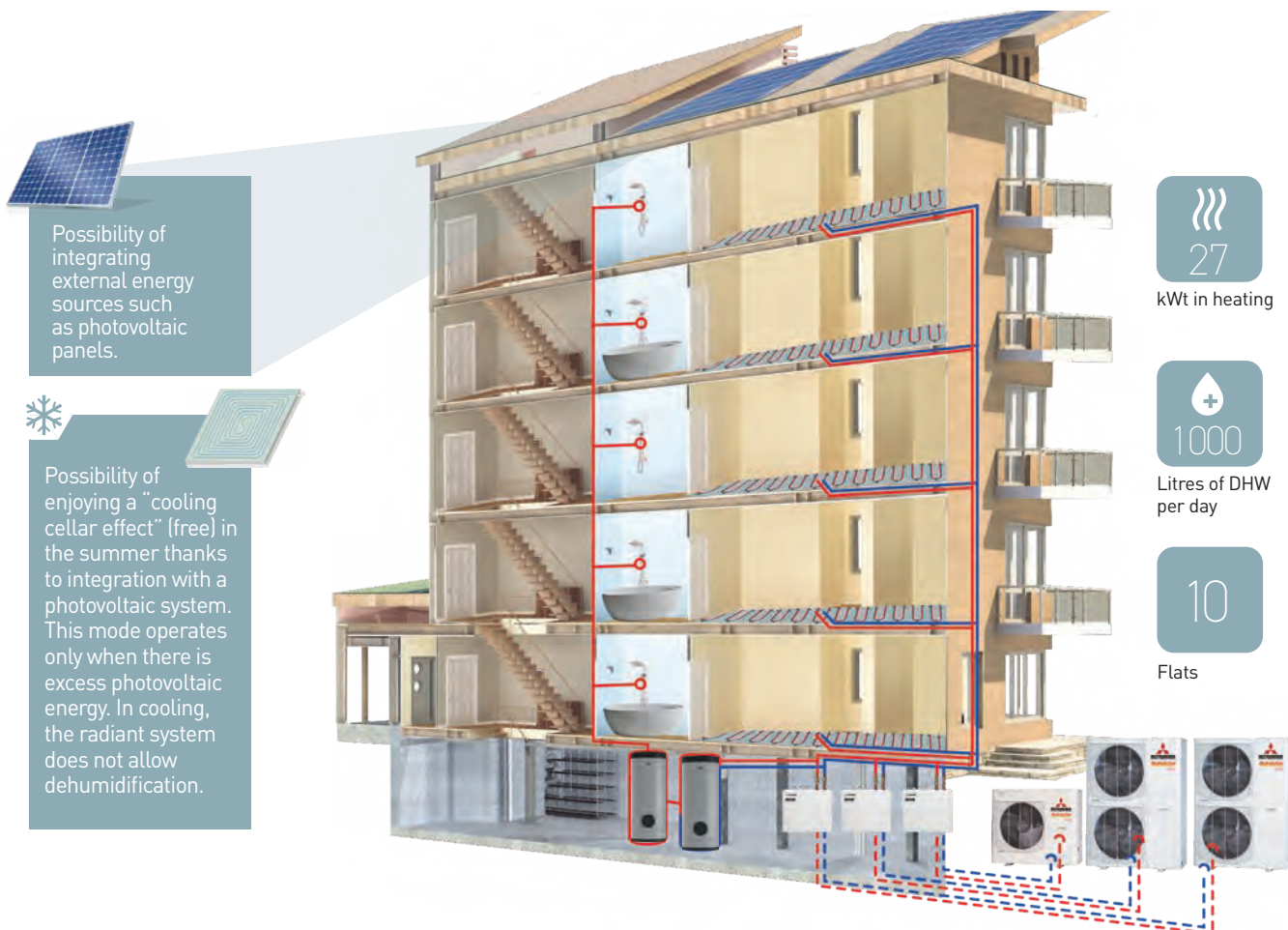


APARTMENT BUILDINGS

Centralised heating and DHW, with cool effect, through HYDROLUTION Flexible modular heating



Possibility of integrating external energy sources such as photovoltaic panels.



Possibility of enjoying a "cooling cellar effect" (free) in the summer thanks to integration with a photovoltaic system. This mode operates only when there is excess photovoltaic energy. In cooling, the radiant system does not allow dehumidification.

27

kWt in heating

1000

Litres of DHW per day

10

Flats



underfloor heating



centralised cooling effect



DHW combined with heating

SYSTEM DESCRIPTION

HYDROLUTION in Flexible modular combination of up to 128 kW, meeting building heating and DHW needs simultaneously.

Supposing we have a newly built condominium consisting of 10 flats (70 m² each) estimated heating demand is about 27 kWt.

This demand is met by two 14 kW HYDROLUTION and one 10 kW HYDROLUTION in combination, which supply a radiant flooring system and produce the apartment building's daily DHW demand of around 1000 litres.

CONTROL SYSTEM

The **single** control **RC-HY40-W** has been created to maximise the potential of HYDROLUTION in the modular Flexible heating configuration, allowing for the following:

- Management of up to 8 systems in heating configuration.
- Management of up to 8 distribution systems at different temperatures (i.e. radiant panels and radiators) using the ECSM40/ ECSM41 accessory kit.
- Guaranteeing efficient adjustment, system durability and service continuity.
- Accounting and allocating of energy consumption by means of a RC-HY40-W control energy meter kit connection.



RC-HY20/40-W control unit

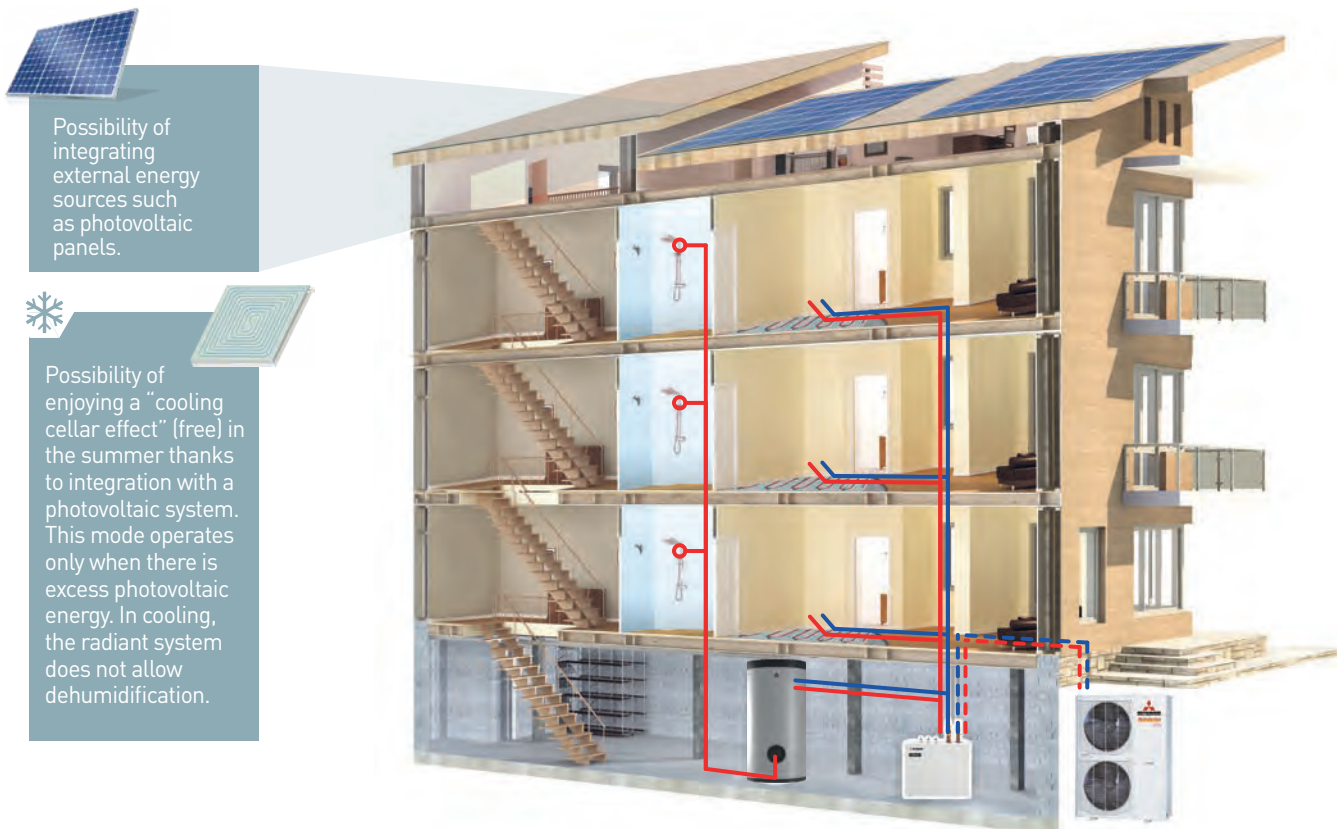


ECSM40/ ECSM41 kit

Calculation according to UNI TS 11300-2

SMALL APARTMENT BUILDINGS

Centralised heating and DHW, with cool effect, through HYDROLUTION Flexible



Possibility of integrating external energy sources such as photovoltaic panels.



Possibility of enjoying a "cooling cellar effect" (free) in the summer thanks to integration with a photovoltaic system. This mode operates only when there is excess photovoltaic energy. In cooling, the radiant system does not allow dehumidification.



underfloor heating



DHW combined with heating



centralised cooling effect

SYSTEM DESCRIPTION

The type of application illustrated in the figure above describes a system inside a small apartment building in which the heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration, with domestic hot water production combined with heating: the DHW tank that can be applied has a capacity from 300 to 500 litres. HYDROLUTION produces hot water for heating up to a maximum temperature of 58°C.

In this example, it is combined with low temperature radiant panels, which can also be used in summer to produce a 'cooling cellar effect'. This centralised solution can always be paired with autonomous split systems.

CONTROL SYSTEM

RC-HY20/40-W is a control system that can be combined with HYDROLUTION in the Flexible heating and DHW configuration to:

- Guarantee regulation efficiency by monitoring the DM parameter.
- Manage the delivery temperature to the system automatically by means of system climate control.
- Set the on/off timer.
- Set the 3 control levels (economic, normal, luxury) for DWH production.
- Manage the Anti-legionella cycles and DHW recirculation pump activation.
- Manage the integration of external energy sources (only with RC-HY40-W).



RC-HY20/40-W control unit

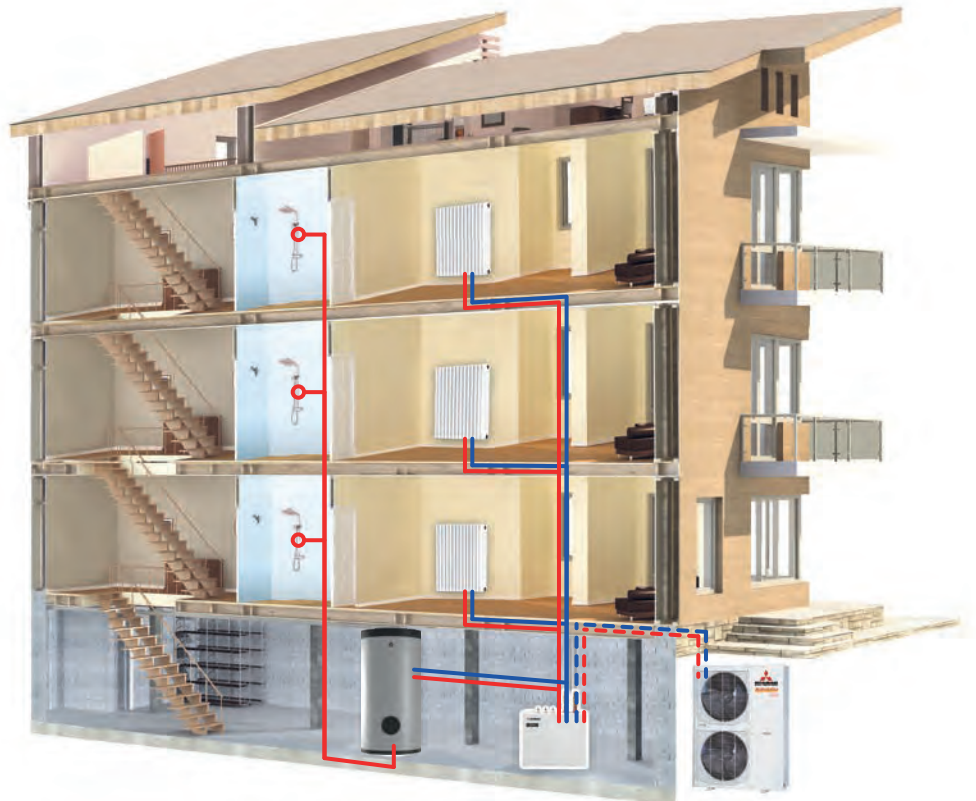
SMALL APARTMENT BUILDINGS

Centralised heating and DHW, through HYDROLUTION Flexible

SYSTEM DESCRIPTION

The type of application illustrated in the figure to the side describes a system inside a small apartment building in which the centralised heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration, with domestic hot water production combined with heating: the DHW tank that can be applied has a capacity from 300 to 500 litres.

HYDROLUTION produces hot water for heating up to a maximum temperature of 58°C. In this example, it is combined with medium temperature heating elements (radiators). It is possible to provide for more than one outdoor unit in modular combination with the RC-HY40-W control unit.



heating with
high efficiency
radiators



DHW combined
with heating

CONTROL SYSTEM

RC-HY20/40-W is a control system that can be combined with HYDROLUTION in the Flexible heating and DHW configuration to:

- Guarantee regulation efficiency by monitoring the DM parameter.
- Manage the delivery temperature to the system automatically by means of system climate control.
- Set the on/off timer.
- Set the 3 control levels (economic, normal, luxury) for DHW production.
- Manage the Anti-legionella cycles and DHW recirculation pump activation.
- Manage the integration of external energy sources (only with RC-HY40-W).



RC-HY20/40-W
control unit

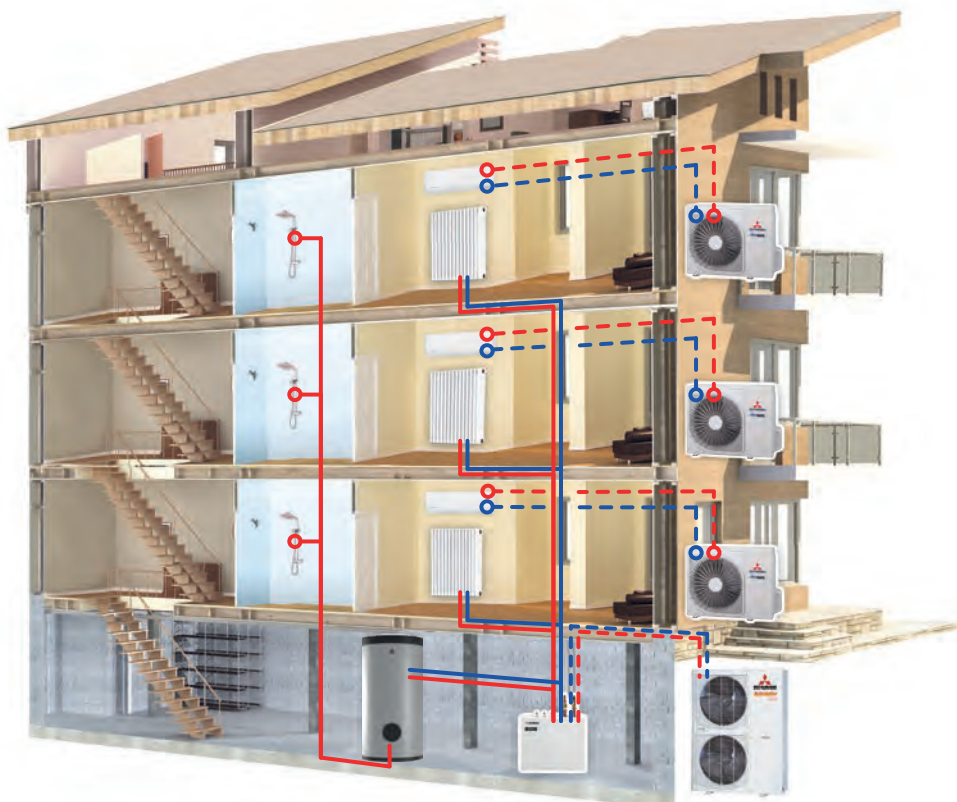
SMALL APARTMENT BUILDINGS

Centralised heating and DHW, through HYDROLUTION Flexible, autonomous cooling with monosplit/multisplit systems

SYSTEM DESCRIPTION

The type of application illustrated in the figure to the side describes a system inside a small apartment building in which the centralised heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration, with domestic hot water production combined with heating: the DHW tank that can be applied has a capacity from 300 to 500 litres. HYDROLUTION produces hot water for heating up to a maximum temperature of 58°C. In this example, it is combined with medium temperature heating elements (radiators). It is possible to provide for more than one outdoor unit in modular combination with the RC-HY40-W control unit.

The autonomous cooling system is composed of a heat pump system (monosplit/multisplit systems) servicing each apartment with outdoor units on the balcony.



SISTEMA DI CONTROLLO

RC-HY20/40-W è il sistema di controllo abbinabile a HYDROLUTION in configurazione Flexible heating e ACS e consente di:

- garantire efficienza nella regolazione tramite il monitoraggio del parametro DM;
- gestire la temperatura di mandata all'impianto in maniera automatica tramite regolazione climatica del sistema;
- impostare timer di accensione/spegnimento;
- impostare 3 livelli di controllo (economico, normale, lusso) per la produzione di ACS;
- gestire i cicli antilegionella e l'attivazione della pompa di ricircolo dell'ACS;
- gestire l'integrazione di fonti di energie esterne (solo con RC-HY40-W).



RC-HY20/40-W
control unit

This type of system is especially suitable for major renovations with insulation, where the goal is to achieve results in terms of energy savings and comfort during summers without intervening with drastic and costly system revisions.

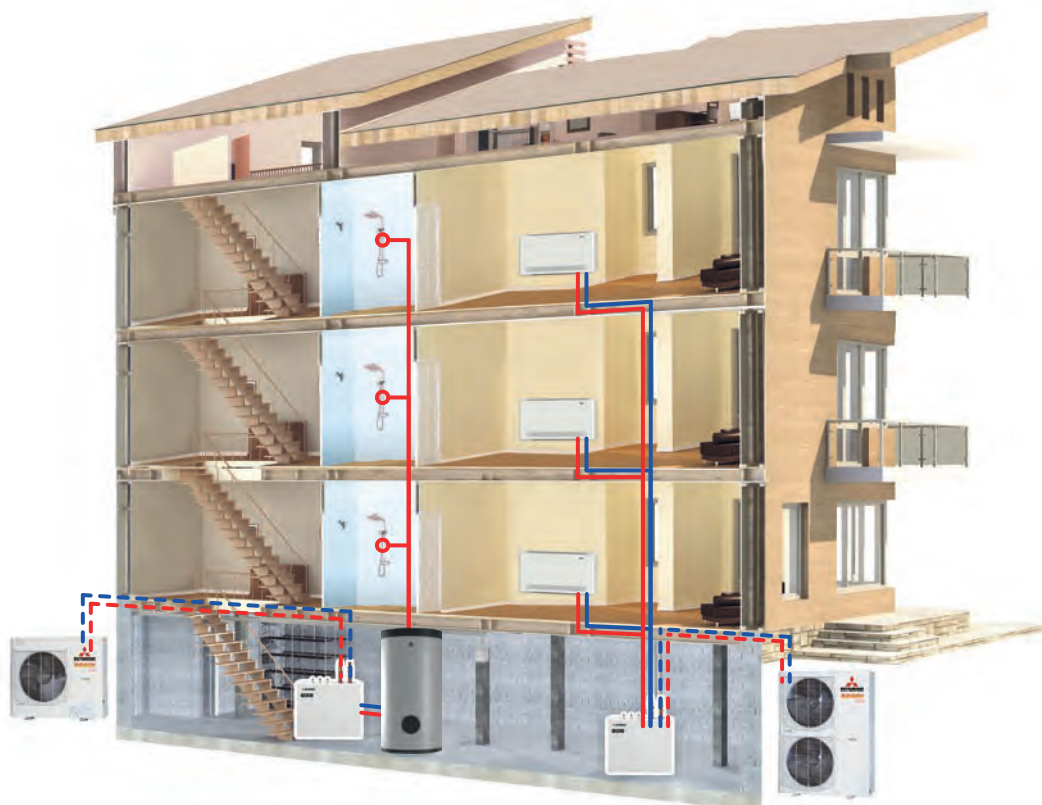
SMALL APARTMENT BUILDINGS

Centralised heating, cooling and DHW through HYDROLUTION Flexible

SYSTEM DESCRIPTION

The type of application illustrated in the figure to the side describes a system inside a small newly built apartment building in which the heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration, with domestic hot water production combined with heating: the DHW tank that can be applied has a capacity from 300 to 500 litres. HYDROLUTION produces hot water for heating up to a maximum temperature of 58°C. In this example, it is combined with warmcoils.

In this configuration, the HYDROLUTION system is capable of effectively cooling the premises during the summer months.



heating with warmcoil



DHW with Hydrolution Flexible



cooling with warmcoil

CONTROL SYSTEM

RC-HY20/40-W is a control system that can be combined with HYDROLUTION in the Flexible heating and DHW configuration to:

- Guarantee regulation efficiency by monitoring the DM parameter.
- Manage the delivery temperature to the system automatically by means of system climate control.
- Set the on/off timer.
- Set the 3 control levels (economic, normal, luxury) for DHW production.
- Manage the Anti-legionella cycles and DHW recirculation pump activation.
- Manage the integration of external energy sources (only with RC-HY40-W).



RC-HY20/40-W control unit

WHAT IS A WARMCOIL?

A warmcoil is a particular radiant effect fan coil which works with very low air movement in the winter and allows for effective air conditioning in the summer.



Calculation according to UNI TS 11300-2

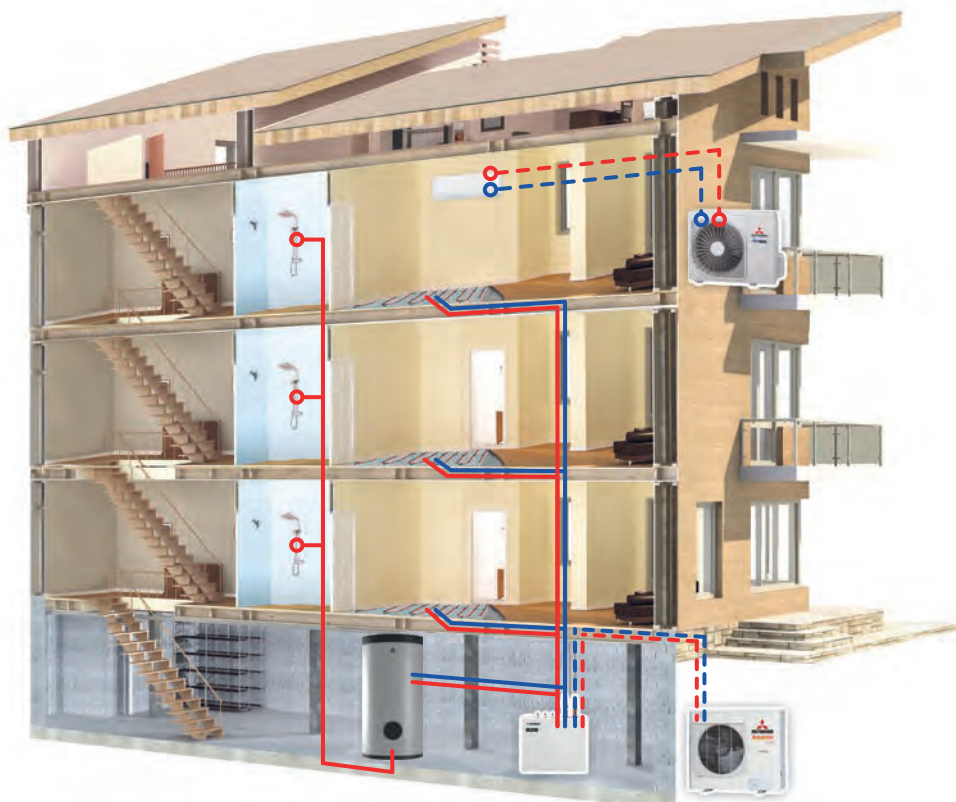
SMALL APARTMENT BUILDINGS

Centralised heating and DHW, through HYDROLUTION Flexible and autonomous cooling with monosplit/multisplit systems

SYSTEM DESCRIPTION

The type of application illustrated in the figure to the side describes a system inside a small apartment building in which the centralised heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration, with domestic hot water production combined with heating: the DHW tank that can be applied has a capacity from 300 to 500 litres. HYDROLUTION produces hot water for heating up to a maximum temperature of 58°C. In this example, it is combined with low temperature heating elements (radiant panels).

The autonomous cooling system is composed of a heat pump system (monosplit/multisplit systems) servicing each apartment with outdoor units on the balcony.



underfloor
heating



DHW combined
with heating



autonomous
cooling

CONTROL SYSTEM

RC-HY20/40-W is a control system that can be combined with HYDROLUTION in the Flexible heating and DHW configuration to:

- Guarantee regulation efficiency by monitoring the DM parameter.
- Manage the delivery temperature to the system automatically by means of system climate control.
- Set the on/off timer.
- Set the 3 control levels (economic, normal, luxury) for DHW production.
- Manage the Anti-legionella cycles and DHW recirculation pump activation.
- Manage the integration of external energy sources (only with RC-HY40-W).



RC-HY20/40-W
control unit

INDEPENDENT HOMES

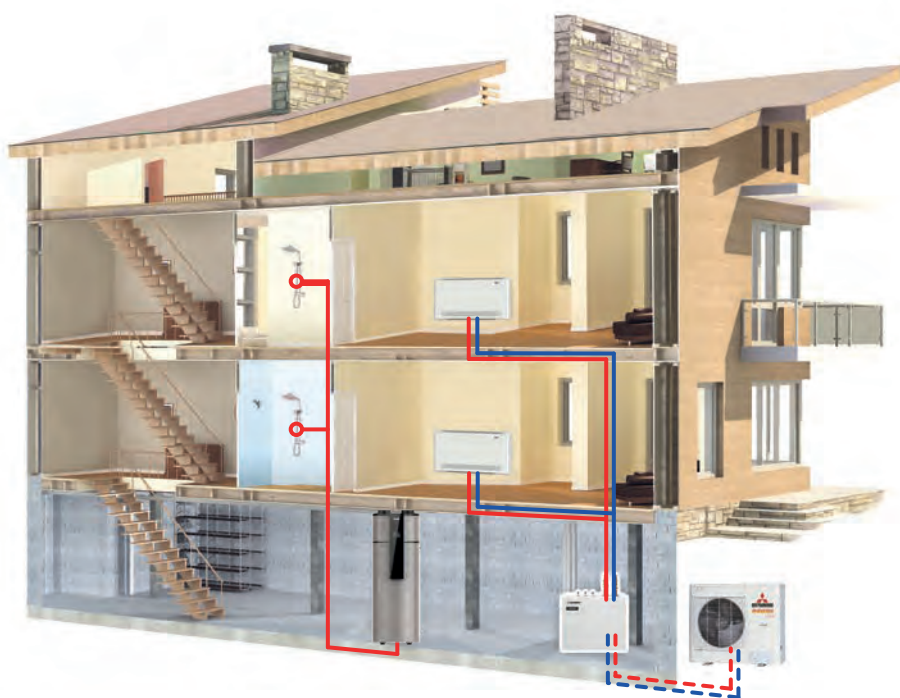
Autonomous heating and cooling, through HYDROLUTION Flexible and **DHW** through Hot Water

SYSTEM DESCRIPTION

The type of application illustrated in the figure to the side describes a newly built independent home system in which heating is composed of a HYDROLUTION system in Flexible heating and DHW configuration. The production of domestic hot water is performed by the Hot Water system: the DHW tank has a capacity of over 180 litres. HYDROLUTION produces hot water for heating up to a maximum temperature of 58° C. In this example, it is combined with warmcoils.

In this configuration, the HYDROLUTION system is capable of effectively cooling the premises during the summer months.

Can connect the RMU40M remote control with built-in room sensor (only if RC-HY40-W is present). It is possible to provide for more than one outdoor unit in modular combination with the RC-HY40-W control unit.



heating with
warmcoil



DHW with
Hot water



cooling with
warmcoil

CONTROL SYSTEM

In the context of this type of system, the **RC-HY20/40-W** is a control system that can be combined with the HYDROLUTION Flexible. The control panel can be used to program HYDROLUTION operation in heating/Silent/DHW mode. More specifically, the control lets you:

- Create 3 daily operating programs in heating.
- Create 2 hourly operating programs in "Silent" mode.
- Reduce heating and suspend DHW production via the "Holiday" setting.
- Set the 3 control levels (economic, normal, luxury) for DWH production.
- Set the "Temporary luxury" function.
- Manage the integration of external energy sources (only with RC-HY40-W).



RC-HY20/40-W
control unit

WHAT IS A WARMCOIL?

A warmcoil is a particular radiant effect fan coil which works with very low air movement in the winter and allows for effective air conditioning in the summer.



Calculation according to UNI TS 11300-2