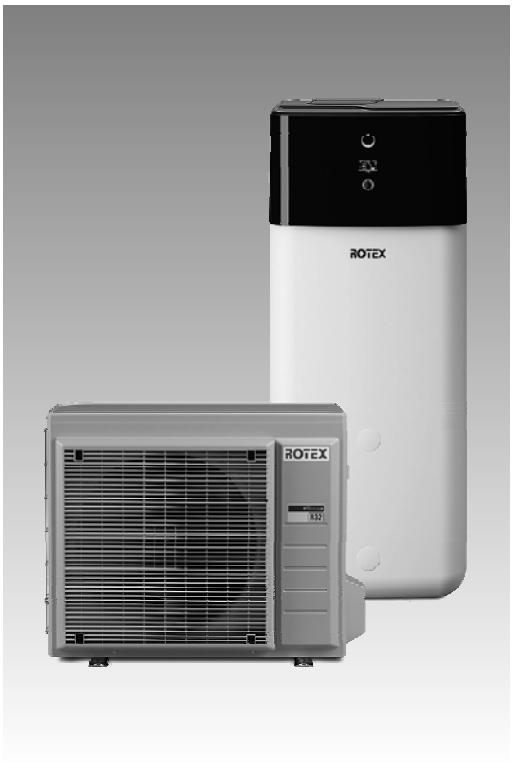
ROTEX

a member of DAIKIN group

For the operator

Operating manual

ROTEX Heat pumps



Types

ROTEX HPSU compact Ultra 4-8 kW
ROTEX HPSU compact 4-8 kW
ROTEX HPSU compact 11-16 kW
ROTEX HPSU Bi-Bloc 4-8 kW
ROTEX HPSU Bi-Bloc 11-16 kW
ROTEX HPSU monobloc compact 5-7 kW
ROTEX HPSU monobloc compact 11-16 kW
ROTEX HPSU hitemp 11-16 kW

EN

Edition 10/2018

1 General instructions

1.1 Warranty conditions

The legal guarantee conditions fundamentally apply. Our warranty conditions beyond that can be found online on your sales presentative's webpage.

1.2 Legal provisions

According to the F-Gas Regulation (EC) No. 842/2006 Article 3, replaced on 01/01/2015 by (EC) no. 517/2014 Articles 3 and 4, operators (or owners) must regularly maintain their fixed refrigeration systems, check for leakages and have any leakages rectified immediately.

All installation, maintenance and repair work on the refrigerant circuit must be documented, e.g. in the operating manual.

The operators of **ROTEX heat pump systems** are subject to **the following obligations**:

The European legal inspection period applies to heat pumps with a total filling quantity of the system with refrigerant of at least 3 kg or from 01/01/2017 with a total filling quantity of 5 t CO_2 equivalent (with R410A, from 2.4 kg, with R32, from 7.4 kg).

However, ROTEX recommends concluding a maintenance contract including documentation of the work carried out in the operating manual to safeguard warranty claims, even for systems for which there is no legal obligation to check for leakages.

- With a **total filling quantity** of the system with refrigerant of **3 kg – 30 kg** or from **6 kg** in hermetic systems and from 01/01/2017 with a total filling quantity of refrigerant of 5-50 t CO_2 equivalent or from 10 t CO_2 equivalent in hermetic systems:
  - ➔ **Inspections** by certified personnel at intervals of no more than **12 months** and documentation of the work carried out in accordance with the valid regulation. This documentation must be kept for at least 5 years.

Persons who hold a certificate of qualification for work on stationary refrigeration systems (heat pumps) and air conditioning systems for the European area in accordance with the F-Gas Certification Regulation (EU) 2015/2067 are certified.

- Up to 3 kg or 5 t CO_2 equivalent Total refrigerant charge: Category II certificate of competence
- Up to 3 kg or 5 t CO_2 equivalent Total refrigerant charge: Category I certificate of competence

RISK OF ENVIRONMENTAL DAMAGE!

The overall heat pump system contains refrigerants with fluorinated greenhouse gases that are harmful to the environment when released.

Coolant type: R410A
GWP* value: 2087.5

Coolant type: R134a
GWP* value: 1430

Refrigerant type: R32
GWP* value: 675

** GWP = Global Warming Potential*

- Never allow refrigerant to escape into the atmosphere - always extract and recycle with a suitable recycling device.

Have the inspection and maintenance carried out by authorised and trained HVAC engineers once a year, ideally **before the heating period**. Malfunctions during the heating period can therefore be prevented.

ROTEX recommends an inspection and maintenance contract to ensure regular inspection and maintenance.

2 System data

2.1 Operator

Name:	
Company:	
Street & house number:	
Postal code & town:	
Phone:	

2.2 System

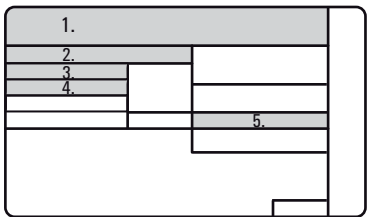


Fig. 2-1 Type plate for external unit

Outdoor unit		
1 - Manufacturer	ROTEX Heating Systems GmbH	
2 - Type		
3 - Serial number (mfg. no.)		
4 - Production date (mfg. date)		
5 - Type of coolant + fill weight of device	R_____	kg

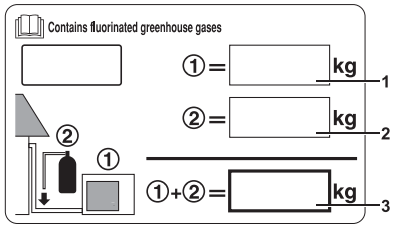


Fig. 2-2 Sticker showing coolant fill weight in entire system (external unit)

Total fill weight	
1 - Factory filling of the outdoor module (see fig. 2-1, item 5):	kg
2 - Quantity of additional coolant added on site:	kg
3 - Total amount of coolant in the system:	kg

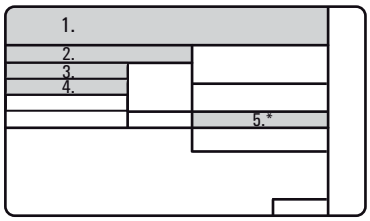


Fig. 2-3 Type plate for indoor unit HPSU Bi-Bloc / HPSU hitemp

Indoor unit		
1 - Manufacturer	ROTEX Heating Systems GmbH	
2 - Type		
3 - Serial number (mfg. no.)		
4 - Production date (mfg. date)		
5* - Type of coolant + fill weight of device	R_____	kg

* forHPSU hitemp only

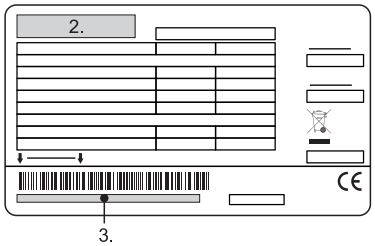


Fig. 2-4 Type plate for indoor unit HPSU compact

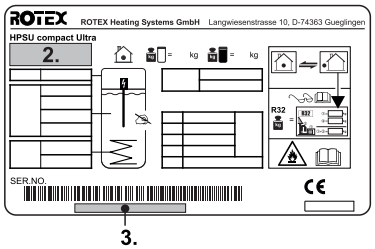


Fig. 2-6 Type plate for indoor unit HPSU compact Ultra

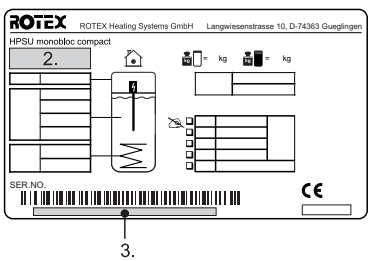


Fig. 2-5 Type plate for indoor unit HPSU monobloc compact

2.3 Leakage checking

Test interval in accordance with F-gas regulations:

- ❑ every 6 months
- ❑ every 12 months
- ❑ No legal requirement for leakage checking

All maintenance, leakage checks and work performed on the coolant system must be recorded below. An unbroken record of compliance with the maintenance and inspection work stipulated by ROTEX is a prerequisite for any guarantee claim within the guarantee period and any possible ex-gratia payment by the manufacturer.

3 Certificates

1st maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

2nd maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

3rd maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

4th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

3 Certificates

5th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

6th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

7th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

8th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

3 Certificates

9th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

10th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

11th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

12th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

3 Certificates

13th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

14th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

15th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

16th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

3 Certificates

17th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

18th maintenance

Activities	Yes	No	Comments
1. Maintenance and inspection work in accordance with the installation and maintenance instructions of the ROTEX HPSU/HPU completed?	❑	❑	
2. System water pressure checked?	❑	❑	bar
3. Leakage check carried out using a leak detection instrument (≤5 g/a) **in accordance with the F-gas regulation** (see chapter 1.2 "Legal provisions", page 2)?	❑	❑	
Leak detection instrument: Manufacturer: _____ Type: _____ Date of last instrument test: _____			
4. Work on coolant circuit completed?	❑	❑	Reason:
5. Weight of coolant added: kg R_____ kg R_____	Weight of coolant disposed of: kg R_____ kg R_____		
6. Function check carried out?	❑	❑	
7. Any faults detected?	❑	❑	Faults detected:
Fault rectified? (see repair log page _____)	❑	❑	
8. Operator informed of existing faults?	❑	❑	

Company stamp / Company address	*Name of technician in capitals*	*Date*	*Signature of technician*

4 Repair/service records

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

4 Repair/service records

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

4 Repair/service records

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

4 Repair/service records

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

Repair/service record	
Description and reason for work on the coolant circuit - followed by pressure test? Please fill in!	Date/signature of technician

ROTEX a member of DAIKIN group

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