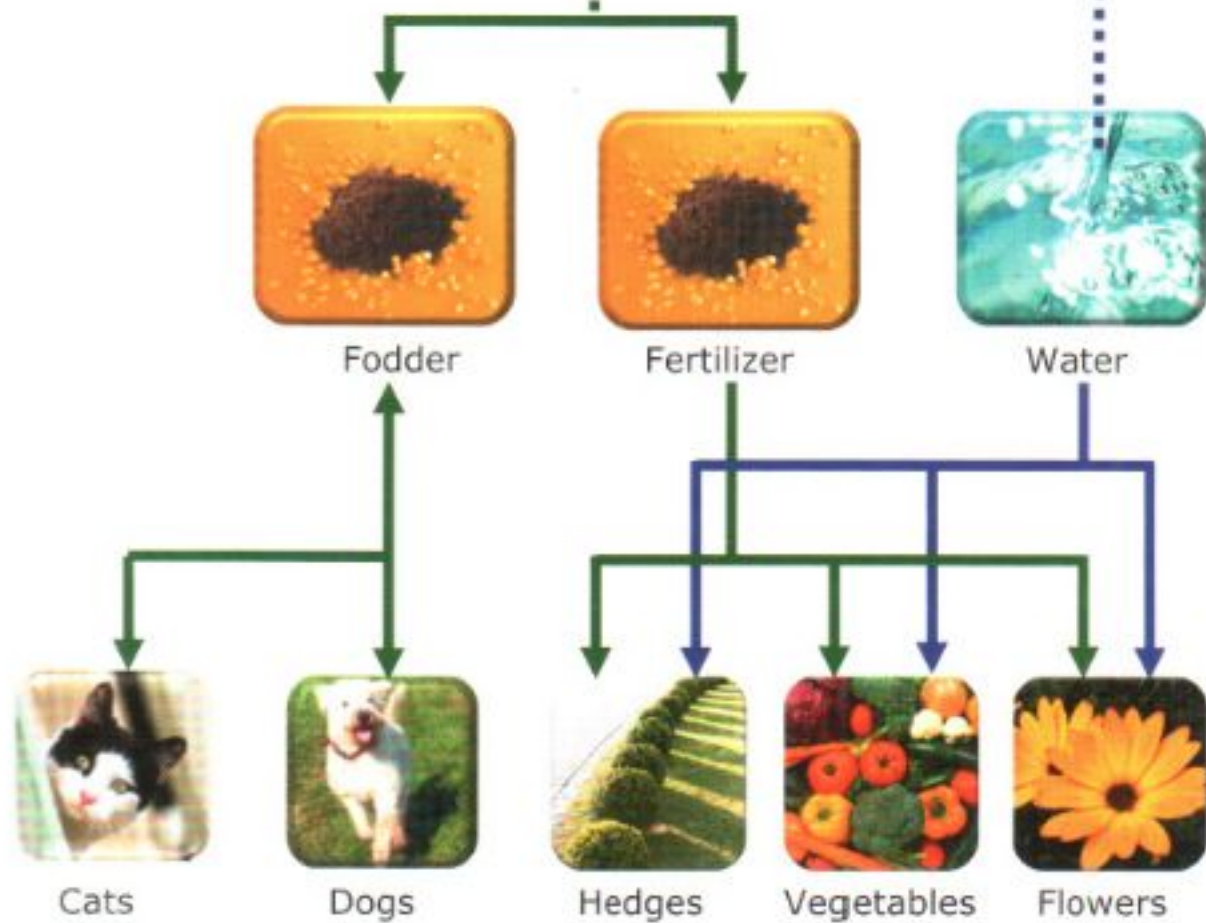
The usage :

Fertilizer

- Organic farming
- Vegetable patch
- Gardens
- Pot plants

Fodder

- Domestic pets



In perfect harmony with the Nature!



The set-up and recycling of food waste on-site brings a customer many advantages.

The VRS machines crush, sterilize the food waste and evaporate the water. In the end, it's the recycling of organic waste into fertilizer in the form of powder.



Wellness for your flowers

Wellness for body and soul!

A hotel manager had THIS IDEA: giving out small fertilizer packets made of food waste from hotel restaurant and produced by VRS machines to hotel guests. Happy recycling and happy guests!



The VRS Machines

VRS – Piccolo

Power connection: 3 pin plug, 230V, 50 Hz
Energy consumption: ca. 0.45 kWh/ cycle

Capacity: 1 kg cycle in about 2 hours

Dimensions:

Length 270 mm
Width 380 mm
Height 430 mm
Weight 13.50 kg



VRS – Génie II

Power connection: AC 230V, L, N, PE, 50 HZ
Energy consumption: ~ 1.0 kWh/ 1 l of water evaporation

Capacity: 20 - 30 kg / day, 2 cycles of 10 - 15 kg in about 6-8 hours

Dimensions:

Length 520 mm
Width 740 mm
Height 840 mm
Weight 90 kg



The VRS - VRS Genie II is also available as VRS - Génie II Twin. Two VRS - Genie II can be combined into one unit so the daily capacity gets doubled-up with convenient loading time choices.

Natural pure essential oil of orange - extracted by VRS machines

VRS machines are now used for extracting essential oil as well. We produce **essential oil from orange peels** which is obtained from one of our customers. The remaining orange peels are processed into the pellet mill and turned into pellets. These are used as feed at dairy farms.

Interesting thing is, there are so many ways to use the orange oil not just the way VRS recommends. (VRS Revol orange oil works great against wasps).



An excerpt from the literature explains the different applications:

Orange peel contains the essential oil and it protects the inner flesh of the fruit. Neither birds, insects, fungi nor bacteria harm undamaged fruit as long as the orange peel is fresh and contains the essential oil before it gets evaporated into the air.

This essential oil (limonene) is traditional herbal or remedy mainly used as solvents in paints, cleaners and care products. It works better than turpentine resins, but with less allergy reaction.

Orange peel oil and **orange terpenes** have excellent disinfecting and deodorizing effect and fresh, aromatic scent, and it's been used for cosmetics as well. Orange oil is also used as therapeutic remedy in medicine and pharmaceuticals, as well as fragrance in aromatherapy.

Orange terpenes can be used in either pure form with emulsifier or diluted form which is in water with the ratio from 1/5 to 1/200. That means this can be very cheap and almost unlimited amount of cleaner for heavy stains of any kind.



For example, this is used to remove contaminants such as oils, greases, adhesives, paints, resins, glue, etc., on machines and machine parts, gears, chains, ropes, plastics as well as cleaning industrial parts.

Orange terpenes is also routinely used for cleaning in commercial and industrial area, hospitals, clinics and laboratories as well households.

Orange terpenes is also used as a universal stain remover for fabrics, upholstery and carpets.

Can you ever imagine more versatile way of recycling than this?



Interested parties are invited to visit the production site.

L'Hôpital du Jura Bernois, Moutier

The hospital has put two new VRS - 150 "Swiss" into operation in September 2012.



An appropriate and convincing example of the use in commercial kitchens.

...and offers the following advantages:

1. No tipping fee.

Instead of high fee for transport and disposal of organic wet waste, you pay for the VRS machine and the energy cost. Depending on the moisture content of the material and on the local electricity tariff as well as tipping fee, the machine can be depreciated in 3 to 5 years.

2. Favorable energy balance.

Up to 80% of the transportation volume can be saved locally, that means a favorable energy balance can be achieved as a result of on-site treatment.

3. Improves hygiene.

Since no transport and container exchange takes place of organic wet waste, no germs or bacteria are carried around. This improves the hygiene crucially, which is very important particularly for hospitals, elderly homes and businesses with large scale catering facility.

4. Small space requirement.

Because the organic wet waste is processed immediately, it does not need a space for freezing storage; Weight and volume of the final product is only 20 - 30% of the original material. For the machines in the following list, only 10 - 20 m² of floor space is required.

5. Recuperation of valuable material.

The valuable material contained in the organic wet waste is not simply burned, but recycled. The dry final product is sterile and has very little odor.

6. Ecological contribution.

The awareness of environmental protection is highest ever. Raw materials become inevitably scarce, the prices constantly rising.

The perfect cycle of VRS System recuperates this valuable resource from waste and turns it into commercial product with small expenditure. As a result, the VRS system contributes to the society with energy saving and pollution free way of recycling.

With the VRS System, it's possible to make the food waste management meaningful and environmentally friendly.

VRS - PRO ECO - Vacuum machine

Machine for vacuum packaging of diapers and textiles to prevent unpleasant odor and volume reduction, suitable for elderly homes and hospitals.

Technical data

Power connection:	230V 50~60 Hz 1 KW
Energy consumption:	ca. 20 watt/ sack
Capacity:	Processing time +/- 1 Minute.
Dimensions:	
Length	750 mm
Width	920 mm
Height	780 mm
Weight	144 kg





The current capacity is 30 - 40 units a week. The professionalism of the partner does not only allow an industrial production, but also the quality that convinces any critical customer in and out of Switzerland.

For the construction of the VRS Machine, exclusively stainless steel is used. The concept is that we provide regular maintenance service for every 3'000 - 4'000 hours of sufficient operation. The filters are easy to change and access to all mechanical parts is simple and quick.



Prior to delivery to the recipient, each machine is tested. A perfect run is ensured.

The relocation of VRS production facility

Since 2007, we have had our manufacturing facility in Chemin de la Rippe 7 in Penthaz / VD. In October 2008 we were able to purchase the neighboring property on the Chemin de la Rippe 8. Although the condition of the property was not necessarily inviting for the purchase, we decided to take the plunge and purchased the property.



The conversion took about eleven months, and we were able to move into the newly renovated building in September 2009.

Enough space was available and the industrial production of VRS - 100 and 150 "Swiss" could start. However, over the following years it became apparent that the increasing demand for our machines was a problem as personnel was difficult to recruit.

In September 2011 our offices were destroyed by vandalism. Whoever is behind the deed and put whatever the reason was, the damage was not only the material. The fear among the staffs was great. As well as the vandalism, there were incidents of break-in and theft, and the neighboring companies suffered also.

The decision to abandon the production in Penthaz was also a result of these incidents. We searched an out-sourcing partner in the German-speaking part of Switzerland and found one in Solothurn.

By the end of operation in Penthaz, our main office in Alpenstrasse 4 in Luzern became too small. In May 2012, we have moved to Maihofstrasse 76 in Luzern, where we set up the office as well as a showroom with VRS machines on 400m² of space.



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با حضور شهردار تبریز و جمعی از اعضای شورای اسلامی شهر صورت گرفت؛

بهره برداری پایلوت از سیستم بازیافت زباله های تر

با حضور رئیس شورای اسلامی شهر و شهردار تبریز، سیستم تبدیل زباله تر به مواد ارزشمند در مجموعه ورزشی پتروشیمی تبریز به بهره برداری رسید.

به گزارش آناج به نقل از شهریار، مراسم آغاز بهره برداری از سیستم تبدیل زباله تر به مواد ارزشمند با حضور دکتر صادق نجفی شهردار تبریز، دکتر شهرام دبیری رئیس شورای اسلامی شهر، سعید حاجی زاده رئیس کمیسیون فرهنگی و اسماعیل چمنی رئیس کمیسیون سرمایه گذاری شورای شهر تبریز و جمعی از مدیران و کارشناسان سازمان مدیریت پسماند شهرداری تبریز برگزار شد.

سیستم تبدیل زباله های تر و آلی به مواد ارزشمند با مشارکت بخش خصوصی و سازمان مدیریت پسماند شهرداری تبریز برای اولین بار و به صورت پایلوت در مجتمع پتروشیمی تبریز مورد بهره برداری قرار گرفت.

این سیستم به دلیل حجم بالای تولید زباله های آشپزخانه ای در مجموعه رفاهی ورزشی پتروشیمی تبریز، به صورت پایلوت در این مجموعه مجتمع رفاهی ورزشی پتروشیمی تبریز راه اندازی شد.

سازمان مدیریت پسماندهای شهرداری تبریز با هدف بازیافت بهینه پسماندهای تر و آلی مواد غذایی و تبدیل این پسماند به کود بیولوژیک خشک و تر اقدام به خرید و راه اندازی دستگاه بازیابی مواد با ارزش از پسماندهای آلی و تر نموده است.

این دستگاه با حرارت دهی مستقیم به زباله های خانگی، در دمای 140 درجه سانتی گراد به مدت 6-8 ساعت و آبزدایی از پسماندها، امکان تفکیک و تجزیه پسماندهای خانگی را میسر می کند.

بعد از اینکه زباله ها هشت ساعت حرارت دهی شدند بلافاصله سرد شده و پسماند خشک به عنوان کود بیولوژیک و آب خروجی نیز به عنوان کود مایع قابل استفاده خواهد بود.

سازمان مدیریت پسماندهای تبریز از سازمان های زیرمجموعه شهرداری تبریز است که در حوزه خدمات شهری با بهره گیری از تکنولوژی و فناوریهای نوین در بخشهای جمع آوری، انتقال، امحا و تولید انرژی از زباله فعالیت می نماید.

