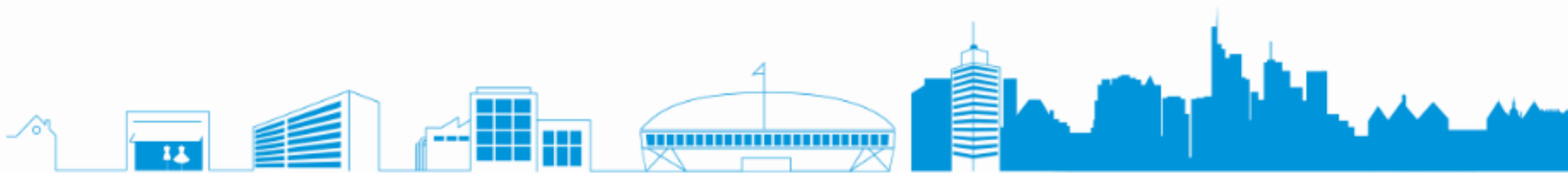




Daikin Applied Smart Control Solutions



Chiller Intelligent Manager

iCM is responsible for the optimal sequencing and staging of Chillers, Heat Pumps and Multipurpose units composing a Plant.

With the new version of iCM implemented onto Microtech® 4 controller, it is also possible to manage mixed Plant configurations in both, Heating and Cooling modes. The extended iCM architecture integrates the management of the Cooling Tower Fans and the Pumps at the evaporator and condenser.

Key Benefits

- ↑ Performance
- ↓ Energy & Maintenance Costs
- ↑ Reliability & lifetime

Remote control and monitoring through **Daikin on Site**

No additional installation required for MT4 equipped units

Daikin on Site is the unique solution for remote monitoring and smart maintenance. It allows a complete remote operation of every unit with different users and levels of access.



Daikin on site is fully compatible with All Daikin Applied Europe products and it can integrate **third-party** products like IoT devices (i.e. IAQ sensors).

- REMOTE MONITORING
- REPORTING
- ALARM TROUBLESHOOTING
- ENERGY ANALYSIS

BUILDING MANAGEMENT SYSTEM INTEGRATION

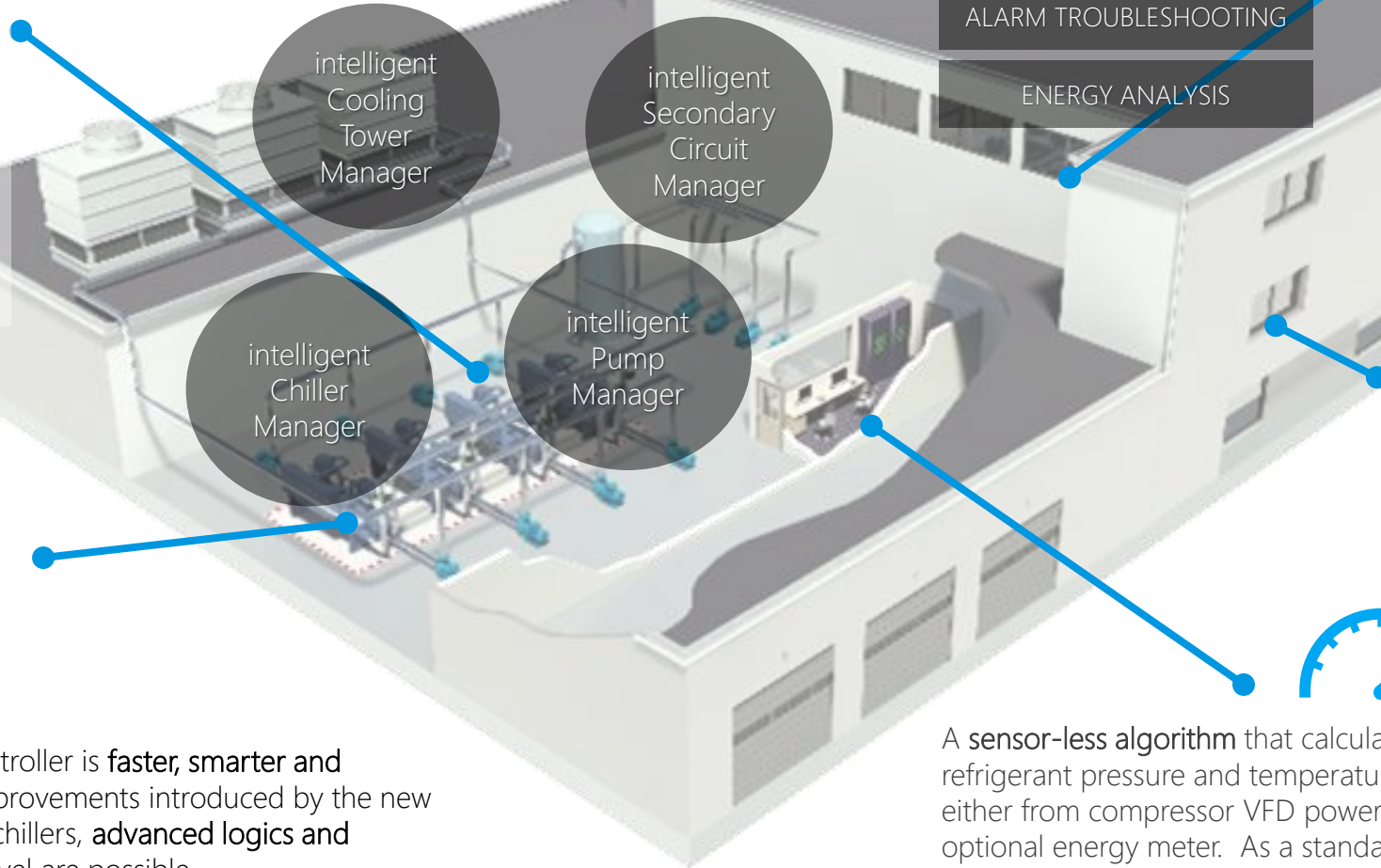


With MT4 the communication protocols such as **Modbus** and **BACNet** are available directly from the unit controller.

PERFORMANCE MONITORING

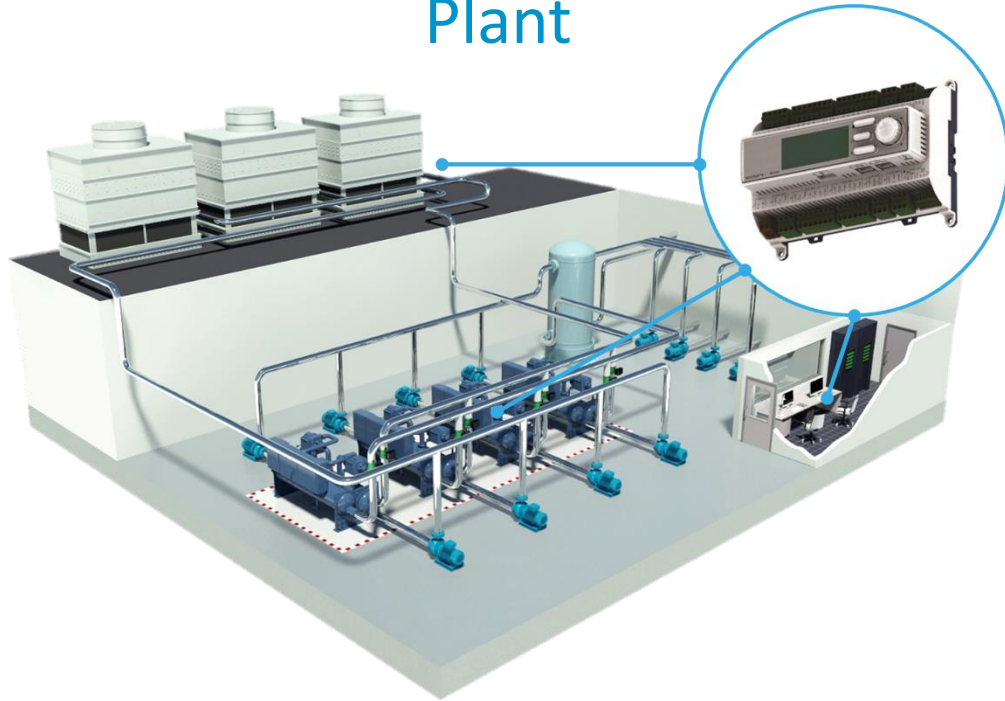


A **sensor-less algorithm** that calculates the unit cooling capacity by using refrigerant pressure and temperature readings. Electrical power is calculated either from compressor VFD power and fan, or directly measured through optional energy meter. As a standard, **no extra-hardware** is required.



The new Microtech® 4 (MT4) controller is **faster, smarter and connected**. With the hardware improvements introduced by the new controller on all air/water cooled chillers, **advanced logics and algorithms** development at unit level are possible.

The **unique control solution** to optimize the performance of your Plant



Key Benefits

↑ Performance

↓ Energy & Maintenance Costs

↑ Reliability & lifetime

Remote control and monitoring with DoS

**No additional installation required for MT4
equipped units**

*Daikin is the **best qualified partner** to optimize the operation of **Daikin** chiller plant rooms.*

Master/Slave

intelligent Chiller Manager

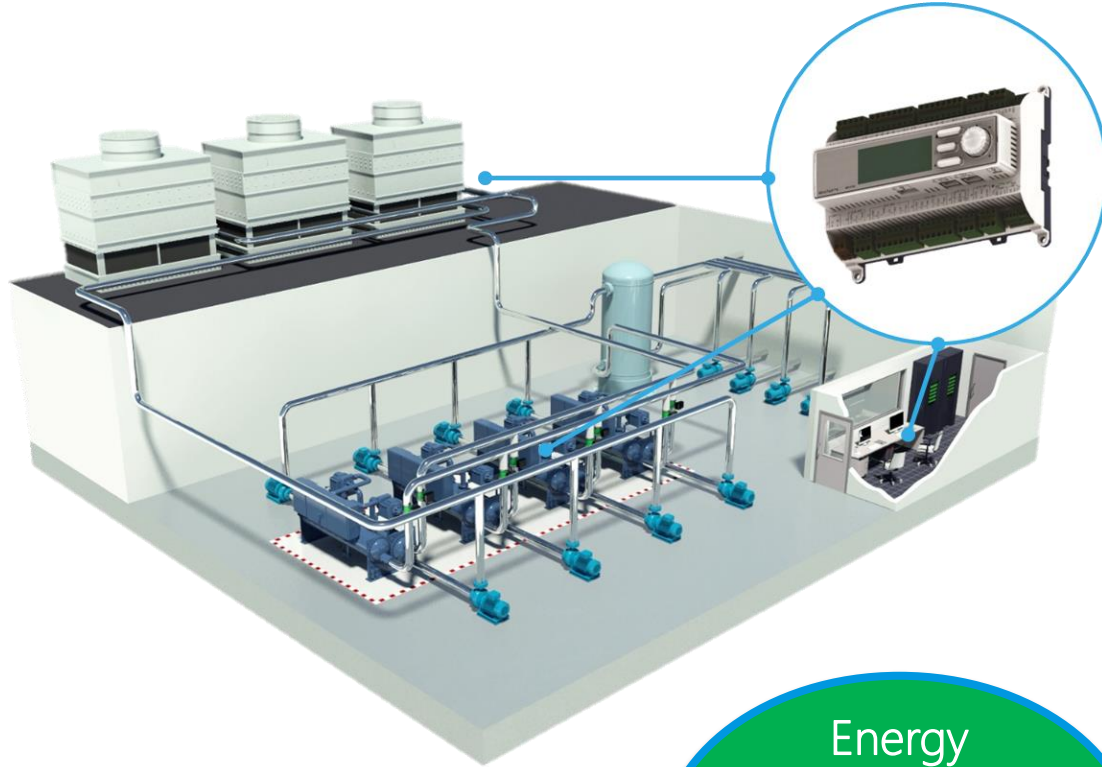
Standard control feature

Up to 4 chiller

Units must be the same

Simple Sequencing

Fixed Staging based on Temperature



Advanced control feature

Up to 8 chiller

Units can be a Mix

Advanced Sequencing

Staging based on Temperature, Load and Unit Capacity control

Energy Savings thanks to full Unit capacity control

iCM – the intelligent Chiller Manager

intelligent Cooling Tower Manager

Cooling towers can be controlled by iCT. iCT is a set of functionalities that can be activated onto the iPM for condenser pumps

intelligent Pump Manager – condenser side

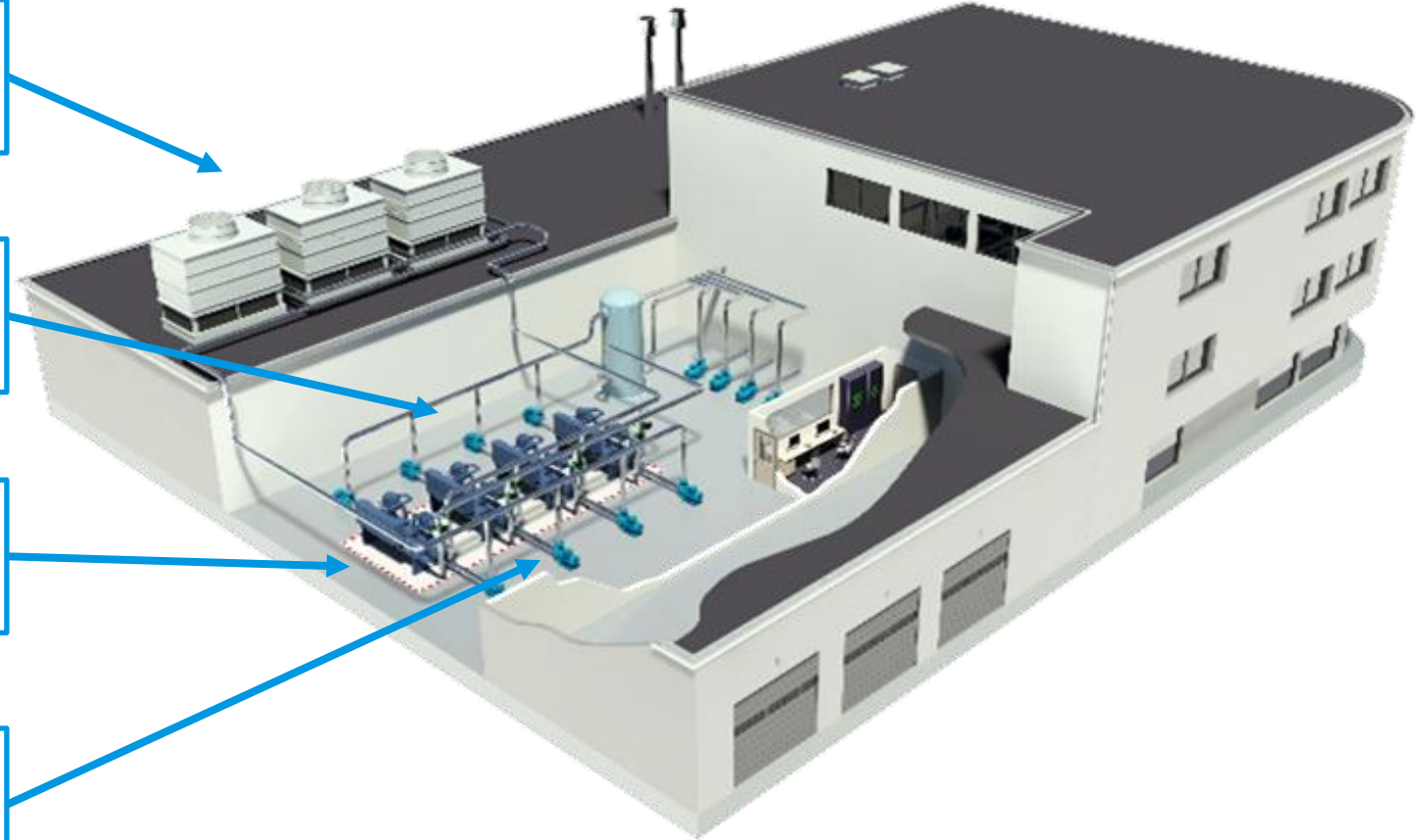
Condenser pump management can be done either by iCM if they are dedicated or by iPM in case they are manifolded. Bypass valve can be also controlled

intelligent Chiller Manager

iCM is a set of functionalities embedded onto Microtech 4 controllers and is able to sequence and stage Chillers in different plant configurations

intelligent Pump Manager – evaporator side

Evaporator Pump Management can be done by iCM if pumps are dedicated or by iPM if pumps are manifolded. Bypass valve can be also controlled



What is iCM?

iCM[®] is the acronym for: **intelligent Chiller Manager**. It is composed by a set of new control functionalities which can be activated on **Microtech 4** controllers.

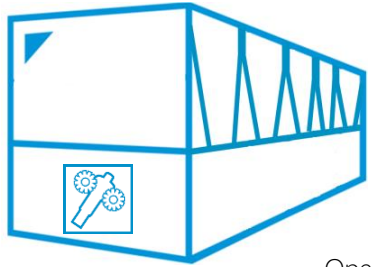
These functionalities are related to:

1. **Sequencing**: the best sequence that can be obtained from a plant composed by different units tackling with specific unit condition, such as:
 - Running Hours
 - Number of activations
 - Priority (equal for all units by default)
2. **Staging**: based on the plant load and units conditions, the best load distribution among the units is set in order to let each unit operate in their optimal operating areas.
3. **Control features management**: in case of units with special control features, iCM will take them into account on its logic. The control features that iCM can manage are:
 - Heat Recovery
 - Free-cooling
 - Demand Limit
 - Energy Monitoring

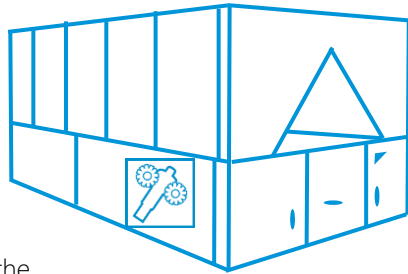
What is iCM? Plant composition

iCM can control plant composed by mix of units (up to 8!)

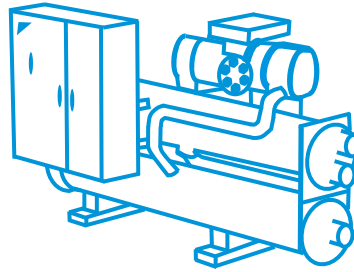
Air-Cooled
Chillers
Screw and Scroll



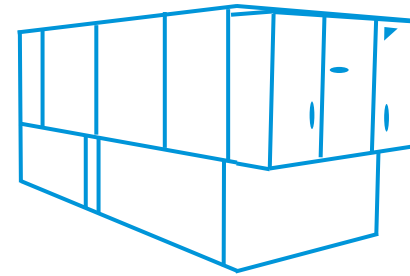
Air-Cooled
Heat Pumps
Screw and Scroll



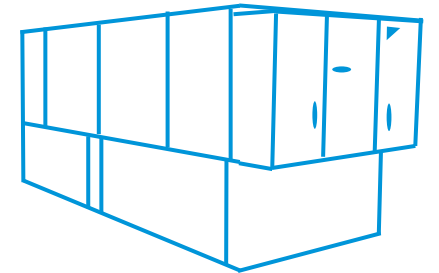
Water-Cooled
Chillers or
Heat Pumps



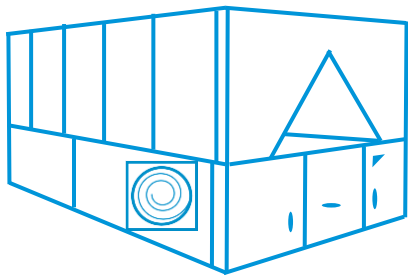
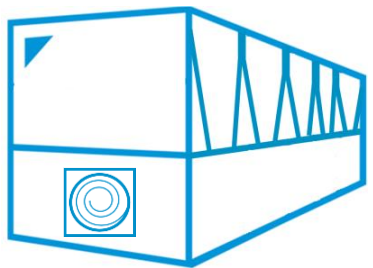
Multipurpose
units



Multipurpose
Units and
Screw Chillers



Operating at the
same running
mode



with or without
Heat Recovery or Free Cooling

only cooling loop

Sequencing Logic

This function decides which unit must start or stop by selecting the Next-On and Next-Off unit

Case 1

The Operator set the units priority

- A. **NEXT ON** unit will be the one with highest priority, less running hours, lower number of starts;
- B. **NEXT OFF** unit will be the one with lowest priority, more running hours, higher number of starts;

Case 2

The Unit priority are all the same or, for some reason, the running hours and number of starts are the same

Units with same priority, running hours and number of starts are taken into consideration



iCM[©] control tries to balance the running hours of the units increasing the overall system life cycle.

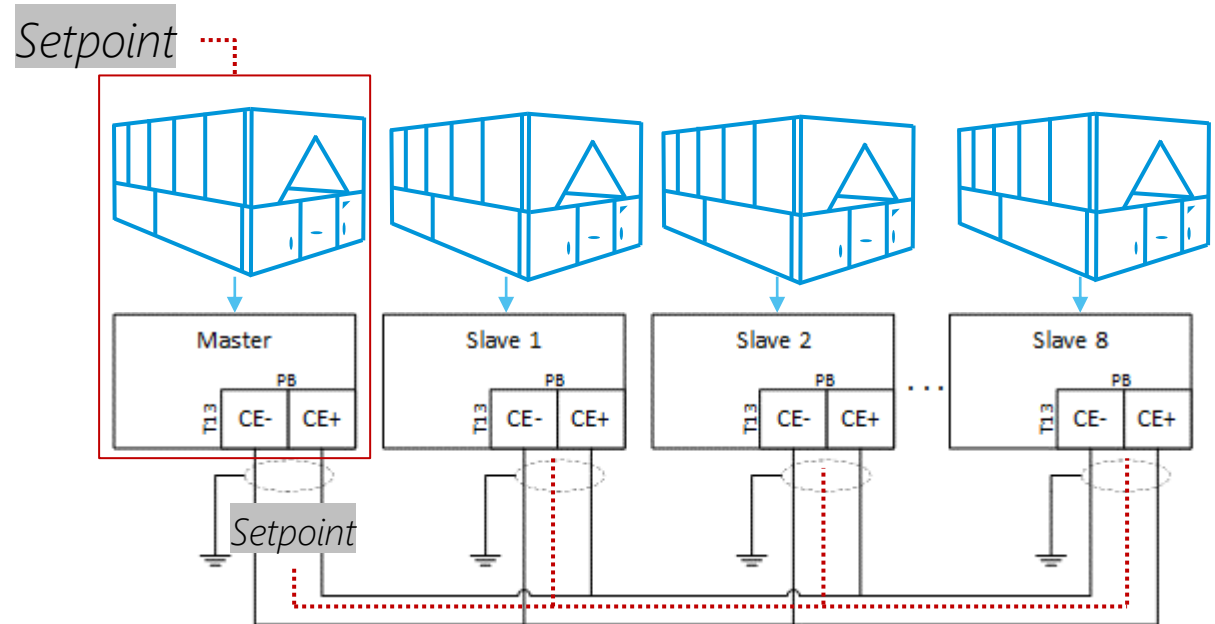
Staging Logic

This function decides when a unit should start or stop in order to achieve and keep system water setpoints

Staging requires to start or stop the units to **keep controlled temperature** as closest as possible to the **system water temperature target**.

There are **two Staging control strategies**:

1. Staging based on Temperature
2. Staging based on Capacity range



Unit Capacity Control

Systems composed by Chillers, Heat Pumps or a Mix of them

Unit Capacity control uses different strategy to choose the unit to load or unload

In case of need to **load up** a unit, iCM[©] will force always the unit with lowest capacity among the running units.

- The Loading strategy in this case is called Min Load

In case of need of unit **unload**, the operator can select three different methods:

- Hi Load
- Lo Load
- Next Off

Heat Recovery with iCM

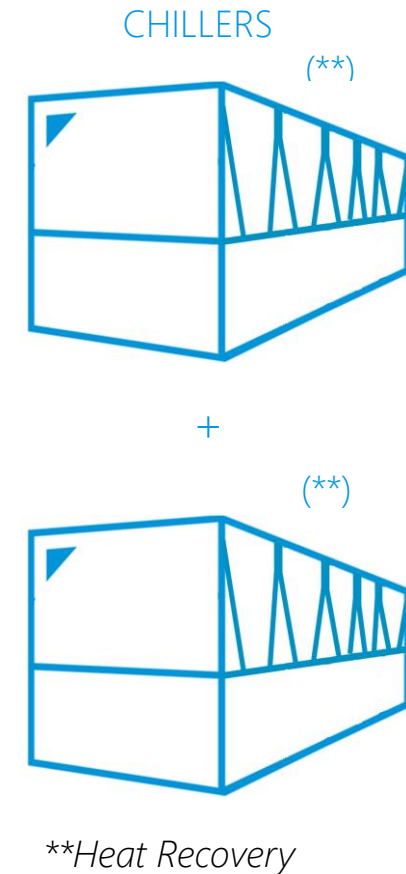
iCM[®] prioritizes the units with Heat Recovery to satisfy the heat demand without affecting the system stability

Cooling demand has a higher priority over the heating demand

- ➡ If the cool demand is not satisfied, the iCM[®] will stage up all the units with Heat Recovery
- ➡ If the Heat Recovery target is not satisfied, iCM[®] will activate the heat recovery on each of those, including the running units

Attention

The Master controller must have the Heat Recovery option enabled



Staging Logic with Multipurpose Units

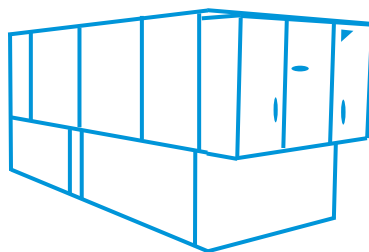
A multipurpose unit manages the start/stop of the circuit and the changeover mode (cooling, heating or Water)

- In **cooling mode**, circuit is providing only cooling water
- In **heating mode**, circuit is providing only hot water
- In **water mode** is providing cool and heat water at the same time

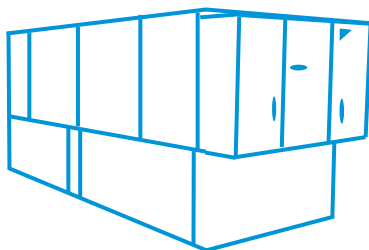


iCM[®] manages all the available circuits of all connected units, trying to minimize the number of running units through Circuit Control function

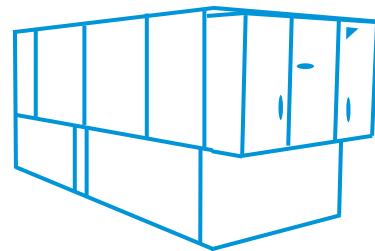
MULTIPURPOSE UNITS



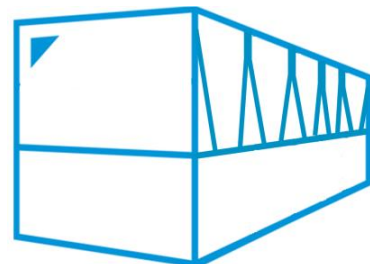
+



MULTIPURPOSE UNITS + CHILLERS



+



Staging on capacity range and control of unit capacity is not available when a System is composed by at least a Multipurpose unit because of the thermostatic control of each unit that manages to reach and maintain the active targets (cold and hot)

Attention

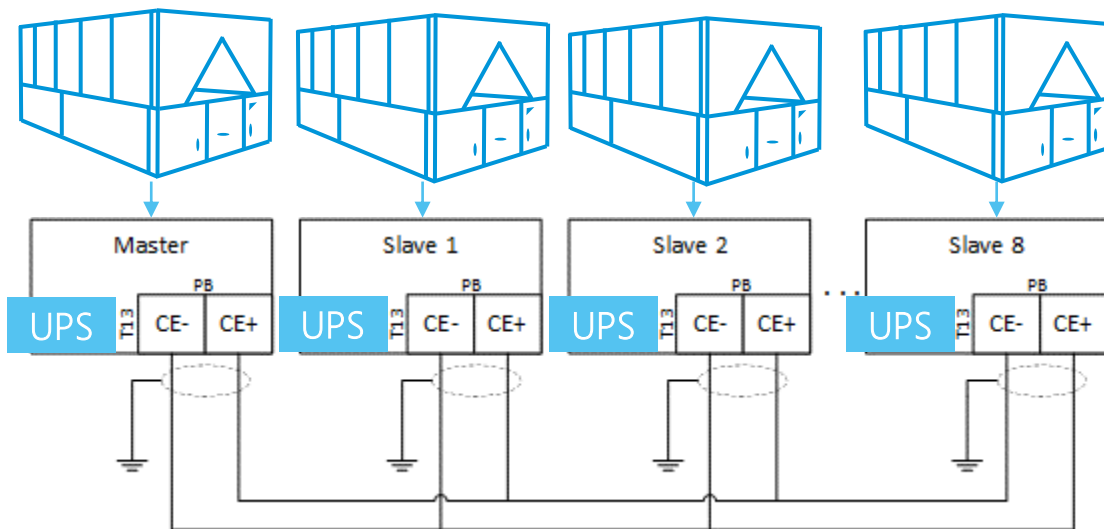
In a mix configuration, the Master controller must be a Multipurpose unit. Different configurations may lead to improper operations of the iCM[®]

Rapid Restart with iCM

The logic stores the status of the running chillers prior to the power failure

Rapid Restart feature is a feature that must be bought together with the unit. iCM[®] cannot manage Rapid Restart if not available on every unit composing the plant.

At power restore the iCM[®] takes care to re-enable all the units that were previously running. Once re-enabled by the iCM[®], all the chillers perform by their own the Rapid Restart function to restore the cooling load to the system.

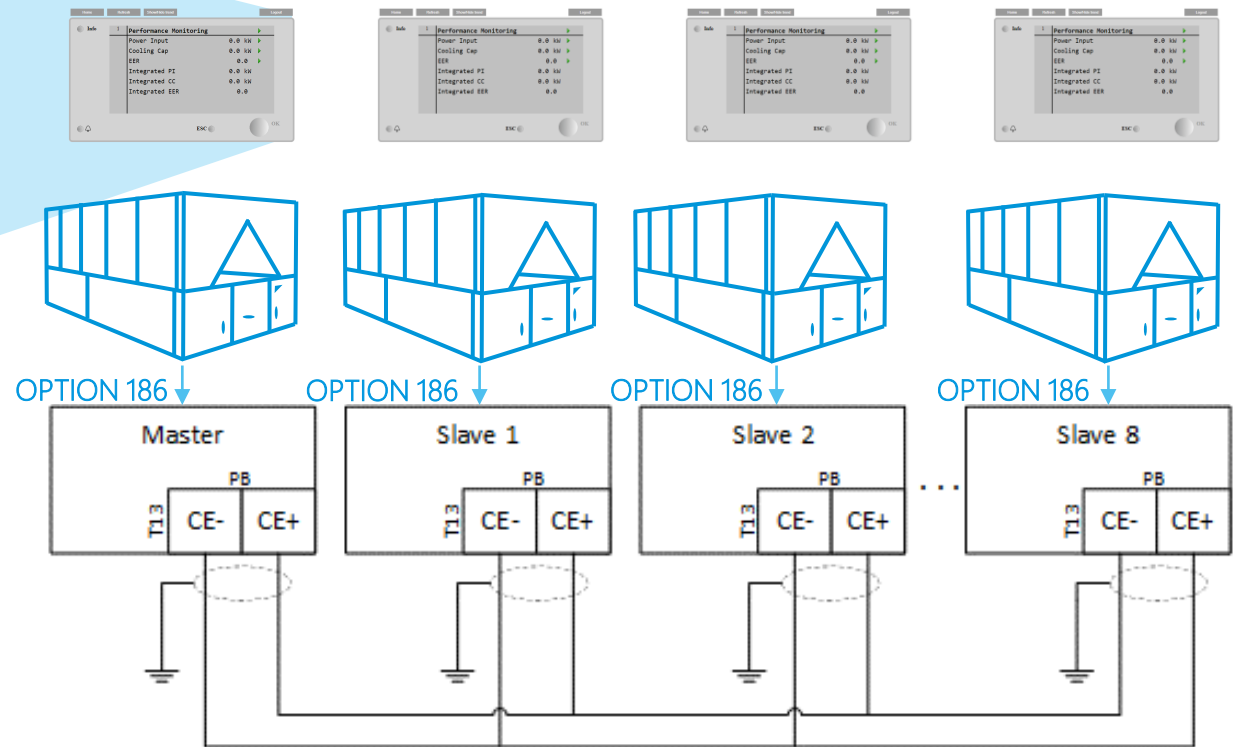
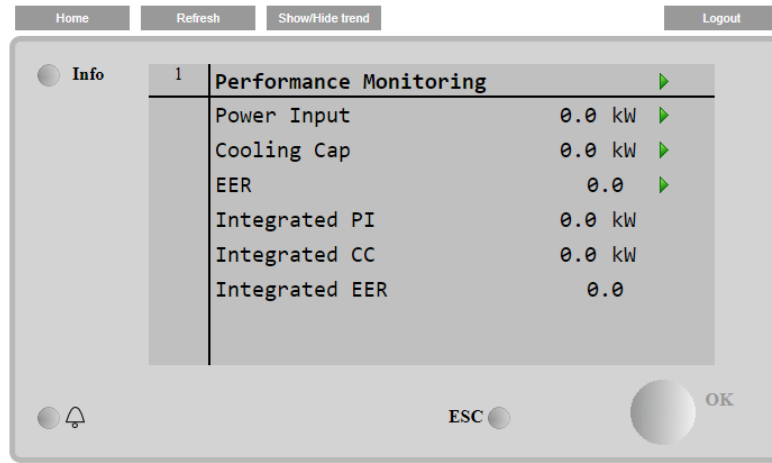


Attention

A UPS should be installed on the unit controllers (Master and Slaves) so the Master controller will not lose the status references and should not wait to re-establish the communication with the slaves.

Energy Monitoring with iCM

iCM[©] can read all the energy data from units equipped with the performance monitoring software option (option 186)



If all the units are equipped with performance monitoring option, the iCM[©] will display power inputs and cooling power from any of the units, the cumulative values and the estimated system efficiency.

intelligent Pump Manager

For iCM embedded

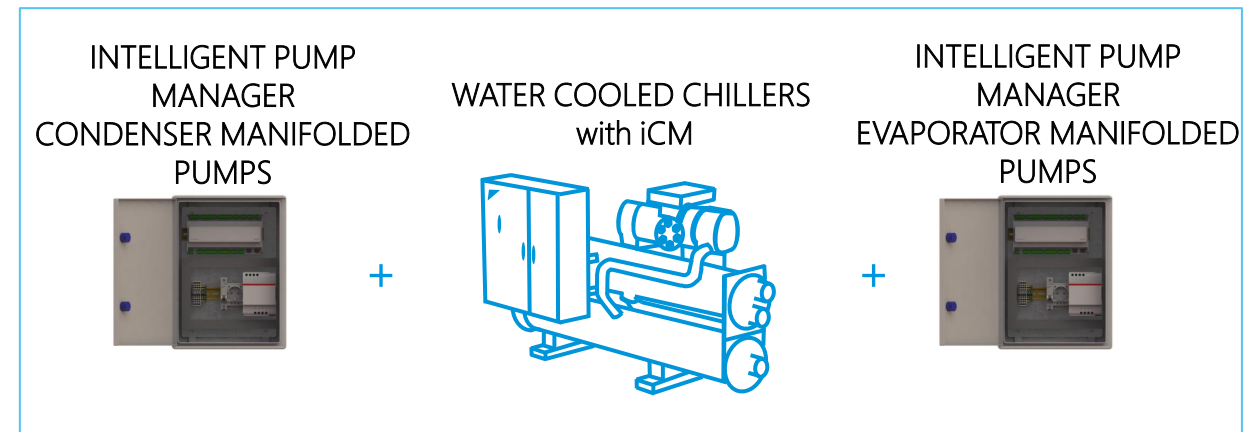
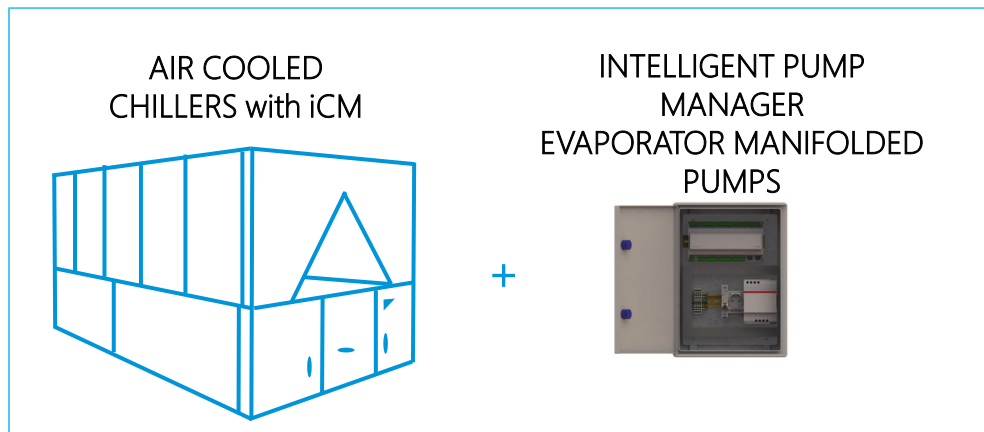
What is iPM?

iPM[©] (Intelligent Pump Manager) is a control panel that can manage manifolded pumps systems and water circuit devices such as Pumps, Header Bypass Valve and Sensors on Evaporator or Condenser side of Daikin Units

iPM[©] is a control panel that can manage manifolded pumps systems and water circuit devices such as Pumps, Header Bypass Valve and Sensors on Evaporator or Condenser side of Daikin Units.



Sample image

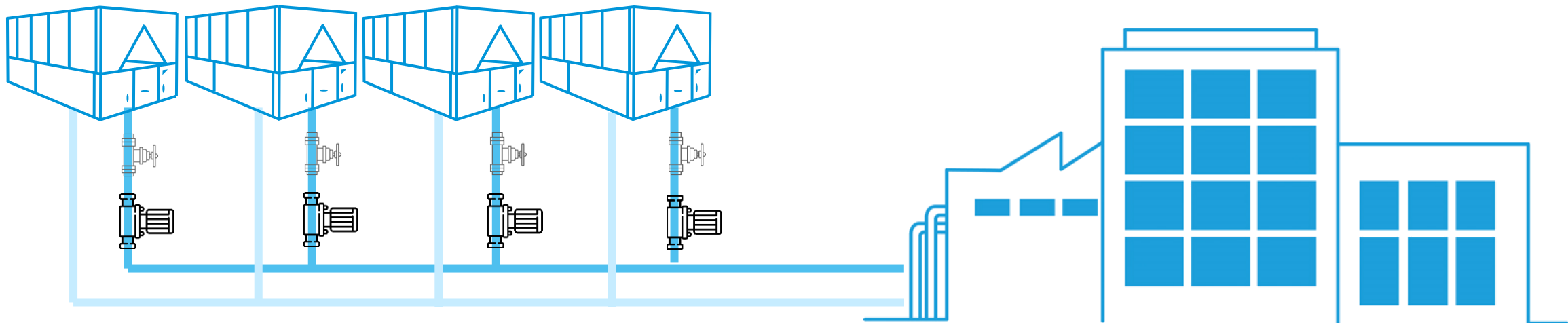


What if dedicated pumps and valves?

iPM[©] (Intelligent Pump Manager) can manage manifolded pumps systems

In case of dedicated pumps and valves, iCM[©] embedded, option 184, can be used

- In case of dedicated **Fixed Speed pumps**, the iCM option 184 is enough
- In case of dedicated **VFD pumps**, then iCM option 184 and Variable Primary Flow (VPF) option 143 must be selected
 - For managing VPF at system level, iCM option 184 is required. Master/Slave is not able to manage VPF systems



Manifolded Pump Sequencing with iPM

This function decides WHICH pump must start or stop

iPM selects the **Next-On** pump and the **Next-Off** pump based on running hours:

- NEXT ON: is the available stopped pump with less running hours
- NEXT OFF: is the available running pump with most running hours

iPM provides the following parameters:

- Maximum number of running pumps
- Minimum number of running pumps
- Stand-by pump

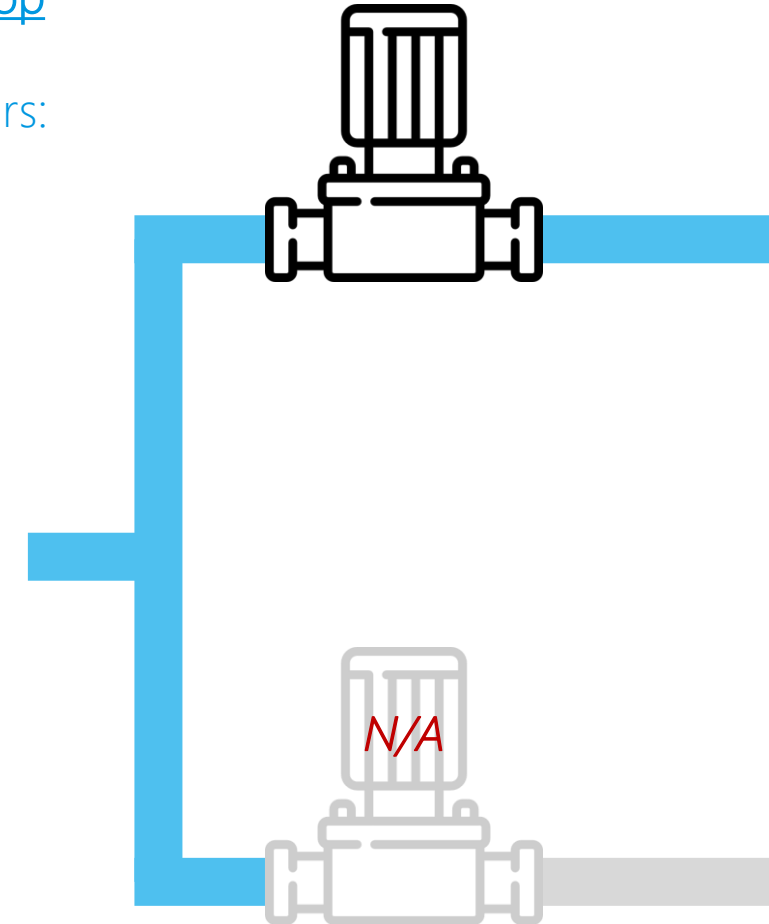
Attention

A pump is considered *Available* if:

- it is not in Alarm
- It is not in Manual mode
- It is not in Standby

Attention

NOT Available pump will not be considered in sequencing and iPM keeps on working with left ones

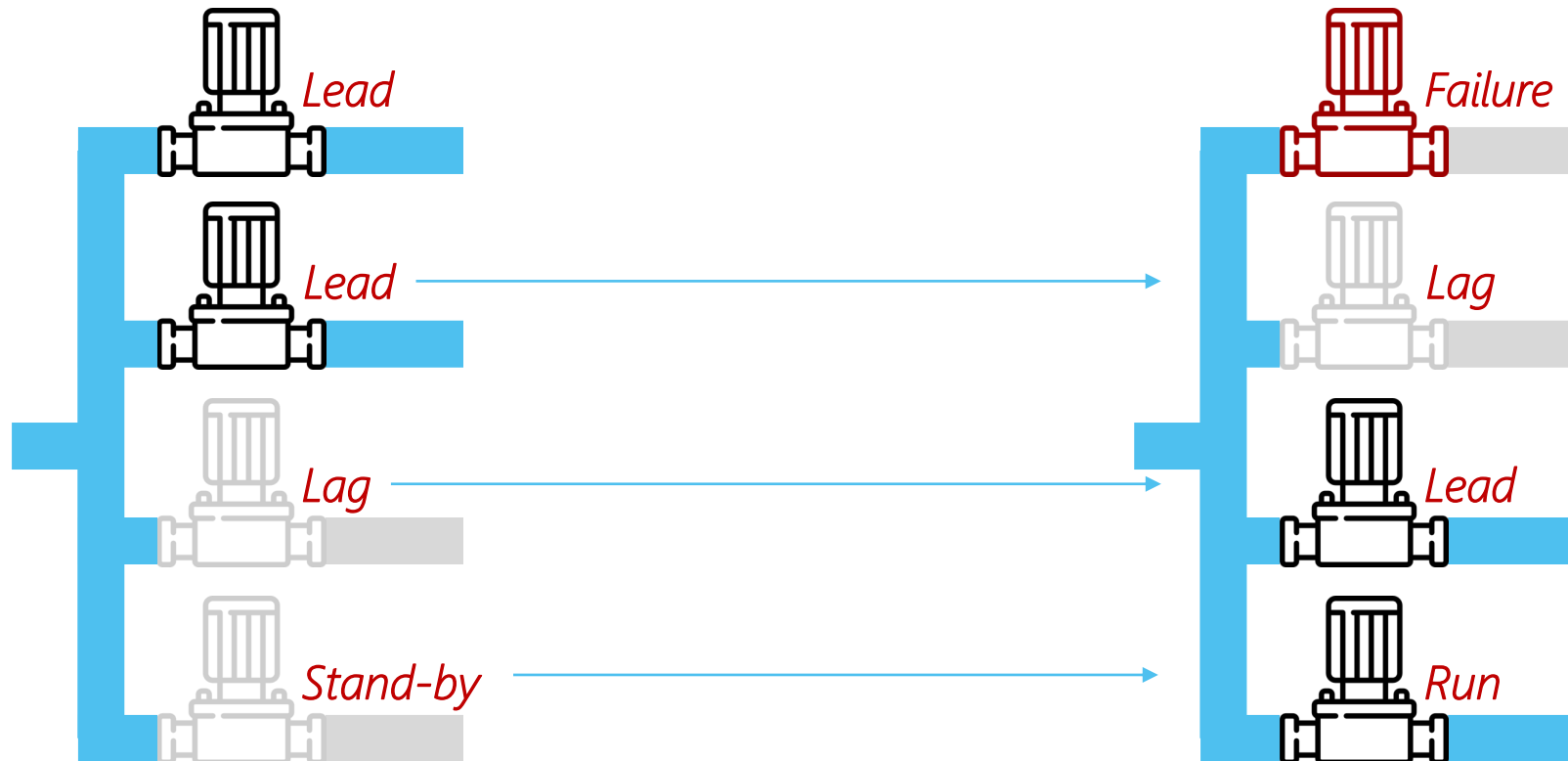


Manifolded Pump Sequencing with iPM

Lead/Lag/Stand-by management

The combination of the three parameters allows the Lead\Lag\Standby configuration

- Minimum Number of running pump fixes the number of Lead pumps
- Maximum Number of running pump fixes the number of Lag pumps (Total Number of Pumps minus Max Number)
- Stand-by pump is the one to be kept stopped and to be started only in case of alarm of the other ones.



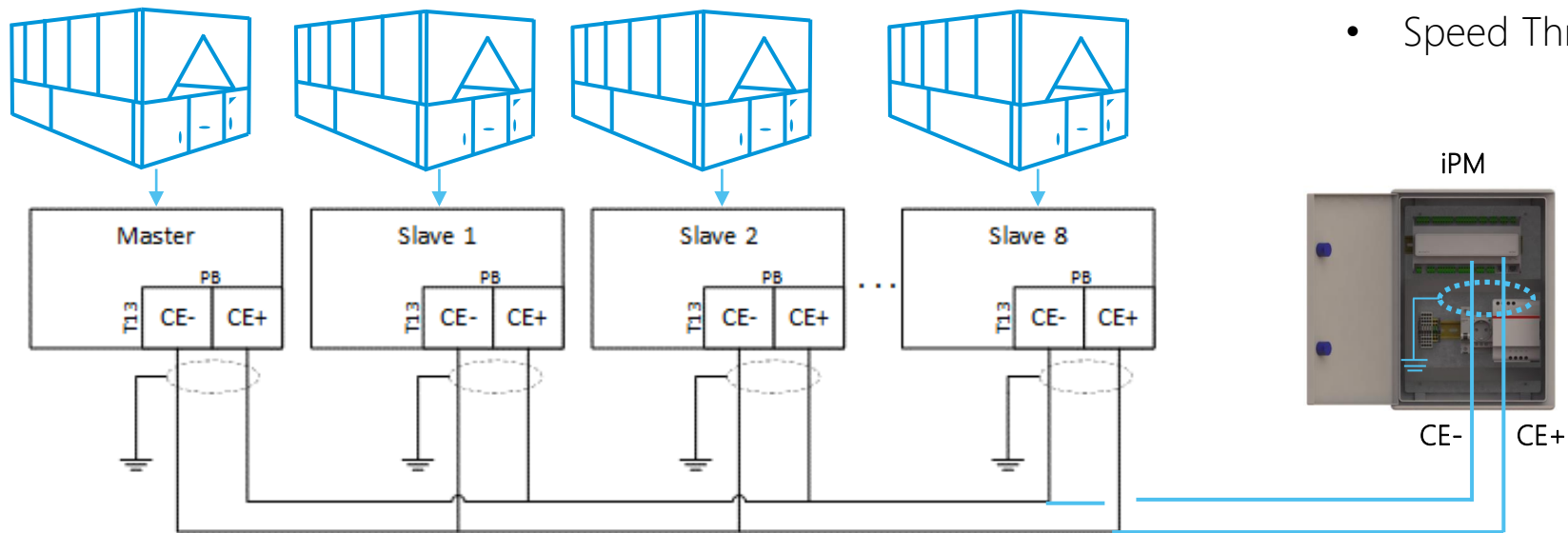
Manifolded Pump Staging with iPM

This function decides when a pump needs to start or stop to assure minimum flow

Staging management is activated when at least one of Daikin unit is started

Staging function can be set in order to perform the following logic:

- Fixed number of running pumps
- Demand number of running pumps by Daikin units
- Speed Threshold staging for VFD pumps.

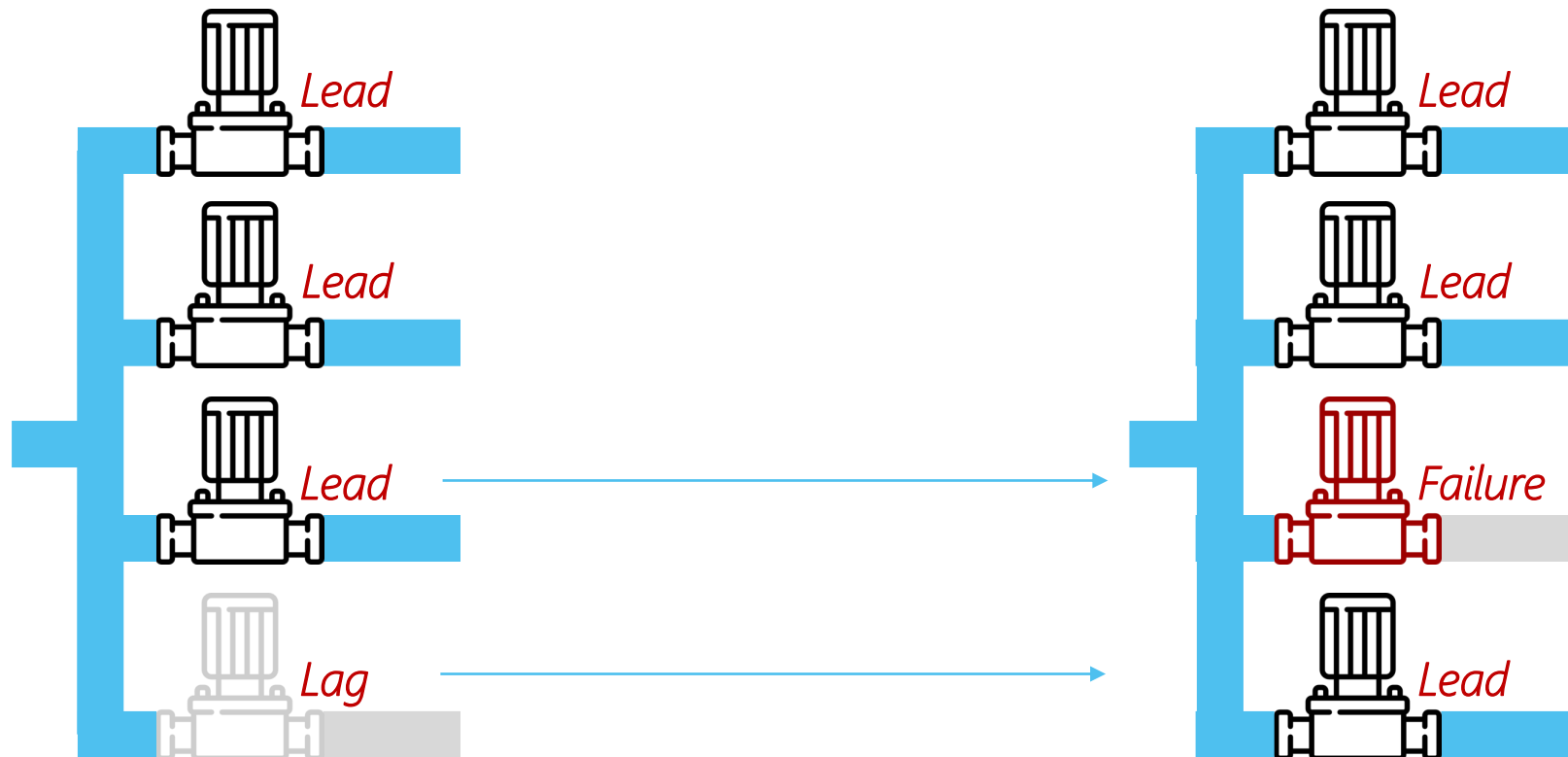


iPM is connected to the Daikin communication network and it can retrieve from all the Daikin units the most important data

Manifolded Pump Staging with iPM

Staging for fixed number of pumps

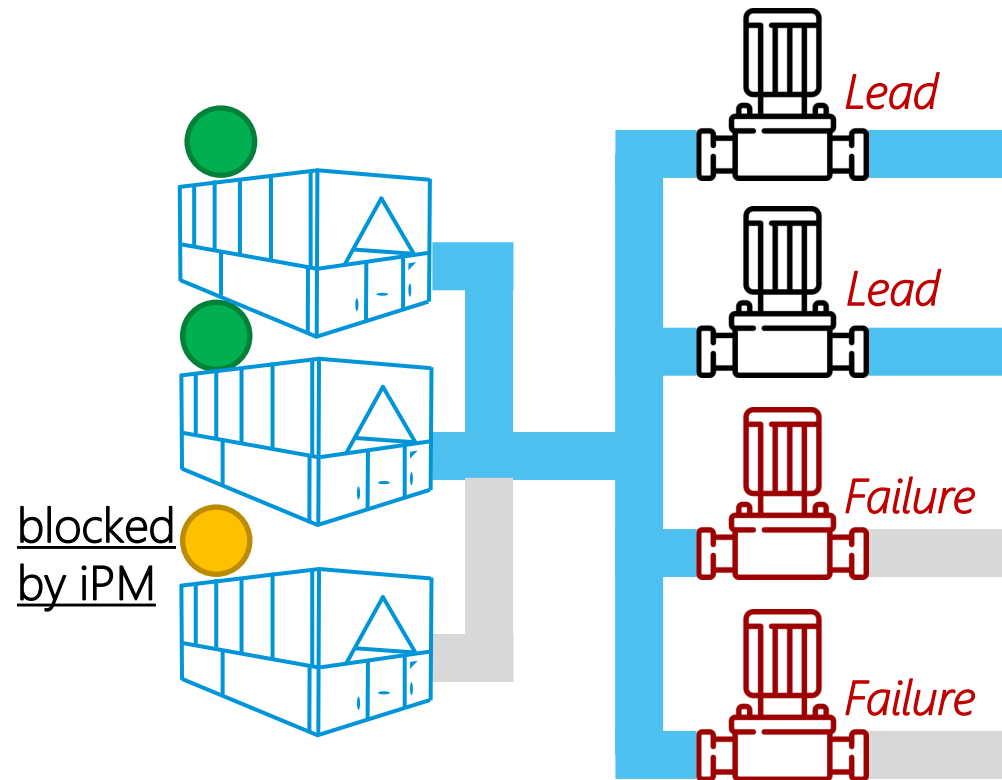
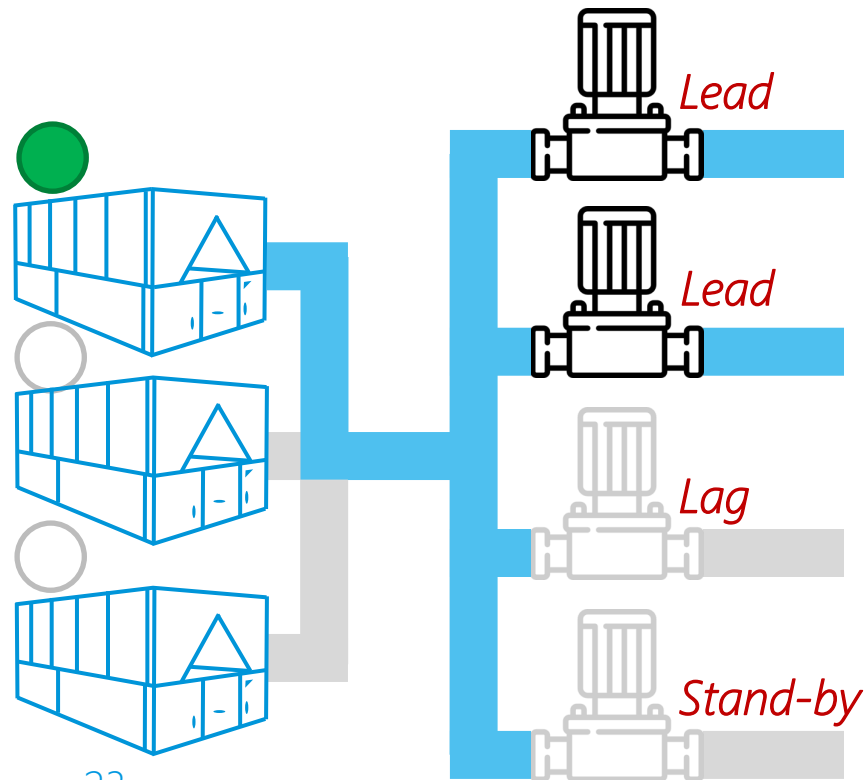
iPM will always starts and keeps running the number of pumps equal to *Maximum number of running pumps*



Manifolded Pump Staging with iPM

Staging for Demand by Daikin units

At any increase or decrease of the Daikin units, iPM respectively start or stop a pump



Manifolded Pump Staging with iPM

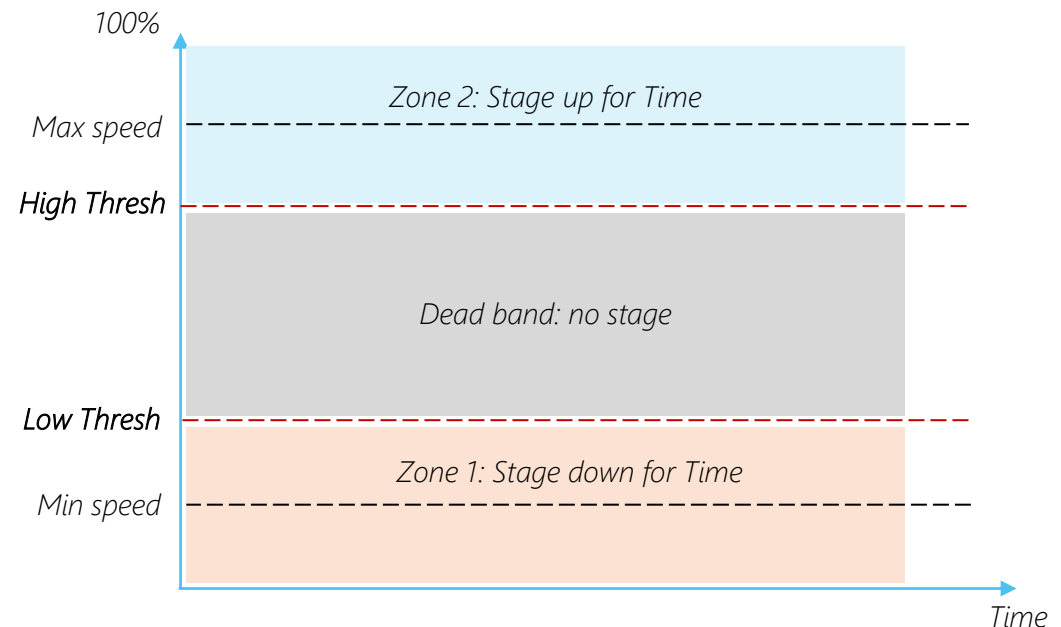
Staging for Speed Threshold

iPM regulates the speed of the pumps according to controlled sensor in order to achieve design setpoint

Attention

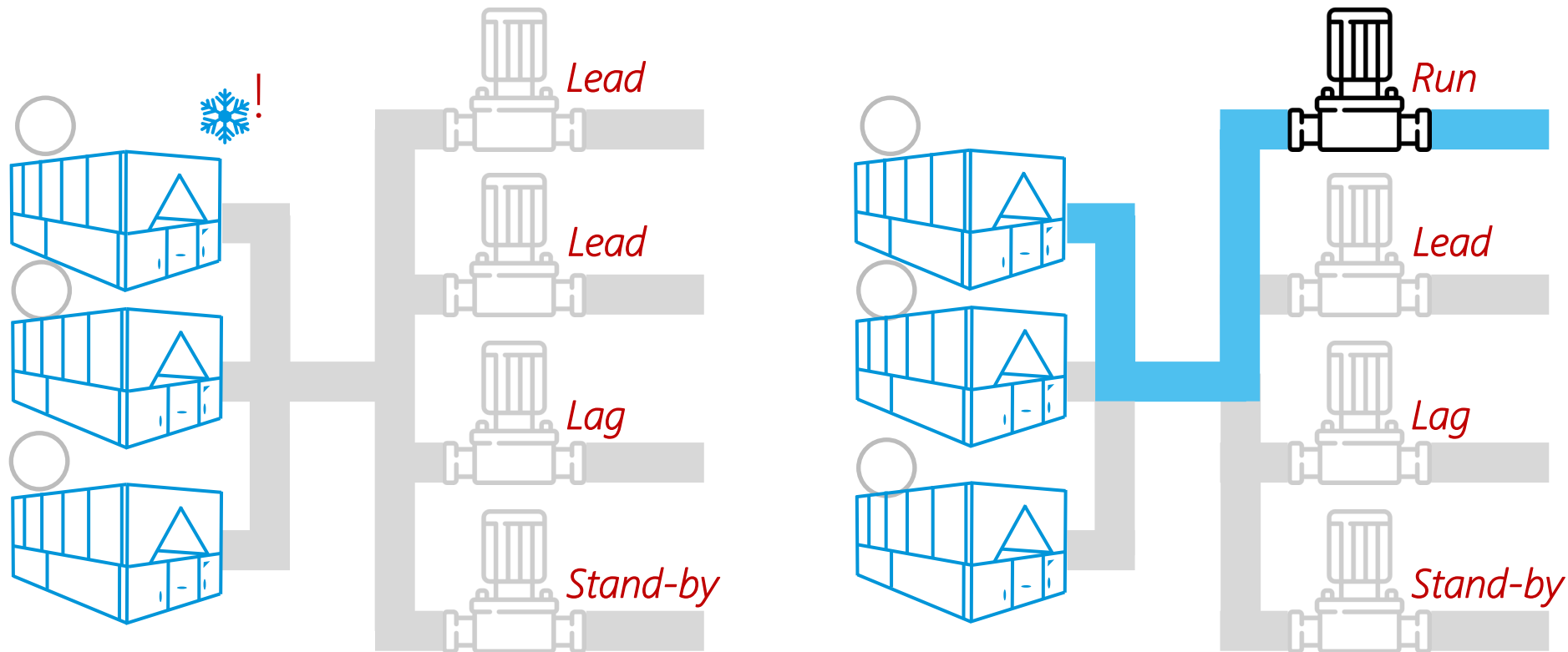
This setting can be done only in case of VFD pumps and Speed Control Management by iPM

The Operator can choose a **High Speed Threshold** and **Low Speed Threshold** and consequently a range of speed, where no staging will occur.



Anti freeze protection with iPM

When a unit should raise a freeze protection alarm and should start, iPM starts a pump to allow circulation of water through unit exchangers



Pump Alarm Management with iPM

If there is a mismatch between “Command” sent by iPM through hardwired output and Operating state received from pump, iPM will raise an alarm of pump.

If iPM starts a pump sending “On Command” and it should not receive “Run” operating state

ALARM

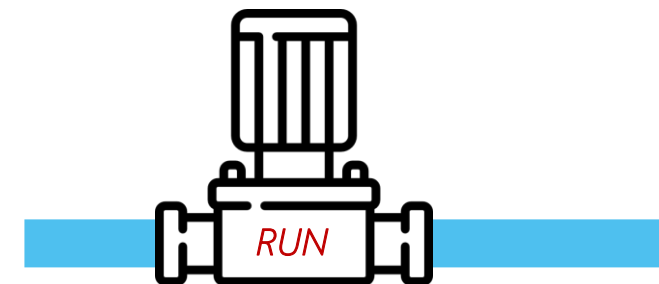
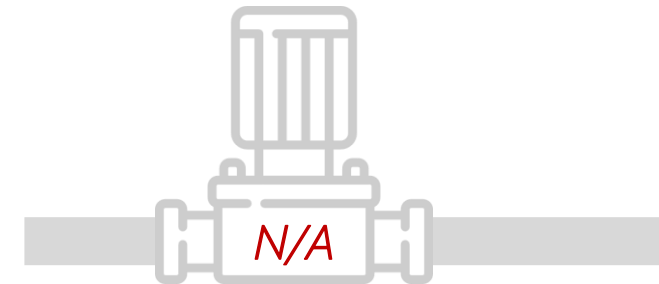
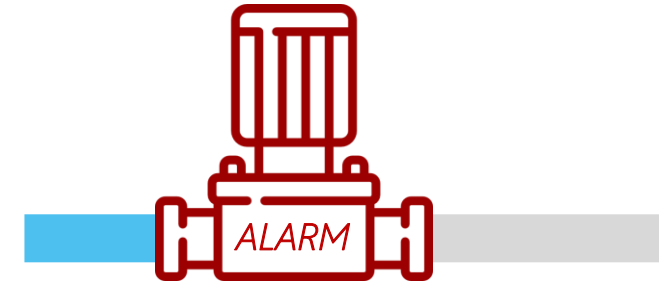
if a pump is commanded by iPM and running and suddenly it should stop

ALARM

iPM sends “Off command” and it considers that Not Available (out of sequencing logic).

The alarm keeps on being “Active” until it is reset manually through iPM controller HMI or with iCM Master controller through communication.

Once Alarm is reset, pump becomes Available again and it is started by iPM if needed.



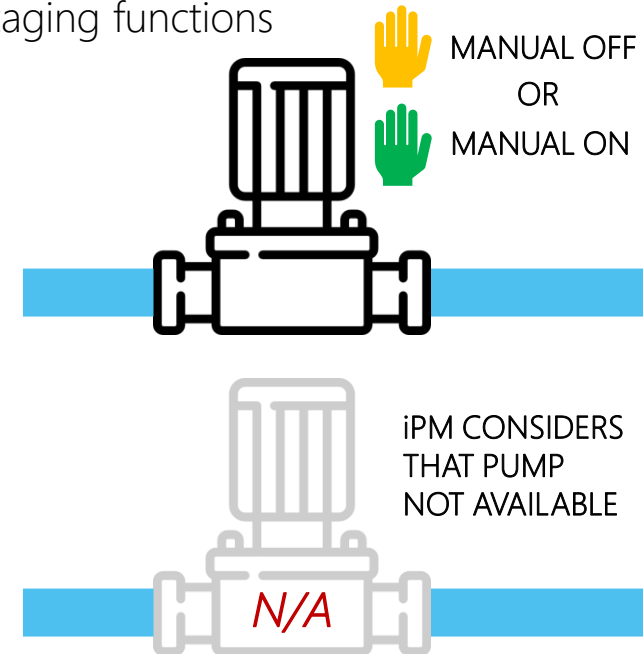
Pump Manual Management with iPM

iPM provides for each pump a setpoint (“Manual Selector”) that sets the command to the pump:

- Auto: Command to the pump is decided by iPM logic according to sequencing and staging functions
- Off: Force Manual Off command, without considering logic
- On: Force Manual On command, without considering logic

ALARM

Therefore, if there is a mismatch between Manual command and feedback from the pump, iPM raises an alarm and stops the pump.

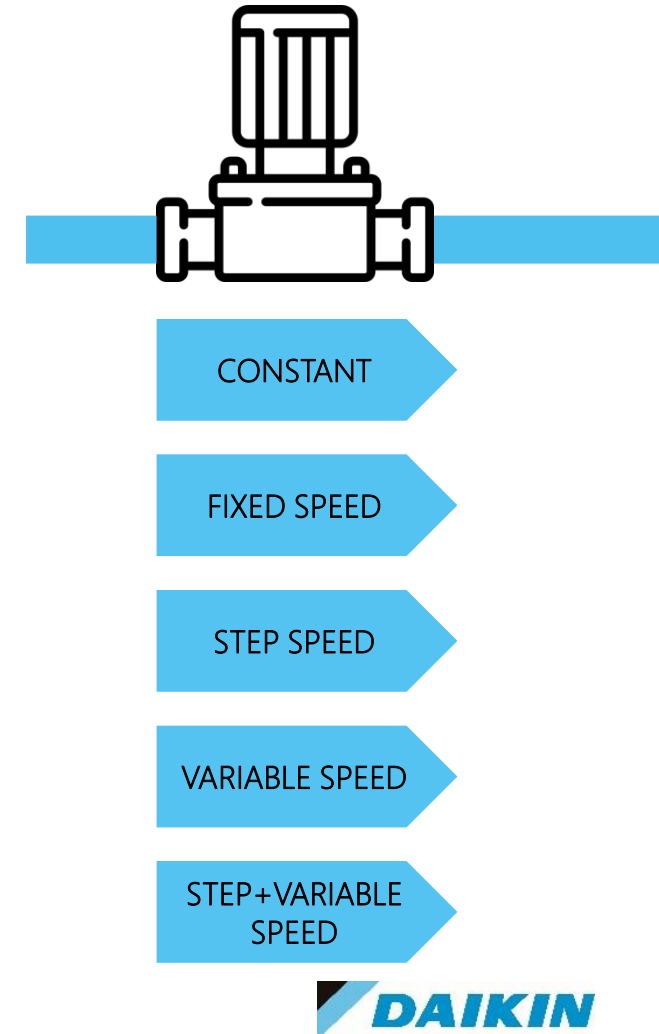


Pump Speed Control with iPM

In system with VFD pumps, iPM can regulate the speed in different ways or according to different controlled sensors to achieve plant-room design setpoint and keep minimum flow to the units

iPM provides additional settings to regulate the speed of the pump as follows:

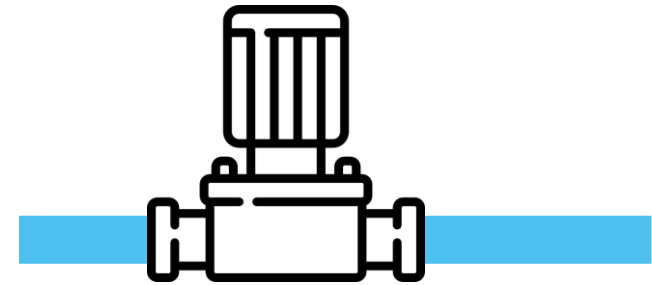
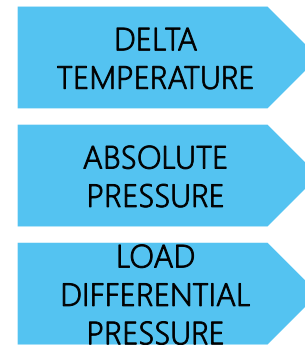
- **Maximum speed:** iPM will never command a speed signal higher than this value.
- **Minimum speed:** iPM will never sends a speed signal lower than this value. It also represents the minimum speed at the start-up of the pump.
- **Back-Up Speed:** iPM will send this speed signal when Daikin communication network fails.
- **Step Speed:** iPM will increase or decrease speed signal to the pump for a "Step" amount.



Pump Speed Control with iPM Variable Speed

iPM regulates the speed of the pump measuring the controlled variable represented by an additional sensor to achieve the designed system setpoint

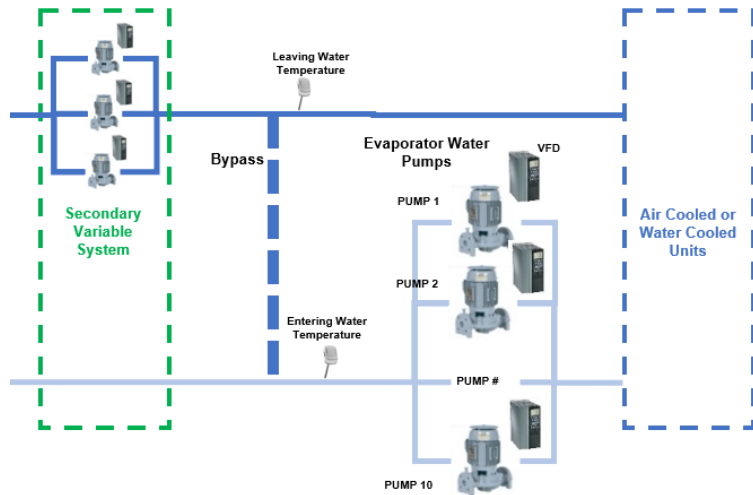
A PID control (Proportional, Integral, Derivative) calculates the percentage of speed of pump



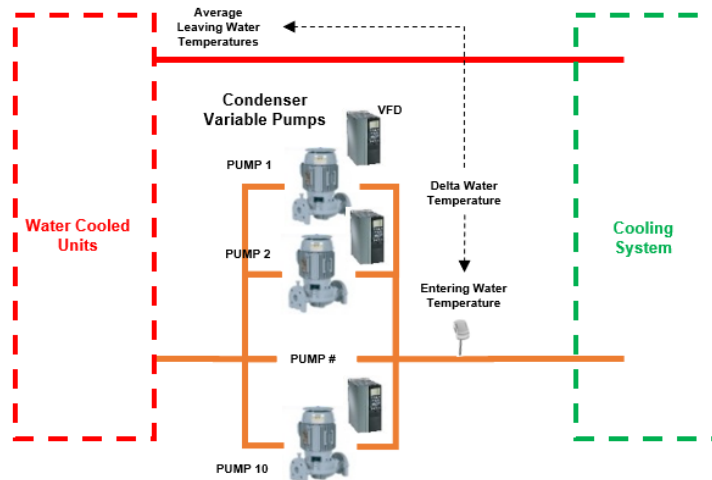
Pump Speed Control with iPM

Variable Speed – Delta Temperature

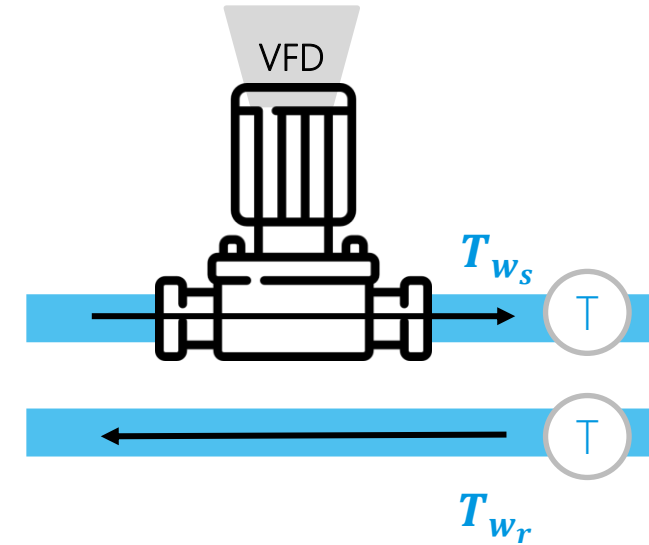
VARIABLE PRIMARY / VARIABLE SECONDARY



VARIABLE CONDENSER CIRCUIT BASED ON DELTA TEMPERATURE



- DELTA TEMPERATURE
- ABSOLUTE PRESSURE
- LOAD DIFFERENTIAL PRESSURE

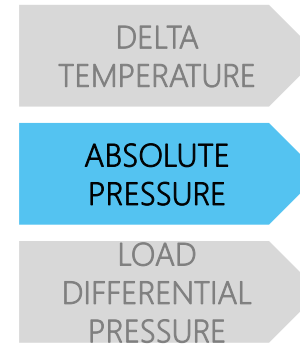
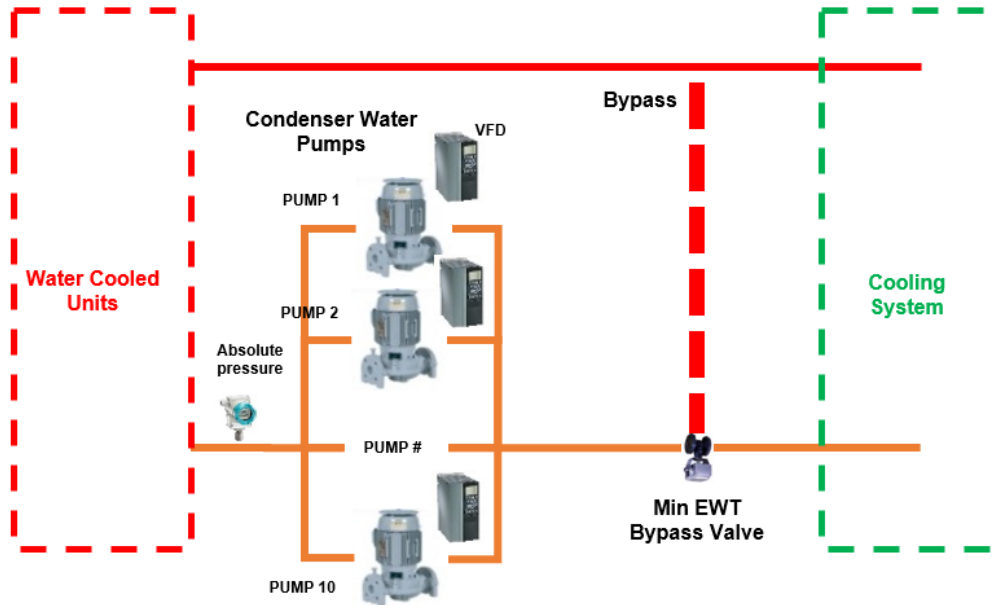


Pump Speed Control with iPM

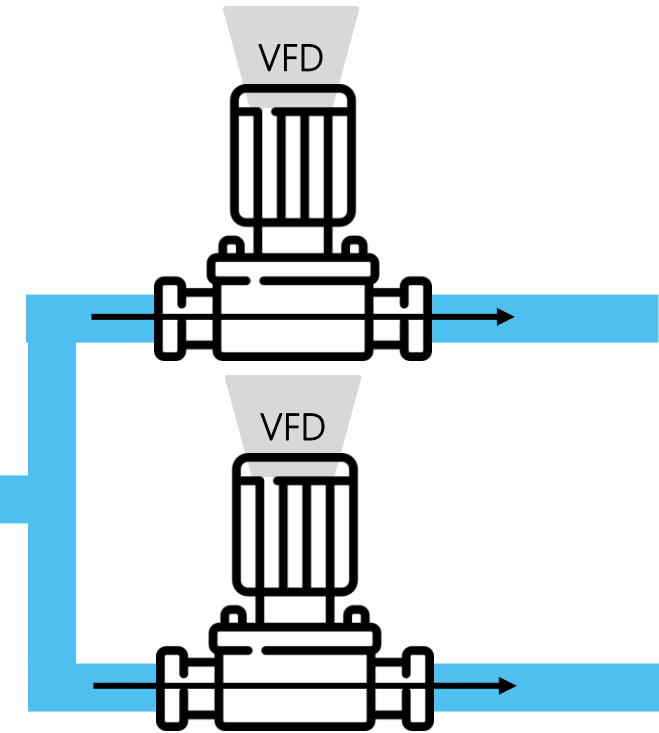
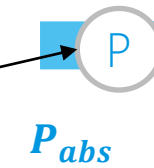
Variable Speed – Absolute Pressure

Additional absolute pressure sensor is necessary, and it must be installed on the downstream pipe of the manifolded pumps

VARIABLE CONDENSING CIRCUIT



The sensor is not part of iPM provision, because strictly depending on plant design



Pump Speed Control with iPM

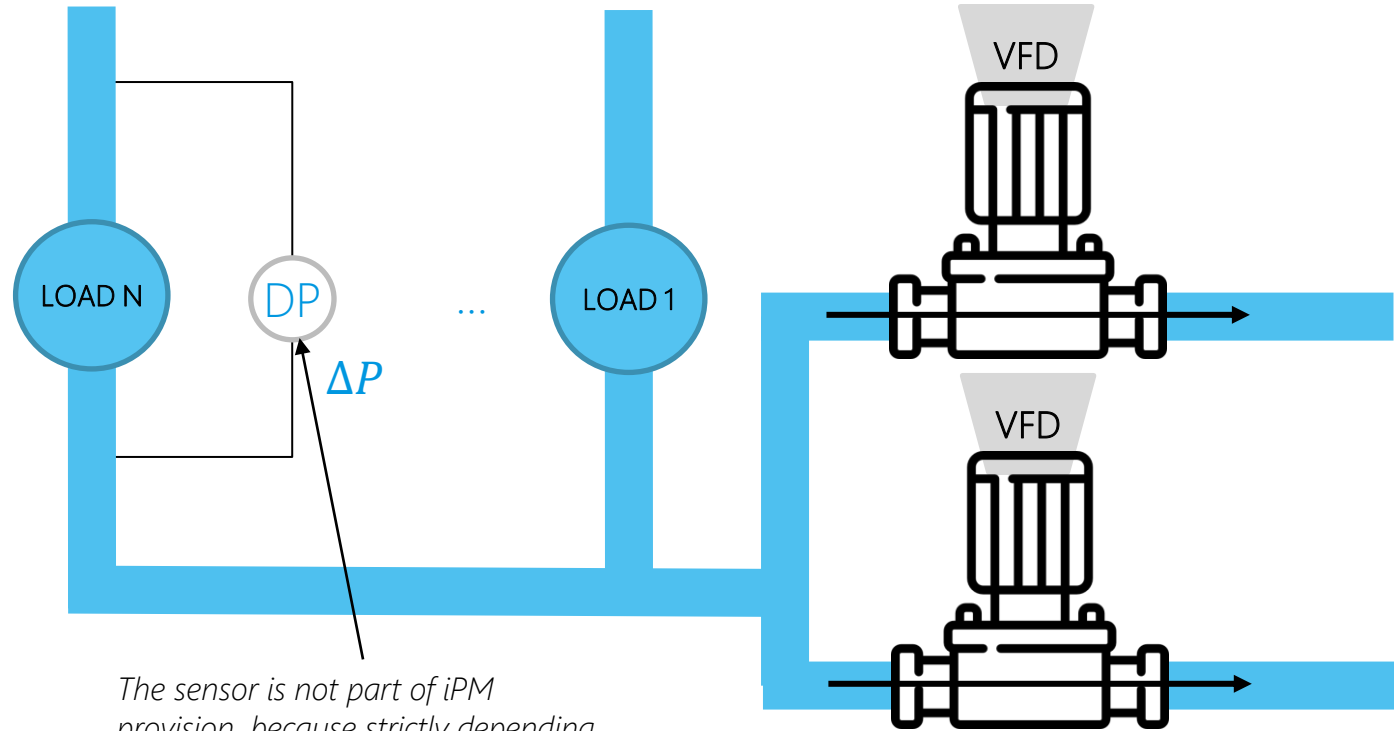
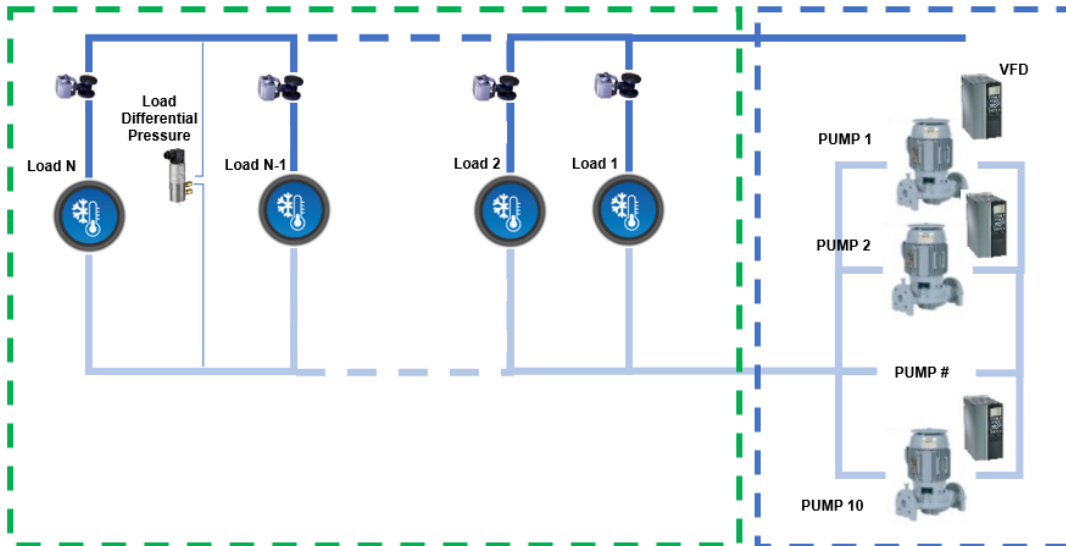
Variable Speed – Load Differential Pressure

Additional differential pressure sensor is needed and must be installed on the most disadvantaged load of the system

VARIABLE PRIMARY ONLY SYSTEM

Building Loads

Variable Primary Flow Pumps



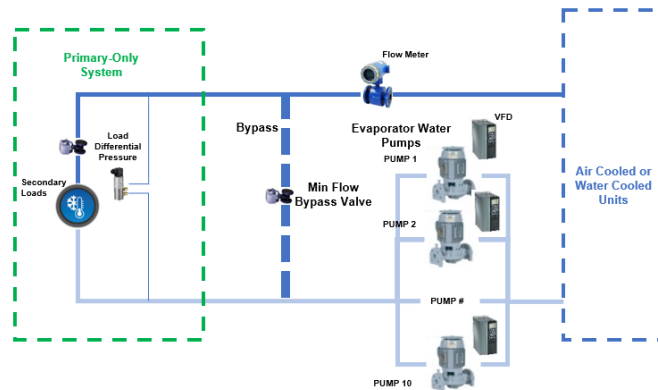
The sensor is not part of iPM provision, because strictly depending on plant design

- DELTA TEMPERATURE
- ABSOLUTE PRESSURE
- LOAD DIFFERENTIAL PRESSURE

By-pass Valve Control with iPM

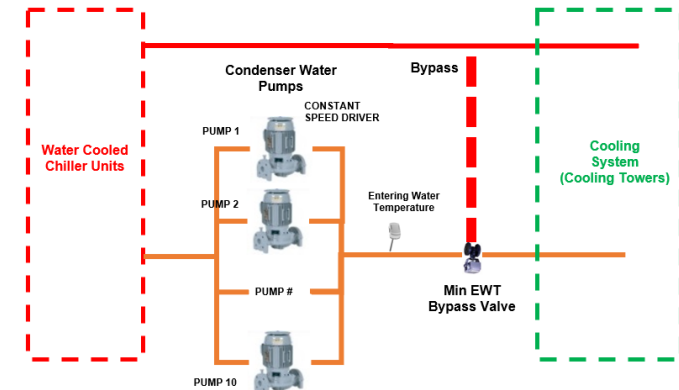
iPM provides two different managements of the by-pass valve to assure the Minimum Flow to Daikin units' exchangers and to Correct Entering water temperature to Daikin units

MINIMUM FLOW PROTECTION
Variable Primary only Systems

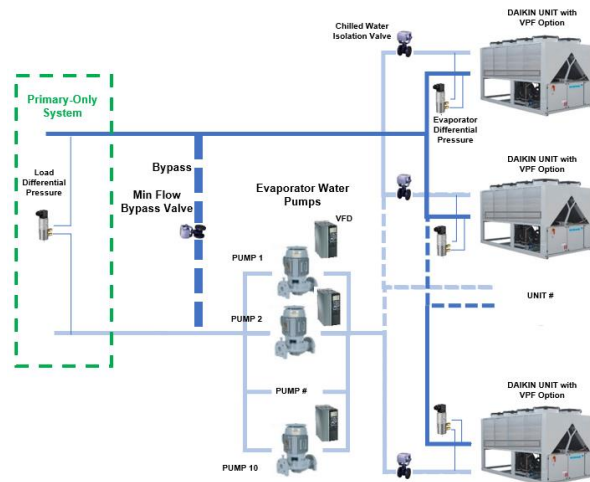


FLOW SENSOR ON PRIMARY CIRCUITS

ENTERING WATER TEMPERATURE PROTECTION
Water Cooled Unit only - Condenser systems

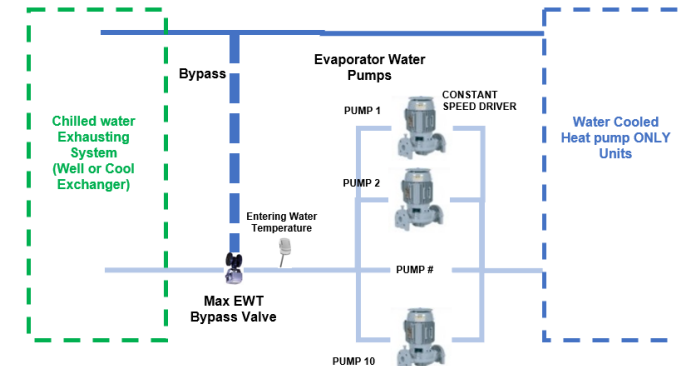


MINIMUM ENTERING WATER PROTECTION



FLOW SENSOR ON PRIMARY CIRCUITS

MAXIMUM ENTERING WATER PROTECTION



intelligent Cooling Tower Manager

For iCM embedded

What is iCT?

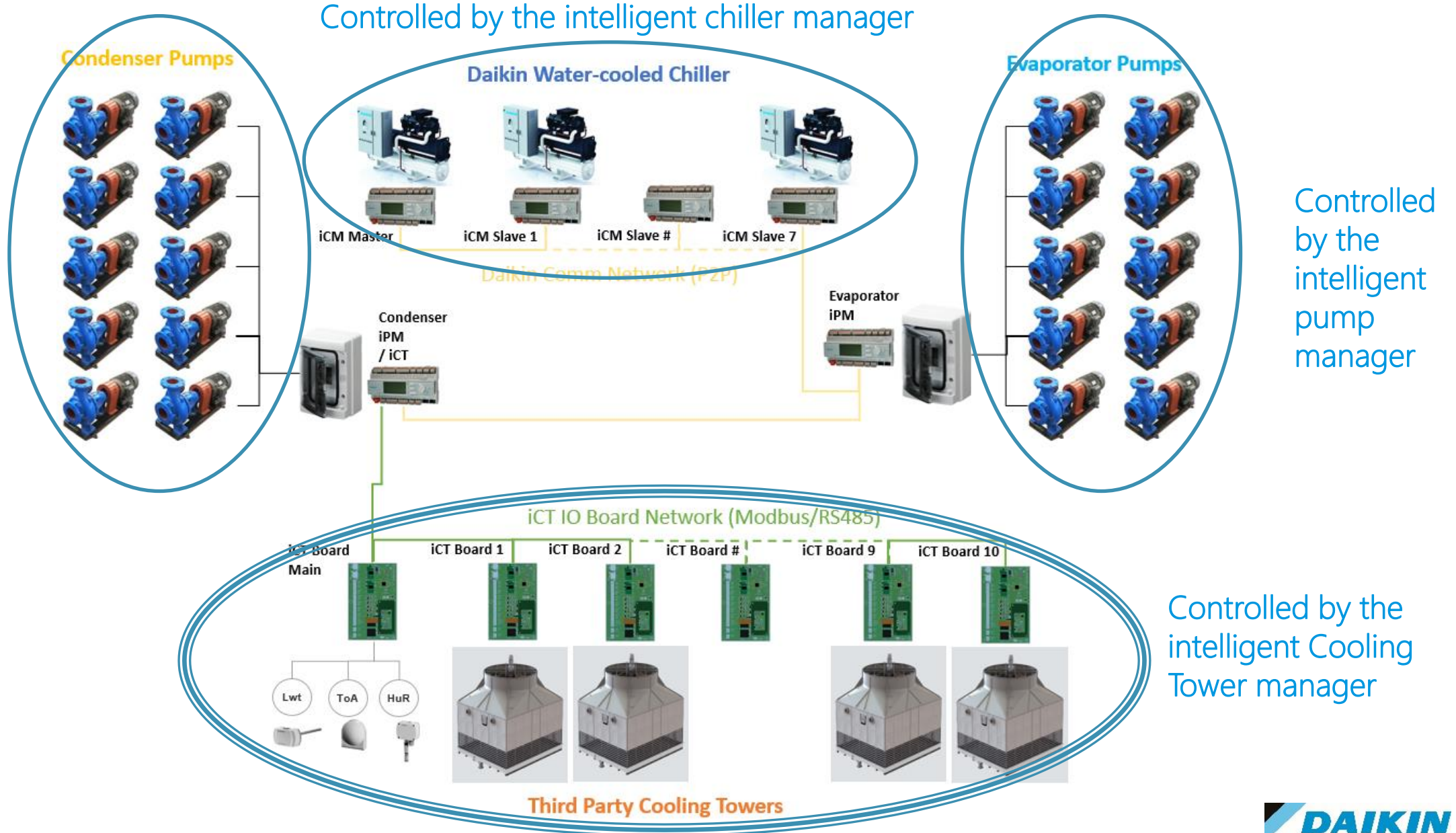
iCT is a software function that can manage up to 10 Cooling Towers that are in common to the chillers composing the plant.

iCT is embedded in the iPM controller that controls the condenser manifolded pumps and thus.

The Cooling tower is then controlled by a remote I/O iCT node that communicates with the master iCT node connected to iPM. The I/O iCT node controls the cooling tower devices such as inlet valve and VFD Fan.

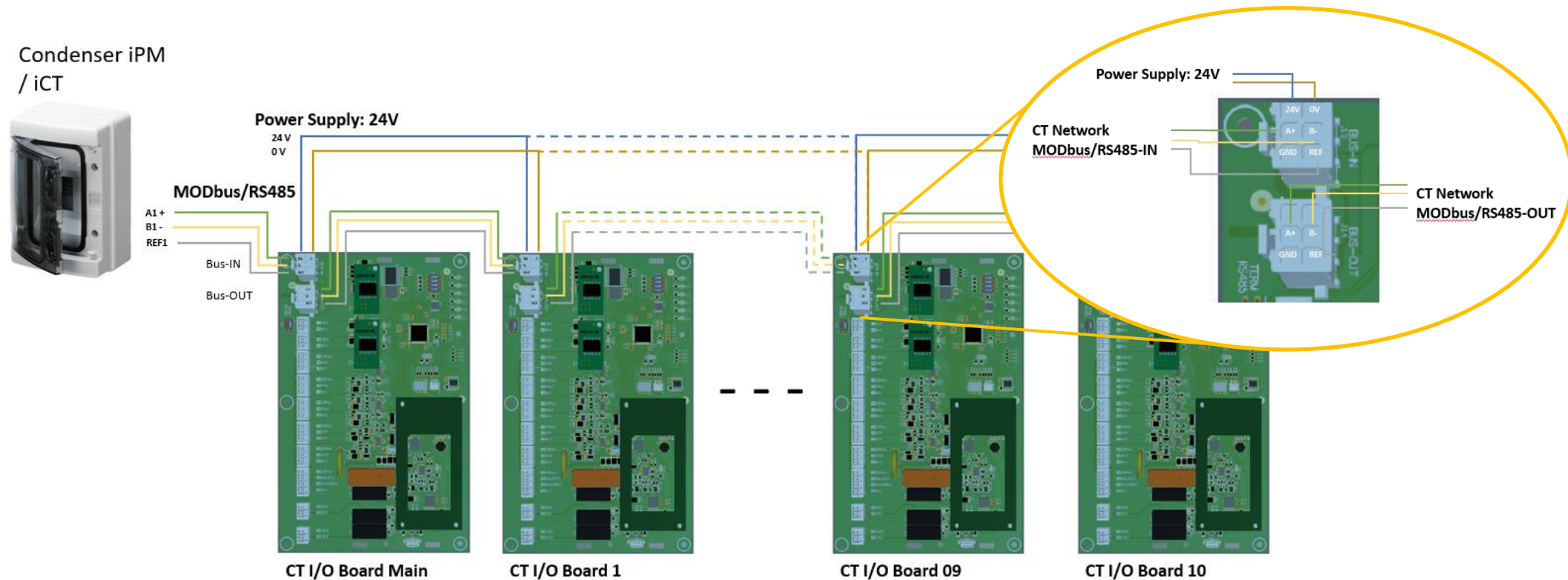
What is iCT?

Controlled by the intelligent pump manager



Cooling Tower network wiring

Starting from embedded Modbus/RS285 port on Microtech 4 controller of iPM, a three-wire cable must be connected to the BUS-IN port of the I/O Board; then, cable from BUS-OUT port of the I/O board must be connected to BUS-IN port of the next I/O Board. Same cable connection must be carried out till last I/O board.

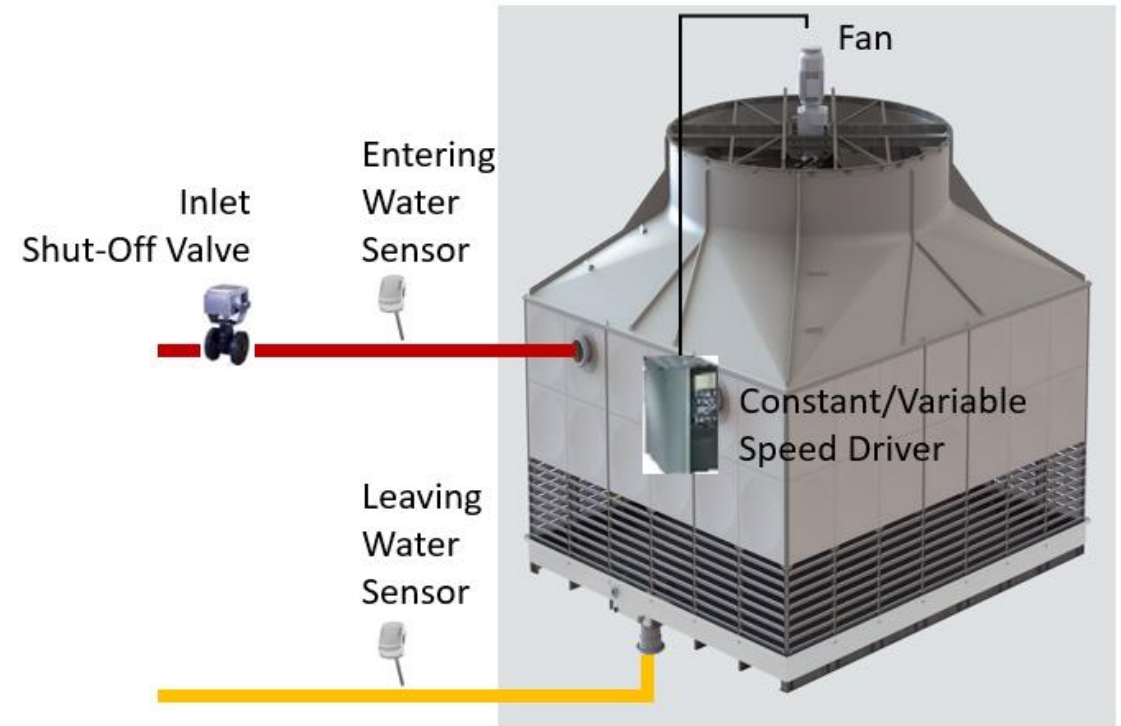


iCT Node – I/O

iCT Manager is able to manage the devices and the dedicated peripherals through Remote Input/Output iCT nodes that must be installed on Cooling tower.

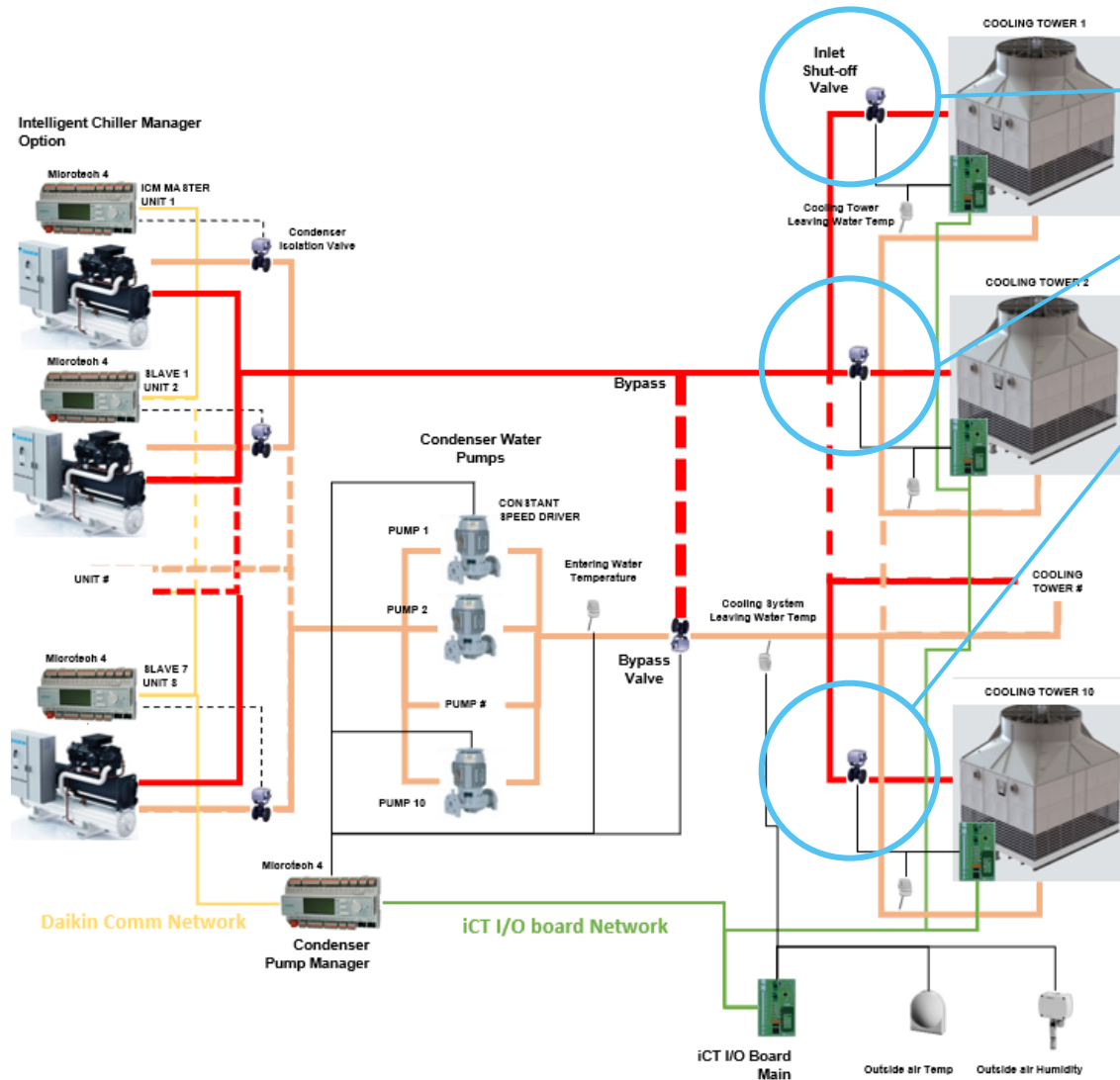
iCT node remote I/O

Fan Operating State (Stop/Run)	DI	Voltage free contact
Inlet Shut-off Valve State (Closed/Opened)	DI	Voltage free contact
Outlet temperature sensor	AI	NTC10K
Inlet temperature sensor	AI	NTC10K
Fan Speed command	AO	0-10V
Fan Command (Off/On)	DO	Voltage free contact (24V DC)
Shut-off Valve command	DO	Voltage free contact (24V DC)
Fan Alarm	DI	Voltage free contact



iCT – Managed Cooling Tower Systems

Dedicated Spray – Common Sump



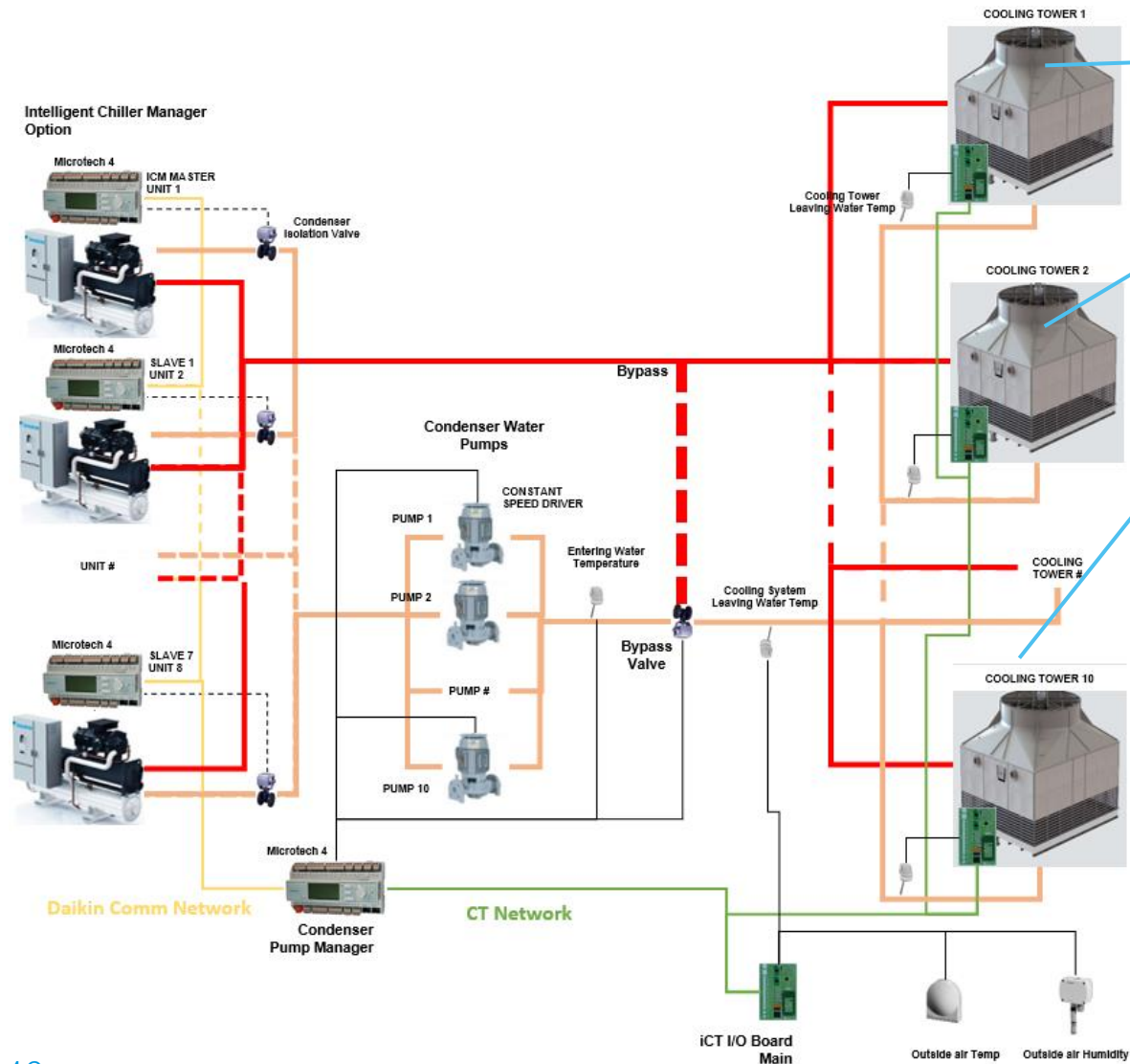
a dedicated isolation valve is present on inlet pipe of each cooling tower connected to the return cooling header

The condenser water flows through the cooling tower only if iCT opens the shut-off valve.

Regulation of the cooling LWT depends only on the running cooling tower (inlet valve opened and fan running).

iCT – Managed Cooling Tower Systems

Common Spray – Common Sump

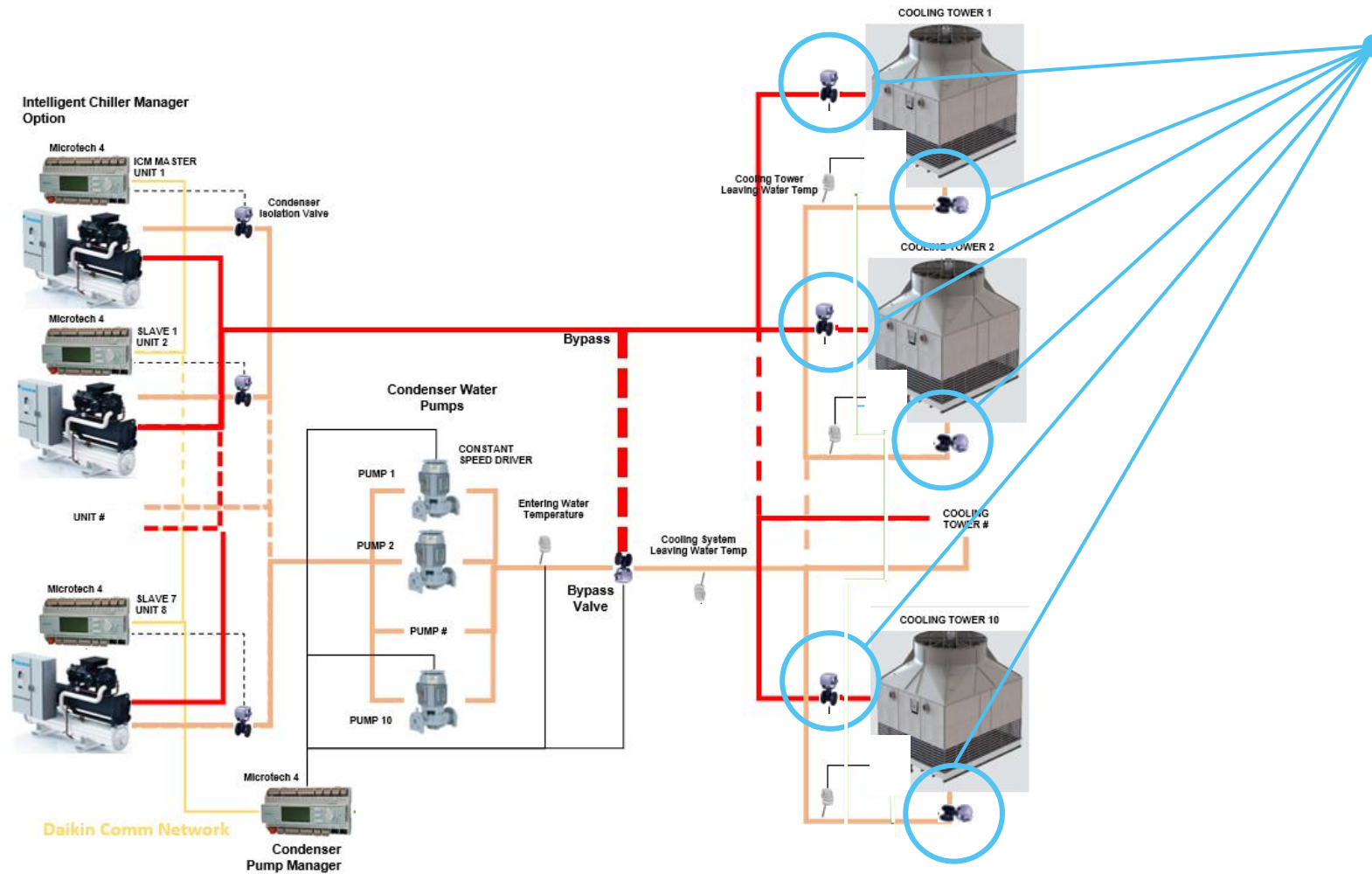


no isolation valves are present on the common return header which inlet pipes of the cooling towers are connected to, and no isolation valves are present on the outlet pipes of the cooling towers connected to common supply header

The condenser water flows through all the cooling towers if the condenser pumps are running. Regulation of cooling LWT depends on the evaporation of all cooling towers that can be enhanced starting any fan.

iCT – Managed Cooling Tower Systems

Dedicated Spray – Dedicated Sump



It cannot be managed by iCT, because control of the outlet isolation valve is missing.

In this case, a possible solution of management could be to connect valve command on each I/O board in parallel to both inlet and outlet valve actuators

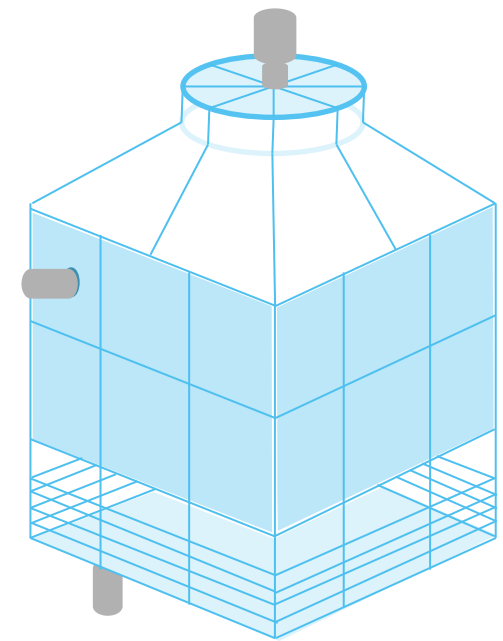
Cooling Tower Sequencing

This function decides which CT must start or stop; in other words, it selects the Next-On CT and the Next-Off CT according to some parameters.

- 1) **NEXT ON:** is the available stopped CT with lowest running hours;
- 2) **NEXT OFF:** is the available running CT with highest running hours;

A CT is considered *Available* if its components are not in Alarm, not forced in Manual mode or not set in Standby.

Not available CT will be not considered in sequencing and iCT keeps on working with left ones.



Cooling Tower Sequencing

iCT provides the possibility to set the following parameters

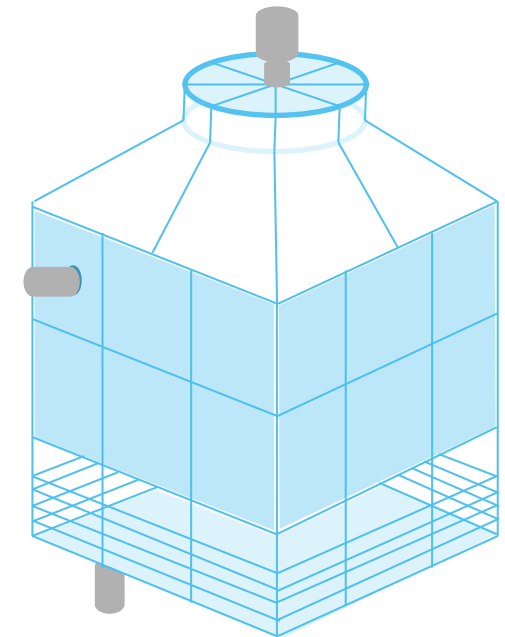
- *Maximum number of running pumps*: iCT will never start more than this number of towers
- *Minimum number of running pumps*: iCT will never stop less than this number of towers
- *Standby Pump*: iCT keeps this tower stopped, unless an alarm on other tower will occur.

1. Lead\Lag Management

2. Lead\Standby Management

3. Lead\Lag\Standby Management

if same lead towers are running for a configurable time, when the time expires, iCT forces the start of a "Lag" tower and the stop of a "Lead"



Cooling Tower Sequencing

iCT provides the possibility to set the following parameters

- *Maximum number of running pumps*: iCT will never start more than this number of towers
- *Minimum number of running pumps*: iCT will never stop less than this number of towers
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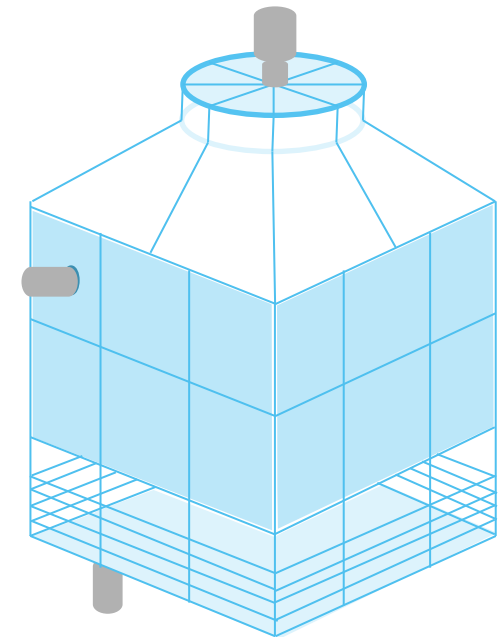
1. Lead\Lag Management

2. Lead\Standby Management

3. Lead\Lag\Standby Management

User can change manually the standby tower or enable the rotation of the Standby tower.

Once the rotation occurs, iPM forces the stop of the new standby tower and it starts the old standby tower if needed



Cooling Tower Sequencing

iCT provides the possibility to set the following parameters

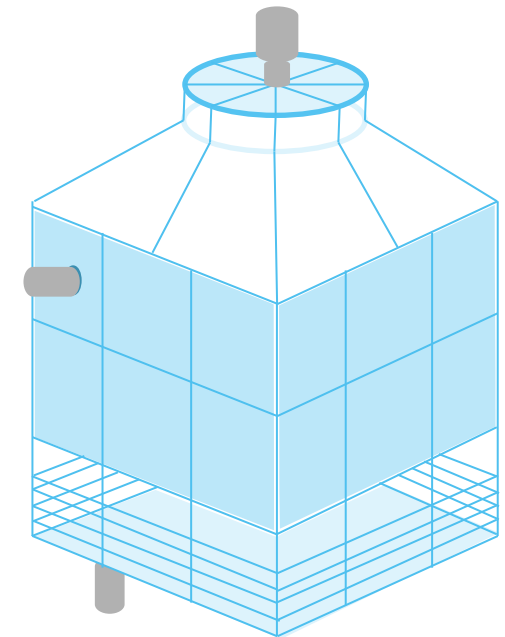
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1. Lead\Lag Management

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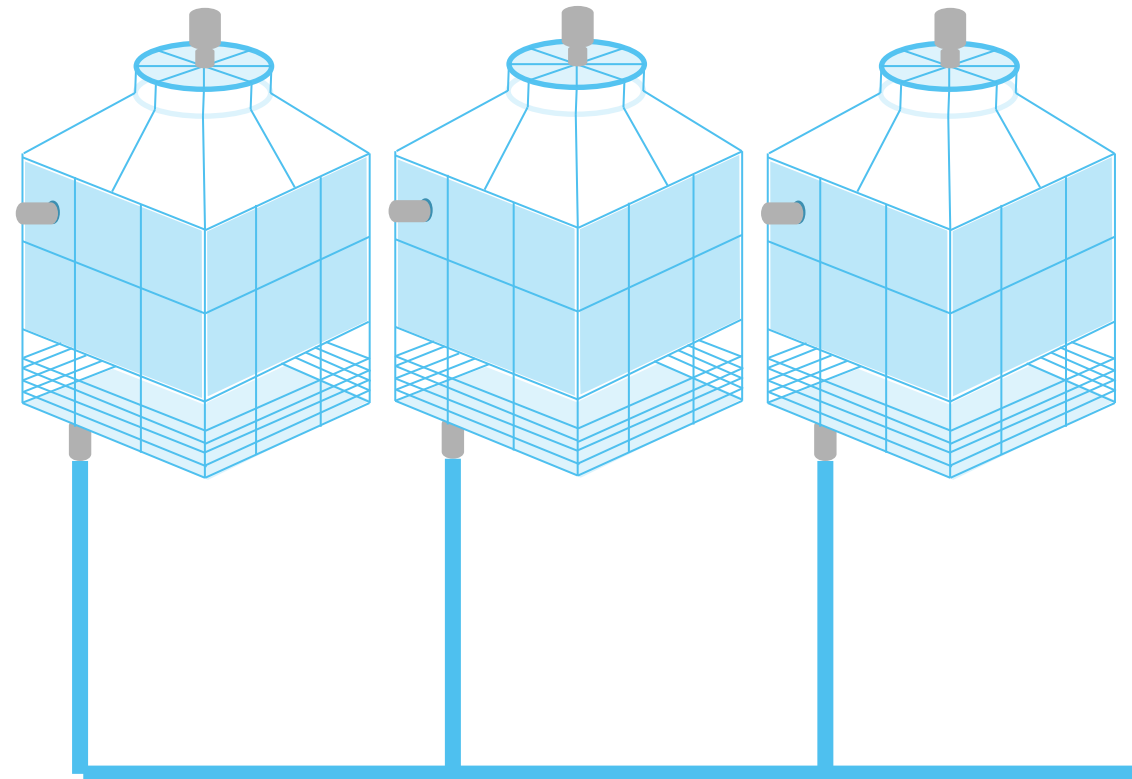
- *Minimum Number of running tower* fixes the number of **Lead towers**
- *Maximum Number of running tower* fixes the number of **Lag towers**
- **Standby tower** is the one to be kept stopped and to be started only in case of alarm of the other ones



Cooling Tower Staging

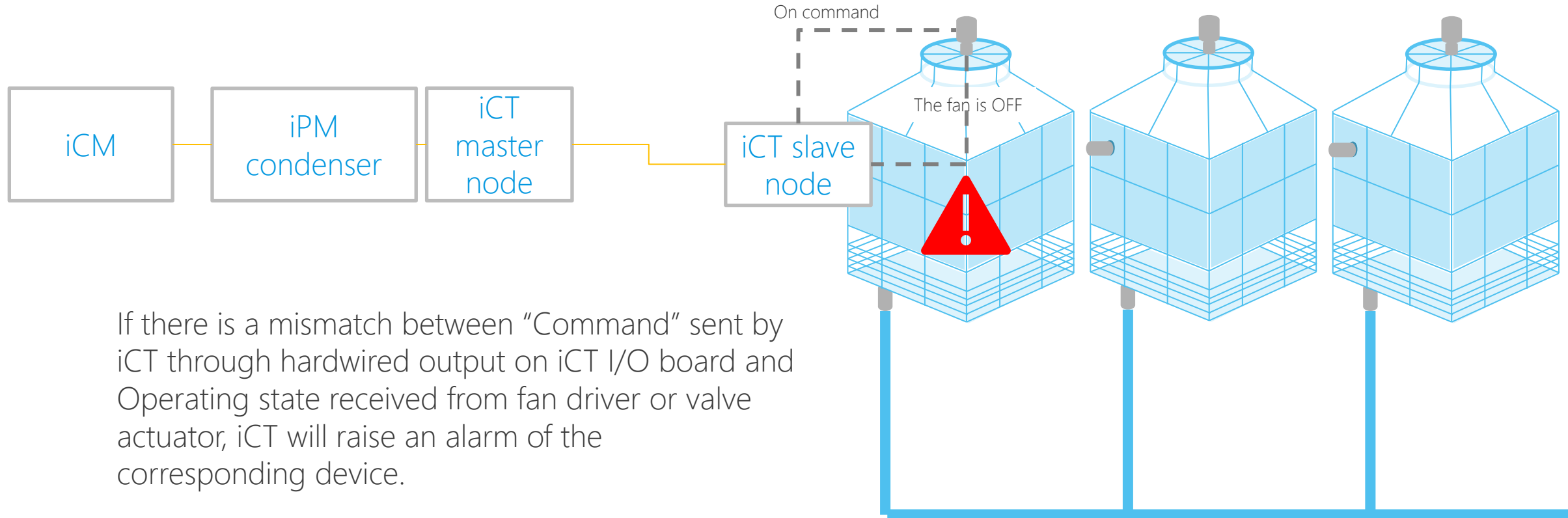
This function decides when a tower needs to start or stop to assure a stable cooling leaving water temperature

1. Fixed number of running towers
2. Demand number of running towers by pumps
3. Cooling leaving water temperature achievement
4. Cooling LWT and Speed Threshold staging (for VFD fan only).
5. Cooling LWT and Demand and Speed Threshold (for VFD fan only)



Cooling Tower Alarm Management

iCT collects through hardwired input of CT I/O boards the "Operating state" of fan and of inlet shut-off valve

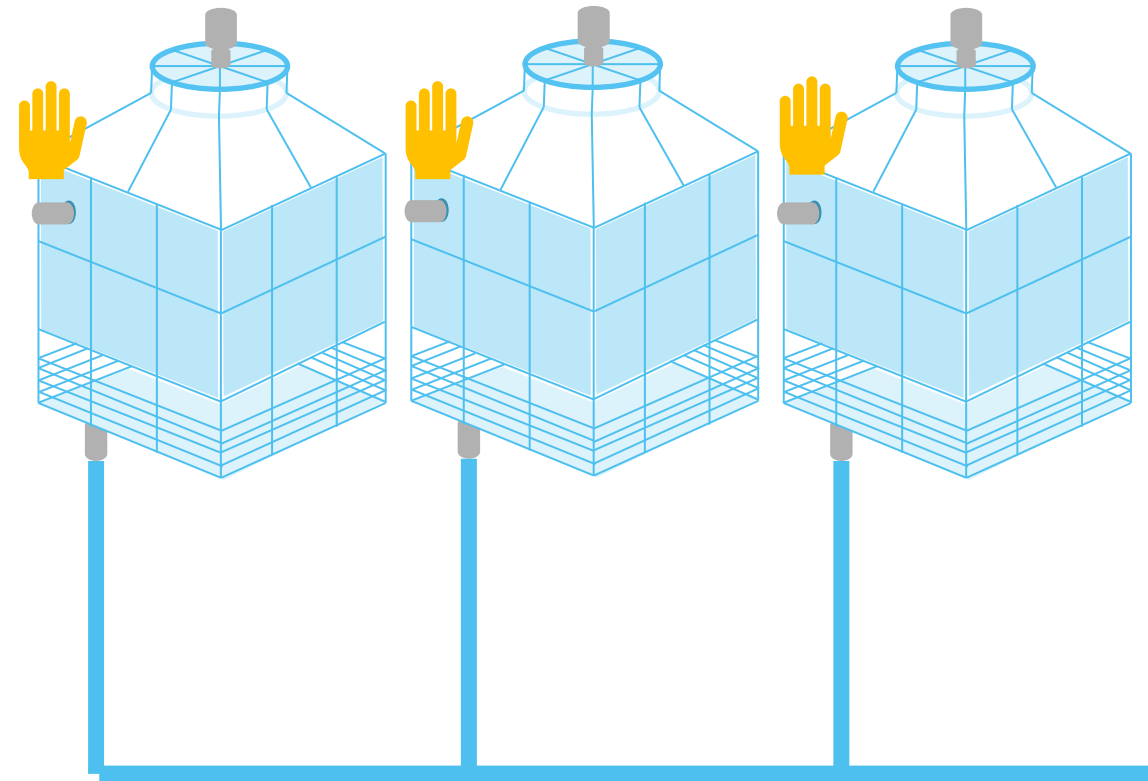


If there is a mismatch between "Command" sent by iCT through hardwired output on iCT I/O board and Operating state received from fan driver or valve actuator, iCT will raise an alarm of the corresponding device.

Cooling Tower Manual Management

iCT provides for each cooling tower components (fan and shut-off valve) a setpoint (“Manual Selector”) that sets the type of command to the device.

1. Auto: Command to the device is decided by iCT logic according to sequencing and staging functions.
2. Off: Force Manual Off command from HMI, without considering logic;
3. On: Force Manual On command from HMI, without considering logic;



Cooling Tower Cooling Leaving Water Temperature compensation

This function change dynamically the Cooling leaving water temperature setpoint according to the outside air condition:

It prevents the fan from running at maximum speed or avoid the start (stage up) of unnecessary cooling towers if the outside air temperature conditions do not allow to reach the Cooling tower setpoint, diminishing the power consumption and enhancing the Cooling system efficiency

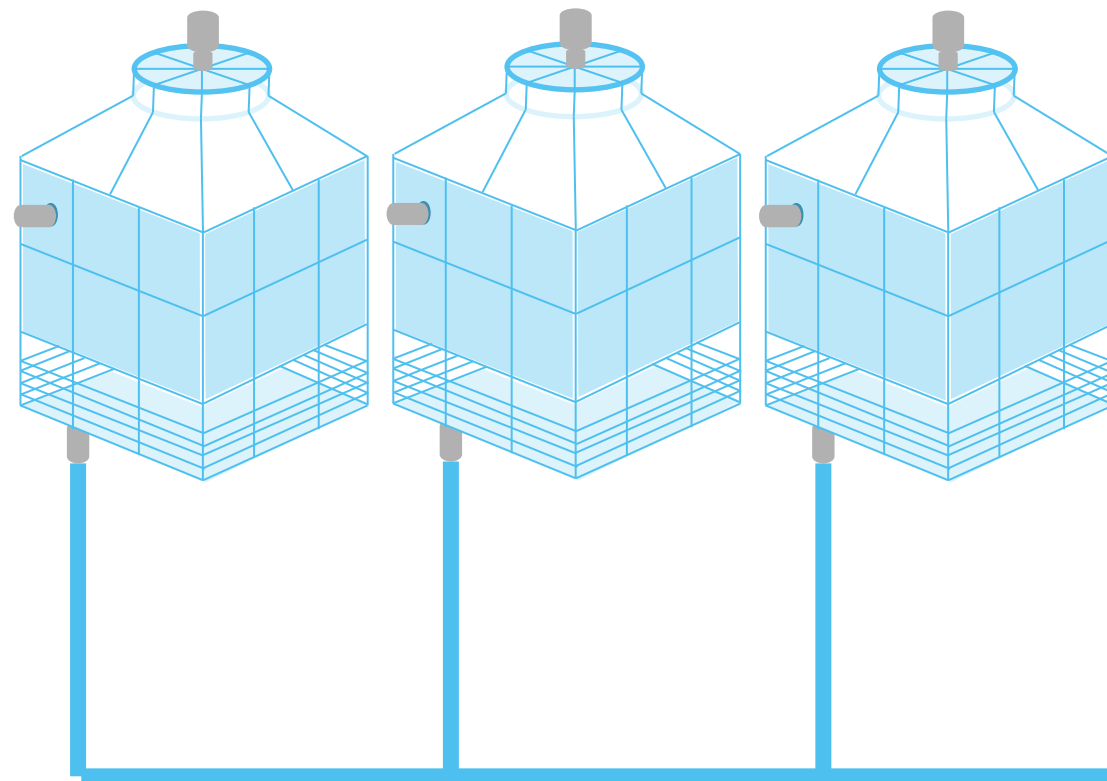
There are two types of compensation:

- **Dry bulb compensation:** based on outside air temperature
- **Wet bulb compensation:** based on outside air temperature and humidity



ENERGY SAVING

- Avoid fan running at max speed
- Avoid unnecessary starts



Daikin on Site

Enhanced Remote Monitoring and Control

What is Daikin on Site

Daikin on Site is a **cloud-based remote monitoring and control system** for chiller plants and air handling units.

Using **enhanced control, monitoring and measuring**, Daikin on Site provides:

- **real-time data access and storage**
- **support from Daikin experts**
- **possibility to you identify cost-saving opportunities, increase the lifetime of your unit and reduce the risk of unexpected issues.**



All new DAE Chiller Units are "*DoS Connection Ready*".

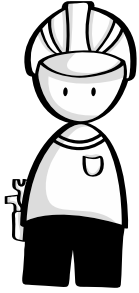
General Features

- **Remote monitoring and control**
provides data analysis for determining if your unit is operating optimally and whether maintenance is needed to improve its performance
- **User-friendly dashboards**
graphic panels that can feature different information depending on which applications is installed within the Unit
- **Access to data points and trends**
You can access data points to evaluate acquired value, change setpoint or update previous configurations.
- **Web graphic**
provides the most technical view also by means of cooling circuit scheme
- **Track energy usage**
monitor the energy efficiency of your unit.
- **Alarm notifications**
to communicate in real time unexpected status of the equipment and reach customers via email

Services

- Remote support by Daikin Smart Center and Service
- Connected maintenance

Daikin on Site commissioning



Jack, Daikin
Service
Technician

Check-list

1. **Application Version** (unit's controller firmware) **preloaded** according to the chiller unit before shipment.
2. Optionally a **M2M device can be installed**, connected to controller and pre-activated.
 - In case of M2M devices, the plant will be connected to DoS without requiring network configurations on the controller!
3. **DoS is never pre-activated** by default.

1. Before
Commissioning



2. Unit Connection



3. Plant Activation



4. Plant
Configuration





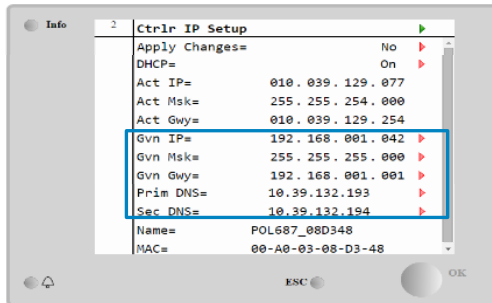
Jack, Daikin
Service
Technician

1 Physical connection



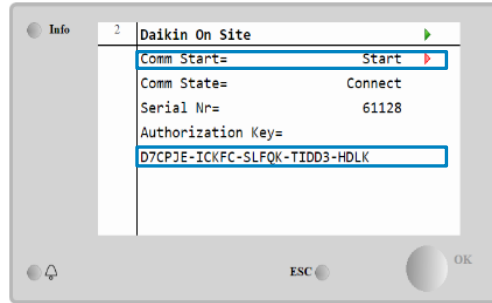
LAN cables or M2M
device

2 IP configuration



Only for ethernet
connections or other
M2M devices

3 Activation of DoS



Annotation of the Auth.
Key

2. Unit Connection



1. Before
Commissioning



Plant Activation



4. Plant
Configuration





Jack, Daikin
Service
Technician



Anita, Daikin
Tenant
Administrator



Contact your **Tenant Admin** and provide him the **Auth. Key**.
This allows to identify and activate your plant on the fly!

1. Before
Commissioning



2. Unit Connection



3. Plant Activation



4. Plant
Configuration





Jack, Daikin
Service
Technician



Anita, Daikin
Tenant
Administrator

The **Tenant Admin** adds the **Owner** of the plant who will receive an email notification about his new account. Then the **Plant Owner** can add in turn other **users**.

External service	<input type="checkbox"/> Company w/ close Daikin relation, doing start-up and/or service tasks (external service companies, facility management companies, installers, contractors)
Operator (Trained)	<input type="checkbox"/> Operator with good understanding of equipment. (Site operator, installer, contractor)
Daikin service	<input type="checkbox"/> Broad data point access for start-up & service of equipment, incl. Plant Upgrade.
Operator	<input type="checkbox"/> Read-only data point access & WEB-Access
Daikin on Site AFF support engineer	<input type="checkbox"/> Data point access at service level and full plant access
Daikin on Site Smart Center & Factory	<input type="checkbox"/> Full data point and plant access.
Owner	<input type="checkbox"/> Person with ownership of a plant and assigning users.

1. Before
Commissioning



2. Unit Connection



3. Plant Activation



4. Plant
Configuration



Your Plan is online!



English (United States) ▼

Welcome to Daikin on Site

Our cloud-based monitoring and controls solution for chiller plants & air handling units.

Access to Daikin on Site is by invitation only. Get in touch with us at fs_servicebusiness@daikineurope.com to find out more.

We invite you to visit our [main site](#) to find more information about our products and services.

Sign In

E-mail address

Password

Sign In

Keep signed in

[Cannot access your account?](#)



Daikin Applied Europe S.p.A.
Daikin Europe N.V.



Basic Features

User Authentication	Username and Password with Daikin single-sign on account
Map Overview	Geographic position of your Plants on a Map
Key Performance Indicators	Configurable KPI can be applied to available plants. 4 status levels with definable pop-up text
Dashboard editors	Used to create plant dashboard
Plant dashboard	Standard tiles for all plants
Plant overview	Overview of the plant and user dashboard
Data points	Data point storage and access
Alarms	Plant alarms on alarm event and alarm resolution. Alarm history
Web access	Access to local controller through web access
Web graphics	SVG based web graphics with access appropriate for the role
Remote Upgrade	Remote firmware upgrade service with scheduler
Trend viewer	Single and Multiple trends per chart and also multiple charts per view to assist with diagnostics. Trend Downloads via CSV. Adaptable X and Y axis, definable min/max limits and definable trend colors.
History	Data point and system alarm storage access
Alarm Dashboard & Troubleshooting	Dedicated Alarm dashboard for unit and alarm troubleshooting with suggested actions
Reports	1 and 3 month reporting
Energy and Performance Monitoring	Unit Energy and performance visualization and trend
intelligent Chiller Manager overview	Integration of iCM units and plant overview in a single page

Daikin on Site – additional services

Gas Leak Detection

Through an extensive analysis of working data of the unit, a Machine Learning algorithm will detect potential gas losses by notifying the Operator. The algorithm is able to detect losses that are in a range of 0-15% of the total amount of gas

IAQ dashboard

A dedicated dashboard providing IAQ values and reports is available with DoS subscription or as a separate service

and much more...

Thank you