VIT-FIT and VIT-FIT HP
Lab syringe pump - infusion pump

The LAMBDA **VIT-FIT** and **VIT-FIT HP high-pressure and high-speed syringe pumps** are **mechanically robust** with **highest precision of the flow rates**.

- Syringe type: Any **plastic, metal or glass syringes**
- Volume of the syringes: **µl to ~150 ml**
- Flow rate range: **0.4 nl/min** (5 µl syringe) **to 6.6 l/h** (150 ml syringe)
- **Metal chassis**: Not affected in case of accidental spills or syringe leakages
- Swiss quality motor and ball screws for an efficient force transmission with highest mechanical load capacity of **12'000 N**
- Precise flow rates and very high forces of **80 or 300 N** (**160 or 600 N** for VIT-FIT HP)
- Pusher arm does not reach out
- **Infusion / withdrawal** pump (push / pull)
- Dispensing accuracy of **± 1%**
- **Motor stall detection**
- **Automatic switch off** when the syringe is empty or has been refilled
- Suitable for **high-pressure**, **high-speed & counter pressure** applications; handling of **viscous liquids** in the laboratory
- **Valve control** for continuous operation
- PC controlled or stand-alone; **TTL** signal based control; **foot-switch**

Construction advantages

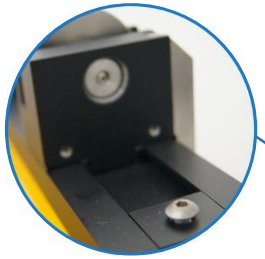
The combination of a **high quality and long-life Swiss motor and ball screws** with an extreme mechanical robustness (of **12'000 N** which is the force to lift 15 persons!) provide the VIT-FIT syringe pump an unprecedented power and **high precision of the syringe pusher movement** and the resulting flow rate.

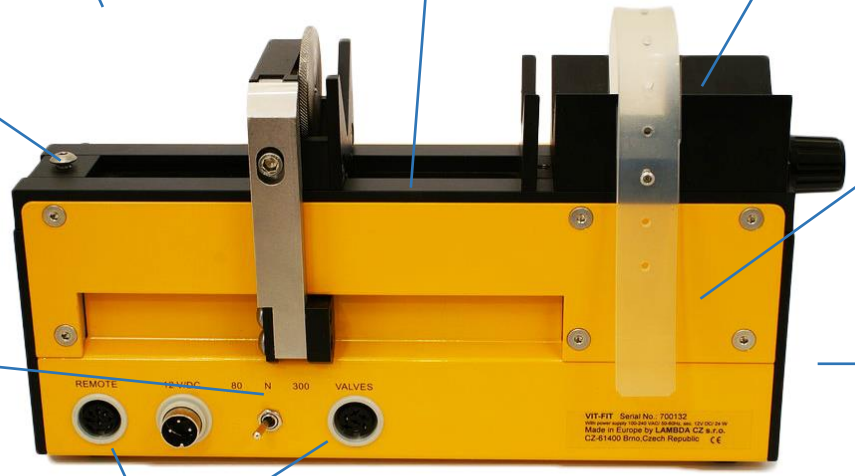
Intuitive control panel; flow rate programming; maximum speed filling / emptying

Spill protection of the precision ball-screw mechanics

New syringe fixing system for almost any syringe, **µL to ~150 ml**

Pusher arm does not reach out; maximum filling adjusted by a screw





Quality Swiss-made ball screws for **highest power** and **precision**

Very high pumping force of **80 N or 300 N**; VIT-FIT HP: 180 N or 600 N

Ergonomic design; can be used in **vertical or horizontal** orientation

Remote and valve control

Robust full metal chassis

Technical specifications

Type	LAMBDA **VIT-FIT** – microprocessor-controlled programmable syringe pump (infusion / withdrawal)	LAMBDA **VIT-FIT HP** – microprocessor-controlled programmable syringe pump (infusion / withdrawal)
Programming	Up to 99 steps of speed and time	Up to 99 steps of speed and time
Time resolution	0 to 999 minutes in 1 minute steps OR 0 to 99.9 minutes in 0.1 minute steps (time resolution can be selected individually for each program step)	0 to 999 minutes in 1 minute steps OR 0 to 99.9 minutes in 0.1 minute steps (time resolution can be selected individually for each program step)
Accuracy	± 1%	± 1%
Reproducibility	± 0. 2% (electronics)	± 0. 2% (electronics)
Syringes	Glass, plastic, metal syringes from 5 µl to over 150 ml	Glass, plastic, metal syringes from 5 µl to over 150 ml
Flow rate range	Depends on the inner syringe diameter	Depends on the inner syringe diameter
Minimum:	0.4 nl/min with a 5 µl syringe	0.4 nl/min with a 5 µl syringe
Maximum:	110 ml/min (6.6 l/h) with a 150 ml syringe	110 ml/min (6.6 l/h) with a 150 ml syringe
Maximum force	300 N (reducible by a switch to 80 N)	600 N (reducible by a switch to 160 N)
Motor	Microprocessor controlled brushless long life BLDC motor with neodymium magnets	Microprocessor controlled brushless long life BLDC motor with neodymium magnets
Transmission	Efficient force transmission by a ball screw with highest mechanical load capacity of 12’000 N	Efficient force transmission by a ball screw with highest mechanical load capacity of 12’000 N
Pusher travel	120 mm	120 mm
Pusher travel rate	Minimum: 0.08 mm/min Maximum: 80 mm/min	Minimum: 0.08 mm/min Maximum: 80 mm/min
Speed control range	0 to 999	0 to 999
Non-volatile memory	Storage of all settings	Storage of all settings
Power supply	95–240 V/50–60 Hz AC plug-in power supply with DC 12V/50W output; possible field operation on 12 V accumulator (Plug types: AU, EU, UK, US)	95–240 V/50–60 Hz AC plug-in power supply with DC 12V/50W output; possible field operation on 12 V accumulator (Plug types: AU, EU, UK, US)
Interface	RS-485 or RS-232 (optional); automatic valve control	RS-485 or RS-232 (optional); automatic valve control
Remote control	0-10 V; (option 0-20 or 4-20 mA)	0-10 V; (option 0-20 or 4-20 mA)
Dimensions	26.5 cm x 12.5 cm × 13 cm (W × D × H)	26.5 cm x 12.5 cm × 13 cm (W × D × H)
Weight	3.2 kg	3.2 kg
Safety	CE, meets IEC 1010/1 norm for laboratory	CE, meets IEC 1010/1 norm for laboratory
Operation temperature	0 – 40 ºC	0 – 40 ºC
Operation humidity	0-90% RH, not condensing	0-90% RH, not condensing

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