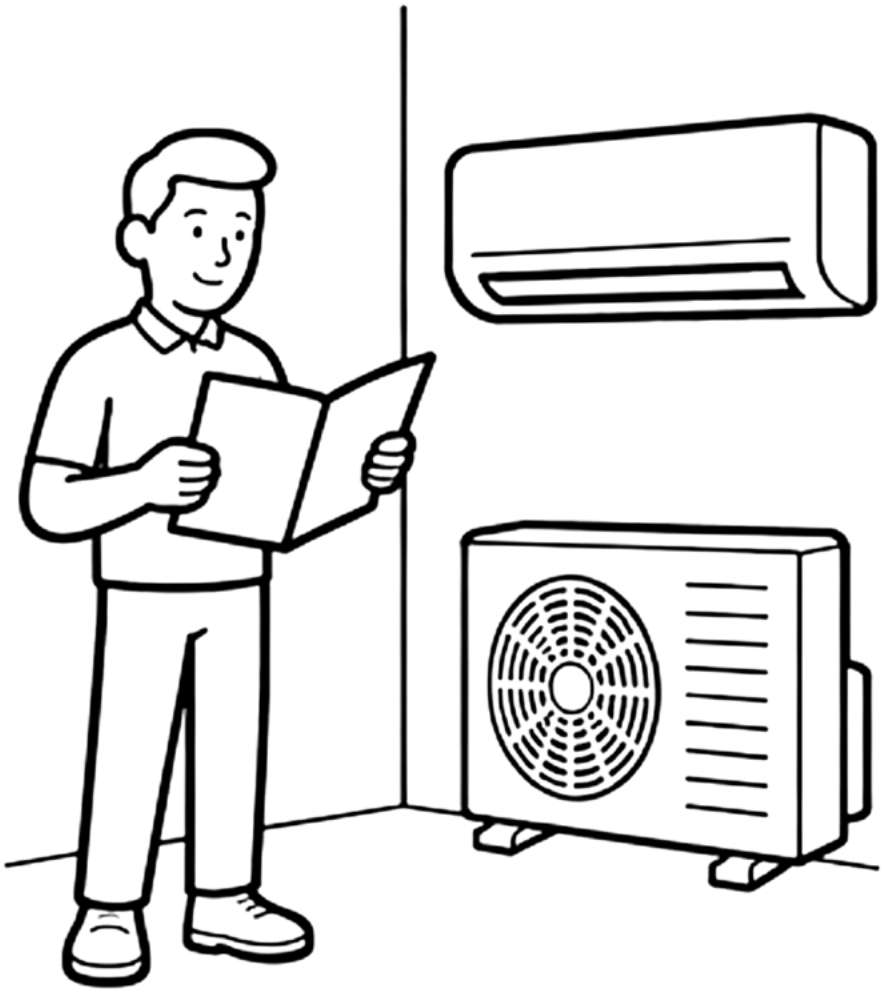
Klimatherm GRUPA

REFRIGERANT GUIDE

How to purchase and operate
Klima-Therm equipment in 2026–2035

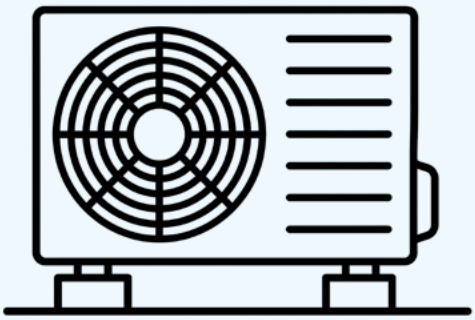


FUJITSU KAISAI auratsu KLIMA-THERM BY CLINT KLIMA-THERM BY MONTAIR

STEP 1

Start here: Existing equipment or new purchase?

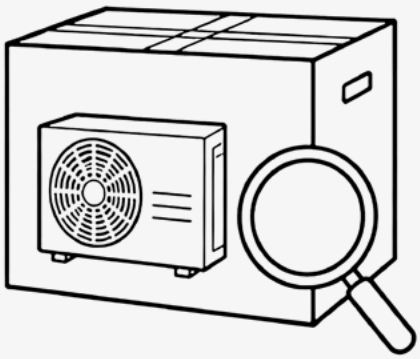
ALREADY IN OPERATION



Do not replace it solely because the regulations have changed

Have it serviced, repair any leaks and retain the documentation

NEW PURCHASE



Check the equipment type, rated capacity, refrigerant and date of placing on the market

The restrictions primarily apply to new equipment and do not automatically extend to equipment already installed.

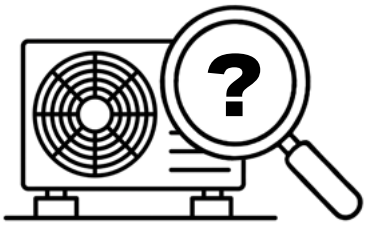
MOST IMPORTANT: cut-off date ≠ equipment shutdown date

Five questions to ask before purchasing

1

What type of equipment is it?

split, monoblock, VRF, chiller or precision air-conditioning unit



2

What is its rated capacity?

the 12 kW and 50 kW thresholds affect the applicable requirements

Find the answers on/in:

- the nameplate
- the product data sheet
- the installer's quotation
- the delivery documents

3

Which refrigerant does it use and what is its GWP?

check the nameplate or product data sheet for the specific variant

4

When was it placed on the EU market?

the date of placing on the market is what matters, not only the installation date

5

Who will install it?

choose a properly certified installer and a reliable service provider

STOP: Do not compare models without this information

Timeline of changes: 2025-2029

2025

Single split < 3 kg
new equipment: HFCs with GWP < 750

R32 ✓ R410A ×

2027

Chiller ≤ 12 kW
GWP < 150

from 2032, generally F-gas-free

Chiller > 12 kW
GWP < 750

R32 / R452B / R454B / R513A ✓

Monoblock ≤ 50 kW
generally GWP < 150

permitted only where required to meet safety requirements

Split air-to-water ≤ 12 kW
GWP < 150

R32 × R454C ✓

2029

Split air-to-air ≤ 12 kW
GWP < 150

applies to typical R32 air-conditioning systems

Split > 12 kW
GWP < 750

R32 ✓ R410A ×

Timeline of changes: 2030-2035

2030

Other self-contained equipment > 50 kW
generally GWP < 150

permitted only where required to meet safety requirements

2032

Monoblocks ≤ 12 kW
generally F-gas-free

permitted only where required to meet safety requirements

Chillery ≤ 12 kW
generally F-gas-free

permitted only where required to meet safety requirements

2033

Split > 12 kW
GWP < 150

R32 no longer meets the threshold

2035

Split ≤ 12 kW
generally F-gas-free

permitted only where required to meet safety requirements

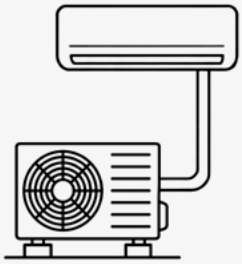
**The EU is phasing in restrictions on new equipment;
it does not automatically require equipment already in use to be taken out of service**

What does the refrigerant designation mean?

REFRIGERANT	GWP	CLASS	WHERE YOU WILL FIND IT
R410A	2088	**A1**	older split/VRF systems; some CLINT and MONTAIR units
R32	675	**A2L**	current air-conditioning systems; some VRF systems and heat pumps
R290	≈3	**A3**	KAISAI monoblocks; portable air conditioners
R452B	≈698	**A2L**	selected CLINT variants
R454B	≈466	**A2L**	selected CLINT variants
R454C	≈146-148	**A2L**	CLINT Thermica
R134a	1430	**A1**	selected CLINT equipment
R513A	631	**A1**	selected high-capacity equipment
R1234ze(E)	≈7	**A2L**	selected high-capacity CLINT chillers

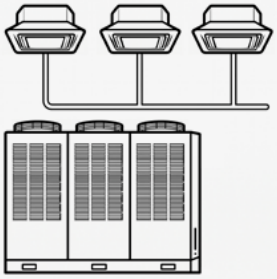
Lower GWP = lower climate impact. It does not automatically mean lower energy bills.

First, select the appropriate equipment family



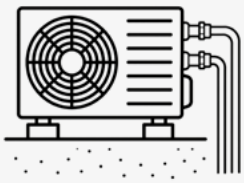
Split / Multi Split

air conditioning for homes and small offices



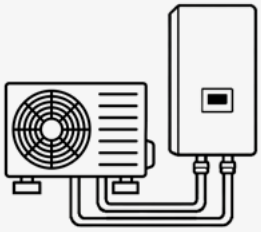
VRF

multiple indoor units



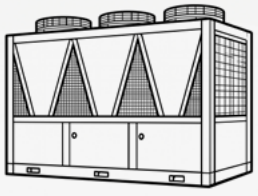
Monoblock heat pump

refrigerant circuit contained within the outdoor unit



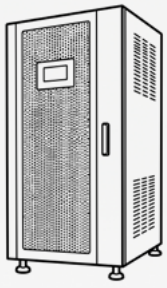
Split heat pump

refrigerant circuit connects the outdoor and indoor units



Chiller

chilled water; selection based on capacity and variant



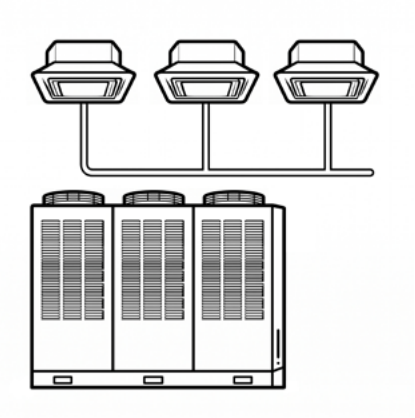
Precision air conditioning

DX or chilled-water air-conditioning unit

The same brand may use several different refrigerants – always check the specific model

BRAND MAP

FUJITSU: air conditioning and VRF



Current Split and Multi Split systems wall-mounted, cassette, ducted, floor-standing, ceiling-suspended and multi systems	**R32**
Selected older / special Split systems e.g. LHTA ducted unit; check the nameplate	**R410A**
VRF J-V / J-VS / J-VL / VU-V new-generation VRF; safety measures required for R32	**R32**
VRF J-IVS / J-IV / J-IVL / VR-IV / V-IV R410A generation; for new systems >12 kW the years 2029 and 2033 are important	**R410A**

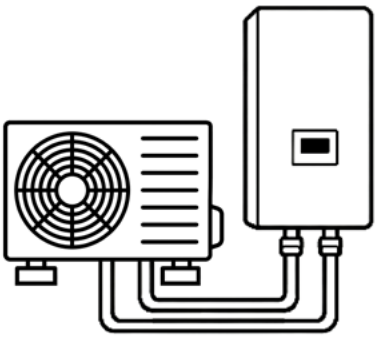
In brief

R32 is the standard refrigerant in current air-conditioning systems.
R410A in equipment already in operation does not mean that replacement is mandatory.

For a new VRF project

The series name alone is not enough. Confirm the system capacity, the refrigerant used in the specific version and the project completion date.

FUJITSU: Waterstage heat pumps

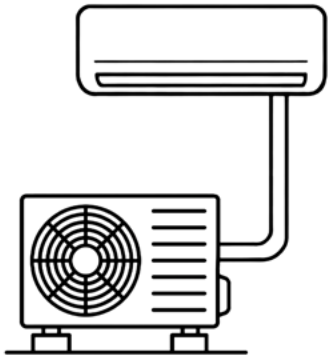


Waterstage Comfort – monoblock monoblock models in the 2026/2027 catalogue	**R32**
Waterstage Comfort – split 5-10 kW residential air-to-water heat pumps	**R32**
Waterstage High Power – new generation 10-14 kW new range differentiated from earlier models	**R32**
Waterstage High Power – earlier models 11-16 kW variants with a maximum water temperature of 60°C	**R410A**
Waterstage Super High Power 15-17 kW earlier high-capacity generation	**R410A**

Note the 12 kW threshold

For new split air-to-water heat pumps up to 12 kW, a GWP < 150 is required from 2027. R32 does not meet this threshold.

KAISAI: air conditioning



FLY+ / GEO+ / ART / AIR and other current series typical split air-to-air systems	**R32**
Cassette / ducted / console / floor-ceiling units the system capacity determines its regulatory category	**R32**
Multi Split and simultaneous systems several indoor units and one outdoor unit	**R32**
VRF and Mini VRF the applicable date depends on capacity: ≤12 kW or >12 kW	**R32**
Portable air conditioners KKPA / KKPE / KKPM self-contained equipment; refrigerant sealed in at the factory	**R290**

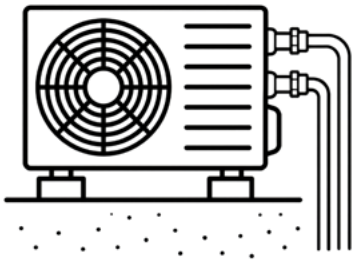
For residential applications in 2026

R32 is a typical choice. For projects scheduled for completion after 2028, check the new generation using refrigerants with GWP < 150.

Source: KAISAI 2026/2027 | Table approved by the Product Manager

KAISAI: heat pumps

KHC – monoblock 6-30 kW earlier product range; rated capacity is relevant	**R32**
KHA / KMK – split 6-16 kW for models up to 12 kW, the GWP < 150 threshold applies from 2027	**R32**
KHOA Green Comfort – monoblock 6-10 kW natural refrigerant; clear regulatory outlook	**R290**
KHON Green Power – monoblock 8-10 kW new high-efficiency range	**R290**
KHY z modułem hydraulicznym – monoblock 12 kW refrigerant contained in the outdoor unit	**R290**
Arctic Power 65 / 110 kW high-capacity monoblock heat pumps	**R32 / R290**

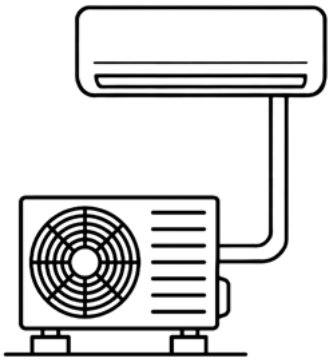


The simplest guideline

For a new residential monoblock heat pump, R290 offers the clearest regulatory outlook. Always maintain the required clearances and comply with the applicable safety requirements.

BRAND MAP

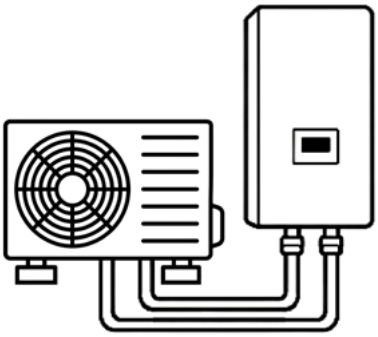
AURATSU: simple product map



R32

AURATSU split air conditioners

Aktualna oferta klimatyzacji marki.



R32

AHA / AHM heat pumps – split 6-16 kW

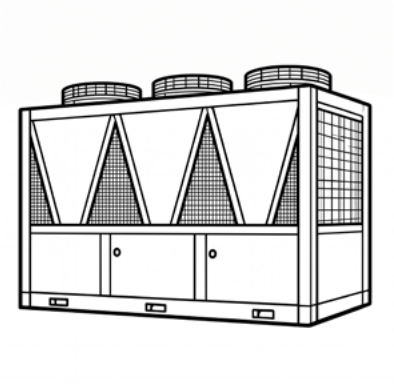
Split air-to-water systems.

What does this mean for the buyer?

In split models up to 12 kW, R32 does not meet the GWP < 150 threshold applicable to new equipment from 2027. This does not prohibit the use of equipment legally placed on the market before that date.

Source: AURATSU 2026 | Table approved by the Product Manager

CLINT: low and medium capacities

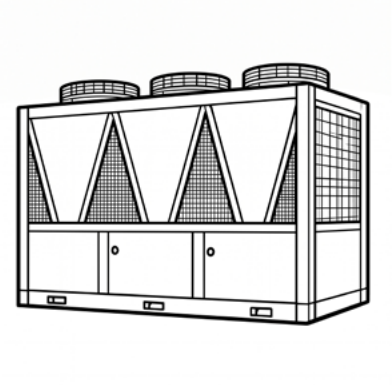


CompactLine CHA/IG/A 51-81 chillers and heat pumps 6-25 kW	**R452B** **R454B**
Thermica CHA/F/ML/WP 52-204 heat pumps 20-67 kW; GWP below 150	**R454C**
Booster CWW/Y/BH 162-P-1204-P high-temperature water-to-water heat pumps 77-550 kW	**R134a**
Booster CWW/J/BH 162-P-1204-P high-temperature water-to-water heat pumps 77-550 kW	**R513A**
AquaPlus air-cooled, water-cooled or with remote condenser; Scroll compressors	**R410A** **R452B** **R454B**
MultiPower high-capacity multi-Scroll systems	**R410A** **R452B** **R454B**

CLINT rule

The refrigerant is part of the equipment configuration. The family name alone is not sufficient – check the full model code and the data sheet for the selected variant.

CLINT: high-capacity systems and auxiliary equipment



EnergyPower multifunctional 4-pipe systems	**R410A** **R134a** **R513A**
MaxiPower chillers with screw compressors	**R134a** **R513A** **R1234ze(E)**
TurboLine chillers with Turbocor compressors	**R134a** **R513A** **R1234ze(E)**
Condensing units check the version code; the regulatory category depends on the design and capacity	most commonly **R410A**

Chillery ≤ 12 kW

From 2027: GWP < 150.

From 2032: generally F-gas-free.

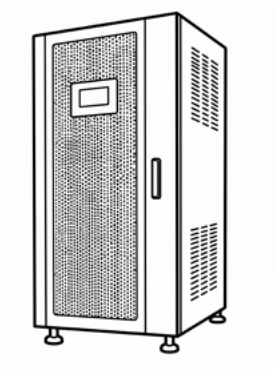
Chillery > 12 kW

From 2027: GWP < 750.

R410A and R134a exceed this threshold.

Fan coils and hydraulic components do not have their own refrigerant circuit. The refrigerant is contained in the cooling or heating source.

MONTAIR: precision air conditioning



XIP / XOP / XOC air-cooled DX	**R410A**
TIP / TOP / TOC DX with redundancy or water cooling	**R410A**
HOP / HOC / FOP / FOC water-cooled DX; refrigerant depends on the configuration	**CHECK THE DATA SHEET**
WOP / WOC / DOP / DOC / WOPU / DOPU chilled-water units; the refrigerant is contained in the external chiller	**NO REFRIGERANT**

A data centre is a system

When upgrading a system, check redundancy, compatibility with the condenser or chiller, service availability and the option of phased replacement. GWP alone is not sufficient.

Always select equipment based on the data sheet for the specific variant.

Operate safely – do not make unauthorised modifications

DO NOT



- open the refrigerant circuit
- top up the refrigerant yourself
- replace R410A with R32 or R290
- obstruct safety zones

DO



- use a properly certified service provider
- respond promptly to refrigerant leaks and loss of performance
- retain service reports and the equipment logbook
- follow the manufacturer's instructions

R290 = A3 (higher flammability)

R32 = A2L (lower flammability)

This does not mean that the equipment is unsafe.
It means that installation and servicing must be carried out in accordance with the instructions.

Know your options. Choose with confidence.

- [ ] I have identified the equipment type.
- [ ] I know the rated capacity.
- [ ] **I know the refrigerant, its GWP and safety classification.**
- [ ] I have confirmed the delivery status against the applicable cut-off dates.
- [ ] I have an installation and service quotation from a properly certified company.
- [ ] I will retain the product data sheet, nameplate information and service reports.



One thing to remember

The regulations set the direction for new equipment. The safety and regulatory compliance of a specific purchase depend on the equipment type, capacity, refrigerant, date and documentation.

Legal basis: Regulation (EU) 2024/573 | FUJITSU, KAISAI, AURATSU, CLINT and MONTAIR catalogues

Information material – does not replace the documentation for the specific model or a project-specific engineering assessment



edition: 2026.10.09