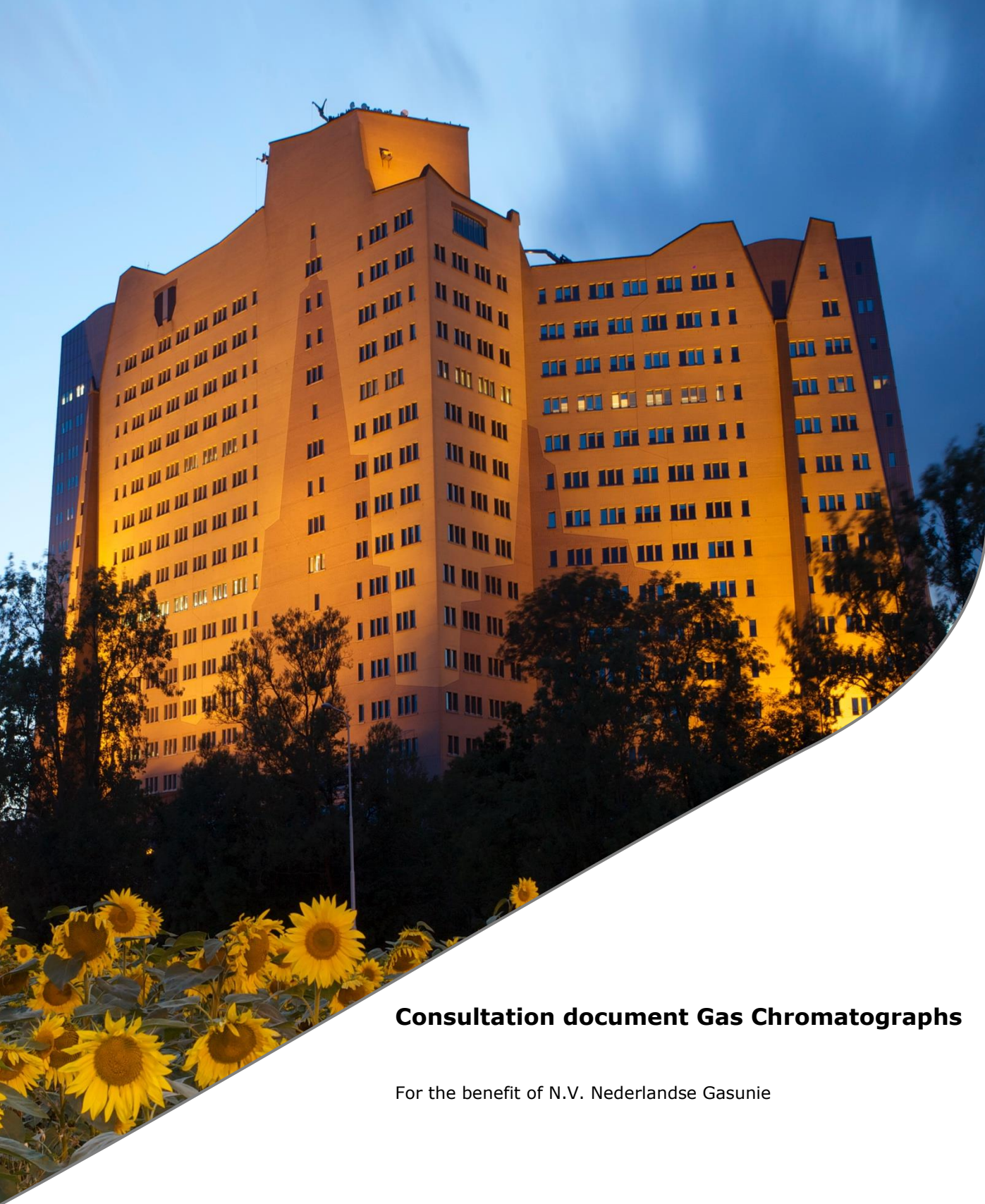




Consultation document Gas Chromatographs

For the benefit of N.V. Nederlandse Gasunie

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Version: final

N.V. Nederlandse Gasunie
Groningen, September 2022

gasunie
crossing borders in energy

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Appendix:

- MSM-05-E Field gas chromatograph

1 GENERAL INFORMATION

1.1 Introduction

This document contains information about the consultation for Gas chromatographs (hereafter: "GC") for N.V. Nederlandse Gasunie (hereafter: Gasunie).

1.2 N.V. Nederlandse Gasunie

Gasunie is an energy infrastructure company. In the Netherlands and Northern Germany, we manage the infrastructure for large-scale transport, storage and conversion of gas, currently still mostly natural gas. With the energy transition, this is increasingly shifting towards green gas and hydrogen. We are also working on the construction and management of heat and CO₂ networks.

Our duty is to provide safe, reliable, affordable and sustainable energy infrastructure services, making energy available to everyone at all times. Safety, reliability, sustainability and cost awareness are paramount.

The Gasunie network is one of the largest high-pressure gas transport networks in Europe and consists of more than 15,000 km of pipelines, 1,000 gas receiving stations and dozens of installations in the Netherlands and Northern Germany. Gasunie's infrastructure is part of the 'gas roundabout' of Europe. This network allows the gas to be traded and transported easily. The annual throughput of gas is approximately 100 billion cubic meters.

1.3 Subject of the consultation

The GC's Gasunie uses in its network (Daniel 500 EX) are declared obsolete. Therefore Gasunie is preparing a call for tender procedure for new GC's. To be futureproof, the GC's shall not only be suitable for natural gas but also green gas and mixtures of natural gas and hydrogen up to 20%.

Furthermore Gasunie is looking for an (almost) emission free gas sampling system which may be considered to be part of the scope of the tender.

The GC's shall (as much as possible) comply with the Gasunie Technical Standard MSM-05-E "Field gas chromatograph" which has been attached to this consultation document.

1.4 Questions

1. What types of GC's is respondent able to deliver which comply (best) with the MSM-05-E? Please elaborate on the deviations to MSM-05-E in the sheet *MSM-05-E compliance* in the Excel file "Consultation GC's Response excel".
2. Is there one type able to measure the 3 variants mentioned in MSM-05-E p15, Table 2: GC configurations? Please fill in the table in the sheet *GC configurations* in the Excel file "Consultation GC's Response excel".
3. Are there possibilities to analyse the 3 variant without the use of Helium as carrier gas? If yes, please explain the analysing method.
4. What possibilities does respondent offer to minimize emissions of gas?
5. Gasunie now makes use of an own multi-level calibration and verification system. If applicable to meet the uncertainties, does respondent offer 'multi-level calibration and verification' as a service? What additional services do you provide?
6. Is live-Z communication possible between GC and Electronic Volume Correction devices such as Krohne Summit8800? If yes, please describe how this is realized and which flow computers are supported.

7. What is the expected lifecycle of the GC('s). What is the status of the GC in its product lifecycle roadmap (active, mature, limited, obsolete).
8. What software can be provided with the GC and at what costs? Please describe the functions the software offers?
9. Please describe what standards respondents follows and which measures have been taken to make the GC control-unit cyber secure.
10. How does your GC differ from the rest of the market and what are the advantages for Gasunie?
11. Through which delivery channels you serve the Dutch market? Is respondent manufacturer or trading company?
12. What recommendations do you have for Gasunie for the upcoming tendering process?
13. Which question did you expect in this questionnaire which we did not include?
14. Please attach product datasheets of the relevant GC's with the following parts highlighted:
 - a. Atex marking;
 - b. Uncertainties/stability;
 - c. Data communication network and protocol;
 - d. Emission

2 CONSULTATION PROCEDURE

2.1 Schedule

Activity	Date / Period
Publish consultation document	Mon 12 th September
Possibility to pose questions about this consultation to Gasunie, via e-mail to j.draijer@gasunie.nl	Wed 21 st September
Answer from Gasunie on questions, anonymized and sent to every potential respondent	Fri 23 rd September
Response to consultation document via e-mail to j.draijer@gasunie.nl Your response consists in a Word/PDF and an Excel file	Thu 29 th September
Bilateral meetings with respondents (Teams)	Week of 10-14 October

2.2 Rules for the consultation

- Gasunie will treat the gathered information as confidential if and only if it is marked confidential by respondent.
- Gasunie may use the non-confidential information in the upcoming European tender but is not obliged to do so.
- Information from the consultation which is made public in the European tender, will in no way refer to the respondent.