Service efficiency

It often happens that a heat pump service efficiency is measured only by a heating factor, which is the relation of heat amount produced by a heat pump to a compressor power-consumption. However, it is necessary to realise that the total efficiency is affected by other factors as well. They are factors such as the power-consumption of additional equipment (pumps, ventilators etc.), the operation time of an additional heat source and especially heating regulation. A quality heating regulation and a heat pump operation control will save your electricity costs. Our company has been manufacturing air-conditioning regulators for 11 years and we use the gained experience also in producing heat pumps. As a producer of complete installations, we are able to perform "made-to-measure" regulation system adaptations.

How much you save

is not affected only
by heating factor
but also

by suitable regulation

Regulator

A quality regulating and control system is a key element of a heat pump. Most of JESY heat pumps are equipped with Regu PFR–TC and Regu AD–C regulators. They are microprocessor regulators which ensure efficient and problem-free operation of a heat pump. The basic Regu PFR–TC regulator characteristics are:

- communication on Czech
- weekly time programme with an 0.5°C precision temperature setting
- measured temperature discrimination at 0.1°C
- equithermal water temperature control
- additional (bivalent) source control
- checks of limit situations and a complete heat pump protection from damage
- displaying the temperatures measured by temperature sensors
- displaying operation modes
- possibility to install a remote control
- possibility to install a GSM control (control by means of SMS's)

Shall I get a heat pump?

Everybody must answer this question for oneself. To facilitate your decision-making, we offer you help with the following:

- obtaining detailed information
- technical solution of your situation
- design of a heating system
- preparing a price estimate
- installation and putting into service
- procurement of a state grant

JESY s.r.o. (Ltd.), Na Cvičírně 188, 267 27 Liteň, the Czech Republic
Phone: +420 311 684 298, +420 602 325 788 ¦ Fax: +420 311 684 379 ¦ E-mail: jesy@jesy.cz

www.tepelnacerpadla.info

Jesy

Heat Pumps

Czech product

For home comfort...

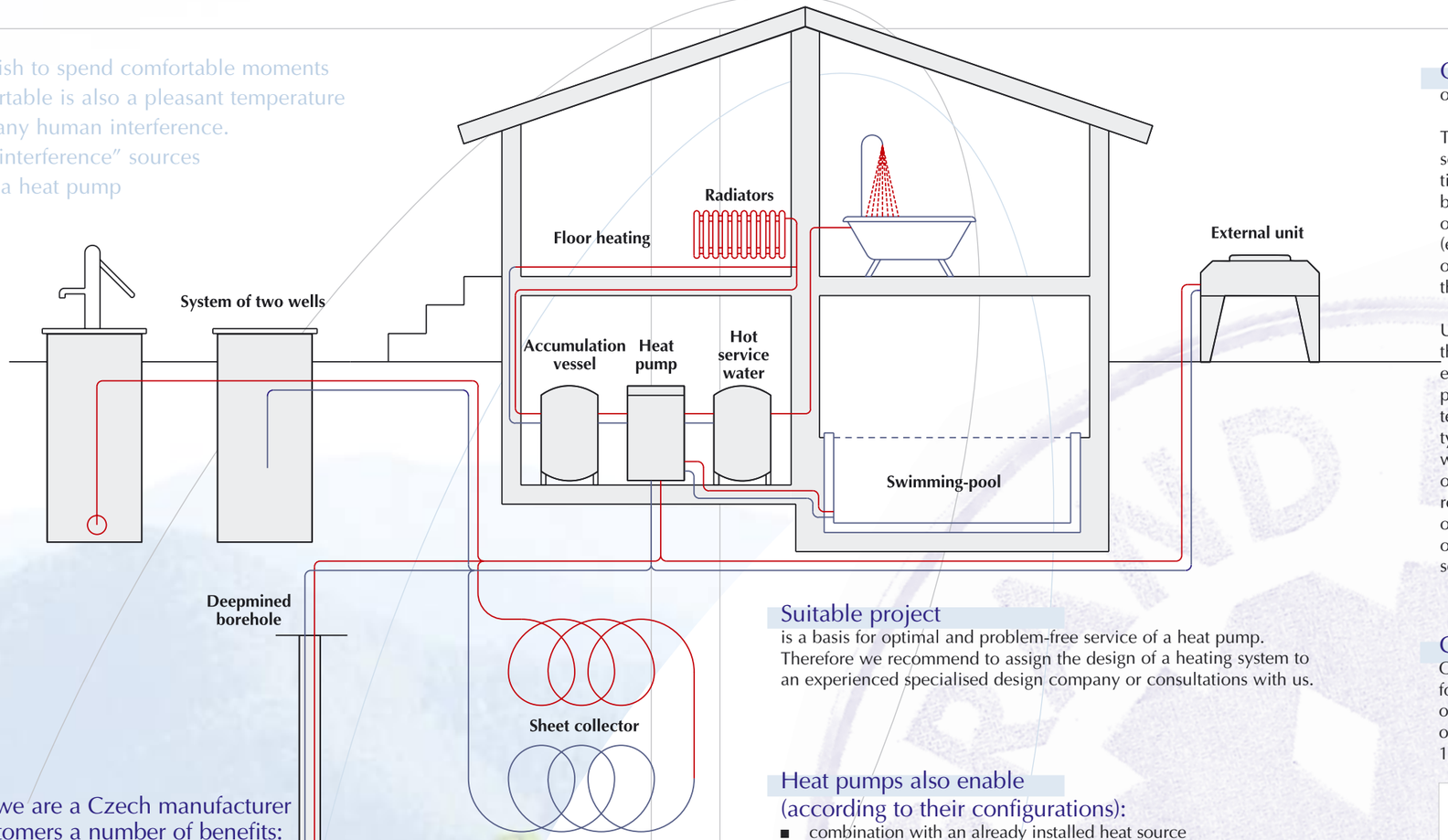
heating ■ service water heating ■ swimming-pool water heating

JESY Heat Pumps

Home is a place where most of people wish to spend comfortable moments of relaxation. What makes a home comfortable is also a pleasant temperature that is automatically maintained without any human interference. With regards to the service costs of "non-interference" sources of heat (electricity, propane, natural gas), a heat pump seems to be the most efficient source.

Getting a heat pump as an ecological and economical heating source for a family house is not a cheap investment. Our primary objective is to produce top quality products containing part which ensure a long lifetime and high service efficiency. Therefore the following are used in our heat pumps:

- coil compressors (SCROLL) – long lifetime, high efficiency and low noisiness
- stainless steel pipe heat exchangers – higher efficiency thanks to lower pressure losses and resistance to clogging in a primary system in a water-water type (as compared to plate exchangers); material chemical resistance enables, for example, a direct heating of swimming-pool water
- two-frame design – the lowest noisiness
- complex system of protection including the protection from power supply failures
- regulating system ensuring automatic operation
- and of course ecological CFC-free coolants



Suitable project

is a basis for optimal and problem-free service of a heat pump. Therefore we recommend to assign the design of a heating system to an experienced specialised design company or consultations with us.

Output decrease compensation

of air-water heat pumps

The outside air temperature (the primary heat source) changes significantly during the heating season. Because its decrease is followed by the decrease of an air-water heat pump output, an additional heat source is used (e.g. an electrical boiler). It cover only the output that a heat pump cannot obtain from the air on exceptionally cold days.

Using an additional heat source decreases the total heating system efficiency. A more effective solution could be offered by a heat pump output change in relation to outside temperature. This is used in the AirWatt 15D type, which contains 2 compressors – one with a lower output and one with a higher output. Depending on the amount of required heat, the first one works, or the other, or both of them together and a heat pump output is sufficient during the whole heating season except extremely cold days.

GRAND PRIX award

Our company was awarded the GRAND PRIX for the best exhibit at the FrigoTherm exhibition in Prague in 2002 for an effective heating output decrease compensation in the AirWatt 15D heat pump.

The fact that we are a Czech manufacturer bring our customers a number of benefits:

- acceptable price
- made-to-measure design
- specialist technical support
- problem-free guarantee as well as post-guarantee period servicing

Heat pumps also enable (according to their configurations):

- combination with an already installed heat source (electrical boiler, gas boiler, solid fuel boiler etc.)
- possibility of installing an electrical boiler as an additional (bivalent) heat source
- hot service water heating
- swimming-pool water heating
- cold water production for cooling in summer

GEOWATT	type range	AIRWATT
water–water, ground–water	heat pump system	air-water
deepmined borehole, sheet collector, ground water	primary heat source	outside air
internal unit (contains also a primary exchanger)	assembly	internal + external unit (divided due to the heat system protection from freezing at power supply failures
heat pump system, water exchangers (secondary, swimming-pool, hot service water), regulation system with its power part and security circuits, electrical boiler	internal unit	
primary and secondary water circuit and power supply connection	installation	external and internal unit connection (cooling and electrical circuit), secondary water circuit and power supply connection
6 to 16kW	standard output range	8 to 16kW
several pumps can be connected parallelly to get a higher output		

- low-speed ventilator with minimal noisiness
- possibility to choose a colour pattern
- anticorrosion protection – zinc-coated sheet metal with durable colour

The source of primary heat

for GeoWatt heat pumps is geotherm heat. It can be obtained, for example, from these sources:

- deepmined borehole – the most stable heat source with minimal space requirements; high purchase costs
- sheet collector – a stable heat source requiring a larger site; lower purchase costs
- ground water – prerequisite of a sufficient amount of water (tens of litres per minute); the cheapest source of primary energy

With regard to a relatively stable source of primary heat, heat pumps have almost constant output during the whole heating season.