



**Efficient DHW and heating solution with
High-output calorifier Modul-plus**

Hoval

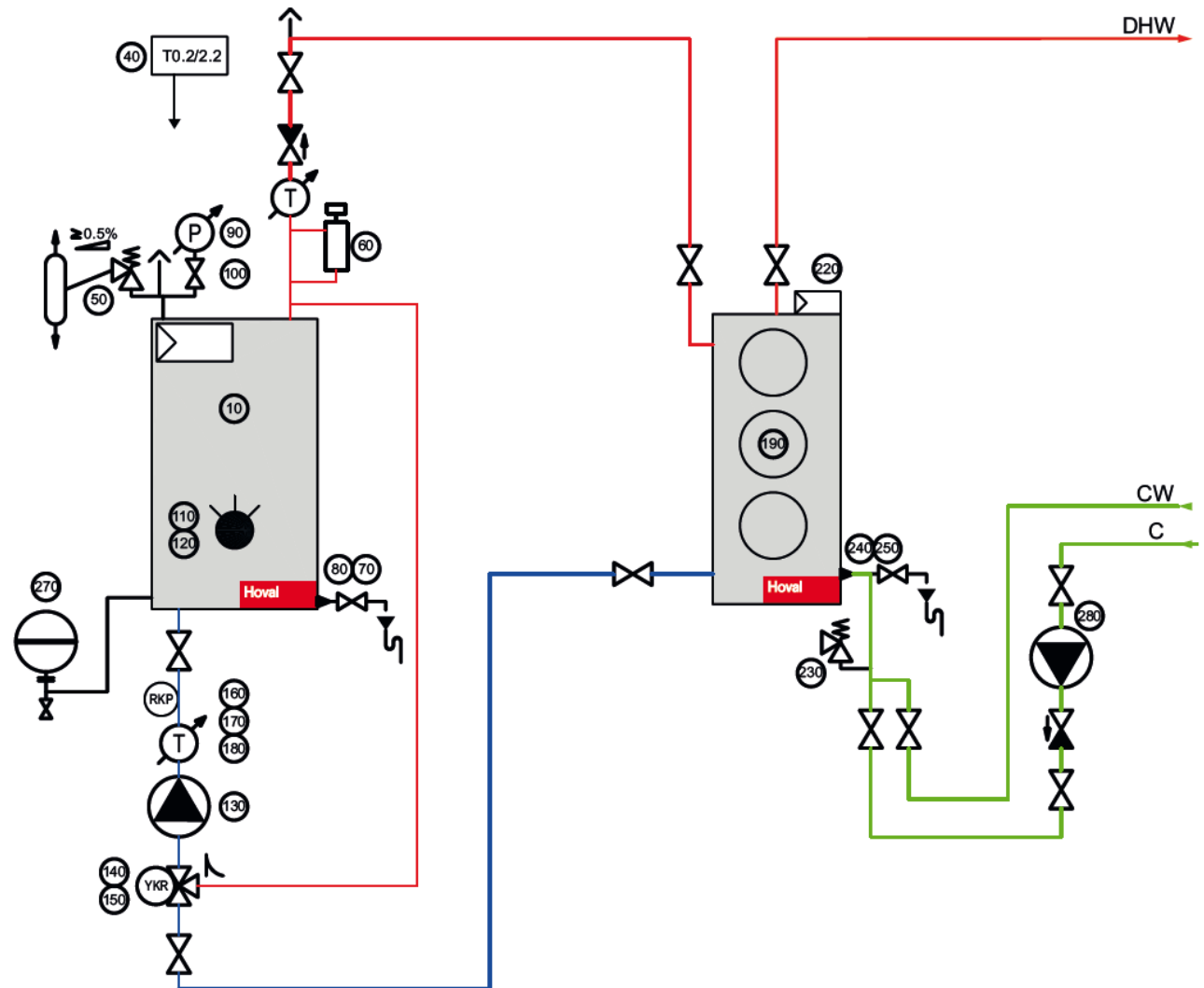
Vaduz, March 2013

Single Boiler with thermostatic control panel

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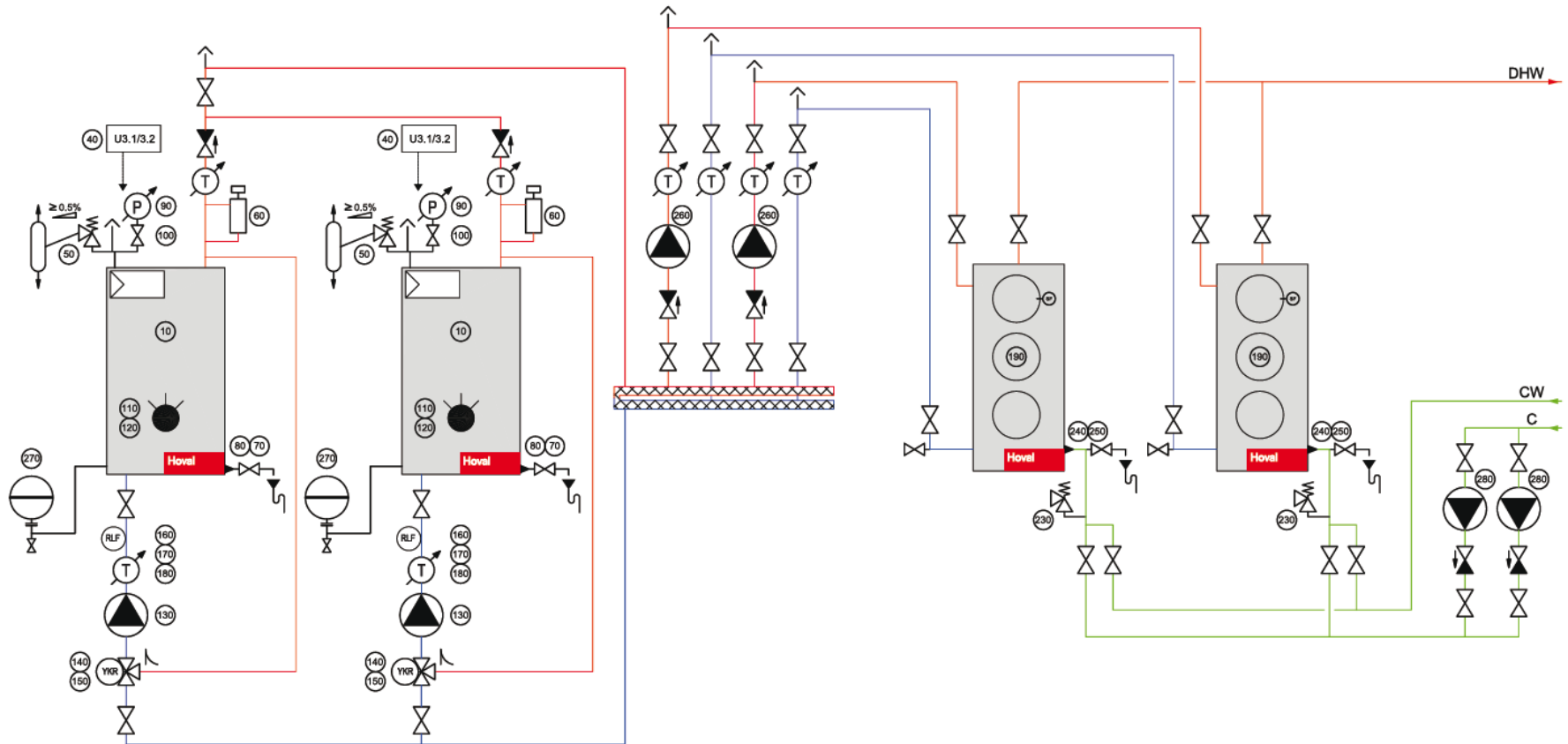
Position	Description
10	Hoval boiler
40	Boiler control panel
50	Safety valve
60	Low water protection
70	Drain valve
80	Reduction sleeve
90	Pressure gauge
100	Pushbutton valve
110	Intermediate flange drilled
120	Burner
130	Boiler loading pump
140	3-way valve
150	Actuator
160	Fixed value controller
170	Immersion sleeve
180	Immersion sensor
190	Hoval calorifier Modul-plus
220	Calorifier Modul-plus control panel
230	Safety valve
240	Reduction sleeve
250	Drain valve
260	Calorifier Modul-plus loading pump
270	Expansion tanks
280	DHW circulation pump

Legend	
DHW	: Domestic hot water
CW	: Cold water
C	: Circulation



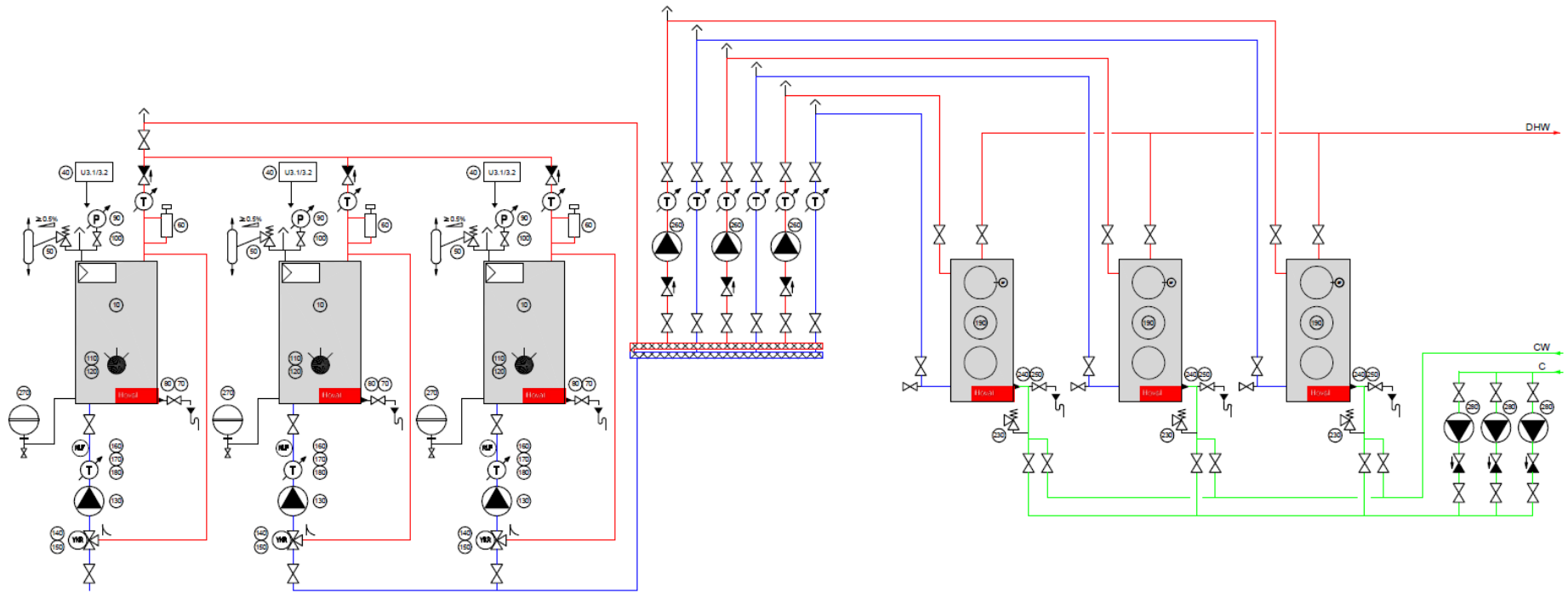
Double boiler cascade with digital control panel & Modul-plus

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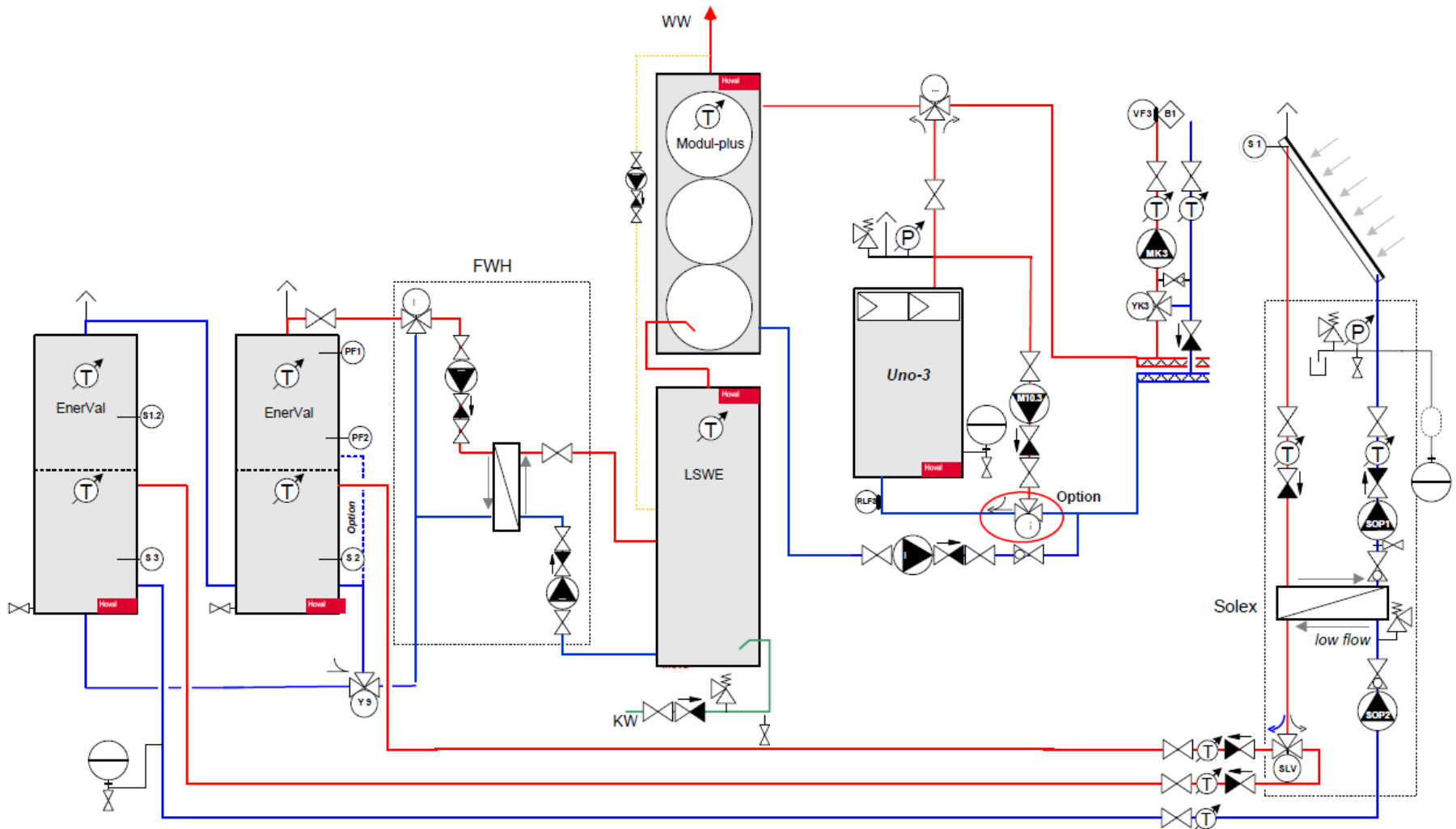
Tripple boiler cascade with digital control panel & Modul-plus

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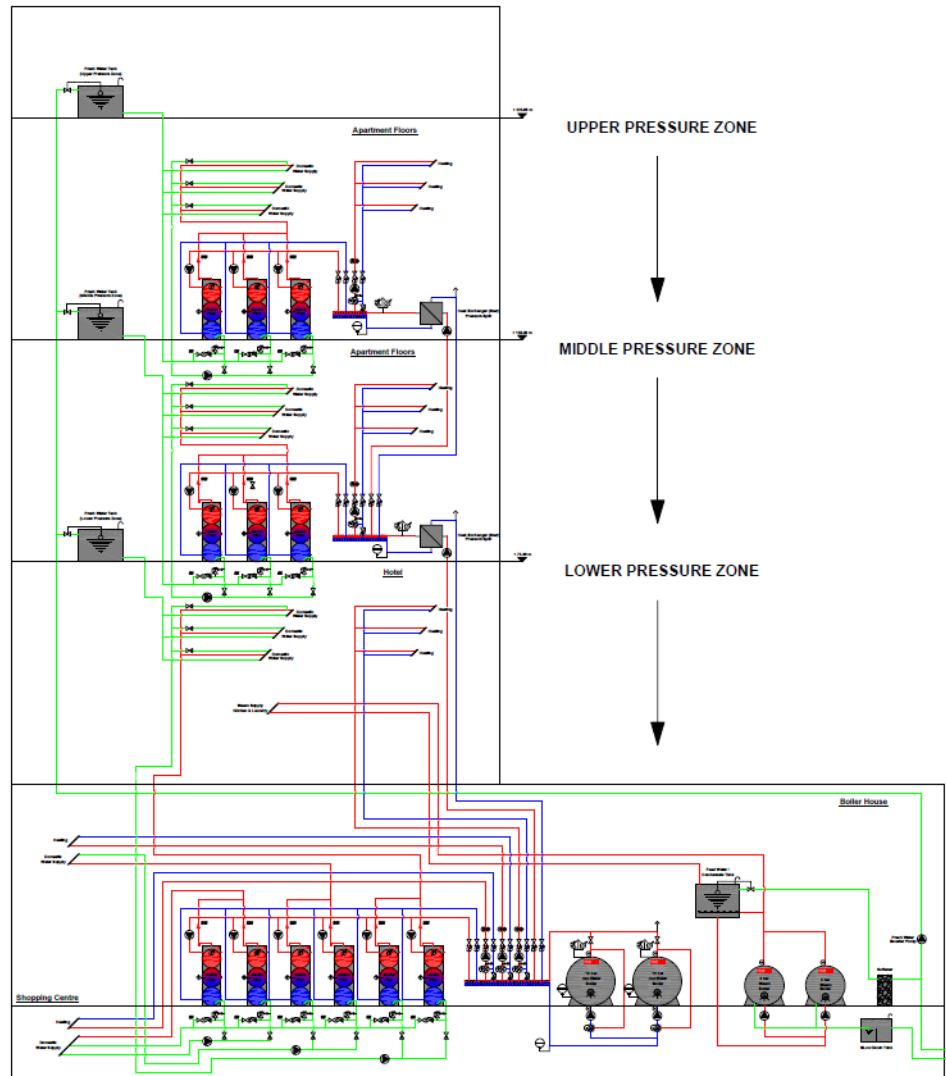
Modul-plus & solar with DHW prewarming tank for high solar fraction

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Modul-plus solution for high-rise buildings

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Hoval equipment installed:

- 3 hot water boilers Type Giga-3 (THW-I NTE) with each 1500 kW, maximal 1956 kW.
- 11 semi instantenous hot water heater in the complete complex: Type Modul-plus F-52 with a capacity of 11'150 liter an hour.
- 3 natural gas burner make Elmatic to suite the required input.



Modul-plus

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For superior hot water supply and secure protection against legionella in any commercial or large building. No matter what the requirements are, the Hoval Modul-plus high-output calorifier guarantees a perfect solution and best protection against legionella covering any hot-water output from 640 up to 17500 l/h.

Modul-plus is economical
High economic viability– low costs

Hoval



- Guaranteed enormous hot water production at peak times
- Boiler-Modul-plus cascade systems due to the control TopTronic® T
- Each individual Modul-plus can be temperature controlled

Modul-plus is ecological
No chance for legionella or other bacteria

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Conservation of energy – protection of the environment



- No possibility for breeding of legionnaires disease, due to the temperature and limited hot water storage
- 99% efficiency due to compact design and maximum insulation thickness

Modul-plus is easy to use
Simple handling

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- No calcification problem
- Internal inspection of every calorifier bottle easily possible through the inspection opening
- Any hot water demand can be adapted due to individual sized units
- Well proven, more than 500.000 calorifier bottles are in operation all over the world

**Modul-plus is clever
Compact and complete**

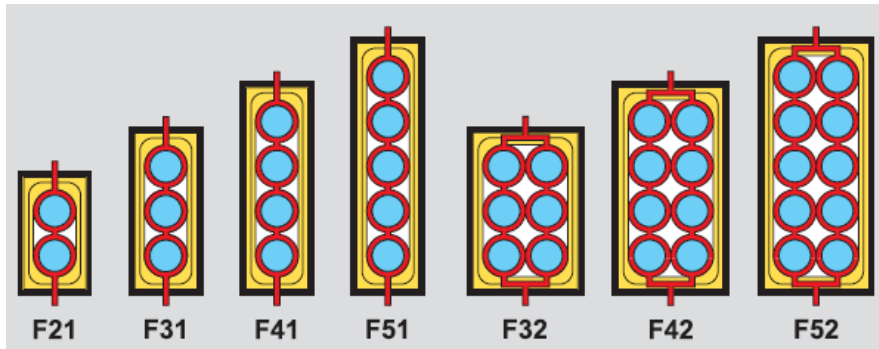
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- Very small dimensions allow to make the boiler room smaller, less pipe work and fittings
- Very little weight per square meter footprint
- Easily to install an additional Modul-plus unit for enlargement of the hot water production
- All Modul-plus types are able to handle

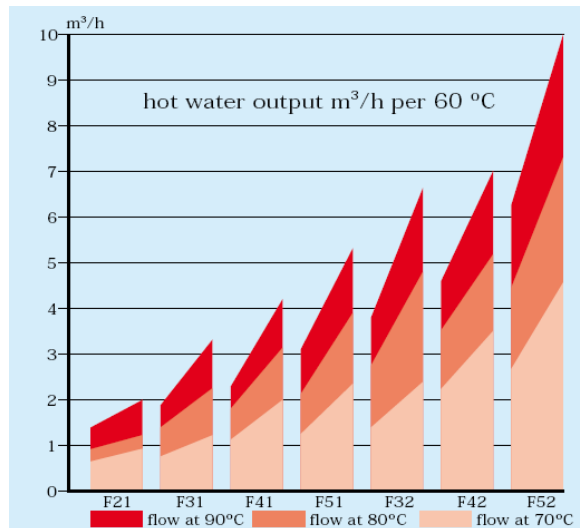


- For superior hot water supply and secure protection against legionella in large buildings
- Hygiene behaviour: simply unique
The hot-water cylinders that are positioned in sequence guarantee full flow – no dead zones.
- Double cover heating cylinders made of stainless steel for highest hygiene standards
- Energy consumption: modest principle of a flow heater
- Technology: indestructible
The robust build and the finish in high grade steel



Measured to demand to the fraction

- 7 different sizes and various variations of water temperature and flow volumes make possible an optimum implementation

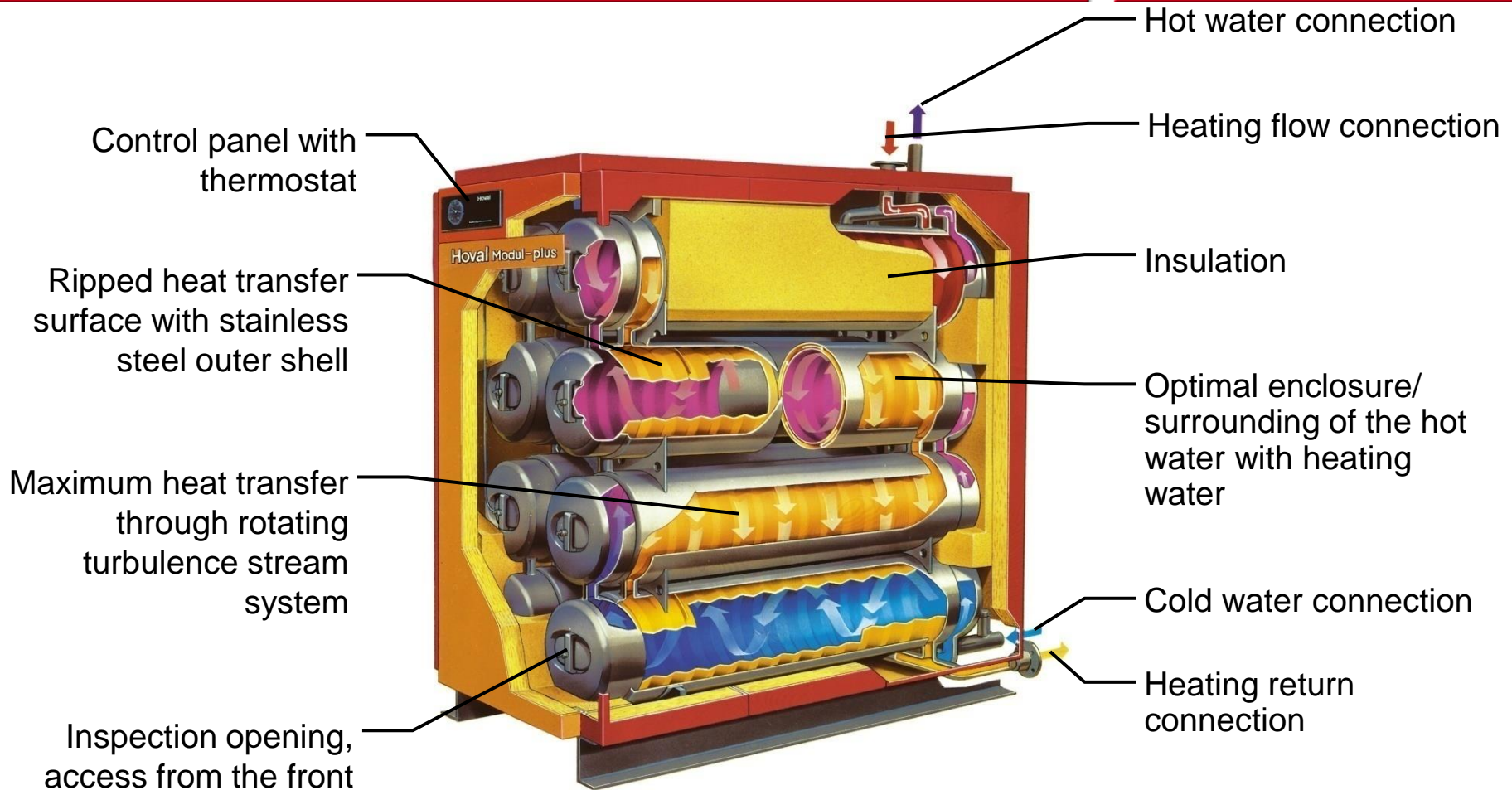


The cell principle

- Central are the integrated high grade steel heating cylinders
- Each modular unit: water content of 115 l and 1.42 m^2 heating surface

Modul-plus in detail

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Technical Data

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Technical data Hoval Modul-plus Type	(F21)	(F31)	(F41)	(F51)	(F32)	(F42)	(F52)
continous output at 45°C l/h*	2850	4600	6150	7900	9200	10500	15600
peak output at 45°C l/10 min min*	530	530	530	530	885	885	885
width mm	530	530	530	530	885	885	885
height mm	1615	1615	1800	2160	1615	1800	2160
depth mm	1872	1872	1872	1872	1872	1872	1872
storage content l	230	345	460	575	690	920	1150
heating surface m ²	2.84	4.26	5.68	7.1	8.52	11.36	14.2
weight**kg	165	215	265	315	370	470	570

* based on 10° C cold water in and 80° C boiler flow temperature

** without casing

subject to alterations

**Up to 300 mg/liter chloride content
DHW up to 10 bar, Heating up to 8 bar**

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All types of the Modul-plus can be used for different domestic hot water qualities.

Modul-plus type	Maximum chloride content of drinking water [mg/liter]	Working pressure [bar]	
		Drinking water	Heating
F21, F31, F41, F51, F32, F42, F 52	30	6	5
	100	6	5
	100 ←	10 ←	8
	200	6	5
	200 ←	10 ←	8
	300 ←	10 ←	8

- Modular system for small, medium or large DHW demand
- Small footprint low weight load
- Fresh DHW
- Hygienic water no legionella germs, no stagnant zones
- Combine with Hoval Uno-3, Max-3, CompactGas, THW-I (NTE) boilers
- Optimal for split systems (steam and hot water combined)
- Highest efficiency



**Technologically superior
indoor climate control solutions**

Hoval

Thank you for your attention.