

RIDEL *ENERGY*



**REFRIGERATION
HEAT RECOVERY**

REFRIGERATION HEAT RECOVERY

EVER DREAMT OF SAVING MONEY BY USING ENERGY TWICE?

How does it work?

- / Ridel-Energy's equipment produces hot water from energy you have already consumed.
- / Recovering the wasted heat from your refrigeration equipment tools will create instead energy savings!

1- The refrigerant absorbs the calories from the cold room through the evaporator.

3- The refrigerant goes through our submerged primary exchanger to give its calories to the storage water. It then goes back to the condenser to finish its cooling cycle.

2- The refrigerant is compressed and then discharged as a gas at a high temperature.

4- When you need it, the equipment will heat your water using the calories of the storage tank.

THE STORAGE TANKS ALLOW A DIFFERENCE IN TIME, BETWEEN THE COLD PRODUCTION AND THE HOT WATER CONSUMPTION.

ADVANTAGES

SAVE ENERGY - DECREASE YOUR BILLS IMPROVE THE EFFICIENCY OF YOUR REFRIGERATION

/ Cost saving

- / You won't have to pay anymore for the majority of your hot water needs.
- / You decreases the maintenance cost of your hot water production equipment.
- / You decrease the maintenance cost of your refrigeration equipment.

/ Respects the quality of the cold

- / Dimensioning our heat exchangers is one of our expertise. We make sure to preserve the quality of your refrigeration and not to damage the COP of your equipment.
- / The refrigeration group is never forced to generate hot water. It will only absorb rejected heat when it is available.

/ Improve the energetic performance

- / By providing additional condensing surface, we improve the efficiency of your refrigeration and increase your equipment lifespan.
- / By pre-heating the water to feed your boilers, we decrease their operation and improve their performance.

/ Highly Hygienic

- / Ridel-Energy's double heat exchange technology prevents the pollution of sanitary water by the refrigerant.
- / We store the calorie in primary water. This prevents the development of bacteria such as legionella.
- / Our equipment has a french certification of sanitary compliance (ACS) which is ideal for environments with high sanitary requirements.

/ Low maintenance cost

- / The storage of calories in primary water (dead-water) guarantees the absence of oxygen in the tank and thus the absence of corrosion inside the tank.
- / The non-renewal of the primary water prevents the creation of limestone.
- / This guarantees your equipment a very long life span and very little maintenance requirement.

/ Reduce refrigeration nuisances

- / Less heat rejected in your machine room, less noises from the condenser fans.

HOW IT LOOKS INDOORS



HOW IT LOOKS OUTDOORS



COMPANIES ALREADY SAVING ENERGY

Food & Beverage



Food Processing Industry



Retail - Hypermarkets



CUSTOMER TESTIMONIALS

/ Project in Europe - Heating water from 10°C to 60°C. Energy saved: 12,000 kW/year

Our Ridel/Ref provides us with 100% of our daily consumption of hot water.

We have hot water at 60°C available at anytime in our workshop.

Our electrical heater isn't used anymore, which decreases as well a lot our maintenance and repair costs.

Elodie CHAMPCLOU - Manager, Farm with integrated meat workshop



/ Project in Europe - Heating water from 10°C to 50°C. Energy saved: 677,000 kW/year

After installing a Ridel/Cub, instead of using water at 10°C, we are feeding the boiler with preheated water at 50°C. We are no longer heating from 10 to 65°C but from 50 to 65°C.

The storage volume is 25 m³ for a daily domestic hot water production of 42m³ at 50°C.

We reduced our gas bill by 50% and got an ROI off less than 3 years.

David PINON - Production Manager Danish Crown factory (food processing) - France

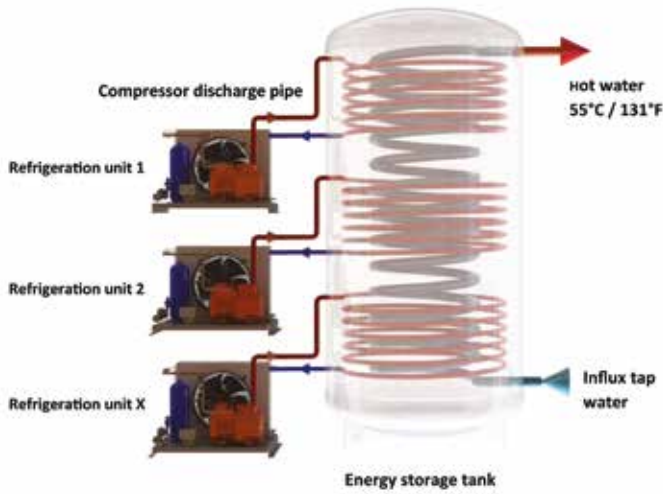
/ Project in Europe - Heating water from 10°C to 50°C. Energy saved: 374,000 kW/year

With the installation of a Ridel/Rec, we entered an era of energy saving and decreased our operating costs.

Our gas bill dropped from 40K€ to 27K€ per year. It is really promising! On top of the energy saving, we also cut down the maintenance cost of our gas-air-heaters.

Eric LAMBERT - CEO - Hypermarket - France





The range RidEL/REF is made of standard plug-and-play products. Perfect for small scale installations, the RidEL/REF preheats the water using the heat rejected by the compressors.

Specificity

- / Multi-circuit recovery unit
- / Tank made in thick black steel with an exterior rust protection
- / Primary immersion coil in copper in 1/2"-5/8"-7/8"
Secondary immersion coil in ASHRAE Standard copper 14/16"
- / Quality thermal exchanges which respect the cold quality and improve the efficiency of your equipment

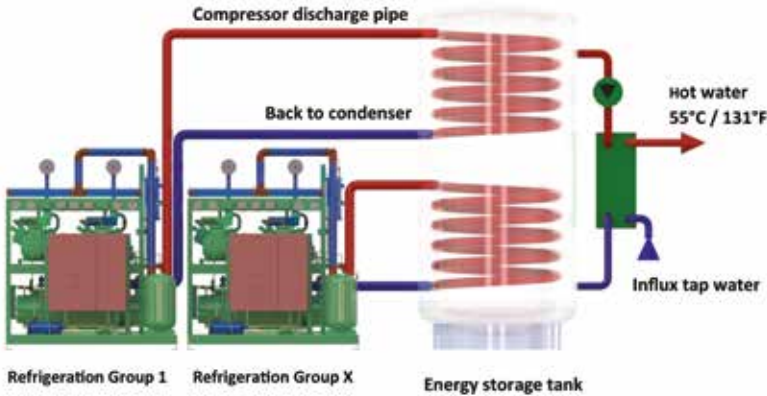


Storage tank Volume in Litres	REFRIGERATION SYSTEM	PRIMARY EXCHANGER			SECONDARY EXCHANGER	
	Maximum rejection power (kW)	Number	Nb of circuit x diameter (inch)	Total surface (m ²)	Hot water Power	Heating Power (kW)
200	4,3	1	1/2	0.30	1,3	3,5
	5,8	1	5/8	0.40	1,7	4,5
	8,7	1	1/2	0.60	2,5	7
	11,6	1	5/8	0.85	3,3	9
	14,5	1	7/8	1.10	4,2	11,5
	2 x 4,3	2	2 x 1/2	0.60	2,5	7
	2 x 5,8	2	2 x 5/8	0.80	3,3	9
	3 x 4,3	3	3 x 1/2	0.90	3,7	10,5
	17,4	2	2 x 1/2	1.20	5	14
	2x4,3 + 1x8,7	3	2 x 1/2 + 1/2	1.20	5	14
1x5,8 + 1x8,7	2	1 x 5/8 + 1/2	1.00	4,2	11,5	
4 x 4,35	4	4 x 1/2	1.20	5	14	
300	14,5	1	7/8	1.10	4,2	11,5
	2 x 14,5	2	2 x 7/8	2.20	8,5	23
	29	2	2 x 7/8	2.20	8,5	23
	2 x 8,7	2	2 x 1/2	1.20	5	14
	17,4	2	2 x 1/2	1.20	5	14
	26,1	3	3 x 1/2	1.80	5	14
	4 x 4,35	4	4 x 1/2	1.20	5	14
	6 x 4,35	6	6 x 1/2	1.80	7,5	21
	2 x 11,6	2	2 x 5/8	1.70	6,5	18,5
	23,2	2	2 x 5/8	1.70	6,5	18,5
	3 x 11,6	3	3 x 5/8	2.55	10	28
	34,8	3	3 x 5/8	2.55	10	28
	29	3	2 x 1/2 + 5/8	2.05	8,4	23,2
	31,9	3	2 x 5/8 + 1/2	2.30	9,2	25,5
11,6 + 8,7	2	7/8 + 5/8	1.95	7,5	20,8	
26,1	2	7/8 + 5/8	1.95	7,5	20,8	
3 x 11,6	3	3 x 5/8	2.55	10	27,8	
500	34,8	3	3 x 5/8	2.55	10	27,8
	46,8	4	4 x 5/8	3.40	13,5	37,5
	5 x 11,6	5	5 x 5/8	4.25	16,8	46,4
	58	5	5 x 5/8	4.25	16,8	46,4
	29	2	2 x 7/8	2.20	12,6	34,8
	43,5	3	3 x 7/8	3.30	12,6	34,8
	40,6	3	2 x 7/8 + 5/8	3.05	11,8	32,5
	3x8,7 + 11,6	4	3 x 1/2 + 5/8	2.65	11	30,1
	37,7	4	3 x 1/2 + 5/8	2.65	11	30,1
	49,3	3	3 x 5/8 + 7/8	6.65	14,3	39,4
	52,2	4	2 x (5/8 + 7/8)	3.90	15	42

Application Fields

- / Cold rooms
- / Refrigerated display cases
- / Centralized air-conditioning units
- / Milk tanks

Its multi-circuit technology allows the connection of multiple units with a minimum of piping for maximum savings.



Specificity

- / Efficient heat recovery
- / Can be use for domestic hot water or heating
- / Double heat exchange guaranteed
- / Excellent quality of thermal exchange
- / Indoor or outdoor installation
- / Can be installed vertically or horizontally
- / Low maintenance: easy to install the replacement parts

Ridel-Energy's core business, the Ridel/Rec is available in a large range of volumes from 500L to 20,000L. These units are customizable for any refrigeration units.

Designed for large retail stores and light industry, the Ridel/Rec allows you to produce free hot water for domestic hot use and/or heating.



Volume Storage tank in Liters	PRIMARY EXCHANGER					SECONDARY EXCHANGER
	Maximum rejection power (kW)	Number of Circuit	Nb of circuit x diameter (inch)	Desuperheating Power (kW)	Condenser Power (kW)	
750L	50	1	1"3/8	10	40	SECONDARY STAINLESS STEEL PLATE HEAT EXCHANGER CAPABLE OF PRODUCING 50°C / 130°F HOT WATER
	2 x 50	2	1"3/8	2 x 10	2 x 40	
	100	1	1"5/8	20	80	
	75	1	1"5/8	15	60	
1000L	2 x 75	2	2 x 1"5/8	2 x 15	2 x 60	STAINLESS STEEL CONNEXION PIPE DN32
	2 x 50	2	1"3/8	2 x 10	2 x 40	
	100	1	1"5/8	20	80	
	3 x 50	3	1"3/8	3 x 10	3 x 40	
	75	1	1"5/8	2 x 15	2 x 60	
	2 x 75	2	1"5/8	2 x 15	2 x 60	
2000L	150	1	2"1/8	30	130	DELIVERED MOUNTED WITH : • CIRCULATION PUMP • PUMP WITH SHUT-OFF VALVE (UP AND DOWNSTREAM) • HIGH EFFICIENCY SINGLE-PHASE PUMP
	3 x 75	3	1"5/8	3 x 15	3 x 60	
	150	1	2"1/8	30	130	
	2 x 100	2	1"5/8	2 x 20	2 x 80	
	4 x 50	4	1"5/8	4 x 10	4 x 40	
	200	1	2"3/8	40	180	
	2 x 150	2	2"1/8	2 x 30	2 x 130	
	4 x 75	4	1"5/8	4 x 15	4 x 60	
	300	1	2"5/8	60	250	
	2 x 200	2	2"3/8	2 x 40	2 x 180	
3000L	2 x 300	2	2"5/8	2 x 60	2 x 250	THE SECONDARY EXCHANGER IS SCALED FOR EACH REFRIGERATION UNIT AND PROJECT IN ORDER TO OPTIMIZE THE VOLUME OF PRE-HEATED WATER ACCORDING TO THE FLOW AND CONSUMPTION
	2 x 400	2	2"5/8	2 x 80	2 x 320	
	4 x 150	4	2"1/8	4 x 30	4 x 130	
	4 x 75	4	1"5/8	4 x 15	4 x 60	
	300	1	2"5/8	60	250	
	400	1	3"1/8	80	320	

Application Fields

- / Refrigeration groups (positive or negative)
- / Chilled water groups
- / Air-conditioning central units
- / Deep freezing tunnel

The multi-circuit technology allows you to plug in multiple refrigeration units. The submerged technology delivers maximum efficiency.



Download our complete range of technical sheets on: www.ridel-energy.com

RIDEL-ENERGY, THE COMPANY

Ridel-Energy has been designing, developing and manufacturing heat recovery equipment in France since the 70s, for the production of heating, hot water and process water.

By recovering and reusing the heat rejected by your activity, we help to significantly decrease your energy bills.

An award winning, innovative company, Ridel-Energy is on a permanent quest to improve its product performance in order to contribute to the conservation of Earth's resources



Authorized distributor

RIDELENERGY

Ridel Energy SAS

14, Boulevard Industriel,
76270 Neufchâtel-en-Bray, France

Phone: +33 2 32 97 99 28

Email: contact@ridel-energy.com

www.ridel-energy.com

Ridel-Energy ASIA

c/o CCI FM - Unit N°2A-6-2, 6th Floor
Plaza Sentral, Jalan Stesen Sentral 5
50470 Kuala Lumpur, Malaysia

Contact: Thibault Bertrand - +60 (0)11 14 49 50 12

Email: tbertrand@ridel-energy.com