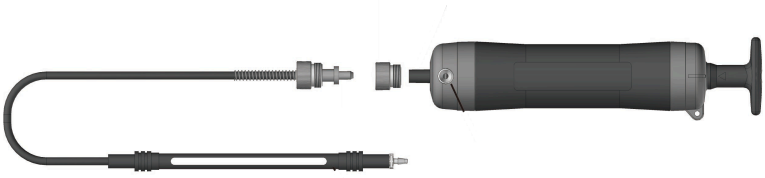
ANALYT MESSTECHNIK



INSTRUCTIONS FOR USE

GASTEC 30 m Extension Hose No. 351A-30

Connecting the 30 m extension hose to a GASTEC GV-100 or GV-110 gas sampling pump, measuring with detector tubes at a distance, and the sampling times and correction factors for each approved tube.

AMTC-IN-0069

Rev. 2 · October 2026

About this document

The GASTEC 30 m extension hose No. 351A-30 lets you take a detector tube sample up to 30 m away from the gas sampling pump: you lower the tube on the tubing into a manhole, a tank or another confined space and work the pump from outside. The tubing fits the GASTEC gas sampling pump GV-100 or GV-110, the pumps supplied in the GV-100S and GV-110S sets.

These instructions cover the safety notes, connecting the tubing to the pump, taking a sample through the tubing and correcting the tube reading. With 30 m of tubing the sampling time may differ from the time in the tube instructions, and a correction factor may apply: Sampling times and correction factors (p. 9) lists both for every tube approved for use with the tubing.

Keep the instruction manual of your pump and the instructions packed with your detector tubes at hand. They describe the pump strokes, the tube readings and the temperature and humidity corrections that these instructions refer to.

Keep these instructions for the lifetime of the product. The current revision is on the product page at analyt-mtc.com.

How these instructions mark information

⚠ WARNING

A hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

A hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Practices not related to personal injury — damage to the product, the process or the sample.

Note

Information that helps understanding; never a hazard.

Document information

Title	GASTEC 30 m Extension Hose No. 351A-30 — Instructions for use
Document number	AMTC-IN-0069
Revision	Rev. 2 — October 2026
Applies to	GASTEC 30 m extension hose No. 351A-30, with the GASTEC gas sampling pump GV-100 or GV-110
Language	English
Manufacturer	GASTEC Corporation

Revision history

Rev.	Date	Change
2	October 2026	Quality programme: new document type, number and identity pages. Sampling times and correction factors updated to GASTEC's current hose instructions (print code 26F-MP): eight tubes added, tube No. 141L changed.
1	October 2026	First issue.

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CHAPTER 1

Safety

Read these instructions, the instruction manual of your gas sampling pump and the instructions of the detector tube before you measure. The cautions below protect you from injury; the notes keep the tubing working and the result reliable.

Handling detector tubes

⚠ CAUTION

Protect your eyes and hands from broken glass. Detector tubes are glass, and you break off their tips to open them. If you do not take care, you may be injured. Keep the tube away from your eyes while you break off its tips. Do not touch broken tubes, glass fragments or the tube reagent with bare hands.

Conditions of use

⚠ WARNING

Detector tubes from another manufacturer can cause property damage, serious injury or death. Use only GASTEC detector tubes with the pump and the tubing.

NOTICE

With a pump other than a GASTEC GV-100 or GV-110, the performance of the tubing is not assured. The result can then be unreliable. Use the tubing only with a GASTEC GV-100 or GV-110 pump.

Note

Stay within the tube's conditions. The temperature and humidity range in which a tube may be used is given in the instructions of that tube; it applies with the tubing as well.

Note

Protect the tubing. Keep it out of direct sunlight and away from acids and alkaline substances.

Note

Use approved tubes only. Only the detector tubes listed in Sampling times and correction factors (p. 9) are approved for use with the tubing at present. To measure with any other tube through the tubing, ask Analyt-MTC first.

CHAPTER 2

Product and supplied items

The 30 m extension hose No. 351A-30 lets you take a detector tube sample up to 30 m from a GASTEC gas sampling pump GV-100 or GV-110, for example from a manhole or tank, while you work the pump from outside.

Parts of the tubing

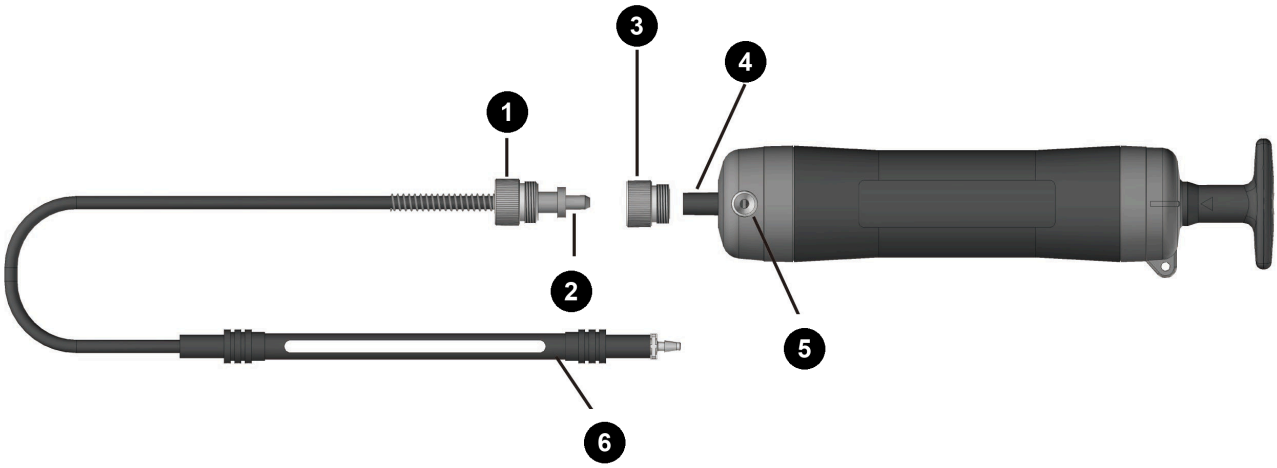


Figure 2-1. Extension hose and pump. Tubing: **1** Metal retaining nut · **2** Nipple · **3** Metal clamping nut · **6** Guard rubber (holds the detector tube). Pump: **4** Rubber inlet · **5** Tube tip breaker. The pump's own inlet clamping nut has been removed.

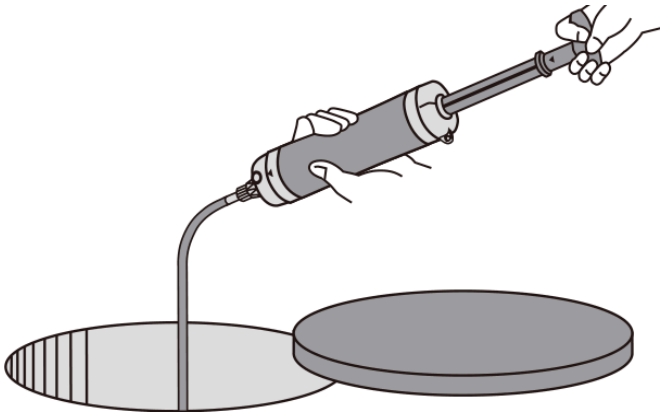


Figure 2-2. Remote downward measurement: the tubing hangs into a manhole and the pump is worked from outside.

CHAPTER 3

Before use

Connect the tubing to the pump

NOTICE

If the clamping nut is loose, air leaks in between the rubber inlet and the pump body instead of passing through the tube. The leak falsifies the result. Tighten both nuts firmly before every measurement.

1. Unscrew the inlet clamping nut from the pump.
2. In its place, screw the metal clamping nut (3) of the tubing over the rubber inlet (4) and tighten it firmly, so that the flange of the rubber inlet seals against the pump body.
3. Push the nipple (2) of the tubing fully into the pump inlet.
4. Tighten the metal retaining nut (1) firmly. The tubing is now fixed to the head of the pump.

CHAPTER 4

Procedure

Fit the detector tube

> **CAUTION**
>
> **Protect your eyes and hands from broken glass.** Detector tubes are glass, and you break off their tips to open them. If you do not take care, you may be injured. Keep the tube away from your eyes while you break off its tips. Do not touch broken tubes, glass fragments or the tube reagent with bare hands.

1. Break off both tips of the detector tube, for example in the tube tip breaker (5) of the pump.
2. Push the tube into the guard rubber (6) at the end of the tubing, with the arrow printed on the tube pointing towards the tubing: the sample must flow through the tube in the direction of the arrow, towards the pump.
3. For a measurement with two tubes in series (twin tubes), push an extension hose guard rubber No. 358 (not included; ask Analyt-MTC) onto the end of the tubing's guard rubber as in Figure 4-1 (p. 8), and fit the second tube in it.



Figure 4-1. Twin-tube set-up: the optional guard rubber No. 358 (right) is pushed onto the end of the tubing's guard rubber (left).

Take the sample

With the 30 m extension hose the sampling time may differ from the time in the tube instructions.

1. Look up the tube in Sampling times and correction factors (p. 9): only a tube that is listed there may be used.
2. Lower the tube end of the tubing to the sampling point.
3. Work the pump from where you stand, with the number of strokes and the full or half stroke that the tube instructions specify.
4. For each stroke, wait for the sampling time given in the table for a full stroke (100 mL) or a half stroke (50 mL), instead of the time in the tube instructions. The times are approximate.
5. When all strokes are done, bring the tube up and read it as described in its instructions.

Correct the reading

1. Where the table gives a correction factor for the tubing, multiply the tube reading by it.
2. Apply the other corrections the measurement needs in the same way, by multiplication: temperature, humidity, number of strokes and atmospheric pressure. The temperature, humidity and stroke corrections are in the tube instructions.
3. If you measure a substance from the tube's list of other substances it can detect (its "application for other substances"), apply that substance's factor or scale last, after all the corrections above.

Sampling times and correction factors

The table lists every detector tube approved for use with the 30 m extension hose, in order of tube number. For each tube it gives the measuring range, shelf life and notes from the current GASTEC detector tube list (27th edition, 2025), the approximate time to wait per pump stroke through the tubing, and the factor by which to multiply the tube reading (see Take the sample (p. 8) and Correct the reading (p. 8)). At present only the tubes in this table are approved for use with the tubing. For any other tube, ask Analyt-MTC.

- — in the half-stroke column: no sampling time is given for a half stroke (50 mL) with this tube through the tubing.
- — in the factor column: no correction for the tubing; the other corrections still apply.
- Notes: T temperature correction, H humidity correction, + twin tubes, ++ nine tests (tubes) per box, F correction factor for the tubing. Shelf life marked * : store refrigerated. Measuring ranges are those of the tube; when a factor is applied, the range changes.

Table 4-1. Approved tubes, sampling time per stroke and correction factor with the No. 351A-30 extension hose

Tube No.	Gas or vapour measured	Measuring range	Shelf life (months)	Notes	Time per full stroke (100 mL)	Time per half stroke (50 mL)	Correction factor
1L	Carbon monoxide	2.5–2000 ppm	36	F	1.5 min	45 s	1.13
1LK	Carbon monoxide	5–600 ppm	36		3 min	1.5 min	—
1LL	Carbon monoxide	5–50 ppm	36	F	3 min	—	1.14
2HH	Carbon dioxide	2.5–40 %	36	F	2 min	1 min	1.12
2H	Carbon dioxide	0.5–20 %	36	F	1 min	30 s	1.12
2L	Carbon dioxide	0.13–6 %	36		3 min	1.5 min	—
2LC	Carbon dioxide	100–4000 ppm	24		3 min	1.5 min	—
2LL	Carbon dioxide	300–5000 ppm	36		2 min	—	—
3M	Ammonia	7–1000 ppm	36		1.5 min	45 s	—
3L	Ammonia	0.5–78 ppm	36	TF	1 min	30 s	1.11
3La	Ammonia	2.5–220 ppm	36	T	45 s	30 s	—
4HM	Hydrogen sulphide	25–1600 ppm	36		1.5 min	45 s	—
4HH	Hydrogen sulphide	0.1–4 %	36		1 min	30 s	—
4M	Hydrogen sulphide	12.5–500 ppm	36		1.5 min	45 s	—
4H	Hydrogen sulphide	10–4000 ppm	36		1 min	30 s	—
4L	Hydrogen sulphide	1–240 ppm	36		1.5 min	45 s	—
4LL	Hydrogen sulphide	0.25–120 ppm	36		1 min	30 s	—
4LK	Hydrogen sulphide	1–40 ppm	36		1 min	30 s	—
4LB	Hydrogen sulphide	0.5–12 ppm	24		1 min	30 s	—
4LT	Hydrogen sulphide	0.05–4.0 ppm	24*		1.5 min	45 s	—
5La	Sulphur dioxide	0.5–60 ppm	36		1 min	—	—
5Lb	Sulphur dioxide	0.05–10.0 ppm	36	F	1 min	—	1.12
5LC	Sulphur dioxide	0.1–22 ppm	36	T	3 min	—	—
6L	Water vapour	0.05–2.0 mg/L	36		30 s	30 s	—
7H	Phosphine	200–5500 ppm	36	T	1 min	30 s	—
7J	Phosphine	2.5–1000 ppm	36	F	1 min	30 s	1.29

Tube No.	Gas or vapour measured	Measuring range	Shelf life (months)	Notes	Time per full stroke (100 mL)	Time per half stroke (50 mL)	Correction factor
7	Phosphine	2.5–100 ppm	36		1.5 min	—	—
7LA	Phosphine	0.05–9.8 ppm	24		1.5 min	—	—
7LAN	Phosphine	0.04–8.4 ppm	24	F	2 min	1 min	1.15
7L	Phosphine	0.15–5.0 ppm	36		1.5 min	—	—
8La	Chlorine	0.1–16 ppm	36		1.5 min	—	—
8LL	Chlorine	0.025–2.0 ppm	12*	F	3 min	—	1.16
9L	Nitrogen dioxide	0.5–125 ppm	36	F	1 min	—	1.60
11L	Nitrogen oxides	0.03–14 ppm	36	F	2 min	—	1.35
15L	Nitric acid	0.1–40 ppm	36	HF	45 s	30 s	1.33
19LA	Arsine	0.04–10 ppm	27		2 min	—	—
30	Hydrogen	0.5–2 %	36		3 min	—	—
30L[a]	Hydrogen				1 min	30 s	—
35	Sulphuric acid	0.5–5.0 mg/m^3	24	T	1.5 min	—	—
40	Mercury vapour	0.05–13.2 mg/m^3	36	F	2 min	1 min	1.20
60	Phenol	0.12–183 ppm	24*	TF	2 min	1 min	1.12
70	Mercaptans	0.5–120 ppm	36	T	2 min	—	—
70L	Mercaptans	0.1–8.0 ppm	24		2 min	1 min	—
70LN	Mercaptans	0.1–8.0 ppm	24*		1.5 min	—	—
72	Ethyl mercaptan	0.5–120 ppm	36	TF	2 min	—	1.00
72LN	Ethyl mercaptan	0.15–57.5 ppm	24	T	1.5 min	—	—
75N	tert-Butyl mercaptan	1.25–250 mg/m^3	24	TH	1.5 min	—	—
75LN	tert-Butyl mercaptan	0.5–39 mg/m^3	24*	THF	1.5 min	—	1.12
81L	Acetic acid	0.125–23 ppm	24*	TF	2 min	1 min	1.19
91L	Formaldehyde	0.1–45.0 ppm	36*	TF	2 min	—	1.16
92M	Acetaldehyde	2.5–100 ppm	24*	F	1 min	—	1.11
92LA	Acetaldehyde	0.3–30 ppm	24	T	2.5 min	—	—
100A	LPG (liquefied petroleum gas)	0.02–0.8 %	36		2 min	—	—
101L	Gasoline	30–2000 ppm	36	F	2 min	—	1.25
102L	Hexane	3.5–1200 ppm	36	F	1.5 min	—	1.16
103	Hydrocarbons (Lower class)	0.05–2.4 %	30	++	3 min	1.5 min	—
105	Hydrocarbons (Higher class)	100–3000 ppm	36		2 min	1 min	—
106	Petroleum naphtha	0.5–28 mg/L	36		1 min	30 s	—
111	Methanol	0.002–6.0 %	36	TF	1 min	30 s	1.40
111L	Methanol	20–1000 ppm	36	TF	3 min	—	1.25
112	Ethanol	0.01–7.5 %	36	TF	1.5 min	45 s	1.35
112L	Ethanol	50–2000 ppm	36	TF	3 min	—	1.21
117	Isoamyl alcohol	5–300 ppm	36	TF	2 min	—	1.21
118	Cyclohexanol	5–100 ppm	24	TF	2 min	—	1.35
120	Aromatic hydrocarbons	0.4–200 ppm	36	F	1.5 min	45 s	1.35
121	Benzene	2.5–120 ppm	36	F	1.5 min	—	1.22
121S	Benzene	2–312 ppm	36	+F	2 min	—	1.53

Tube No.	Gas or vapour measured	Measuring range	Shelf life (months)	Notes	Time per full stroke (100 mL)	Time per half stroke (50 mL)	Correction factor
121SL	Benzene	1–100 ppm	36	+F	2 min	—	1.30
121L	Benzene	0.1–65 ppm	36	+F	3 min	—	1.19
122	Toluene	4–600 ppm	36	F	2 min	1 min	1.35
122L	Toluene	0.82–100 ppm	36	F	1.5 min	—	1.22
123	Xylene	4–900 ppm	36	F	2 min	1 min	1.33
123L	Xylene	2–220 ppm	36	F	1.5 min	—	1.47
124	Styrene	10–1500 ppm	36	F	1 min	30 s	1.48
124L	Styrene	2–100 ppm	36	F	1 min	30 s	1.46
131	Vinyl chloride	0.025–2.0 %	36	F	2 min	1 min	1.17
131L	Vinyl chloride	0.1–6.9 ppm	30*	+TF	1.5 min	—	1.25
131La	Vinyl chloride	0.25–54 ppm	24*	+	2 min	1 min	—
131La	1,3-Dichloropropene	0.5–10 ppm	24*	+F	2 min	1 min	1.17
131LB	Vinyl chloride	0.4–70 ppm	24*	TF	1.5 min	—	1.29
132LL	Dichlorvos	0.11–1.8 ppm	24*	TF	1.5 min	45 s	1.14
134	Chloropicrin	2.5–60 ppm	12*	+F	1.5 min	—	1.28
134L	Chloropicrin	0.28–5.5 ppm	12*	+F	2 min	—	1.28
135	1,1,1-Trichloroethane	100–2000 ppm	36	+T	3 min	1.5 min	—
136H	Methyl bromide	10–600 ppm	36	+	2 min	1 min	—
136L	Methyl bromide	2.5–200 ppm	27	+	2 min	1 min	—
136LA	Methyl bromide	1–36 ppm	36	+F	1.5 min	45 s	1.15
136LL	Methyl bromide	0.1–3.0 ppm	24	+T	3 min	—	—
139	1,2-Dichloroethylene	5–250 ppm	30*	T	1 min	30 s	—
141L	Ethyl acetate	20–800 ppm	24	T	3 min	—	—
141L	Methyl isothiocyanate	5.4–216 ppm	24	TF	3 min	—	1.36
142L	Butyl acetate	10–300 ppm	24	TF	3 min	—	1.16
151L	Acetone	50–12 000 ppm	24*	T	3 min	—	—
161	Ethyl ether	0.04–1 %	36	TF	1.5 min	—	1.13
163	Ethylene oxide	0.05–3.0 %	36	F	45 s	—	1.11
163L	Ethylene oxide	0.4–550 ppm	12*	+TF	3 min	—	2.00
163LL	Ethylene oxide	0.1–10 ppm	12*	+TF	2 min	—	1.43
165L	Ethylene glycol	10–100 mg/m^3	36*	+TF	3 min	—	1.43
166	Methyl tert-butyl ether	10–660 ppm	24	T	3 min	—	—
172	Ethylene	25–1680 ppm	36	TF	3 min	1.5 min	1.28
172L	Ethylene	0.2–100 ppm	36	TF	2 min	—	1.22
174	1,3-Butadiene	50–800 ppm	36	T	1.5 min	—	—
174L	1,3-Butadiene	2.5–100 ppm	36		3 min	—	—
191L	Acrylonitrile	0.1–18 ppm	36	+	2 min	—	—
230	Methyl iodide	0.5–108 ppm	24*	TF	1.5 min	45 s	1.17
230H	Methyl iodide	100–34 800 ppm	24	TF	2 min	1 min	1.28
231	Sulphuryl fluoride	1–20 ppm	24	+T[b]	2 min	—	—
232	Ethylene dichloride	1–39 ppm	12*	+TF	3 min	—	1.13

Tube No.	Gas or vapour measured	Measuring range	Shelf life (months)	Notes	Time per full stroke (100 mL)	Time per half stroke (50 mL)	Correction factor
233	Chloropicrin	0.045–22 ppm	12	+F	2 min	—	1.12
234L	Methyl isothiocyanate	0.07–25 ppm	24	+TF	3 min	—	1.11

Times are approximate. [a] Tube No. 30L is listed in the tubing instructions only; the current GASTEC tube list gives no measuring range, shelf life or notes for it. [b] One box is enough for four tests.

CHAPTER 5

After use and sample handling

After the measurement

Do not touch broken glass tubes, glass pieces or the tube reagent with bare hands, and dispose of used tubes, and tubes past their “valid until” date, according to local regulations. Store the tubing away from sunlight, acids and alkaline substances.

Disposal

Dispose of the extension hose under local regulations; separate metal, glass and plastic parts for recycling where possible.

CHAPTER 6

Specifications

Product	GASTEC 30 m extension hose
Product number	No. 351A-30
Length	30 m ±2 %
Outer / inner diameter	5 mm / 1.5 mm
Weight	approx. 900 g
For use with	GASTEC gas sampling pump GV-100 or GV-110
Optional	Extension hose guard rubber No. 358, for twin tubes

CHAPTER 7

Ordering information

Order from Analyt-MTC with the order codes.

Related parts

Part	Order code
Extension hose guard rubber, for twin tubes	GST_358
Replacement extension hose guard rubber, for the tubing tip	GST_359
Extension hose, 5 m	GST_351A-5
Extension hose, 10 m	GST_351A-10
Extension hose, 30 m (No. 351A-30)	GST_351A-30
Inlet clamping nuts for the pump, pack of 10	Ask Analyt-MTC

The sampling times and correction factors in these instructions apply to the 30 m extension hose No. 351A-30 only.

CHAPTER 8

Service and contacts

Contact and support

ANALYT-MTC Messtechnik GmbH

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Before you call

Have the following at hand so that Analyt-MTC can help you quickly:

- the extension hose number (No. 351A-30) and the pump model;
- the tube number and the gas you want to measure;
- what you were doing and what you observed.

The GASTEC 30 m extension hose No. 351A-30 is made by GASTEC. Contact Analyt-MTC with questions about your GASTEC tubing and pump, and before you use the tubing with a tube that is not listed in Table 4-1 (p. 9). Warranty matters follow Analyt-MTC's terms of sale. Analyt-MTC's contact details are above and on the back cover.

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