

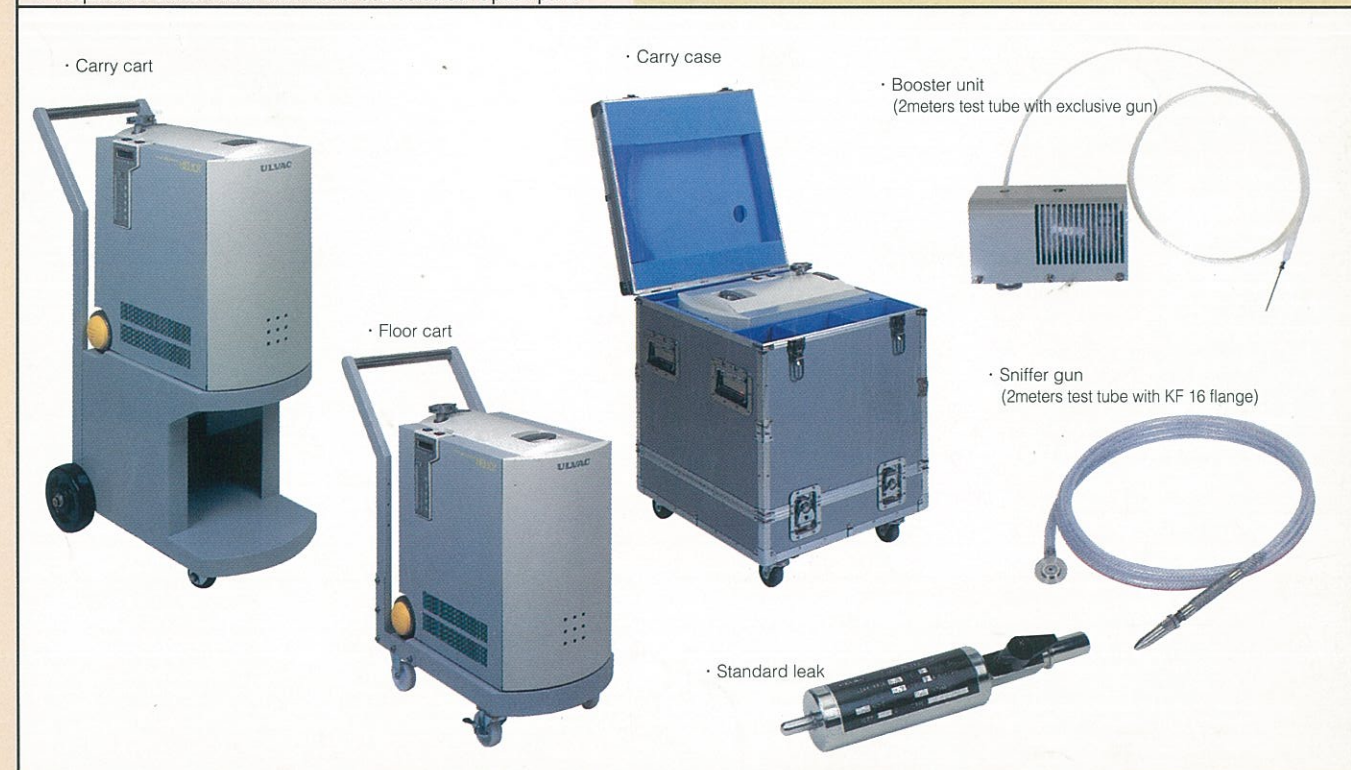


■ Option parts

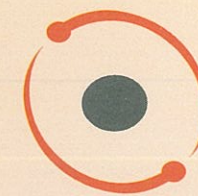
○ : standard attachment ▲ : option ☆ : exclusive detector is useless

No.	Option parts	301	302P	302B	303	304	305A	305B	306	306S	307
1	Carrying cart	▲	▲	▲	○	○	▲	○			○
2	Floor cart	▲	▲	▲			▲				
3	Carrying case	▲	▲	▲			▲				
4	Test port (KF16*PG18)	▲	☆	☆	▲	▲	☆	☆	▲	☆	▲
5	Test port (KF16*KF25)	▲	☆	☆	▲	▲	☆	☆	▲	☆	▲
6	Test port (KF16*KF25*PG18)	▲	☆	☆	▲	▲	☆	☆	▲	☆	▲
7	L-shaped valve (KF16*KF25) model VULH-16KF	▲	☆	☆	▲	▲	☆	☆	▲	☆	▲
8	Printer (applicable thermal paper) model DPU-411 TYPE II	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
9	Printer paper (thermal paper) 10 rolls 1 set	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
10	Printer (applicable clean paper) model DPU-5442-OB +PW	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
11	Printer paper (clean paper) 10 rolls 1 set	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
12	Oil rotary vacuum pump Irregular voltage specification (120,200,220,240V)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
13	Remote controller for panel mounting	▲	▲	▲	▲	▲	▲	▲	○	○	▲
14	Remote meter cable extension (extension 10mUP)	▲	▲	▲	▲	▲	▲	▲			▲
15	Spray gun	▲	☆	☆	▲	▲	☆	☆	▲	☆	☆
16	HELIOT sniffer gun (2m prove, with KF16 conversion)	▲	○		☆	▲	☆	☆	☆	☆	☆
17	HELIOT booster unit (2m prove, with exclusive gun)	▲		○	☆	▲	☆	☆	☆	☆	▲
18	Set point buzzer	▲	▲	▲	▲	▲	▲	▲	○	○	▲
19	Calibration leak 10 ⁻⁷ Pa·m ³ /s	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
20	Calibration leak 10 ⁻⁸ to 10 ⁻⁹ Pa·m ³ /s	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
21	Calibration leak 10 ⁻¹⁰ Pa·m ³ /s	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
22	Dummy leak 10 ⁻⁴ to 10 ⁻⁶ Pa·m ³ /s *1	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
23	Accessory connector	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
24	External panel connector	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
25	RS232C communication connector	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

*1 Required in sniffer mode with model 302 selected. Option parts



This catalog are subject to change without notice to reflect performance improvements,etc.



HELIUM LEAK DETECTOR
HELIOT
300Series

The HELIOT, which meets all of the requirements for finding gas leaks, is a high-sensitivity helium leak detector with a completely new exhaust construction (select free flow). It is totally automatic in all operating environments, and can respond flexibly to a wide range of needs.

ULVAC's original select-free flow system (an pumping system that allow automatic selection of the test flow, in accordance with the pressure at the test port) combines the best features of both the conventional counter flow method and the direct flow method.

In addition, following are included:

- CPU control allows automatic operation, so that anyone can operate the equipment easily.
- Leak test can be performed from 1,000 Pa, thus minim test time.
- High-sensitivity leak test for one liter container can be completed in about 30seconds (model 301)
- High-sensitivity leak test from the order of 10Pa to 10⁻¹¹Pa·m³/s can be achieved.
- Wide ranging leak test, from the order of 10⁻¹² to 10⁻⁴Pa·m³/s can be achieved.



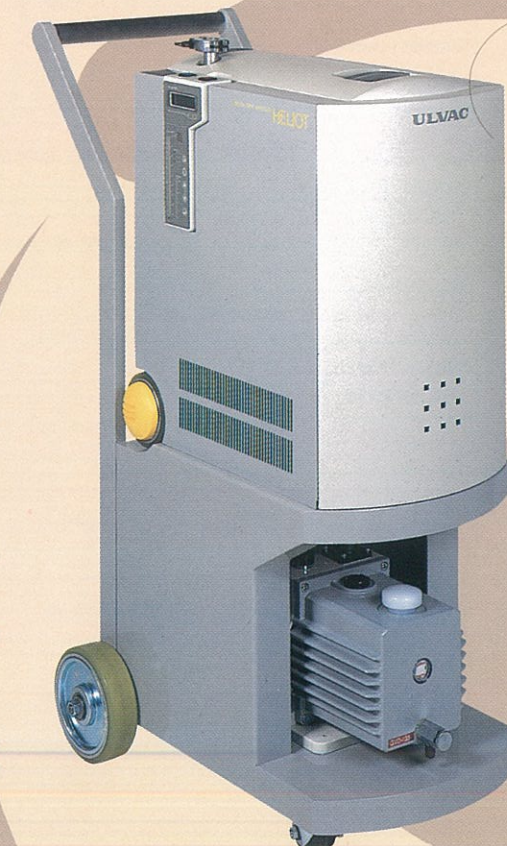
· model 301



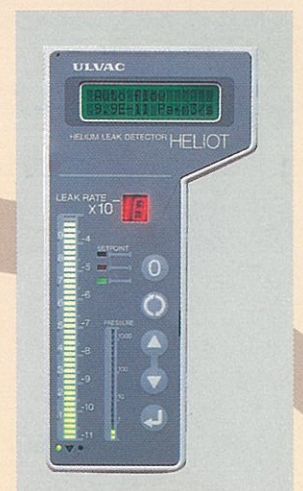
Selected by Japanese Ministry of International Trade and Industry's as "Good Design Product."

■ Applications

- **Automobile industry:**
Radiators, gasoline tanks, wheels, air suspension, power steering, brakes.
- **Air conditioner and freezer industry:**
Condensers, evaporators, compressors.
- **Gas and petroleum industry:**
Hot-water generator, kitchen equipment, heaters, burning equipment.
- **Electrical equipment industry:**
Batteries, pots, stove tanks.
- **Machine industry:**
Valves, couplings, pipes, pressure gauges, connectors.
- **Medical supplies industry:**
Intravenous drip containers, medication packages, ampules.
- **Food industry:**
Package in vacuum, cans, snack food package.
- **Maintenance of all types of vacuum systems:**
Sputtering systems, Etching systems, CVD systems.



· model 304



· Remote meter

Specifications

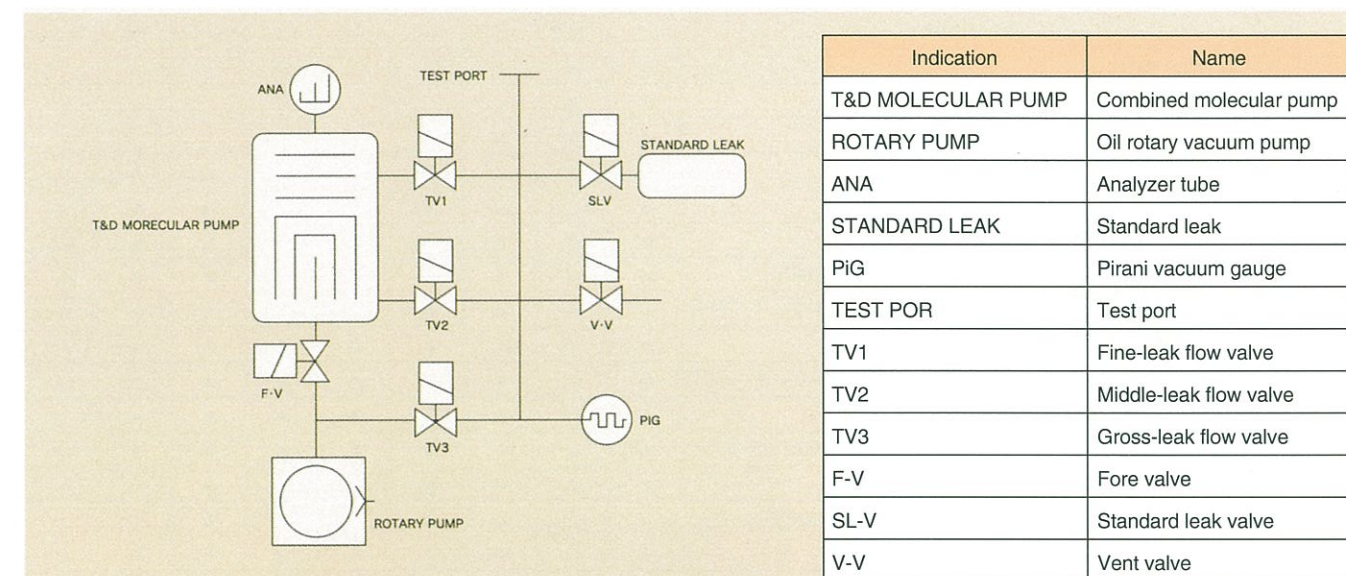
Item	Model	model 301	model 302P(S)*1	model 302B*1	model 303*1	model 304	model 307
Sensitivity		10 ⁻¹² to 10 ⁻⁴ Pa·m ³ /s	10 ⁻⁹ to 10 ⁻³ Pa·m ³ /s	10 ⁻⁸ to 10 ⁻² Pa·m ³ /s	10 ⁻¹⁰ to 10 ⁻² Pa·m ³ /s	10 ⁻¹² to 10 ⁻⁴ Pa·m ³ /s	10 ⁻¹² to 10 ⁻⁴ Pa·m ³ /s
Analyzer tube		Electromagnetic field 60° deflection type					
Pumping system	Main pump	Combined molecular pump(30L/s)					
	Fore pump	Oil rotary vacuum pump (30L/min)				Oil rotary vacuum pump(120L/min)	Dry pump(250L/min)
	Roughing pump	Fore pump			Oil rotary vacuum pump(120L/s)	Fore pump	
Vacuum gauge		Pirani gauge					
Gas inlet		Select free flow	Sniffer mode		Big flow mode	Select free mode	
		Intermediate intake from three valves	Intermediate intake from TV2		Intermediate intake from TV3	Intermediate intake from three valves	
Operation		① Full automatic(From start of pumping to sensitivity calibration) ② Automatic selection of valve operation and test flow ③ Leak direct read-off ④ Standard leak automatic temperature correction ⑤ Auto-zero function ⑥ Self-diagnostic function					
Leak rate display		Digital display by LCD (Japanese and English selectable) Analogue display by LED					
Leak alarm		Standard audio alarm installed					
Power supply		AC 100V 10A			AC 100V 15A		AC 100V 15A
RS232C		Standard					
Printer output		Standard (Centronics interface)					
Recorder output		LIN:DC 0 V to DC 10 V					
External		LOG:DC 0 V to DC 8 V(each digit represents 1V)					
input/output		Start/Stop input, Test start/complete input, Printout input, Leak rate set point output, Helium spray valve power supply, Big flow valve power supply					
External dimensions WxDxH(mm)*2		300x484x520	300x484x520	300x484x520	473x599x948	473x599x948	473x599x948
Weight(kg)		39	39	41	91	83	85

*1:Can be switched to standard(model 301) by mode setting. *2:Dimensions : W=width, D=depth, H=height
NB:See separate catalog for models 305 and 306.

Model selection table

HELIOT model selection details		Model	Outline
HELIOT	Vacuum test	Sample volume 3L to 10L	301 Standard type
		Sample volume 3L or less	Oil rotary vacuum pump specification 304 Large pump equipped Carrying cart as standard Oil rotary vacuum pump:120L/min
			Dry pump specification 307 Large pump equipped Carrying carts as standard Dry pump:250L/min
		Sample volume 10L or more	Common type 303 Large pump equipped as separate installation Carry cart as standard Oil rotary vacuum pump:120L/min(variable)
			High-speed type 306 Large pump equipped as separate installation(desk type) Oil rotary vacuum pump:500L/min(variable) See separate catalogue(Cat. No.N1846)
	Pressure test	Sniffer specification	R&D use 302P With pencil probe Direct readoff software built in.
			Production use 302B 302S With booster unit Direct readoff software built in. (302S:with pencil probe)
		Cylinder tank specification	Common type 305A 305B For miniature airtight components *See separate catalogue(Cat. No.N1846)
			High-speed type 306S For miniature airtight components *See separate catalogue(Cat. No.N1846)

Pumping system diagram (model 301)



External dimensions

