1 I•BOOST additional function (optional)

Leaks can be detected visually more clearly and quickly with the aid of the I•BOOST function. Even small measured helium leak rates that indicate a leak are shown accelerated in the measurement display. With I•BOOST activated, the leak rate curve therefore behaves as if the leak detector had a significantly higher helium pumping speed. The function is limited to using helium as the test gas.

1.1 Unlock I•BOOST

- ✓ The software versions of your leak detector are up to date (operating unit and basic unit). See also “ > Device“.
- ✓ You have ordered an additional feature from the manufacturer specifying the serial number of your leak detector.
- ✓ You have received an unlock code from the manufacturer.
- ✓ **Supervisor** rights

  1 > Update > Unlock feature

  2 Enter your unlock code in the "Unlock code" field.

  3 Save .

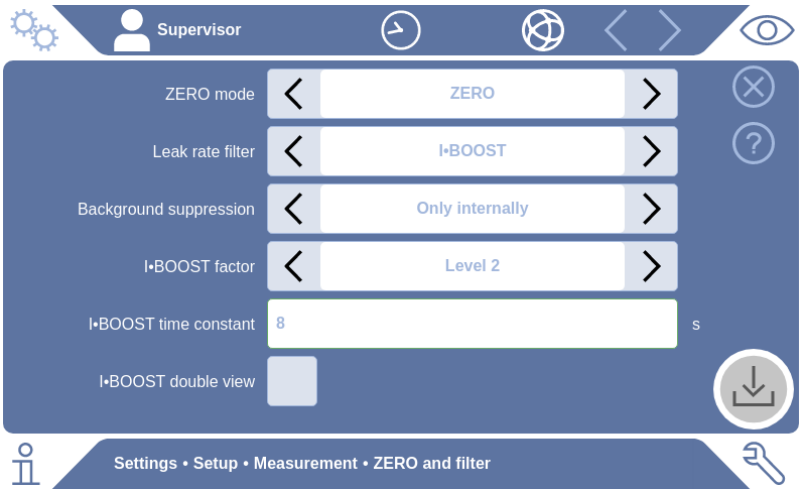
⇨ After successful unlock the new function will be displayed.

The unlocked function is not lost even if the factory settings are reset.

1.2 Switch on I•BOOST

- ✓ The software versions of your leak detector are up to date (operating unit and basic unit).
- ✓ I•BOOST is enabled on your leak detector, see also “Unlock I•BOOST [▶ 1]“.
- ✓ **Supervisor** rights

  1 > Setup > Measurement > ZERO and filter



2 Select the “I•BOOST“ entry in the "Leak rate filter" field.

3 Enter the desired “Level“ (between 1 and 5) in the “I•BOOST factor" field. The factory setting is “Level 2“.

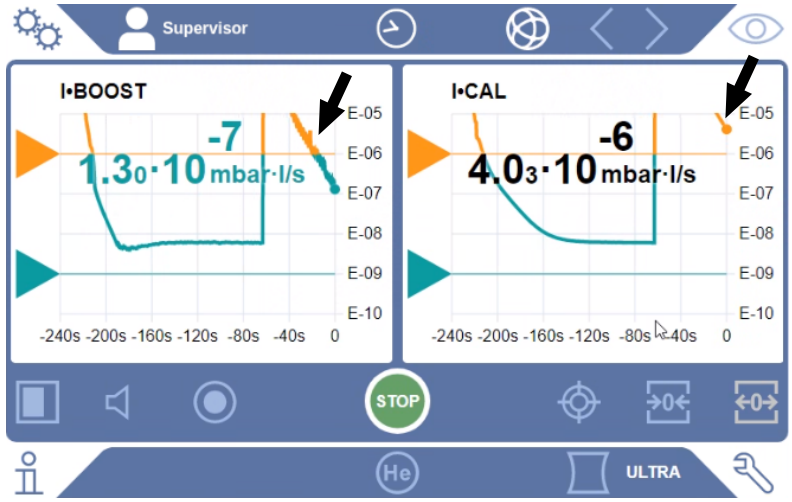
⇨ The higher the selected level,
- the steeper the leak rate signal will rise and fall again when a leak is sprayed.
- the more unsteady the leak rate signal becomes (more noise).
- the higher the lower display limit.

4 Change the value of the displayed "I•BOOST time constant" only if necessary.

⇨ The value of the I•BOOST time constant is determined elsewhere by calibration and automatically adopted in this display, see also “Matching the I•BOOST to the test object [▸ 3]“.

⇨ Only if the time constant cannot be determined by calibration as described there, enter the appropriate value from the tables, see “Obtain time constant from tables [▸ 3]“.

5 If you want to compare the effect of I•BOOST with the previous display of the measurement screen, activate the "I•BOOST double view" field.



6 Save .

⇨ I•BOOST is switched on.

7 To improve the quality of the measurement result, still match I•BOOST and test object. See "Matching the I•BOOST to the test object [▶ 3]".

1.3 Matching the I•BOOST to the test object

The volume of a test object has a certain relationship to the effective helium pumping speed. A time constant can be determined which affects the displayed signal response. This makes it possible to significantly accelerate the signal response and improve signal heights and response times.

✓ User rights

✓ The leak detector is connected to the test object for calibration.

✓ The leak detector is in "Standby" or "Measure" mode.

✓ I•BOOST is switched on, see “Switch on I•BOOST [▶ 1]“.

1 Press .

2 Select "I•BOOST time constant".

3 Press .

⇨ The device performs an calibration.

⇨ If you change to a test object with a different volume or other connection sizes, repeat the calibration.

4 If the calibration should end with an error message, transfer the time constant from the tabular overview, see “Obtain time constant from tables [▶ 3]“.

1.3.1 Obtain time constant from tables

✓ Calibration was terminated with an error message, see “Matching the I•BOOST to the test object [▶ 3]“.

1 Take the appropriate time constant from the following tables.

⇨ In the following tables, it is assumed that a test object with a certain volume is connected via a hose with a certain diameter and length.

⇨ For example:
For a test object with a volume of 50 liters connected to the leak detector via a 1 meter long hose of nominal size DN 16 (16 mm diameter), this results in a time constant of 51 seconds.

2 Enter the suitable time constant in the “I•BOOST time constant" field of the "ZERO and Filter" window, see “Switch on I•BOOST [▶ 1]“.

3 Save .

- Tables with typical values -

Time constant leak detector UL3000 with DN 16 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 16 ISO KF	Time constant in s at 2 m DN 16 ISO KF	Time constant in s at 3 m DN 16 ISO KF	Time constant in s at 4 m DN 16 ISO KF
10	10	18	26	31
20	21	36	52	63
30	31	54	77	94
40	41	72	103	125
50	51	90	129	157
60	62	108	155	188
70	72	126	180	219
80	82	144	206	251
90	92	162	232	282
100	103	180	258	313
120	123	216	309	x
140	144	252	x	x
160	164	288	x	x
180	185	324	x	x
200	205	x	x	x
250	257	x	x	x
300	308	x	x	x
350	x	x	x	x
400	x	x	x	x
450	x	x	x	x
500	x	x	x	x

Avoid combinations of chamber volume and hose dimensions marked with "x". A suitable time constant is not available in these cases. If possible, use a connection with a larger diameter.

Time constant leak detector UL3000 with DN 25 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 25 ISO KF	Time constant in s at 2 m DN 25 ISO KF	Time constant in s at 3 m DN 25 ISO KF	Time constant in s at 4 m DN 25 ISO KF
10	5	7	9	11
20	9	13	17	21
30	14	20	26	32
40	18	26	34	43
50	23	33	43	53
60	27	39	52	64
70	32	46	60	75
80	36	53	69	85
90	41	59	78	96
100	45	66	86	106
120	55	79	103	128
140	64	92	121	149
160	73	105	138	170
180	82	118	155	192
200	91	132	172	213
250	114	164	216	266
300	136	197	259	319
350	159	230	302	x
400	182	263	345	x
450	205	296	x	x
500	227	329	x	x

Avoid combinations of chamber volume and hose dimensions marked with "x". A suitable time constant is not available in these cases. If possible, use a connection with a larger diameter.

Time constant leak detector UL3000 with DN 40 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 40 ISO KF	Time constant in s at 2 m DN 40 ISO KF	Time constant in s at 3 m DN 40 ISO KF	Time constant in s at 4 m DN 40 ISO KF
10	3	3	4	4
20	6	7	8	9
30	9	10	12	13
40	12	14	16	17
50	15	17	20	22
60	18	21	24	26
70	21	24	28	30
80	24	28	32	35
90	27	31	36	39
100	30	35	40	43
120	36	42	48	52
140	42	49	56	61
160	48	56	64	70
180	54	63	72	78
200	60	70	80	87
250	75	87	100	109
300	90	105	120	130
350	105	122	140	152
400	120	140	160	174
450	135	157	180	196
500	150	175	200	217

Time constant leak detector UL6000 with DN 16 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 16 ISO KF	Time constant in s at 2 m DN 16 ISO KF	Time constant in s at 3 m DN 16 ISO KF	Time constant in s at 4 m DN 16 ISO KF
10	8	16	24	31
20	16	32	47	63
30	24	47	71	94
40	32	63	94	125
50	40	79	118	157
60	48	95	142	188
70	56	111	165	219
80	65	127	189	251
90	73	142	212	282
100	81	158	236	313
120	97	190	283	376
140	113	222	330	439
160	129	253	377	502
180	145	285	425	564
200	161	316	472	627
250	202	396	590	784
300	242	475	708	940
350	282	554	825	1097
400	323	633	943	1254
450	363	712	1061	1411
500	403	791	1179	1567

Time constant leak detector UL6000 with DN 25 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 25 ISO KF	Time constant in s at 2 m DN 25 ISO KF	Time constant in s at 3 m DN 25 ISO KF	Time constant in s at 4 m DN 25 ISO KF
10	2	4	6	8
20	5	9	13	17
30	7	13	19	25
40	9	17	26	33
50	12	22	32	42
60	14	26	38	50
70	16	30	45	58
80	19	35	51	67
90	21	39	58	75
100	23	43	64	83
120	28	52	77	100
140	32	61	90	117
160	37	70	103	133
180	42	78	115	150
200	46	87	128	167
250	58	109	160	208
300	69	130	192	250
350	81	152	224	292
400	93	174	256	333
450	104	196	288	375
500	116	217	321	417

Time constant leak detector UL6000 with DN 40 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 40 ISO KF	Time constant in s at 2 m DN 40 ISO KF	Time constant in s at 3 m DN 40 ISO KF	Time constant in s at 4 m DN 40 ISO KF
10	1	1	2	2
20	2	3	4	5
30	2	4	5	7
40	3	5	7	9
50	4	6	9	11
60	5	8	11	14
70	5	9	12	16
80	6	10	14	18
90	7	12	16	20
100	8	13	18	23
120	9	15	21	27
140	11	18	25	32
160	12	21	28	36
180	14	23	32	41
200	16	26	35	45
250	19	32	44	57
300	23	38	53	68
350	27	45	62	80
400	31	51	71	91
450	35	58	80	102
500	39	64	89	114

Time constant leak detector UL6000 with DN 50 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 50 ISO KF	Time constant in s at 2 m DN 50 ISO KF	Time constant in s at 3 m DN 50 ISO KF	Time constant in s at 4 m DN 50 ISO KF
10	1	1	1	1
20	1	2	2	3
30	2	2	3	4
40	2	3	4	5
50	3	4	5	6
60	3	5	6	8
70	4	6	7	9
80	4	6	8	10
90	5	7	9	12
100	5	8	10	13
120	6	9	13	16
140	7	11	15	18
160	9	13	17	21
180	10	14	19	23
200	11	16	21	26
250	13	20	26	32
300	16	24	31	39
350	19	28	37	45
400	21	31	42	52
450	24	35	47	58
500	27	39	52	65

Time constant leak detector UL6000 with DN 63 ISO KF connection

Chamber volume in dm^3 (liters)	Time constant in s at 1 m DN 63 ISO KF	Time constant in s at 2 m DN 63 ISO KF	Time constant in s at 3 m DN 63 ISO KF	Time constant in s at 4 m DN 63 ISO KF
10	0	1	1	1
20	1	1	1	2
30	1	2	2	2
40	2	2	3	3
50	2	3	3	4
60	2	3	4	5
70	3	4	5	6
80	3	4	5	6
90	4	5	6	7
100	4	5	7	8
120	5	6	8	9
140	6	7	9	11
160	7	9	11	13
180	7	10	12	14
200	8	11	13	16
250	10	13	17	20
300	12	16	20	24
350	14	19	23	28
400	16	21	26	31
450	18	24	30	35
500	20	27	33	39

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