

F-GAS regulation: periodic inspections based on GWP/quantity of gas (1/2)

	<i>Equipment WITHOUT leak detection</i>	Inspection every 12 MONTHS	Inspection every 6 MONTHS	Inspection every 6 MONTHS , use of leak detection system mandatory****
	<i>Equipment WITH leak detection and monitoring system</i>	Inspection every 24 MONTHS	Inspection every 12 MONTHS	
Codice refrigerante	GWP* AR4	CO2eq value** between 5 and 49 tons	CO2eq value** between 50 and 499 tons	CO2eq value** >= of 500 tons
R-1150	4	1250kg	12500kg	125000kg
R-1233zde	5	1000kg	10000kg	100000kg
R-1234yf	4	1250kg	12500kg	125000kg
R-1234ze	6	834kg	8334kg	83334kg
R-1270	2	2500kg	25000kg	250000kg
R-134a	1430	3,5kg	35kg	350kg
R-22	1810	2,8kg	28kg	277kg
R-290	3,3	1516kg	15152kg	151516kg
R-32	675	7,5kg	75kg	741kg
R-404A	3922	1,3kg	13kg	128kg
R-407A	2107	2,4kg	24kg	238kg
R-407C	1774	2,9kg	29kg	282kg
R-407F	1825	2,8kg	28kg	274kg
R-410A	2088	2,4kg	24kg	240kg
R-448A	1387	3,7kg	37kg	361kg
R-449A	1397	3,6kg	36kg	358kg
R-450A	604	8,3kg	83kg	828kg

*The GWP coefficient expresses the contribution to the greenhouse effect of the gas compared to that of CO2 (the latter is 1 by definition).

**To find the CO2eq value, multiply the GWP of the gas by the quantity of refrigerant (example: R-1150 gas has GWP=4, with 1000 kg of CO2eq gas = 4000 kg).

F-GAS regulation: periodic inspections based on GWP/quantity of gas (2/2)

	<i>Equipment WITHOUT leak detection</i>	Inspection every 12 MONTHS	Inspection every 6 MONTHS	Inspection every 6 MONTHS , use of leak detection system mandatory****
	<i>Equipment WITH leak detection and monitoring system</i>	Inspection every 24 MONTHS	Inspection every 12 MONTHS	
Codice refrigerante	GWP* AR4	CO2eq value** between 5 and 49 tons	CO2eq value** between 50 and 499 tons	CO2eq value** >= of 500 tons
R-452A	2140	2,4kg	24kg	234kg
R-452B	698	7,2kg	72kg	717kg
R-454A	239	21kg	210kg	2093kg
R-454B	466	11kg	108kg	1073kg
R-454C	148	34kg	338kg	3379kg
R-455A	148	34kg	338kg	3379kg
R-464A	1323	3,8kg	38kg	378kg
R-465A	145	35kg	345kg	3449kg
R-466A	733	6,9kg	69kg	683kg
R-468A	148	34kg	338kg	3379kg
R-50	25	200kg	2000kg	20000kg
R-507A	3985	1,3kg	13kg	126kg
R-513A	631	8kg	80kg	793kg
R-600A	3	1667kg	16667kg	166667kg
R-717	0	-	-	-
R-744	1	5000kg	50000kg	500000kg

*The GWP coefficient expresses the contribution to the greenhouse effect of the gas compared to that of CO2 (the latter is 1 by definition).

**To find the CO2eq value, multiply the GWP of the gas by the quantity of refrigerant (example: R-1150 gas has GWP=4, with 1000 kg of CO2eq gas = 4000 kg).

Technical characteristics of CAREL GLD small gas sensors

	Semiconductor version	Electrochemical version (for ammonia - R717)	Infrared version (for CO2 - R744)
Operating life***	5 years	2 years	7 years
Calibration requirements	12 months	12 months	Not required

***Reference conditions at 25°C 50% RH atmospheric pressure 101.3 kPa.

Regulatory references and recommendations

F Gas Regulation (effective from July 2006)

The Regulation of the European Parliament and Council (EC) number 842/2006 and subsequent 517/2014 is applicable to HFCs (hydrofluorocarbon gases) and to all other fluorinated greenhouse gases.

EN378: 2008, Part 1-4 (effective February 2008)

It applies to all types of refrigerants and sets the criteria for leak detection in engine rooms, pump rooms and in all other premises (also defined as occupied spaces) where people can be found.

Examples of such spaces are: shops, production plants, cold rooms, etc.

****ATTENTION:

For a system with a gas charge **equal to or greater than 500 tonnes of CO2 equivalent**, it is mandatory to provide:

- 1) periodic inspections every 6 months to check for gas leaks,
- 2) a fixed leak detection system.

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The information contained therein is accurate and reliable at the date of publication, however this document is for informational purposes only and Climaset s.r.l. assumes no responsibility for any errors or omissions in the data presented here. For more informations on the gas leakage detector, see the CAREL manual +0300047IE.