

DAIKIN360 INTEGRATED SERVICE SOLUTIONS

Internal Guide 2026



Applied HVAC specialists for complex, large scale projects
Lifecycle service, maintenance, and refurbishment solutions across the UK
Formerly McQuay

AHUs

Chillers

Service

Rentals

Spares

Daikin360 Integrated Service Solutions

This catalogue provides an overview of the solutions available through Daikin360 Integrated Service Solutions and is designed to help you understand the full range of Daikin Applied Service capabilities.

Daikin360 is our lifecycle service framework, bringing together proactive maintenance, optimisation, connected services, modernisation, rental solutions, spare parts and replacement projects into a single integrated offering.

By understanding the complete portfolio, we can better support our customers, identify opportunities within their HVAC systems, and recommend solutions that improve reliability, efficiency, asset life and business continuity.



SERVICE & SOLUTIONS

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PROACTIVE SERVICE & MAINTENANCE

Proactive Services & Maintenance

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Whenever, wherever, however you need us

CHILLER OVERHAUL

Lifetime maintenance for screw and centrifugal chillers

PRODUCT DESCRIPTION

- An overhaul **is part of the lifetime maintenance of a chiller.**
- The lifetime maintenance schedules are detailed in the following pages.
- An overhaul **replaces the wearable parts before they fail.** This aims to bring the compressor back to its original performance.
- The overhaul is **focused on the compressor**, as it has the most wearable parts of the chiller, but we can also recommend other overhaul procedures in the maintenance schedules.

We strive to promote preventive activities to take care of the equipment, therefore we expect these to be scheduled while the compressor still works

A. If compressor has failed

Only option 4. ALL IN is possible and the compressor needs to be sent to the factory for a full overhaul.

B. If compressor is still working

- If you have the capabilities to perform the overhaul, you'll just need to select a kit from the list [here](#).
- If you don't have the capabilities, you can request one of the kits with DAE engineer's support.

C. Warranty conditions

- If the overhaul is executed by DAE, you get 1y warranty on the overhauled compressor.
- The SPP kit has a one-year warranty on the parts only.

BENEFITS



Cost savings:

Repairs are costly and preventive actions aim to reduce this for up to 50%



Reduced downtime:

Planned maintenance and interventions reduce the risk of downtime



Improved reliability and performance:

Wear and tear makes the equipment operate at a lower performance than originally



Extend lifetime:

The replacement of some of the main components assures your equipment's life gets prolonged



Planned intervention:

To avoid surprises when the chiller is most needed, planning in the low seasons allows for better and cheaper interventions



Peace of mind:

Focus on your core business, and let Daikin take care of your chillers.

HOW TO OVERHAUL?

For every overhaul job, there are 4 options to choose. This will depend on 3 main factors:

- A. Whether the compressor is working or not
- B. Whether the affiliate is able to perform the overhaul by themselves or if they need support from the factory
- C. Whether the compressor needs to be shipped to DAE or stays in the country.

Depending on these, you can select a kit to order:

1. **Overhauling kit**
The parts will be shipped to the local office of the technician.
2. **Overhauling kit + Site overhaul**
The parts will be shipped to the local office and a Daikin technician will execute the overhaul at the customer premises.
3. **Overhauling kit + Factory overhaul**
Daikin technician will execute the overhaul at Daikin Cecchina factory. The compressor needs to be shipped to the factory.
4. **ALL IN**
When the compressor has failed, it needs to be shipped to the factory to be fully stripped down and overhauled.

1. Overhauling Kit	2. Overhauling Kit+ Site overhaul	3. Overhauling Kit + factory overhaul	4. ALL IN
Compressor is working			Compressor failed
Compressor in local workshop		Compressor shipped to Daikin factory	
Standard warranty on parts 1 year	Standard warranty on compressor 1 year.		

How to sell

Targeting chillers that have 20k (screw) or 40k (centrifugal) running hours is the perfect moment to execute the overhaul.

1. Screw Chillers

For Screw chillers, the factory recommendation is to have a minor compressor overhaul every 20.000 running hours and a major compressor overhaul every 40.000 running hours.

2. Centrifugal chillers

For centrifugal chillers, every 40.000 running hours an overhaul is recommended.

For every centrifugal chiller model, low-, medium-, and high-voltage kits are available. The correct kit will also depend on the overhaul service selected. Part numbers can be obtained through the Daikin Applied (UK) Spare Parts Department.

Please contact the team at spares@daikinapplied.uk for assistance.

LONG TERM PREVENTATIVE MAINTENANCE

Daikin centrifugal chillers in premium applications

DAIKIN CENTRIFUGAL CHILLERS - LONG TERM PREVENTATIVE MAINTENANCE FOR PREMIUM APPLICATIONS																					
Section	Item No.	Item Description	Inspection Work	Inspection Criteria	Maintenance Work	MAINTENANCE FREQUENCY - Years or operating hours															Remarks
						1 year	2 years	3 uyears	25,000hrs	4 years	6 years	40,000hrs	7 years	8 years	9 years	75,000hrs	10 years	12 years	14 years	15yrs or 100,000hrs	
	1	Compressor vibration analysis	Compressor vibration readiings	Take readings at bearing points	Compare readings with factory baseline	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	For critical applications or where a high level of security is required
	2	Oil & Oil Filter Change	Time based, no inspection required	Change regardless of condition	Change Oil and oil filter			.			.	.			.			.		.	For critical applications or where a high level of security is required (Every year)
	3	Onsite or factory overhaul	Time and oil condition based	Change depending on time and/or oil analysis results	Factory overhaul							.									
Evaporator	4	Pressure relief valves	Replace valve regardless of condition	Time based	Replace at due time			.			.				.			.			Replacement should be carried out in line with local regulation; with 3yr maximum
	5	Eddy current check	Inspect all evaporator tubes	< 10% tube thickness reduction	Plug or replace defective tubes						.				.			.			After initial check, increase frequency if required, depending on site conditions
Condenser	6	Water-cooled condenser lube condition				.	.	.		.	.	.	.	.	.		.	.	.		Analyse operations log to determine potential tube fouling
	7	Eddy current check	Inspect all condenser tubes	< 10% tube thickness reduction	Plug leaking or suspect tubes						.				.			.			After initial check, increase frequency if required, depending on site conditions
	8	Pressure relief values	Replace valve regardless of condition	Time based	Replace at due time			.			.				.			.			Replacement should be carried out in line with local regulation; with 3yr maximum
	9	Starter Contractor contacts	Inspect contacts for wear and arcing damage	Serviceable or not	Replace	.	.	.		.	.	.	.	.	.	.	.	.	.		Suggest change every 5 years regardless
	10	Integral VFD Capacitors	When promoted by control diagnostics	Only when promoted	Replace capacitors															.	Maximum life is 15 years
Refrigeration	11	Electronic expansion valve	Check correct operation	Control set s/ heat and shuts off tight	Replace every 8 years, or as necessary	.	.	.		.	.	.	.	.	.		.	.	.		Replace is latest system is compatible
	12	Filler drier	Check filter pressure drop	<1° C equivalent	Replace core if necessary	.	.	.		.	.	.	.	.	.		.	.	.		Only replace if system is opened

LONG TERM PREVENTATIVE MAINTENANCE

Daikin water cooled screw chillers for standard applications

DAIKIN AIR COOLED SCREW CHILLERS - LONG TERM PREVENTATIVE MAINTENANCE FOR PREMIUM APPLICATIONS																			
Section	Item No.	Item Description	Inspection Work	Inspection Criteria	Maintenance Work	MAINTENANCE FREQUENCY - Years or operating hours													
						1 year	2 years	3 years or 12,000hrs	20,000hrs	4 years	6 years or 24,000hrs	40,000hrs	7 years	8 years	9 years or 36,000hrs	60,000hrs	10 years	12 years or 48,000 hrs	14 years
Compressor	1	Visual inspection of gate-rotors and clearances	Remove refrigerant, remove side covers and visually inspect.	All clearances within tolerance and star-gates in good condition	Replace gates and/or gate bearings if necessary				.			.				.			.
	2	Oil Analysis	Tested Annually	Review Oil Analysis Results															
	3	Oil & Oil Filter Change	Operating Hours	Change regardless of condition	Change Oil and oil filter				.			.				.			.
	4	Onsite or Factory Overhaul	Time/run hours based,	Change regardless of condition	Replace compressor main bearings, star gates and internal elastomer seals							.							.
Evaporator	5	Pressure relief valves	Replace valve regardless of condition	Time based	Replace at due time.			.			.				.			.	Replacement should be carried out in line with local regulation; with 3yr maximum
	6	Eddy current check	Inspect all evaporator tubes	< 10% tube thickness reduction	Plug or replace defective tubes						.				.			.	After initial check, increase frequency if required, depending on site conditions
Condenser	7	Air-cooled Condenser Coil condition	Examine coil for evidence of fin corrosion and/or damage	Insufficient damage to significantly effect performance or lead to premature failure	Repair damaged fins, consider coil protection coatings	.	.	.		.	.	.	.	.	.	.	.	.	
	8	Water-cooled condenser tube condition				.	.	.		.	.	.	.	.	.	.	.	.	Analyse operations log to determine potential tube fouling
	9	Eddy current check	Inspect all condenser tubes	< 10% tube thickness reduction	Plug or replace defective tubes						.				.			.	After initial check, increase frequency if required, depending on site conditions
	10	Pressure relief valves	Replace valve regardless of condition	Time based	Replace at due time.			.			.				.			.	Replacement should be carried out in line with local regulation; with 3yr maximum
Electrical Components	11	Starter Contactor contacts	Inspect contacts for wear and arcing damage	Serviceable or not	Replace	.	.	.		.	.	.	.	.	.	.	.	.	Suggest change every 5 years regardless
	12	Integral VFD Capacitors	When prompted by control diagnostics	Only when prompted	Replace capacitors													.	Maximum life is 15 years Replace even if not prompted
Refilling Circuit	13	Electronic expansion valve	Check correct operation	Control set s/ heat and shuts off tight	replace every 8 years, or as necessary	.	.	.		.	.	.	.	.	.	.	.	.	Replace with latest standard if compatible
	14	Filter Drier	No inspection	Suggested service life	replace			.				.			.	.			

ENERGY AUDIT (ON-SITE) CHILLERS

BY THERMAL & ELECTRICAL ENERGY MEASURING & MONITORING

PRODUCT DESCRIPTION

To effectively propose energy saving solutions, an accurate measuring of the current situation is a must. For such targeted energy audit, Daikin developed its own tool: Measurement and Monitoring kit (M&M). All data measured by the Monitoring kit is logged and available in a user friendly way on 'Daikin on Site'. (The DoS connection is charged separately).

And more, because the measurement kit measures on the hydraulic side, it is suitable for any chiller brand.

Content

Thermal Energy & Communication kit

- MT-III Controller
- 4 temperature sensors
- Modem 3G and antenna (sim card not included)

Electrical Energy kit

- Energy metering module (Nemo)
- Electrical probes (2 for voltage and 2 for current)

Options

- 1 DP sensor



FEATURES

The M&M kit is not for sale.

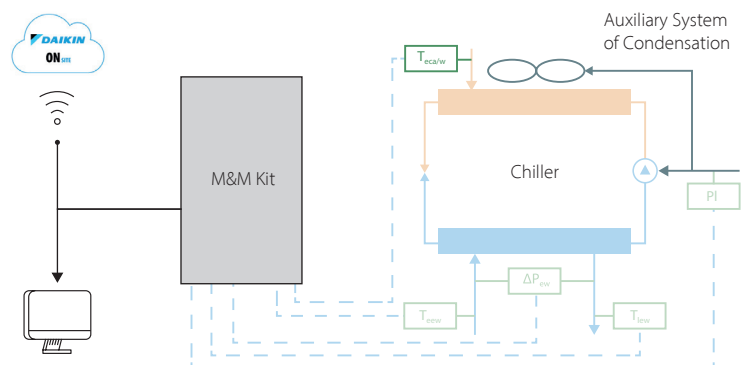
It is a 'Daikin only' tool which allows us to approach the market with upgrade proposals which are based on real data.

Confidently optimising a chiller plant

requires a clear view on the initial performance. By measuring the different points where the energy consumption is concentrated, you can assertively propose the necessary actions for optimisation.

Daikin Energy Monitoring kits

allow customers and our technicians to better understand the chillers' performance and the impact of all actions taken. Because accurate data is the base for correct decisions, both thermal and electrical measurements are recommended.



HOW TO ORDER

Available kits

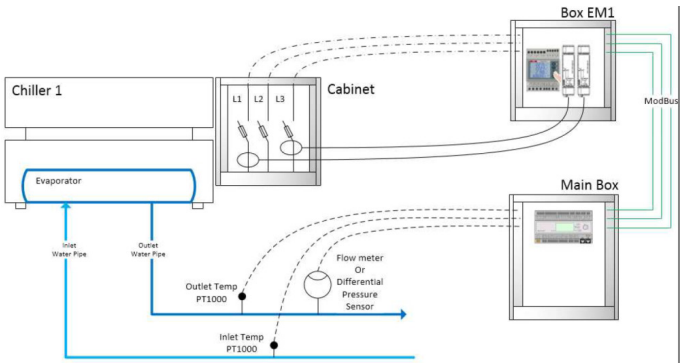
These are Daikin tools, NOT available for external sales.

Order process

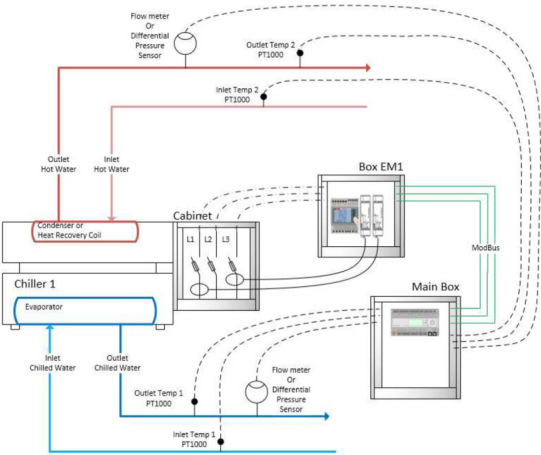
- Select the required kit:
 - **Thermal Energy kit:** Measures the thermal energy and sends information to the cloud (this kit has the main components – Main box).
 - **Electrical Energy kit:** Measures electrical energy in different points and sends the information to the cloud (this kit complements the Thermal Energy kit – EM box).

Detail	Kit number
Thermal Energy kit + Communication (Main kit)	Refer to Spares
Electrical Energy kit (Additional option)	Refer to Spares
Option	Part number
A Differential Pressure (DP) sensor needs to be ordered depending on the pressure drop throughout the evaporator	Request the part number from Spares according to the range you need to: [0...200] kPa [0...500] kPa [0...1000] kPa

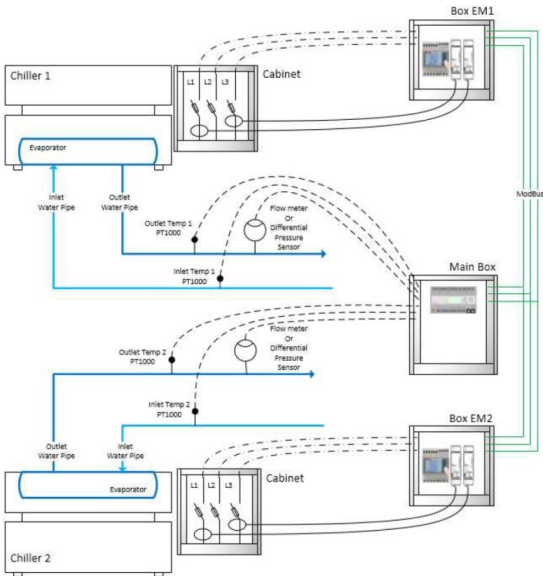
Configuration 1: One loop in one chiller



Configuration 2: Two loops in one chiller



Configuration 3: Two independent chillers



F-GAS: REGULATION COMPLIANCE CHECK

PRODUCT DESCRIPTION

As HVAC-R equipment contains fluorinated greenhouse gases (F-Gases) such as hydrofluorocarbons (HFCs), customers must comply with a series of requirements adopted in the European Union to ensure emission prevention, containment; and hence reduce the environmental impact of refrigerants.

What is the frequency of the inspections?

- The frequency of the equipment's leak inspections depends on its F-Gas charge size measured in CO₂ equivalents as shown on the table.
- The installation of a leakage detection system is mandatory for equipment containing 500 t CO₂ or more and its proper functioning has to be checked at least once every 12 months.
- When the equipment has a leakage detection system, the frequency of required leak checks is reduced by half.

Gas Regulation (EU) No 517/2014

- Applies from 1 January 2015
- Puts in place mandatory measures to reduce F-Gas emissions in the EU
- One of these measures is the prevention of emissions of F-Gases by conducting:
 - Periodical checks.
 - Proper servicing.
 - Recovery of the gases at the end of the equipment's life.

BENEFITS



Repaired without undue delay

HVAC-R equipment that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO₂ equivalent or more must be checked for F-Gas leakage by certified personnel. During these checks, precautionary measures are taken to prevent leakages; and in case a leak is detected, it is repaired without undue delay.

Applicable for

		Refrigerant			
Leak checks frequency	Tonnes of CO ₂ equivalent	R-410A (Kg)	R-407C (Kg)	R-134a (Kg)	R-32 (Kg)
12 months	5 ≤ t CO ₂ e < 50	2.4 – 24	2.8 – 28	3.5 – 35	7.4 – 74
6 months	50 ≤ t CO ₂ e < 500	24 – 240	28 – 280	35 – 350	74 – 740
3 months	t CO ₂ e ≥ 500	≥ 240	≥ 280	≥ 350	≥ 740

OIL ANALYSIS: DIAGNOSTIC AND PREDICTIVE MAINTENANCE SERVICE

PRODUCT DESCRIPTION

Regularly scheduled analysis of your chiller's oil is a valuable aid in assessing internal mechanical condition. Laboratory analysis of chiller oil samples can identify potential problems so they can be remedied before they become disruptive headaches.

Oil comes in contact with many important internal components and therefore holds valuable information about a chiller's condition. The presence of harmful acids, corrosion causing water and abnormal metal wear particles can all be detected by chemical analysis. By comparing the results of the analysis against your chiller's historical operating data, our analysts provide a reliable diagnosis with individualised recommendations for each system.

Identifies:

- Lubricant Condition.
- Internal Contamination.
- Abnormal Wear.
- Mechanical Condition.

Results:

- Earlier detection of problems.
- Lower operating costs.
- Increased reliability.

BENEFITS



Reduced downtime

Oil analysis, when used as part of a maintenance program, can prevent catastrophic chiller failures and eliminate the cost of unexpected shutdowns. Knowing the current operating condition of your machine allows you to schedule repairs at a time that works best for you.



Extend chiller life

By identifying and repairing abnormal machine conditions early, it is much easier and less expensive to keep your chiller in peak operating condition. If oil analysis is conducted on a scheduled basis, you benefit from a more reliable chiller performance for years to come.



Minimise costly repairs

Because oil analysis can identify problems before you might otherwise be aware of them, conditions can be remedied before they become problems that are more expensive to repair. Oil analysis helps to pinpoint the areas that should be checked so scheduled repairs can be accomplished quickly and cost effectively.



Environment

Oil will remain in the chiller as long as analysis findings are within expected limits. Extending oil lifetime reduces handling of oil waste. It is a win-win for the environment and cost saving.

HOW TO ANALYSE ?

Available oil analysis tools

	Spare Parts numbers
Glass sample bottle, including sample label, pre-addressed shipment label and pre-paid analysis	Refer to spares



Convenient:

- Prepaid analysis.
- Online reporting.
- Pre-addressed stickers for envelopes.

Oil Analysis:

- For any brand of HVAC oil.
- For all compressor technologies and brands

Report what really matters:

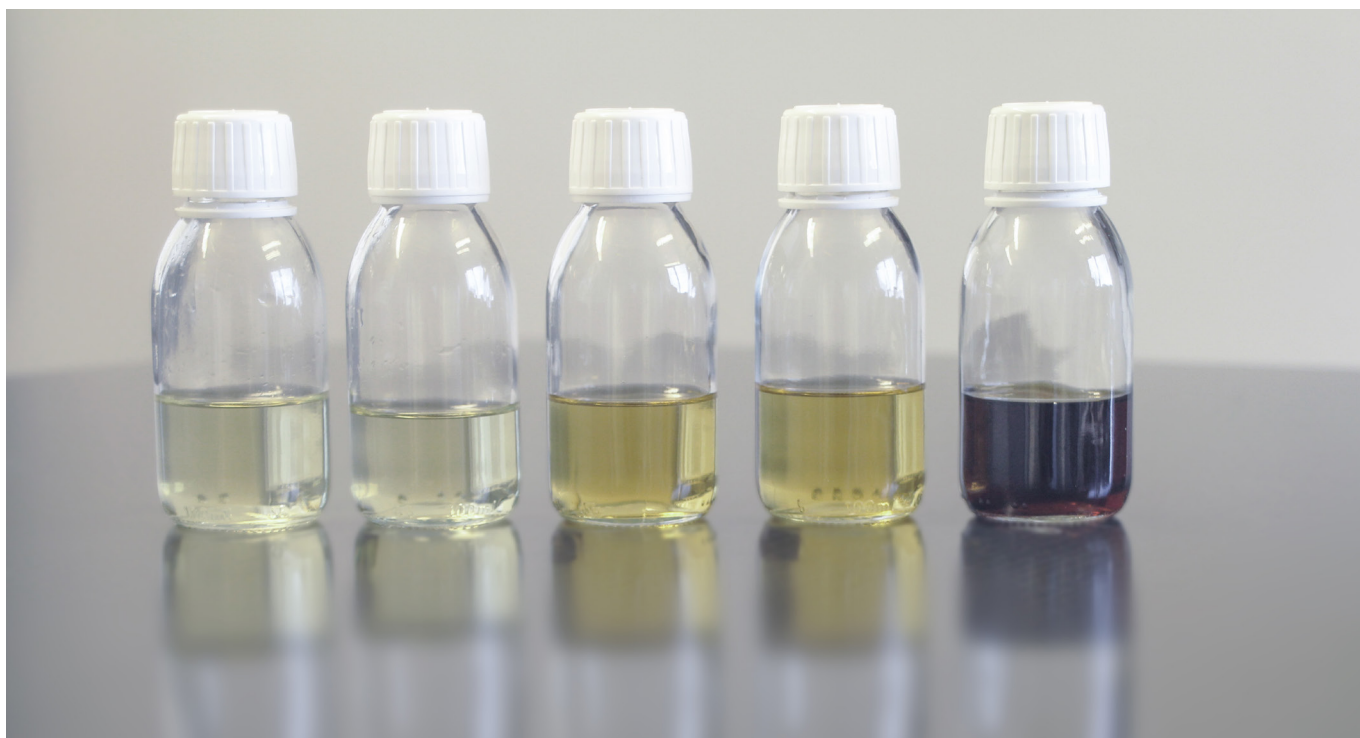
- Expert comments and corrective recommendations
- History and trend lines of
 - Chemical
 - Contamination
 - Wear
 - Acidity
 - Moisture

Oil limits

Oil types: Emkarate RL68H (POE) MOBIL EAL ARTIC 68 (POE) DAPHNE HERMETIC OIL FW56EA (PVE) DAPHNE HERMETIC OIL FCV68D(PVE)					Oil types: Daphne hermetic FVC D 132			Oil types: General Polyolester		
Test		Result			Result			Result		
		Normal	Resample after 1000 hrs	Investigate for cause. Replace oil, filter and dryer	Normal	Resample after 1000 hrs	Investigate for cause. Replace oil, filter and dryer	Normal	Resample after 1000 hrs	Investigate for cause. Replace oil, filter and dryer
Visco	cSt	± 10%	±10% - 15%	> 15%	± 10%	±10% - 15%	> 15%	± 10%	±10% - 15%	> 15%
Water	ppm	> 150	150 - 200	> 200	< 400	400 - 800	> 800	< 400	400 - 800	> 800
Si	ppm	< 50	50 - 100	> 100	< 10	10 - 20	> 20	< 50	50 - 100	> 100
Na	ppm				< 10	10 - 20	> 20			
Fe	ppm	< 100	100 - 150	> 150	< 10	10 - 20	> 20	< 100	100 - 150	> 150
Cr	ppm	≤ 10		> 10	< 10	10 - 20	> 20	≤ 10		> 10
Mo	ppm	≤ 10		> 10	< 10	10 - 20	> 20	≤ 10		> 10
Al	ppm	< 100	100 - 150	> 150	< 10	10 - 20	> 20	< 100	100 - 150	> 150
Cu	ppm	< 100	100 - 150	> 150	< 10	10 - 20	> 20	< 100	100 - 150	> 150
Pb	ppm	≤ 10		> 10	< 10	10 - 20	> 20	≤ 10		> 10
Sn	ppm	≤ 10		> 10	< 10	10 - 20	> 20	≤ 10		> 10
TAN	mg KOH/g	< 0,10	0,10 - 0,20	> 0,20	< 0,20	0,20 - 0,40	> 0,40	< 0,20	0,20 - 0,40	> 0,40

Applicable for

- All HVAC oils.
- All compressor technologies.

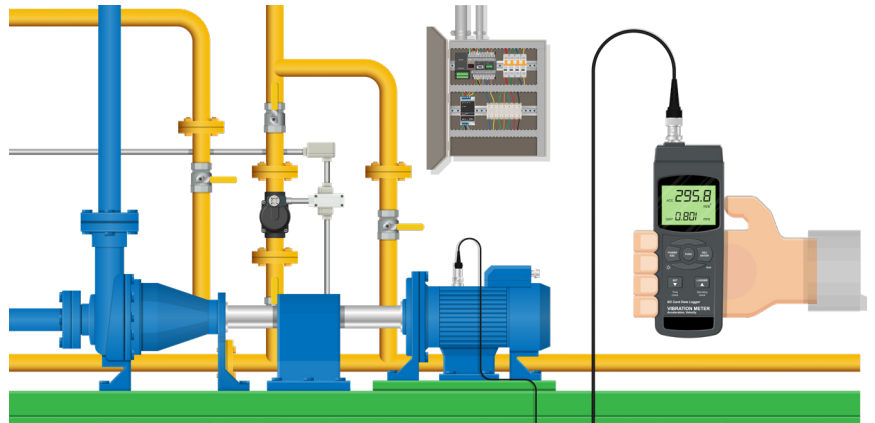


VIBRATION ANALYSIS

Detect faults before they lead to failure

WHAT WE DETECT:

- 1 IMBALANCE
- 2 MISALIGNMENT
- 3 BEARING WEAR
- 4 LOOSE COMPONENTS
- 5 MOTOR ISSUES



How it works

Using portable vibration analysers, measurements are taken while the system is in operation.

This data is analysed to identify abnormal vibration patterns, allowing engineers to diagnose faults and prioritise maintenance activities.

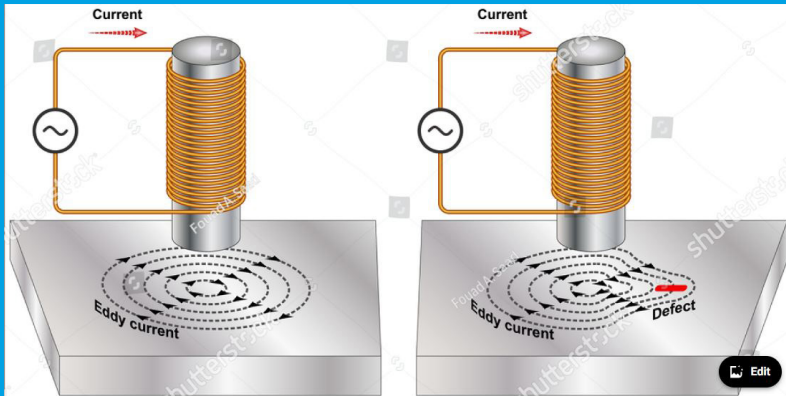
Key Benefits

- › Early fault detection
- › Reduced downtime
- › Extended equipment lifespan
- › Lower maintenance costs
- › Improved reliability
- › Supports predictive maintenance strategies



TUBE TESTING

An Eddy Current analysis of your shell and tube heat exchangers evaporator and condenser tubes should form part of your preventative maintenance program. Daikin Applied Service can detect any wear before serious damage can occur to your equipment, avoiding system failure and costly downtime.



Eddy current testing is a non destructive testing method and completely safe for your equipment.

An inspection probe is used inside each tube of the heat exchanger.

Any defects to the tubes cause a change in the eddy currents and thus a corresponding change from their normal circular shape.

Daikin Applied Service monitor these changes to produce a detailed report on findings including the root cause of the problem and the extent of the damage. We can then offer a tailored quote for any repairs required.

Heat exchanger wear and tear

The heat exchanger in your chiller or heat pump is a vital piece of equipment. Over time, your heat exchanger can develop various types of defects.

These defects can cause leaks, affect your equipments performance and eventually lead to complete system failure.

Shell and tube defects are not easy to detect. Your system may remain running adequately until your system completely fails.

Possible defects to your shell and tubes

- › **External corrosion** caused by oxidation. The reaction between oxygen (O₂) and iron (Fe₂, Fe₃) is the most commonly observed form of corrosion
- › **Internal tube erosion and pitting** is the physical wearing of the tubes by fluids. The weakest points of the tubes are at the U-bends and the leading edge of the inlet tubes. This can be caused by water velocity or foreign deposits in the water from inadequate water treatment
- › **Rupture or collapse** to either the shell or the tubes, caused by a surge in water pressure or low water flow
- › **Tears, cracks and warps**, caused by accumulated stresses associated with extreme temperature differences
- › **Physical thermal expansion and contraction** of tubes along their length, causing the connection of the tube to the tube sheet to be compromised.

✓ Benefits of Eddy Current tube testing

- › **Maintenance cost savings:**
Repairs are costly and preventive actions aim to reduce this by up to 50%
- › **Operating cost savings:**
Equipment performing optimally will reduce unnecessary energy consumption
- › **Reduced downtime:**
Planned maintenance and interventions reduce the risk of downtime
- › **Improved reliability and performance:**
Wear and tear makes the equipment operate at a lower than optimum performance
- › **Extend lifetime:**
The replacement of some components assures your equipment's life is prolonged
- › **Planned intervention:**
To avoid surprises when the chiller is most needed, planning in the low seasons allows for better and cheaper interventions
- › **Peace of mind:**
Focus on your core business, and let Daikin take care of your chillers

✓ Rental Solutions

- › **Rental**
Availability of Daikin Applied Rental Solutions will keep you up and running whilst repair work on your equipment is carried out or in the event that your equipment fails and must be replaced.

DAIKIN360

OPTIMISE

Optimise

- Chiller Plant Performance Analysis (CPPA) 19
- Coil Protection Coating 20



Whenever, wherever, however you need us

CHILLER PLANT PERFORMANCE ANALYSIS (CPPA)

Unlock the true performance of your chiller plant

A Chiller Plant Performance Survey uses real operating data to build an accurate picture of system performance under actual site conditions. Supporting data-led decision making through measurable energy, cost and performance improvements.

WHAT WE ASSESS

- › Chiller operation and load profile
- › Controls strategy and sequencing
- › Energy use and system behaviour
- › Plant condition and optimisation opportunities

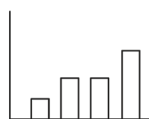
WHAT YOU'LL RECEIVE

- › Detailed system performance assessment
- › Quantified energy and cost saving opportunities
- › CO₂ reduction analysis
- › Lifecycle cost and efficiency insights
- › Clear recommendations for optimisation or upgrade



Turn plant performance data into practical recommendations for energy savings, carbon reduction and long-term investment planning.

Real-world service expertise, applied to operational HVAC assets.

**Data****Insight****Action**

COIL PROTECTION COATING

Protect critical heat exchange surfaces from harsh environments

Coil protection coating provides an additional protective layer for heat exchangers exposed to corrosive or contaminated environments, helping maintain performance and extend equipment life.

ENVIRONMENTAL RISKS

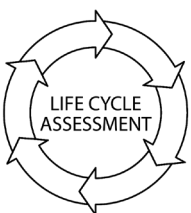
- › Salt air in coastal applications
- › Chemical exposure in industrial environments
- › High humidity and condensation
- › Airborne contaminants and pollutants

KEY OUTCOMES

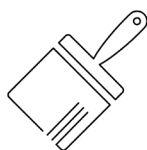
- › Corrosion Resistance
- › Longer Asset Life
- › Maintained Efficiency
- › Reduced Maintenance

KEY BENEFITS

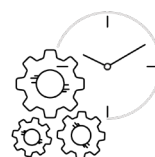
- › Protects against corrosive and chemical environments
- › Extends coil lifespan compared with uncoated coils
- › Maintains heat transfer efficiency with minimal performance impact
- › Reduces risk of early failure and costly replacement
- › Supports long-term reliability in harsh conditions



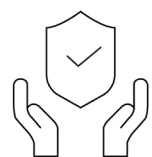
Prepare



Coat



Cure



Protect

HOW TO UPGRADE AIR-COOLED SCREW CHILLERS?

KITS for MT3-controlled chillers

Circuits to be equipped with HR compressor family (MT3)	1	2	3	4
3100	refer to Spares	refer to Spares	-	-
3200	refer to Spares	refer to Spares	-	-
FR4	-	-	-	-
FR3A	refer to Spares	refer to Spares	refer to Spares	-
FR4A	refer to Spares	refer to Spares	refer to Spares	-

A typical kit contains heat recovery heat exchanger, subcooler (if applicable), solenoid valves, expansions valve, temp sensors, pressure transducer, For MT2 a HR2 control box is required / for MT3, a control expansion module is required.

IMPORTANT: Check in the chiller's IOM, that the inlet/outlet water temperatures are within the envelope for the unit.

For other chiller types, partial heat recovery can be evaluated. Contact Daikin Applied (UK) Spare Parts department to check the feasibility and obtain a quote.

KITS for MT2-controlled chillers

- Chillers that still use MT2 controllers and want to have a Heat Recovery upgrade, must be first upgraded to an MT4 controller. This will be part of the quotation, so contact us for further information. Contact Daikin Applied (UK) Spare Parts department for further information.

APPLICABLE FOR

Daikin chiller type	McQuay chiller type
EWAD-BJYNN	ALS (from 2002 onwards)
EWAD-C EWAD-D	McEnergy McEnergy Evolution AWS
EWAD-CZ	AWS inverter

DAIKIN360

MODERNISE

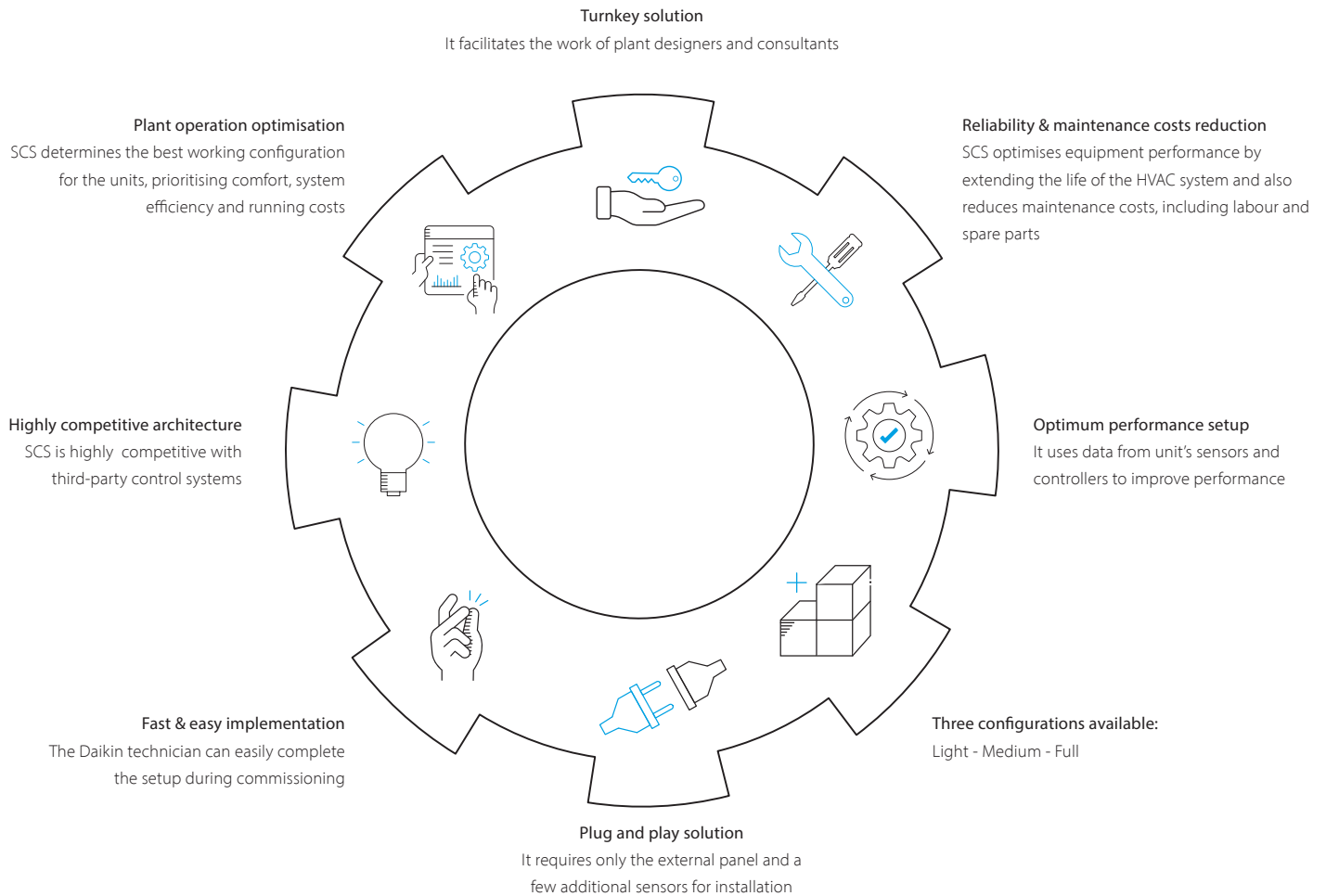
Modernise

▪ Control Systems Upgrades	24
▪ Heat Recovery Retrofit	25
▪ Inverter Retrofit for Screw Chillers	26
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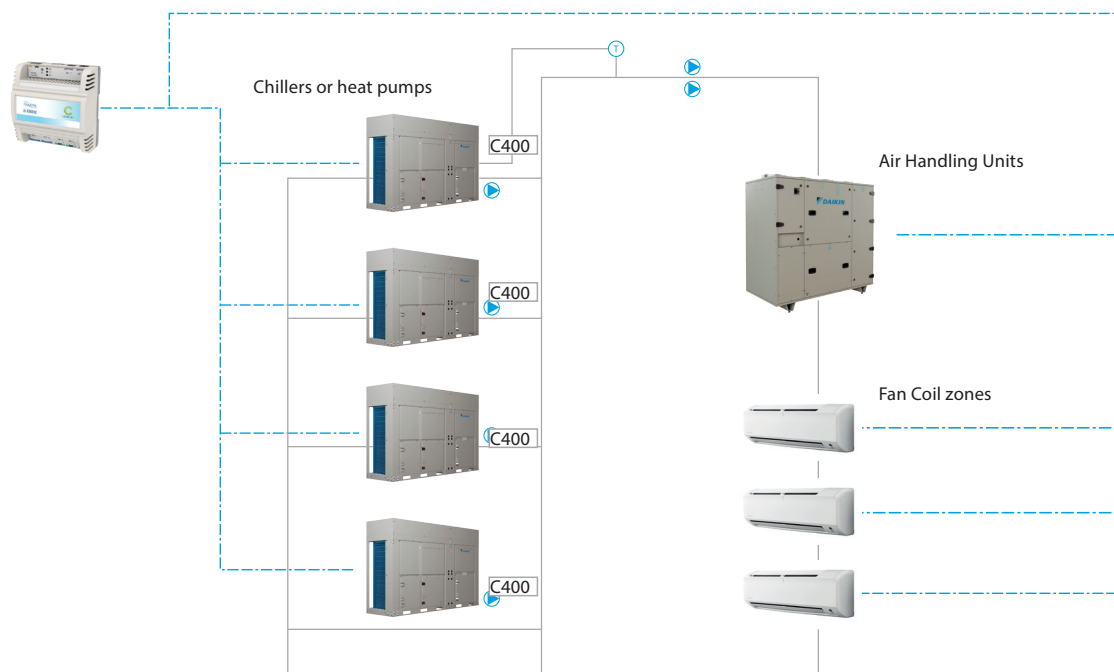


CONTROL SYSTEMS UPGRADES

8 advantages of Smart Control System



Eligible to provide credits for BREEAM and LEED building protocols



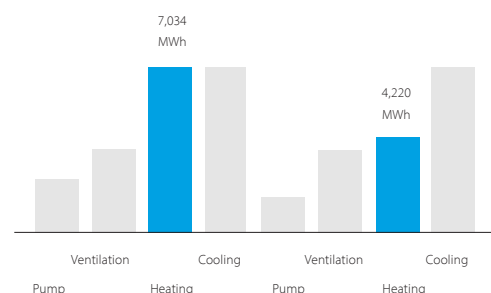
HEAT RECOVERY RETROFIT:

Upgrade program for air-cooled screw chillers

PRODUCT DESCRIPTION

Controlled heat recovery system HR2

A plate to plate heat exchanger in series with the condenser. The HR2-controller adjusts the condensing temperature to meet the hot water set point and assure that priority is always given to the cooling side. Heat recovery Retrofitting projects like this one benefit companies by reducing their carbon footprint, reducing net operating costs, and providing an economical way to heat water.



Heat recovery - before and one after Italian television station
- 40 % energy saving

BENEFITS



Energy savings

- The heat (or energy) recovery kits complements Daikin's range of Energy Saving Solutions. Pre-evaluate, analyse and realise the real savings potential of the installation.
- Heat recovery reduces Total Life Cycle Cost. It is an investment which will return year after year.



Highest return: High running hours chillers and/or high consumption of sanitary water (such as hotels (with swimming pool), hospitals, industry...)

- The heat recovery kits will provide substantial energy savings when used in high operating hour applications. The recovery and savings are maximised when it the need for cooling and heating is simultaneous.



Environmental savings Value for the customer is ROI

- The energy saving and carbon footprint reduction go hand in hand.
- The energy recovered by heat recovery kits results as well in a net saving on carbon emissions.

3 STEPS TO UPGRADE HEAT RECOVERY SYSTEM HR2

Pre-checks

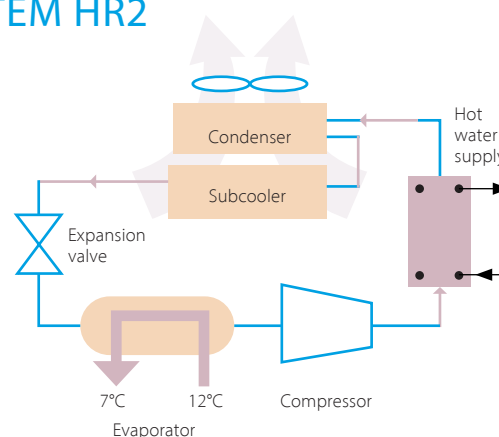
- Check that the chiller is compatible with this solution.
- Check in the chiller's IOM, that the inlet/outlet water temperatures are within the envelope for the unit.

Complementary piping tubes

- Delivery will be Ex-DAE factory

Installation: large diameter piping

- HR2 installation requires re-piping on-site. Piping is not included in the HR2 kits. However, following large diameter Cu pipe is available for order in SAP (delivery ex-McQuay Cecchina factory) for your convenience.



INVERTER RETROFIT FOR SCREW CHILLERS:

Program for air-cooled chillers

PRODUCT DESCRIPTION

Many fixed speed chillers out in the market are not operating in optimal conditions as the compressor is constantly running at full speed. By having an inverter connected to your unit this can, however, be prevented. The compressor speed is then adapted based on the user needs. This leads to various benefits. The main ones are the following:

- Thanks to the 'Inverter Retrofit Solution' the benefits of inverter technology can be added to your unit, even after installation.
- The decision to Retrofit will be driven by the time required to payback the investment.
- This pay-back period is determined by:
 - % of partial load operation (in others words when compressor is not running at full speed)
 - Operating hours
 - Cost of electricity
 - Public funding



HOW TO ORDER

Order through Spare Parts department

You can order your inverter Retrofit through Spare Parts.

Content order

- Cabinet IP54 with inverter for 1 compressor including prewired cooling fan.
- Installation guide: wire diagram, dimension drawing, instructions to adapt parameters.

Not included: shielded power cables.

Part number	Description
Refer to Spares	INVERTER UPGRADE BOX SIZE 3100/3200
Refer to Spares	INVERTER UPGRADE BOX SIZE FR3AL/FR3AS/4221
Refer to Spares	INVERTER UPGRADE BOX SIZE FR3BS/4222
Refer to Spares	INVERTER UPGRADE BOX SIZE FR3BL/4223
Refer to Spares	INVERTER UPGRADE BOX SIZE FR4AS/4224
Refer to Spares	INVERTER UPGRADE BOX SIZE FR4AL

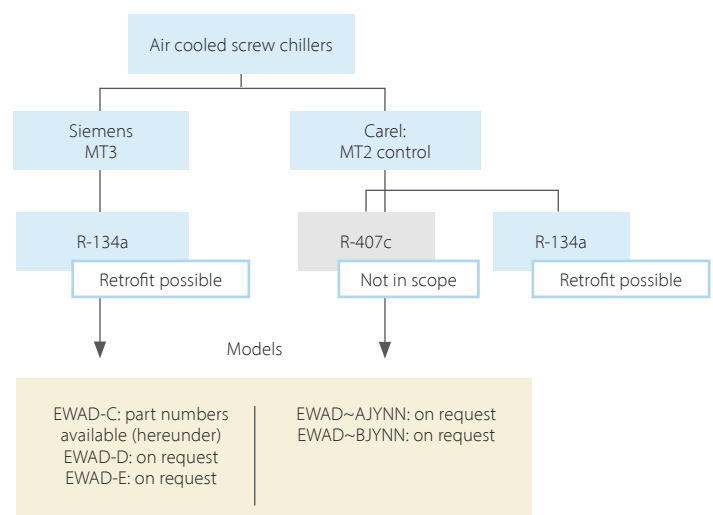
COMPATIBILITY

Inverter type

There are six different inverter Retrofit packages available. Depending on the compressor(s) present in your chiller the right package can be identified. Every inverter Retrofit package mentions the range of compressors it covers in its description (see below).

All the inverter types are enclosed in an IP 54 cabinet. This provides the inverter protection against dust & splashing water.

Important: Inverter Retrofit is possible up to 3 circuits.



INVERTER RETROFIT FOR CENTRIFUGAL CHILLERS:

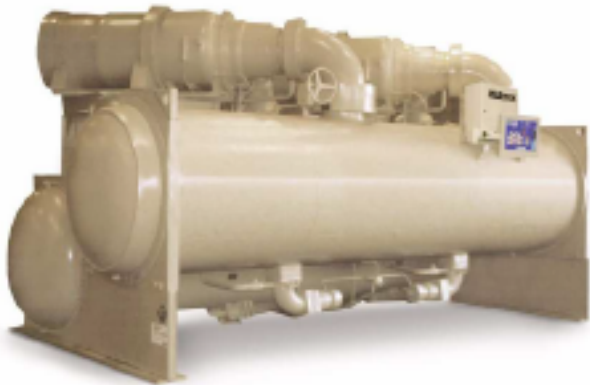
Upgrade program for R-134a chillers

Application Manual	Rev. 2.8
	Date: January 2018
	Supersedes: Rev. 35

Original Instructions

VFD for Centrifugal Chillers – B-Vintage

WBC/AVDC 082, 078, 027, 100, 113, 128, Cooling Only



APPLIED CONTROL SYSTEMS



The intelligent Chiller Manager is a factory-engineered control solution to manage a chiller plant room. It is responsible for the **optimal sequencing and staging** of Chillers, Heat Pumps and Multipurpose units even in a **mixed plant configuration** and in both Heating and Cooling modes.

The extended control solution integrated the management of Cooling Towers and manifolded Pumps for air and water cooled chiller plant.

By reaching higher plant performance and efficiency levels, the intelligent Chiller Manager is the best and qualified solution for your HVAC equipment in a wide range of **Applications**.

Key Benefits

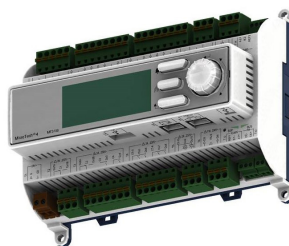
- High performance
- Lower energy & Maintenance Costs
- Increase reliability & lifetime
- Remote control and monitoring through Daikin on Site
- **No additional installation required**

intelligent
COOLING TOWER
Management

intelligent
SECONDARY CIRCUITS
Management

Microtech® 4 Unit Controller

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. Communication protocols like **Modbus** and **BACNet** are also available without any additional hardware required because the MT4 controller supports them natively.





Daikin on Site

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).

Daikin has developed two offers called Daikin on Site: Partner and Daikin on Site: Premium.

REMOTE MONITORING

REPORTING

ALARM TROUBLESHOOTING

ENERGY ANALYSIS

REFRIGERANT LEAKAGE DETECTION



Building management system Integration

With MT4 unit the communication protocols such as **Modbus** and **BACNet** are available directly from the controller and activated from Factory when ordered or through the after-sales channel.

Performance Monitoring

With MT4, advanced algorithms implementation in the unit controller are possible, such as the **Performance Monitoring** (Option 186).

This **sensor-less algorithm** 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**.

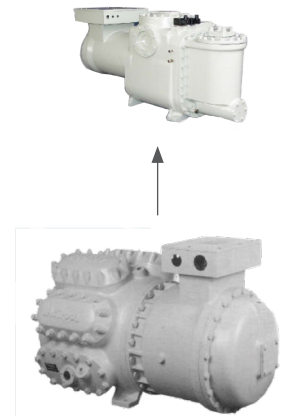
intelligent
PUMP
Management

CHILLER MODERNISATION:

Upgrade program for chillers

PRODUCT DESCRIPTION

The chiller is a critical component in the customer's own production and/or comfort processes. Hence, keeping the equipment fit and reliable is the key. When chillers need compressor exchange while the unit is still in good shape. When refrigerant upgrade is required. When the time is there to consider renewal, but logistic and handling costs are expensive because of basement installation or crane manipulation in the middle of the city centre... For these situations, Daikin offers a **strong alternative solution: Chiller modernisation**. Daikin will team-up with these customers and work out a 'best fit' solution.



Available modernisation kits

Chiller	Compressor	With soft starter	With inverter
2 circuit	F3100	Refer to Spares	Refer to Spares
	F3200	Refer to Spares	-
3 circuit	F3100	Refer to Spares	Refer to Spares
	F3200	Refer to Spares	-
4 circuit	F3100	Refer to Spares	Refer to Spares
	F3200	Refer to Spares	-

BENEFITS

- Critical components are replaced and upgraded to latest technology:
 - Extends the lifetime
 - Increased reliability and maintenance efficiency
 - Best fit compressors, controls and soft starter/inverter upgrade will enhance energy efficiency up to +20% ESEER.
- Convert to R-134a or R-407C.
- Budget management: avoid the expense, operational and safety risks of chiller removal and installation.



Chiller modernisation is about advising and consulting customers in the search for the 'best fit' solution for their situation. It requires to team-up with the customer, taking into consideration site conditions and accessibility, chiller condition and expected remaining lifetime, criticality of the installation and customer's budget (maintenance, operation, energy or investment budget ...).



Tune to today's needs: energy cost and cooling load requirement have changed significantly over the life time of the chiller. Fit the chiller to the new circumstances, with limited investment.



Focus on chillers which have accessibility restrictions and/or suffer reduced reliability. In these circumstances, benefit of modernisation will be highest.



Cost of modernisation is to be compared with the total installation cost of a new chiller: craning and handling of removing the old chiller, installing a new chiller, re-pipe and reconnect, re-wiring.

While many manufacturers can quote for a new chiller, only Daikin can modernise the chiller.

HOW TO UPGRADE CHILLERS?

Modernisation kit content

- 1. **Compressor upgrade**
Recip or oil-free frame 4 screw will be replaced by the latest F3100 or F3200 screw compressor technology.
- 2. **Controller is upgraded**
to Microtech 2 or Microtech 3 when possible
- 3. **Upgrade**
of expansion valve.
- 4. **Upgrade**
to soft starter or inverter technology.

- 5. **R-22 to R-407C**
refrigerant upgrade.



APPLICABLE FOR

McQuay chiller type	Old compressor	New compressor
ALR - prior 2002	Piston	Screw F3100 or F3200
WHR	Piston	
ALS - prior 2002	Oil free screw Frame 2	



AHU UPGRADES & REFURBISHMENTS

WHAT SERVICES CAN WE OFFER



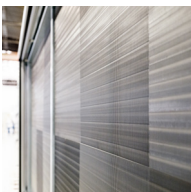
Fans

- › Fan upgrades from old belt-driven centrifugal fans, or even AC plug fans to EC fan arrays.
- › EC fans not only provide higher efficiencies and therefore significant energy & CO2 savings, but they offer additional redundancy through their multiple fan installation.
- › They are easy to maintain due to their low weight, streamlined wiring connections and easy mounting arrangement.



Filters

- › Update from BS EN 779 to ISO 16890 has introduced more effective filter solutions to the market.
- › Replacing your filter solutions and housings can have a significant impact on IAQ and system pressure drop.



Coils

- › Replacing coils where damaged or worn to ensure optimal performance is re-established.
- › Over-time, set point parameters can change which can require the implementation of new coils.
- › DX coils can offer significant cost savings vs electric heater batteries though integration is load dependent.



Dampers

- › Replacement/repair of dampers where damaged ensures that airflow set-points are re-established at the lowest pressure drop.



Panels

- › Replacing panels where damaged to help improve casing leakage and thermal performance.
- › Upgrading to new panels can help align to the latest specifications such as HTM-03-01 with the requirements for BS EN 1886 T2/TB2 and Euroclass A insulation.



Other

- › Site surveys of controls often highlight areas where control set-up is sub-optimal for desired performance.
- › We can offer individual component or full system upgrades and re-commissioning.
- › This can also reduce overall energy consumption.
- › Daikin on Site (DoS)

HOW IS AN AHU REFURBISHMENT CARRIED OUT?

-  Comprehensive site survey to determine scope of works
-  Schedule of works created for approval
-  Itemised replacement components listed and schedule of works agreed
-  Components delivered to site - flat packed or assembled ready for fitment
-  Refurbishment works commence
-  Unit can be re-started if refurbishment is on a staged basis
-  Unit re-commissioned and full technical specification issued
-  Safe disposal of redundant components stripped out of original AHU



AHU REFURBISHMENT BENEFITS

- 1 Improved Efficiency**
Upgrading filter, fan and coil solutions can significantly improve overall AHU efficiency.
- 2 Energy Savings**
Increased efficiencies from upgrading components can lead to significant energy savings.
- 3 Reduced CO₂**
Replacing components with energy-efficient solutions can support carbon reduction objectives.
- 4 Improved Indoor Air Quality (IAQ)**
Filter and airflow improvements can significantly enhance indoor air quality.
- 5 Maintainability**
Upgrading fan and filter solutions can reduce periodic maintenance requirements and associated costs.
- 6 Extended Lifecycle**
Refurbishment through replacing key components can extend the operational life of AHUs.
- 7 Lower Upfront Cost**
Component replacement is often significantly less expensive than full system replacement.
- 8 Compliance Support**
Modern solutions can help align existing AHUs with current regulations and operational requirements

CENTRIFUGAL CHILLER EXPANSION VALVE RETROFIT

Daikin Applied Service offers an upgrade to replace existing mechanical Thermostatic Expansion Valves (TEVs) with fully electronic high-efficiency expansion valves (EEVs).

This upgrade improves energy efficiency, enhances control precision and optimises chiller performance without the need for full equipment replacement.

TYPICAL ENERGY
SAVINGS

8-10%

Savings will vary depending on model, operating conditions and application.

KEY BENEFITS



IMPROVED EFFICIENCY

Fine-tuned refrigerant control reduces unnecessary energy consumption.



ENHANCED CONTROL PRECISION

Faster, more accurate response to changing load conditions.



REDUCED ENERGY WASTE

Eliminates inefficiencies associated with fixed mechanical control.



RELIABLE SOLUTION

Factory engineered and field tested to ensure reliable performance.



DWDC

HOW IT WORKS

The Electronic Expansion Valve continuously regulates refrigerant flow based on system demand.

Unlike a mechanical TEV, which operates with fixed characteristics, the EEV:

- Adjusts dynamically to part-load conditions
- Responds instantly to temperature and pressure changes
- Ensures optimal evaporator performance at all times
- Maintains accurate chilled water temperature control

This results in improved system efficiency and consistent cooling performance.

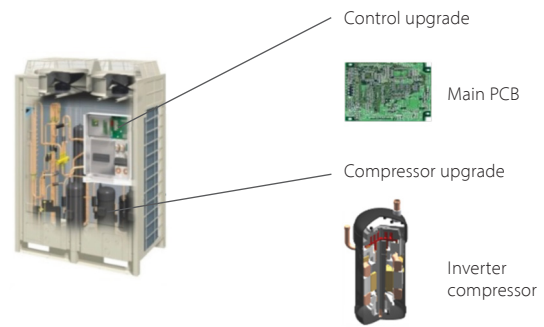
VRV COMPRESSOR RETROFIT

Upgrade VRV III to the latest technology

PRODUCT DESCRIPTION

This upgrade introduces the revolutionary Variable Refrigerant Temperature technology on existing installations (VRV IV technology).

The upgrade is applicable for VRV3 heat pumps and will provide solution in case of compressor repair or to upgrade and optimise VRV installations. The lifetime of VRV III units is extended by a newly designed and Japan-manufactured compressor, together with an upgraded control PCB and related sensor parts.



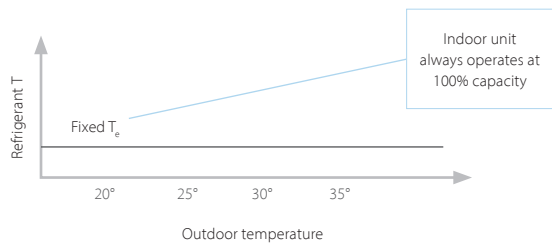
Materials available in SAP

Category	Reference	Description	Models
VRV Retrofit Compressor kit	AA	VRV Retrofit Compressor kit H/P Model	*Heat pump
	AB	VRV Retrofit Compressor kit H/A Model	*High Ambient
VRV Retrofit Sensor kit	A	VRV Retrofit Sensor kit RXYQ5P7W	RXYQ5P7W1B
	B	VRV Retrofit Sensor kit RXYQ8P7 - 8P8W	"RXYQ8P7W1B RXYQ8P8W1B"
	C	VRV Retrofit Sensor kit RXYQ10P7 - 12P7W	"RXYQ10P7W1B RXYQ12P7W1B"
	D	VRV Retrofit Sensor kit RXYQ14P7 - 18P7W	"RXYQ14P7W1B RXYQ16P7W1B RXYQ18P7W1B RXYQ14P7W1BA RXYQ16P7W1BA RXYQ18P7W1BA"
	E	VRV Retrofit Sensor kit RXYQ5P9W	RXYQ5P9W1B
	F	VRV Retrofit Sensor kit RXYQ8P9W	RXYQ8P9W1B
	G	VRV Retrofit Sensor kit RXYQ10P9 - 12P9W	"RXYQ10P9W1B RXYQ12P9W1B"
	H	VRV Retrofit Sensor kit RXYQ14P9 - 18P9W	"RXYQ14P9W1B RXYQ16P9W1B RXYQ18P9W1B"
	I	VRV Retrofit Sensor kit RXYQ8P7Y	RXYQ8P7Y1K
	J	VRV Retrofit Sensor kit RXYQ10P7 - 12P7Y	"RXYQ10P7Y1K RXYQ12P7Y1K"

SOFTWARE [VARIABLE REFRIGERANT TEMPERATURE CONTROL VRT]

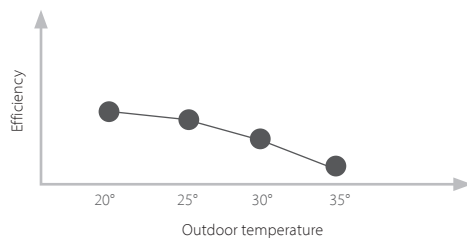
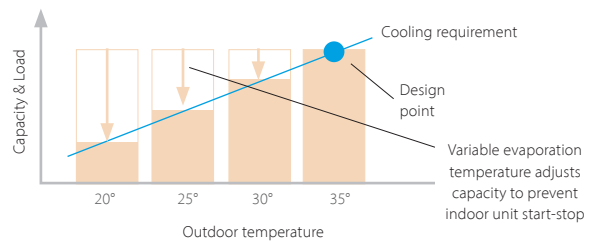
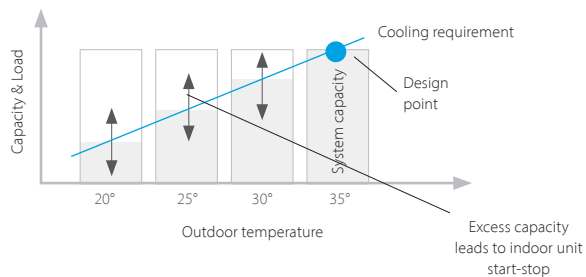
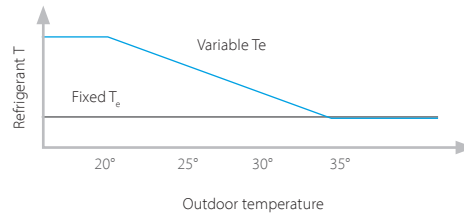
Existing machines

AC capacity adjusted through compressor inverter control and start-stop of indoor unit

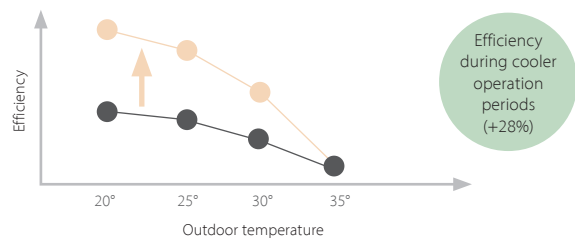


Retrofitted

AC capacity adjusted through compressor inverter control and evaporation temperature control



Example: cooling



Example: cooling

The air-conditioner capacity needed as related to the outdoor temperature is monitored in real-time. The system adjusts the optimal refrigerant temperature to throttle compressor speed and raise efficiency. Variable evaporation temperature adjusts capacity to prevent indoor unit start-stop.

BENEFITS



Improve comfort

Frequently starting and stopping of indoor cassettes is avoided, which increases the tenant's comfort. The cold draught-feeling is prevented by higher out-blow temperatures



Extend life time

- The new Japanese manufactured compressor is designed for even longer lifetime.
- Combined with the preventive exchange of highly used parts (sensor kit), avoids unscheduled unit breakdown.



Improve efficiency in partial load

Thanks to its revolutionary Variable Refrigerant Temperature technology, VRV Retrofit adjusts both the inverter compressor speed and refrigerant temperature in cooling and heating, providing the necessary capacity to meet the building load with the highest efficiency at all times.



Frequently Asked Questions

How do I know the result (energy)?

Overall, energy saving starts with measuring and following up your energy consumers. Daikin offers a great tool, which is Daikin Cloud Service (ITab controller) and VRV Cloud (LC8 or iTM). We strongly promote to connect the installations and utilise Daikin's cloud technology to monitor the results.

Why is the sensor overhaul recommended?

A sensor, thermistor with an offset has an immediate negative impact on the performance of the VRV equipment. During the compressor exchange, the refrigerant will be evacuated. Combining preventive sensor exchange during the same intervention is very cost effective solution.

Is the upgrade kit also available for heat recovery units?

No, the heat recovery variant has not been developed yet. This development project can be initiated if there is sufficient market request.

The kit only contains the inverter compressor. Why?

Yes. The kit only includes inverter compressor. Due to the concept of VRV III, the on/off compressor will have less running hours (at least half) then the inverter. The inverter compressor ramps up and when more capacity is asked then it can supply, the on/off will kick in.

Next to this from experience, most sites run on very low part loads which means that the capacity is met with inverter compressor only and the on/off will not even start.

Only in case the site is running 24 hours and/or the system is really undersised, then the technician can consider to replace the on/off as it might have high operating hours.

What is the reason for the label in the kit?

This label needs to be put on next to the original name label. The first reason is to show that the unit has already been modified with a new model name on it. The second reason is because the new compressor and PCB have new spare part numbers, thus it will be easier to find out by searching the new model name on the Spare Parts Bank.

What about warranty?

The kit follow the spare part warranty policy if locally available.

Our recommendation is to evaluate the warranty period based on the condition of the site which is retrofitted and keep this to the commercial minimum. This should not exceed 12 months.

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CONNECTED SERVICES

Connected Services

▪ Daikin on Site (DoS)	43
▪ Remote Monitoring Reporting Tool	45
▪ Virtual Maintenance Visits	47
▪ Energy Metering Kit Retrofit for MT3 Controlled Chillers	48
▪ Predictive Maintenance	50
▪ 3rd Party Chiller Monitoring	51



Whenever, wherever, however you need us

How can our services meet your needs?



Saving resources
Our strategy is in the 1st place to take back refrigerants and give them a place in new machines or service, effectively reducing the need for new refrigerant to be produced.



Customised solutions
By taking back your equipment through partners, we ensure your **old appliances are recycled in the most sustainable way.**



Customer oriented
When recovery of refrigerants is necessary, our specialised team will respond with an **on site intervention to ensure correct handling is done in the most cost effective way** and to ensure the usable refrigerants are regenerated.



Environmental commitment
Our approach is rooted in sustainable practices, aimed at minimising waste and optimising resource efficiency. This reflects our establishment's **dedication to environmental responsibility** and showcases a **commitment to reduce the footprint.**

Meet our sustainable offerings

	Main sustainable offerings	
	Refrigerants	Appliances
Recovery and recycling activities		
F-gas recovery and reclamation	•	
Recycling		•
Reuse	•	•
Support activities		
Technical service and consulting	•	•
Certification	•	•



DAIKIN ON SITE (DOS)



PRODUCT DESCRIPTION

Daikin on Site (DoS) is our remote monitoring and control platform for chillers and air handling units. It provides affiliates and service teams with a powerful digital tool to monitor installations, optimise performance, and support customers more proactively.

BENEFITS



Peace of mind,
with constant monitoring.



Reduced downtime
and maintenance costs



Improved reliability
and equipment lifetime



Energy efficiency:
through optimisation and remote control



Flexible, scalable solution
for different plant sizes

Practicals

- No hardware investment required.
- Easy commissioning.
- Annual access fee per connection (pay per use).
- Unlimited users per connection allowed.
- Different access roles for operators, trained service and Daikin.
- Internet and data privacy secure.

In your sales approach, present Daikin on Site through its three levels of service, allowing you to adapt the offer to your client's specific needs.

Level	Delivery
Alerts and web application	• 24/7/365 automated alarm and event monitoring by customer themselves • Automated notification via email to customers • Access to Daikin on Site web application
Active monitoring	• Remote alarm analysis and diagnostics by Daikin Affiliate Experts • Smart mobilisation of authorised service personnel
Connected Service Plan	• Remote alarm analysis and diagnostics by Daikin Affiliate Experts • Smart mobilisation of authorised service personnel • Complemented with a Daikin Service Plan

APPLICABLE FOR

Connectivity

Chillers MT3 & MT4 controlled chillers			
		- Chiller software is 'DoS ready'. - No extra hardware required.	Find the overall DoS software release planning in the compatibility list on www.mydaikin.eu - New chillers: delivered from factory 'DoS ready'. - Installed base: Chiller software update is required; see compatibility list on www.mydaikin.eu.
AHU – MT3 controlled			
	Uses IP port of controller to connect to LAN or modem.		
Chillers MT2 controlled			
	- Unique device for any MTII controlled Unit. - New features, as the possibility to control additional sensors. - Possibility to connect the unit with BMS of the customer.		ALC DC8
iCM – Chiller plant manager			
	- iCM is DoS-ready. - No extra hardware required. - Uses IP port of controller to connect iCM has a modem onboard.		Look for iCM documentation on my.daikin.eu
Measurement and Monitoring kit for targeted energy audit			
	- M&M is DoS-ready. - No extra hardware require. - Uses IP port of controller to connect to LAN or modem.		Look for sales index 'target energy audit'.

Please find the updated version of the connectivity table in the latest release note.

If you do not find it, then fqs.servicebusiness@daikineurope.com and fqs.technicalsupport@daikineurope.com will assist you.

The table provides information of required hardware, software and monitoring features for each chiller model.

REMOTE MONITORING REPORTING TOOL

PRODUCT DESCRIPTION

An advanced reporting tool that you can create editable and non-editable (pdf) reports.

BENEFITS

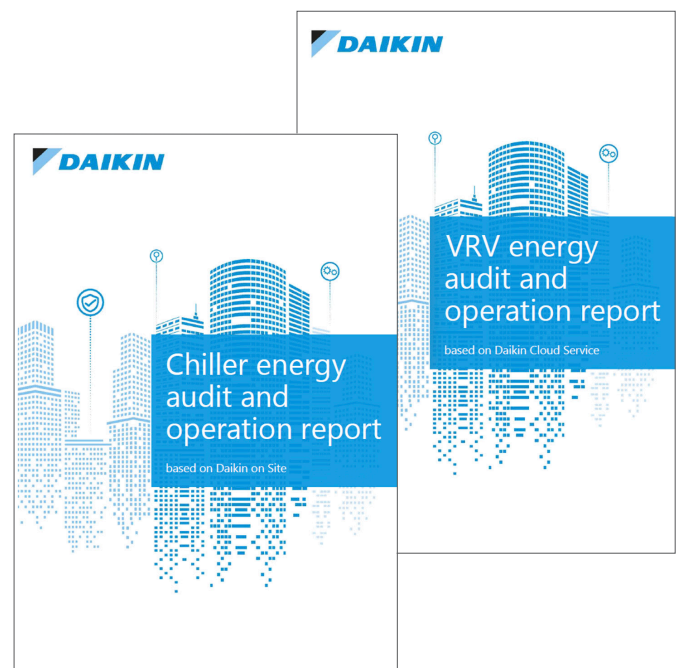
- You can create the reports whenever you need
- You can add valuable comments
- You can use the subscription tool to create and send the reports automatically

Available

- All VRV models are concerned (connected to DC+ and Airnet)
- Air cooled chillers which are connected to DoS

Report Types

- **Energy Audit and Operational Report:**
In addition to the product's operating conditions and energy consumption data, you can find critical parameters showing the product's status and valuable interprets made by our expert technicians to ensure the product's healthy operation and maximise energy savings
- **Operational Report:**
Includes operational data about the product usage and general overviews which are examined by our expert technicians



Daikin on Site web graphic

		Chiller No. 1		Chiller No. 2	
		State	Off	State	Off
		Mode	Cool	Mode	Cool
		Loop No. 1 – Thermal energy		Loop No. 2 – Thermal energy	
		Temperature inlet	0.000 °C	Temperature inlet	0.000 °C
		Temperature outlet	0.000 °C	Temperature outlet	0.000 °C
		ΔT	0.000 ΔK	ΔT	0.000 ΔK
		Flow rate		Flow rate	
		Pressure drop	-4.00 kPa	Pressure drop	
		Thermal power		Thermal power	0.000 kW
		Cooling energy	0.000 kWh	Cooling energy	0.000 kWh
		Heating energy	0.000 kWh	Heating energy	0.000 kWh
		Loop No. 1 – Electrical energy		Loop No. 2 – Electrical energy	
		Cooling electrical energy	0.000 kWh	Cooling electrical energy	0.000 kWh
		Heating electrical energy	0.000 kWh	Heating electrical energy	0.000 kWh
		Active energy		Active energy	
		Maximum peak demand	0.000 kW	Maximum peak demand	0.000 kW
		Active power	0.000 kW	Active power	0.000 kW
		Average power	0.000 kW	Average power	0.000 kW
		Voltage line 1	0.000 V	Voltage line 1	0.000 V
		Voltage line 2	0.000 V	Voltage line 2	0.000 V
		Voltage line 3	0.000 V	Voltage line 3	0.000 V
		Current line 1	0.000 A	Current line 1	0.000 A
		Current line 2	0.000 A	Current line 2	0.000 A
		Current line 3	0.000 A	Current line 3	0.000 A
		Cosinus Φ	0.000	Cosinus Φ	0.000
		Loop No. 1 – Energy performance		Loop No. 2 – Energy performance	
		EER Instantaneous		EER Instantaneous	0.000
		ERR Minimum		ERR Minimum	0.000
		ERR Maximum		ERR Maximum	0.000
		ERR Year to date	0.000	ERR Year to date	0.000
		ERR Year to date Minimum	0.000	ERR Year to date Minimum	0.000
		ERR Year to date Maximum	0.000	ERR Year to date Maximum	0.000
		COP Instantaneous	0.000	COP Instantaneous	0.000
		COP Minimum	0.000	COP Minimum	0.000
		COP Maximum	0.000	COP Maximum	0.000
		COP Year to date	0.000	COP Year to date	0.000
		COP Year to date Minimum	0.000	COP Year to date Minimum	0.000
		COP Year to date Maximum	0.000	COP Year to date Maximum	0.000
		Measurement uncertainty	2.88 %	Measurement uncertainty	0.000 %
General 2.00.A					
Ambient temperature	0.000 °C				
Ambient humidity	0.000 %r.H.				
External alarm No. 1	NoAlarm				
External alarm No. 2	NoAlarm				
Same period	1.000 s				
Loop No. 1 – Setup					
Flow sensing type	DiffPress				
Flow sensor signal type	0-10V				
Diff. pressure drop scale	20.0 kPa				
Nominal flow	45.0 l/s				
Coefficient	1.80				
Fluid type	EthylGlycol				
Ethylene	40.0 %				
Error temp. sensors	2.00 %				
Error diff. pressure sensor	1.000 %				
Error energy meter	2.00 %				
Loop No. 2 – Setup					
Flow sensing type	FixValue				
Fixed flow	50.0 l/s				
Fluid type	Water				
Error temp. sensors	2.00 %				
Error energy meter	2.00 %				

VIRTUAL MAINTENANCE VISITS

REMOTE ENGINEERING SUPPORT

Virtual Maintenance Visits provide remote access to operational equipment data, enabling Daikin Applied (UK) engineers to assess system performance, investigate potential issues and support maintenance decisions without always requiring a physical site visit.

By combining engineering expertise with connected system intelligence, customers can benefit from faster technical support, reduced disruption and improved visibility of asset performance.



REMOTE DIAGNOSTICS

Review live equipment data, alarms and performance trends remotely to quickly identify potential issues and support informed maintenance decisions.



FASTER ISSUE RESOLUTION

Early investigation helps engineers assess issues sooner, supporting faster decisions and more effective maintenance planning.



REDUCED SITE DISRUPTION

Remote reviews reduce unnecessary site visits, helping minimise disruption and make better use of engineering resources.

CUSTOMER BENEFITS

- › Reduced unnecessary site attendance
- › Faster technical support
- › Improved asset visibility
- › Better maintenance planning
- › Reduced operational disruption

Supporting lifecycle care for chillers, heat pumps and applied HVAC Systems



ENERGY METERING KIT RETROFIT FOR MT3 CONTROLLED CHILLERS

PRODUCT DESCRIPTION

In recent years, Energy control has become more important, due to the increasing need for optimisation and reduction of power consumption. Two important factors drive this situation: environmental impact and cost. Sustainable impact of the installed equipment can only be controlled through evidence of energy consumption. For Daikin chillers, there is now a **'Energy metering' Retrofit kit** for already installed chillers. Recording the power consumption of the chiller shows if the climate comfort is optimised for minimum energy absorbed and, if not, promotes the start of actions to increase the efficiency of the system with proper maintenance, and fine tuning of the source and the system in general.

Chiller Main Switch	Kit number
250 A	Refer to Spares
400 A	Refer to Spares
630 A	Refer to Spares
800 A	Refer to Spares
1000 A	Refer to Spares
1250 A	Refer to Spares
1600 A	Refer to Spares

The 'Energy metering kit' includes:

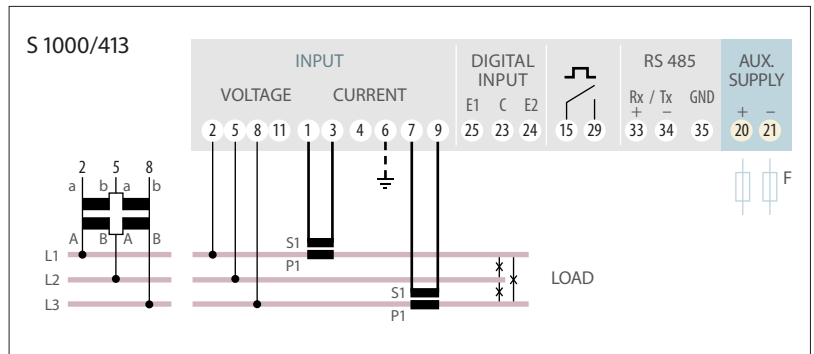
- 1x Multi-Function Digital Display.
- 2x Current Transformers.



The Digital Display is mounted inside the panel on a DIN rail, but also includes a RS485 communication module.

Main electrical parameters which are displayed are:

- Line-to-line power supply
- Phase and average current
- Active and reactive Power
- Active and reactive Energy
- Frequency



Multi-Function Digital Display

Technical data:

- 3-phase network
- 115 Vac power supply
- DIN rail mount
- RS485 communication
- 5A current input

Current transformers

- Primary current 200 .. 1600 A
- Secondary current 1A..5A
- Housing: self extinguishing
- polycarbonate IP20

HOW TO ORDER

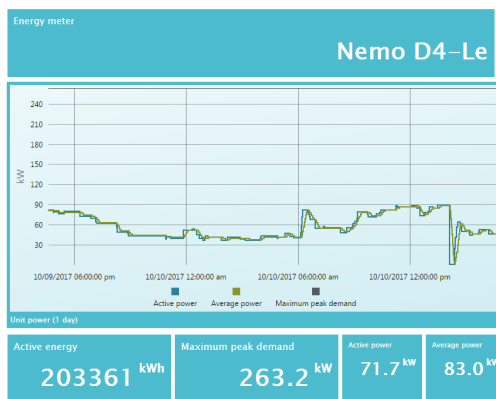
Quotation and order process

- Select the kit to fit the unit isolator.
- Order from the Spare Parts department

How to sell

- Energy metering is a product aimed at customers who care about their costs and environmental impact.
- By measuring energy consumption, proper follow-up and improvement actions can be put in place.

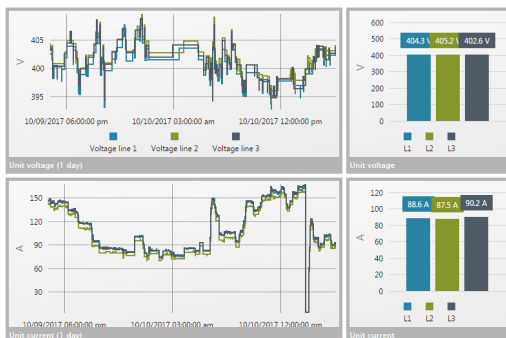
APPLICABLE FOR



DAIKIN ON SITE COMPATIBILITY

Predefined dashboard for the NEMO meter:

- Unit power
- Unit voltage
- Unit current
- Active energy
- Maximum peak demand
- Active power
- Average power
- Cos phi



PREDICTIVE MAINTENANCE

Using operational data to identify issues before they impact performance

Predictive Maintenance uses connected equipment data and performance analysis to identify developing issues before they become critical failures. By moving beyond reactive maintenance approaches, organisations can improve reliability, reduce downtime risk and make more informed maintenance decisions.

Through continuous monitoring and analysis of asset performance, maintenance activities can be planned proactively, helping to optimise system operation and support long-term equipment health.



MONITOR

Continuous visibility of equipment performance and operating conditions



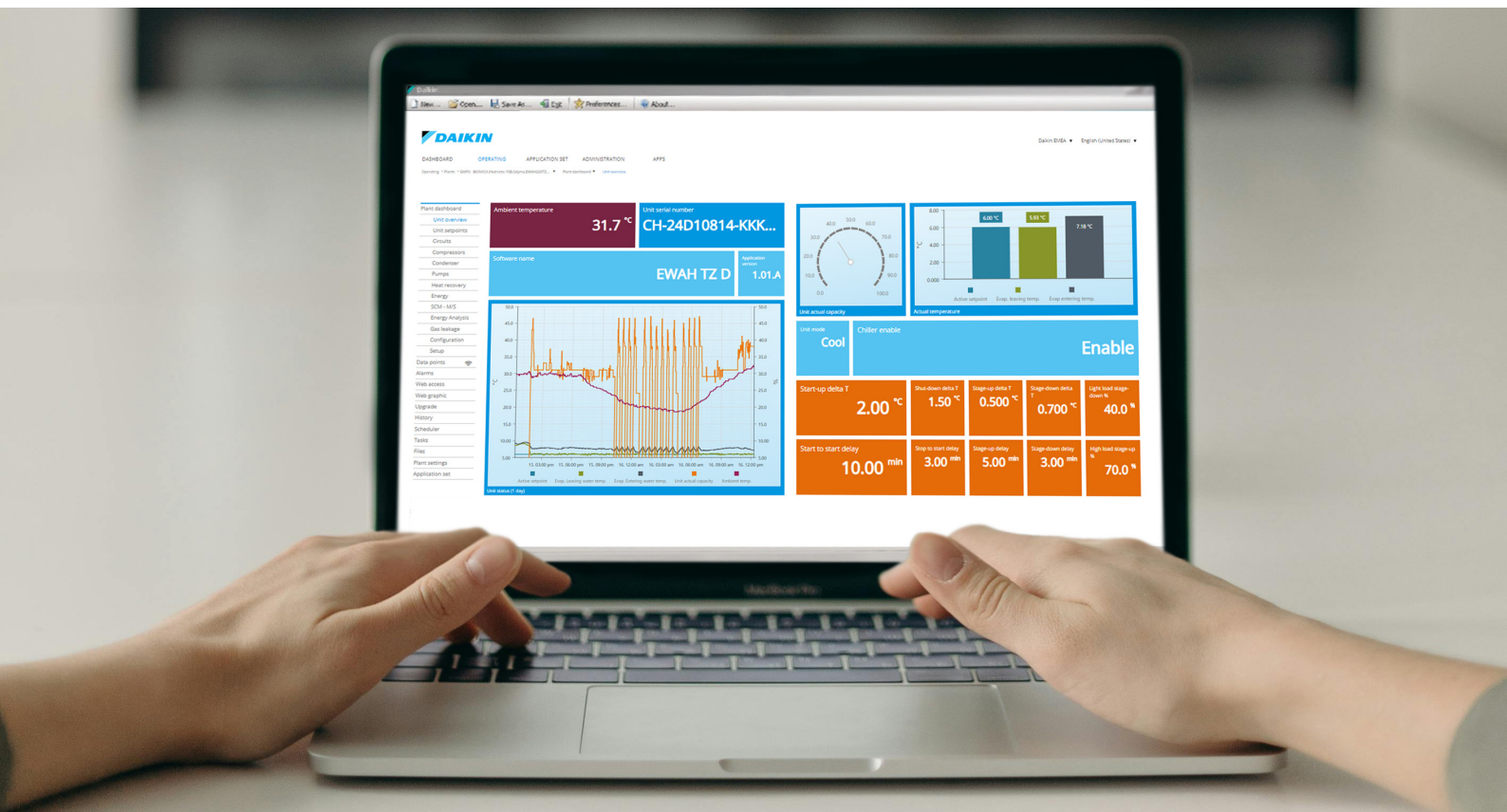
ANALYSE

Identify trends, anomalies and developing issues through data-led insights.



OPTIMISE

Support decisions that improve reliability and efficiency.



3RD PARTY CHILLER MONITORING

Connected monitoring for mixed-manufacturer HVAC environments.

Many facilities operate equipment from multiple manufacturers across different phases of site development. 3rd Party Chiller Monitoring extends connected service capabilities beyond Daikin equipment, providing greater visibility across the wider plant environment.

This broader view supports more informed operational and maintenance decisions by bringing valuable performance insight together in one place.

MONITORING BENEFITS

- › Visibility across mixed-manufacturer estates
- › Broader plant performance insight
- › Simplified monitoring approach
- › Improved maintenance planning
- › Greater operational awareness
- › Better-informed asset decisions



SERVICE IMPACT

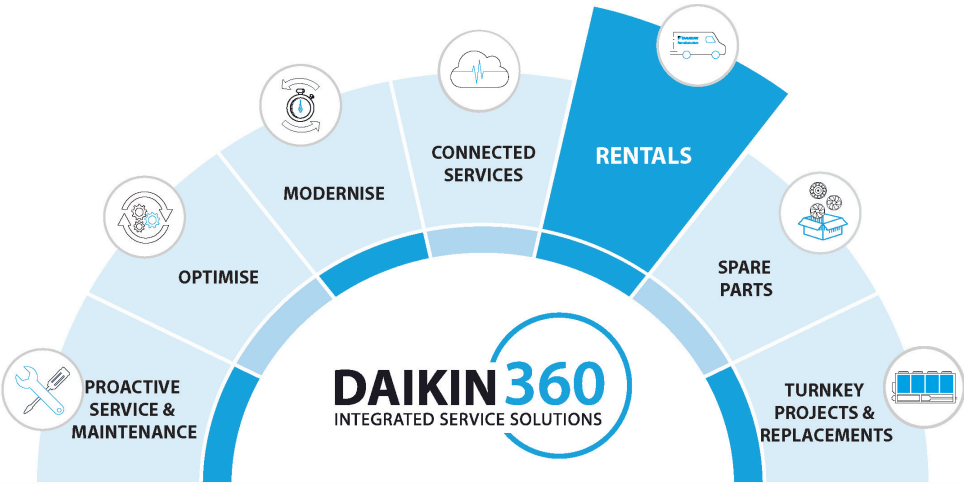
A connected view of both Daikin and third-party equipment, helping facilities teams manage complex chiller estates with greater confidence and visibility.

DAIKIN360

RENTALS

Rentals

- Daikin Rental Solutions



Whenever, wherever, however you need us

DAIKIN RENTAL SOLUTIONS

Daikin offers a wide range of services to our business clients. In the next page we have listed the services that we offer to our clients along with a brief description. Daikin and partners stock most capacity units. If the requested unit is not available, Daikin commits to find the suitable solution for you.



Daikin on Site, active remote monitoring as standard

Every rental unit is fitted with Daikin on Site for active, expert remote monitoring. This maximises system reliability, efficiency, and lifespan, while eliminating downtime for alarm diagnosis and enabling energy analysis and performance optimisation.



Minimise downtime with a contingency plan

A Daikin Rental specialist will visit your site to help you plan your temperature control contingency.

- Site survey
- Identification of failure points
- Enabling works
- Rapid response strategy



Emergency cooling support

Whether caused by equipment failure or natural events, our temporary cooling solutions restore operations fast with minimal disruption.



UK-Wide Engineer Coverage

Our network of service engineers spans the UK, ensuring rapid response, expert installation, and full system support wherever you are.



Standby cooling for critical systems

Ensure continuity during reduced system redundancy in hospitals or for safeguarding manufacturing and chemical processes.



Climate Control for Events

We tailor temporary temperature control systems to maintain comfort and performance for temporary venues and special events.



Solutions for cooling load fluctuations

Temporary cooling ensures optimal performance and energy use during site expansion or seasonal demand peaks.



Cooling supply during planned shutdowns and outages

Rental solutions maintain cooling during equipment upgrades, retrofits, or replacements - reducing downtime and avoiding overtime costs.

WIDE RANGE OF
UNIT CAPACITY



CHILLER HIRE

- › Air cooled - 30kW to 1MW
- › Water cooled - 10kW to 1MW
- › Plug & Play & BMS Integration
- › Remote monitoring

DRY AIR COOLER HIRE

- › Closed-loop system with zero water usage
- › Glycol-compatible, ideal for process industries
- › Low acoustic profile for sensitive environments

AHU HIRE

- › Up to 150kW per unit
- › Suitable for healthcare, food production, and cleanrooms
- › Optional HEPA filtration and hygiene-compliant designs

PROCESS COOLING

- › Supports critical applications
- › Chillers, AHUs, tanks, pumps, and ducting
- › Rapid-response turnkey delivery and setup

AIR SOURCE HEAT PUMP HIRE

- › 50kW to 500kW modular systems
- › Both heating and hot water
- › Suitable for healthcare and high-care
- › Remote monitoring

BOILER HIRE

- › Oil fired, gas & electric
- › Capacities from 50kW to 1MW
- › Plug-and-play configuration
- › Quiet models suitable for occupied buildings

IDF HEATER HIRE

- › Available in 70kW, 150kW, & 200kW
- › Fume-free, thermostatically controlled heating
- › Best for construction sites, warehouses, and event venues

COMFORT HEATING

- › Portable, low-noise solutions
- › Suitable for offices, events, retail, and temporary facilities
- › Quick deployment and scalable coverage

TURNKEY SOLUTIONS

- › Contingency planning
- › Hassle-free quoting
- › Full maintenance support
- › Remote monitoring
- › Swift off-hire and removal
- › Ancillary equipment supplied
- › Turnkey project management



CONTACT DIRECTLY YOUR RENTALS MANAGER

UK South	Paul Ives	paul.ives@daikinappliedservice.uk
UK North	David Edmonds	david.edmonds@daikinappliedservice.uk
Scotland	Craig Kerr	Craig.kerr@daikinapplied.uk

RENTALS

DAIKIN360

SPARE PARTS

Spare Parts

▪ OEM Spare Parts & Components	58
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▪ Compressor Oil Offer	60
▪ Dual Port Safety Valve	61



OEM SPARE PARTS & COMPONENTS

Access to the correct spare parts is essential for maintaining equipment reliability, efficiency and operational continuity. Daikin Applied (UK) supplies genuine Daikin and McQuay spare parts, helping customers support both current and legacy HVAC assets throughout their lifecycle.

With extensive product knowledge and access to original equipment components, our team can help identify and source the correct parts for maintenance, repairs and planned asset management activities.

OEM

Genuine parts

24/7

Service mindset

UK

Applied support

PARTS CATEGORIES

- ☒ Compressors
- ☒ Controls
- ☒ Sensors
- ☒ Fans
- ☒ Valves
- ☒ Filters
- ☒ Electrical components
- ☒ Service spares



TECHNICAL SUPPORT & ADVICE

SPECIALIST GUIDANCE BEYOND THE PART ITSELF

Effective spare parts management is not simply about replacing failed components. It is about understanding equipment criticality, planning for potential failures and ensuring the right parts are available when they are needed.

Daikin Applied Service combines equipment expertise with practical engineering support to help customers make informed decisions about their spare parts strategy.

1**IDENTIFY**

When supporting planned maintenance or urgent repairs, part identification ensures the right solution is sourced first time.

2**ADVISE**

Drawing on extensive equipment expertise, we help customers identify risks, prioritise maintenance and strengthen resilience.

3**PLAN**

Helping customers reduce downtime risk through critical spares guidance and contingency planning.



COMPRESSOR OIL OFFER

PRODUCT DESCRIPTION

The compressor oil of your equipment is a vital component that provides lubrication to ensure a smooth operation while helping you avoid potential failures. Checking and replacing it regularly offer you these benefits:

- Maximum protection of seals and moving parts.
- High temperature and hydrolytic stability.
- Higher reliability.
- Maximum equipment uptime.
- Minimum operating cost.
- Less impact on the environment.

Our robust formula helps you extend the lifetime of your equipment while reducing operational costs and environmental impact.

BENEFITS



Extend
lifetime



Reduce
operational costs.



Reduce the
environmental footprint.

How to do?

- Offer to your customers our compressor oil selection. This is a great value generator while you are on site for maintenance or any intervention.
- Place your orders through your **Spare Parts System**.

Part number	Packing	Description	Applicable for
Refer to spares	18 L 1 L	FVC68D	VRV systems EWYD-BZ chiller (HPI)
Refer to spares	5 L	RL32	Multi scroll chillers (DAE manufactured)
Refer to spares	20 L 5 L 1 L	Single screw 68	Screw chillers, centrifugal chiller (WTC)
Refer to spares	20 L 5 L 1 L	Single screw 220	EWWD-VZ
Refer to spares	20 L 5 L	Arctic 46	Centrifugal chillers

Arguments

- Using poorly performing lubricants leads to higher service costs as well as unplanned servicing.
- Rapid lubricant aging, lower cooling efficiency, poor stability, and insufficient protective quality jeopardise the reliable operation of the equipment.
- Therefore, longer lubricant lifetime reduces total service costs.

Opportunities

- Use Daikin's oil analysis program to extend oil drain intervals and avoid oil waste.

DUAL PORT SAFETY VALVE

PRODUCT DESCRIPTION

The changeover device is a service valve for dual pressure relief valves that allows using one valve while isolating the other from the system.

This device allows the user to work on the isolated valve, for periodic checking or replacement, while the system is completely operative and the other valve is in service.

N.B. each safety valve placed on a changeover device must have sufficient capacity to protect the vessel alone.

The valve is designed so that it is never possible to close off both ports at the same time. Under working conditions, the shutter must be clamped against one of the two seats of the valve, front port or back port, in order to ensure always full discharge to the corresponding safety valve.

Intermediate positions of the shutter are not acceptable in order not to affect the operation of both safety valves.

The valve ensures a pressure drop perfectly compatible with the safety valve operation under conditions of discharge of saturated vapour as well as overheated vapour.



BENEFITS



Reduce replacement time.



Avoid vacuuming the system every 5 years.

WHY REPLACE

- › The current EN 378 standard requires relief valves to be tested every five years.
- › Manufacturer states that the lifetime is 5 years after installation.
- › These valves are typically not tested, but replaced.
- › The need of vacuuming every time the valves need to be tested or replaced, increases significantly the cost of the preventive maintenance.

OPPORTUNITIES

- › A maintenance visit is enough to schedule a valve replacement. By doing the job once, the customer will save the labour and material cost of vacuuming the system in 5, 10 and 15 years.
- › Systems that have been running more than 5 years, are likely candidates to this replacement.

SPARE PARTS

DAIKIN360

TURNKEY PROJECTS & REPLACEMENTS

Turnkey Projects & Replacements

- AHU Replacement Projects 66
- Control System Projects 67



Whenever, wherever, however you need us

PRODUCT DESCRIPTION

A turnkey project is typically non-standard and tailor-made to the needs of an end-user. As Daikin, we take care of the engineering, procurement, installation and/or commissioning services. We can offer from like-to-like replacement of the customer equipment to the complete design and installation of the cooling/heating system. By providing engineering services we can offer solutions including every aspect of an HVAC system. Project management skills will ensure a streamlined process from order to start-up of the system. At the end the client is offered the 'key' to the system, tailor-made and ready to go. We can rely on a network of pre-qualified subcontractors during the execution phase.

BENEFITS



Peace of mind:

As Daikin will take care of everything, from engineering to commissioning, the customer can rely on our expertise and concentrate to his core business.



Solution approach – tailor-made to the needs of the end-user:

System engineering is our Unique Selling Proposition. By offering smart, tailor-made solutions, including Daikin and third-party material, we can make the difference with our competition. Doing so we will avoid mere price discussions and enable WIN-WIN situation with our clients.



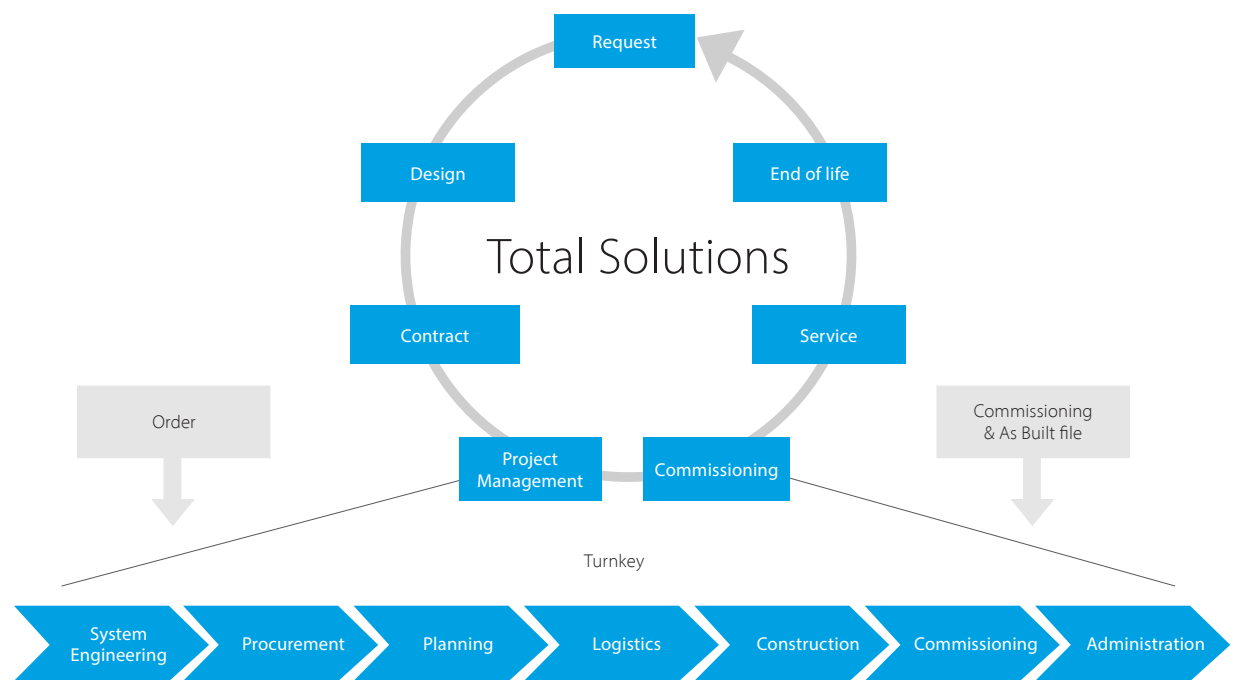
Total Solution:

As Daikin, we want to offer a Total solution, including the full scope of services. When offering Turnkey project, we offer engineering and execution of the solution adapted to the customer's needs. Then we want to keep supporting him after sales with Maintenance Services, Energy Management, Remote monitoring etc".



Life Cycle approach:

By offering all services from the Daikin360 portfolio, we can support the customer throughout the life cycle of the unit, and finally close the business loop by replacing with a new unit.



Turnkey is essential to close the cyclic business loop and to enable complex business models such as operating leasing and PAAS (Product as a Service)

TURNKEY SOLUTIONS

Daikin have the capabilities and in house skills to provide a total turnkey solution from design installation and project management. We utilise state of the art energy audit tools and programmes to provide the most efficient solution.

TURNKEY IS APPLICABLE FOR:

- **Market:** Industrial, Commercial market segment.
Pillar: Applied, Commercial DX and Refrigeration.
- **New clients where Daikin conducted an Energy audit** in order to propose a more efficient system with Daikin units.
- End-users who want to **trade exclusively with the manufacturer.**



AHU REPLACEMENT PROJECTS

Replacing ageing air handling systems with structured, project-managed HVAC solutions.

Air handling units are critical to building comfort, indoor air quality and operational performance. As equipment ages, performance can decline, maintenance requirements can increase and reliability can become more difficult to maintain.

Daikin Applied Service delivers turnkey AHU replacement projects, supporting customers from initial survey and design through to installation, commissioning and ongoing service support. Solutions are developed around the operational requirements of the building, helping improve performance, reliability and long-term efficiency.

CUSTOMER VALUE

- › Improved system reliability
- › Modernisation of ageing equipment
- › Enhanced indoor air quality
- › Support for energy-efficiency objectives
- › Reduced maintenance burden
- › Lifecycle service and maintenance support

Turnkey projects covering survey, specification, installation, commissioning and ongoing support.



CONTROL SYSTEM PROJECTS

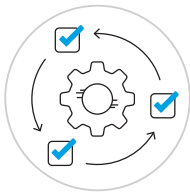
Improving HVAC operation through smarter control, integration and system visibility.

Control systems play a critical role in how HVAC equipment operates, responds and consumes energy. Legacy controls can limit visibility, reduce operational flexibility and make optimisation more challenging.

Daikin Applied (UK) delivers control system projects that help improve system visibility, operational insight and equipment management, supporting more informed decision-making across HVAC assets.

CONTROLS PROJECT EXPERTISE

Controls projects can bring together system operation, integration and performance insight to help improve efficiency, reliability and operational control across HVAC assets.



HVAC CONTROLS UPGRADES

Modernise control systems to improve performance and operational visibility.



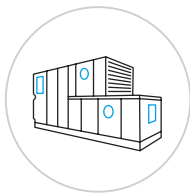
PERFORMANCE INSIGHT

Understand system behaviour and identify improvement opportunities.



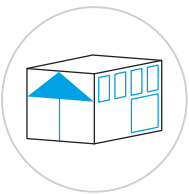
REMOTE VISIBILITY SUPPORT

Improve access to operational data and system insight.



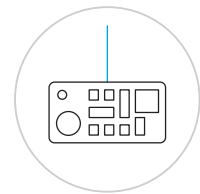
AHU CONTROL INTEGRATION

Integrate AHU controls within a wider building strategy.



CHILLER & HEAT PUMP CONTROL

Support efficient operation through smarter plant control.



PLANT CONTROL STRATEGIES

Develop coordinated control strategies across HVAC plant.



DAIKIN360

INTEGRATED SERVICE SOLUTIONS

We understand that your building is one of your company's most significant investments, and a cornerstone of growth and success. Our expertise in HVAC systems, delivered through **Daikin360 Integrated Service Solutions**, can help by creating an **ideal environment** and **quality air** that propels your people

and customers forward. Plus, our **advanced energy-saving solutions** and **protective maintenance plans** can help you control your maintenance and operational costs. You can count on Daikin for **advanced technology, agility and reliability**.



For Product, Service & Maintenance,
Rental, and Spares enquiries:



0345 565 2700



www.daikinapplied.uk
www.daikinrentalsolutions.uk



[linkedin.com/company/daikin-applied-uk-ltd/](https://www.linkedin.com/company/daikin-applied-uk-ltd/)
[linkedin.com/company/daikin-applied-service/](https://www.linkedin.com/company/daikin-applied-service/)



Daikin Europe N.V. participates in the Eurovent Certified Performance programme for Fan Coil Units and Variable Refrigerant Flow systems. Daikin Applied Europe S.p.A. participates in the Eurovent Certified performance programme for Liquid Chilling Packages, Hydronic Heat Pumps and Air handling Units. Check ongoing validity of certificate: www.eurovent-certification.com

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ISO 14001 Environmental Management System (EMS), and
ISO 45001 Occupational Health and Safety (OH&S) management systems.
For the latest certificates, visit: www.daikinapplied.uk/documents-download

