OPERATOR'S GUIDE

Syringe pump PILOT A2

Introduction

The **Pilot A2** has been designed and manufactured with the greatest care. It introduces a new concept of control with easy reading of alarms and safety features.

The configuration flexibility of the **Pilot A2** provides overall improvement in the working conditions of medical teams, thus increasing patient safety. A choice of easily accessible configurations ensures optimum use of functions according to the needs of each department.

The use of this material requires great care. The user must be able to handle the instrument properly and must know how to fully operate.

Please read the operator's guide carefully before putting the device into use.

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A company of Fresenius Kabi

Fresenius Vial Infusion Technology

Operations for use

Installation

The syringe pump can be used on mains, battery or external supply.

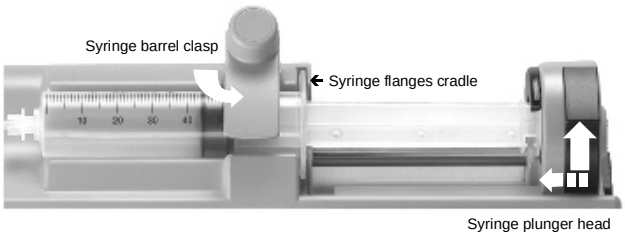
Particular attention should be paid to the stability of the device before it is put into use.

1. **Connect the power supply cord to the mains source and to the syringe pump. The mains power indicator lights up.**

Note: connect device to mains as often as possible to recharge battery.

Syringe installation

1. Connect the extension set to the syringe according to proper practices.
2. Place syringe in its cradle, the flanges correctly in the provided slot.
3. Turn the syringe barrel clasp into the closed position and move the syringe drive forward the syringe plunger head.



4. Press the ON key to turn ON the **Pilot.**

Note: if CtrL is displayed, preventive maintenance should be considered. Press OK to continue.

Programming infusion

1. Syringe brand selection:

syringe list given as an example

Drug name selection: (according to device configuration: PArC)

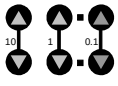
AdrE OK

(e.g.: ADRENALIN)

2. Prime the line: PurG (continuous ~~nd~~ press)

3. Connect infusion set to patient and check general installation.

4. Flowrate setting (ml/h):



5.2 (e.g.: flow rate 5.2 ml/h)

5. Starting the infusion: OK ◄ ◄ ◄

Important: flow rate may be programmed during infusion and must be confirmed within 15 seconds following the change. Proceed as described above to change the syringe.

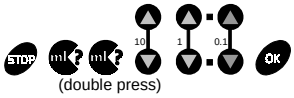
Infused volume

Consulting the infused volume: ml?

Erasing the infused volume: STOP ml?? (continuous press)

Volume limit

Programming a volume limit (ml):



(double press)

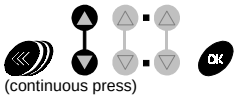
Programmed volume limit recall: ml? ml? (double press)

Erasing programmed volume limit: STOP ml? ml? ml?? (continuous press)

Bolus function

Administering a bolus (ml): bolu (continuous press)

Changing bolus rate (ml/h):



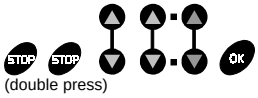
(continuous press)

STOP and Pause

Stop (sound warning after one minute): STOP

To resume infusion: OK

Pause duration selection, from 1 min to 9 hrs 59 min:



(double press)

Ending Pause and resuming infusion: STOP OK

Occlusion alarm threshold setting

3 occlusion pressure limits available. Selection is adjusted manually by a safety located on the rear of the syringe drive.

Lower limit Middle limit Upper limit

OFF

To turn off the **Pilot** : STOP (press for more than 2 seconds)

Internal safety features

The Pilot device have a continuous inspection system which functions as soon as the pump is in use.

Nevertheless, the qualified personnel in your establishment or our After-Sales Department should always be notified of any abnormal function where no specific cause can be found.

In case of single fault condition, an alarm is activated within the limit of 5% rate deviation. In addition, a secondary control feature activates an alarm at 1 ml over infusion or 20% rate deviation, whichever is shortest.

Note: the battery automatically takes over when the mains supply is disconnected.

Prealarms and alarms With visual and audible signal.

Checks		Infusion Stop	Silence alarm	Activation	Message
Battery	**Prealarm**	NO	YES	low battery	Battery alarm + prealarm indicators
	Alarm	YES	YES (2 min)	discharged battery	Battery alarm + alarm indicators Note: memorisation of programmed parameters (10 min). Connect device to mains.
Mains	**Disconnection**	NO	YES	mains disconnected	bAt messsage displayed. Press to acknoledge this warning.
Infusion	**End of infusion prealarm**	NO	YES	5 minutes before end of infusion alarm or 10% of total syringe capacity.	Prealarm + end of infusion indicators Note: to use Empty syringe mode press CONFIRM key.
	End of infusion alarm	YES	YES	Syringe empty (theory)	Alarm + end of infusion indicators Note: to use Empty syringe mode press CONFIRM key.
	Empty syringe	YES	YES	Total syringe empty	Prealarm + end of infusion indicators
Volume limit	**Prealarm**	NO	YES	5 minutes before the volume limit alarm or 10% of syringe capacity.	Prealarm + flashing **ml** indicators
	Alarm	KVO rate	YES (2 min)	Volume limit reached	Alarm + **KVO** + **ml** indicators
Pressure	**Occlusion alarm**	YES	YES (2 min)	Programmed limit reached	Flashing alarm + occlusion indicators
Syringe installed	**Syringe barrel clasp** **Syringe flanges insertion**	YES	YES (2 min)	Syringe incorrectly positioned	Alarm + syringe barrel clasp indicators
	Plunger head position **Anti-siphon systems**	YES	YES	Syringe incorrectly positioned	Alarm + plunger head position indicators
	Disengaged mechanism	YES	YES	Drive systems not engaged	Alarm + disengaged mechanism indicators
Others alarms	**Unconfirmed program or flow rate = 00.0 ml/hr**	---	NO	No confirm > 15 seconds	Flashing confirm indicator
	No syringe selection	YES	YES	no syringe selection > 1 min	Flashing confirm signal + flashing capacity and brand syringe indicators
	Key disabled	NO	NO	Pressing an unauthorised key	Audible signal only
	Programmed end of pause	YES	NO	Programmed end of pause	Alternating displays of flow rate value and StOP

Checks	Infusion Stop	Silence alarm	Activation	Message
Malfunction alarm	YES	YES	Device cannot check the infusion	● ⚠ Technical malfunction + alarm indicators
Error message–: Er 01	YES	YES	Motor rotation control anomaly	Er-- ● ⚠ Error message + technical malfunction + alarm indicators Press STOP to resume the device normal operation
Error messages–: Er 10–; 14; 20–; 24; 30–; 34; 40–; 44; 50, 70	YES	YES	Electronic control anomaly	Er-- ● ⚠ Error message + technical malfunction + alarm indicators
Error message–: Er 80	YES	NO	Keyboard anomaly	Er-- ● ⚠ Error message + technical malfunction + alarm indicators
Error messages–: Er 32–; 52–; 72; 82	YES	YES	1 ml deviation/ volume to be infused	Er-- ● ⚠ Error message + technical malfunction + alarm indicators
Preventive maintenance warning	NO	---	Date of maintenance reached (PArb)	CtrL message only displayed when the device is turned on). Press CONFIRM to continue. Warning: check the device as soon as possible.

Note: in case of malfunction alarm, note the error message (Er..) and stop the device by pressing the OFF key (5 - 10 seconds can be necessary). If the alarm persists when the device is switched on again, without use on patient, contact the qualified technicians in your establishment or our After-Sales Department.

The sound level can be set by rotating the shutter placed underneath the device  .

Performances

Flow rates

The values given in the table below correspond to device configuration.

	Syringes	
	50/60 ml	**20 ml**
Infusion flow rate (ml/h)	from 0.1 to 200.0	from 0.1 to 120.0
Bolus rate (ml/h)	from 50.0 to 500.0	from 50.0 to 275.0
Prime rate (ml/h)	500.0	275.0

0.1 ml/h increments.

Volume limit

Volume limit (ml)	from 1 to 99.9 ml, 0.1 ml increment
	from 100 to 999 ml, 1 ml increment

KVO rate (Keep Vein Open): 1 ml/h or flow rate originally selected if this is less than 1 ml/h.

Accuracy

Flow rate accuracy	± 3 % with pre-programmed syringes
Device accuracy	± 1%
Syringe accuracy	± 2%

Pause duration

From 1 minute to 9 hours 59 minutes, 1 min. increments.

Syringe type list

The Pilot A2 recognises the size of the installed syringe. The last syringe brand used is proposed when the device is turned on.

Brands and types	50/60 ml	20 ml
B-D PLASTIPAK	■	■
FRESENIUS INJECTOMAT	■	
BRAUN OMNIFIX	■	■
BRAUN PERFUSOR	■	■
PIC INDOLOR	■	
TERUMO	■	■

Different syringe lists are available. For further information, please contact our Customer Service.

Fresenius Vial cannot accept any responsibility for errors in flow due to modifications of the specifications of the syringes introduced by the manufacturer.

Display of the name of the drug

According to configuration (PArC).

It is possible to display periodically during infusion the name of the drug used. 15 names of drugs may be programmed by configuration (PArG).

Pressure limit

Pilot A2 proposes a choice of 3 occlusion alarm thresholds.

		Syringes	
		50/60 ml	**20 ml**
Threshold value	**lower ●**	300	600
(mmHg)	**middle ●●**	500	1000
	upper ●●●	900	1700

Values given for B-D Plastipak® Luer Lok® syringes.
Note: 1 bar = 750 mmHg = 1000 hPa.

Occlusion alarm response time versus infusion flow rate

These values are representative of syringes used during trials with an **Pilot A2** and serve as an indication only of the pump's overall performance.

		Threshold values		
	Flow rate	**lower ●**	**middle ●●**	**upper ●●●**
Syringe	**1 ml/h**	40'	60'	120'
50/60 ml	**5 ml/h**	8'	12'	20'
	120 ml/h	25''	35''	50''

Syringe used: B-D Plastipak® Luer Lok® (B-D Plastipak and Luer Lok are registered trademarks of Becton Dickinson).

Bolus volume on occlusion release

	Threshold value		
	lower ●	**middle ●●**	**upper ●●●**
50/60 ml syringe	≤ 0.2 ml	≤ 0.4 ml	≤ 0.8 ml
20 ml syringe	≤ 0.2 ml	≤ 0.4 ml	≤ 0.8 ml

Note: wait until the Alarm + occlusion + ----.- flashing indicators turns on, indicating the bolus has been reduced.

Technical characteristics

Mains supply

Mains supply	230 V ~ - 50-60 Hz (110V on request)
Maxi. consumption	100mA
Maxi. power consumption	23 VA
Internal protective fuse	T 100 mA 250V IEC 127

External supply

External supply ⊖	12 to 15 Volts - Continuous voltage ⎓ Power > 15 Watts

Battery

Characteristics	6 V 1,1/1,3 Ah - Sealed lead rechargeable
Autonomy	min. 7 h av. at 5 ml/hr
Battery recharging	Partial (70% of capacity): 8 hours
	Total (100% of capacity): 16 hours

Compliance

Compliance with EN 60 601-1 and EN 60 601-2-24.

CE0454	CE 0459 marking in compliance with EEC 93/42 Medical Device Directive
IP34	Protection against ingress of liquid
♥	Protection against leakage current: Type CF equipment
⧈	Protection against electrical shocks: Class II equipment

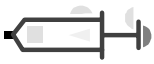
Device materials

Casing/ Drive/ Syringe barrel clasp	Polycarbonate/ Polyester alloy / shock resistant
Programming keyboard / labels	Polyester

Dimensions - Weight

Height / Width / Depth	120 x 330 x 155 mm
Weight	approx. 2.2 Kg

Indicators lights

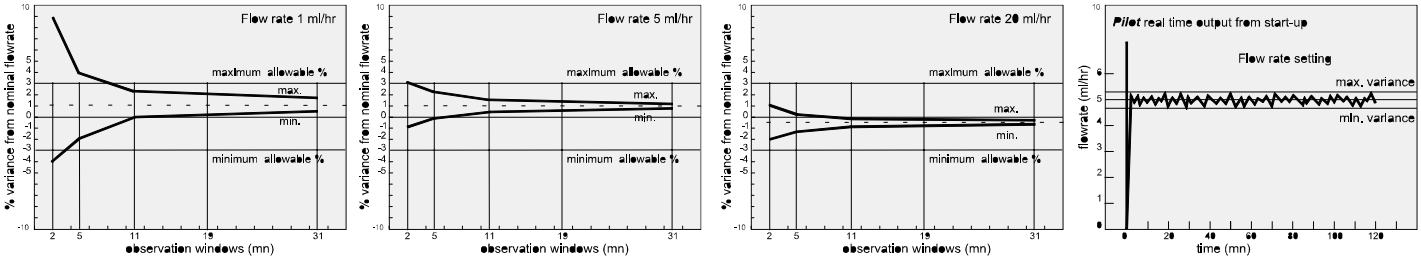
Mains power operation		constant yellow
Battery power operation		constant green
Confirm signal		flashing green
Infusion in progress		flashing green
Prealarm		flashing orange
Alarm		flashing red
KVO	**KVO**	flashing red
Programmed volume limit or infused volume	**ml**	constant or flashing green
Flow rate	**ml/h**	constant or flashing green
On hold duration	**min**	constant or flashing green
Display		3 green digits (tens, units) 1 orange digit (decimals)
Syringe list available (example)		capacity (ml): constant or flashing green brand and type: constant or flashing green
Occlusion		flashing red
Syringe barrel clasp **Syringe flanges insertion**		flashing red
Plunger head position anti- siphon system		flashing red
Disengaged mechanism		flashing red
End of infusion		flashing orange
Battery alarm		flashing red
Technical malfunction		constant red

Trumpet curves

Trumpet curves demonstrate the evolution of the minimum and maximum variance of the Syringe/Syringe-Pump combination.

The test protocol used to obtain these results is described in the EN 60 601-2-24. For further information, please refer to this publication.

This graph is therefore representative of syringes used during trials and serve as an indication only of the pump's overall performance. Please contact our After-Sales Department for the others curves.



Syringes used B-D Plastipak® 50 ml Luer Lok®.

Configuration

Fresenius Vial **recommends the presence of its qualified personnel or of a member of the Technical Department of your establishment to help you implement the configuration procedures you wish to choose.**

Moving to configuration of the various parameters mode, press ◎, then simultaneously ⏻ + ▲ ▲▪▲ : PAr appears on display. Press OK within 2 seconds to confirm start of configuration.

Note: press STOP to cancel modification at any time - Press ◎ to leave configuration mode at any time.

Press	Configuration mode	Confirm	Choice	Configuration available on start up	Display	Press to select	Confirm
▲ ▼	**PAr 1: flow rate memorizing**	OK	▲	■ last selection in ml/hr ■ default value 00.0 ml/hr	nEn nonE		OK
	PAr 2: syringe selection type	OK	▲	■ automatic confirmation ■ manual scrolling	SEL3 SEL4		OK
	PAr 3: max. flow rate selectable	OK	▲	■ for 50 ml syringe types ■ for 20 ml syringe types	50cc OK 20cc OK	max. flow rate ▲ ▲▪▲	OK
	PAr 4: selectable syringes  syringe list given as an example	OK		1st syringe brand 50 ml capacity ■ selectable ■ not selectable selection for all syringe list	SEL noSE	▲ ▲▪▲	OK
	PAr 5: confirming compulsory prime (after syringe confirming)	OK	▲	■ priming compulsory ■ priming not compulsory	PurG noPu		OK
	PAr 7: KVO rate	OK	▲	■ KVO rate ■ no KVO rate	tUO notU		OK
	PAr 8: empty syringe mode	OK	▲	■ empty syringe mode ■ no empty syringe mode	SUId noSU		OK
	PAr b: frequency of maintenance	OK		■ from 1 to 9999 hours of continuous use	1230 ex : 1230 h	from 1 to 9999 ▲ ▲▪▲	OK
	PAr C: drug name	OK	▲	■ drug name selection ■ no selection	drUG nodr		OK
	PAr d: syringe flanges	OK	▲	■ syringe flanges detection ■ no detection	FILE noFI		OK
	PAr F: bolus rate memorizing	OK	▲	■ last selection in ml/h ■ default value in ml/h	nEn nonE OK	from 50 to maxi ▲ ▲▪▲	▲
	PAr G: drug name entry	OK		■ 1st name of drug (15 names programmable) Note: confirm the 15th name to leave PAr G configuration.	AdrE e.g.: ADRENALIN, or free name - - - .-	▲ ▲▪▲ to accede to the next name, or ▲ ▲▪▲ to change the name (A...Z)	▲
	PAr J: mains disconnected detection	OK	▲	■ disconnection detection ■ no detection	SECt noSE		▲
	PAr 0: date and time selection	OK		■ Date (d / n / Y) and time (h / n) selection	d : day n : month Y : year h : hour n : minute	▲ ▲▪▲	OK

Operating precautions

The symbol ⚠ visible on the condensed instruction guide of the device, recommends this Operator Guide should be completely read, in accordance with the EN 60 601-1 Standard.

Fresenius Vial **will not be liable for any damages or claims, medical or otherwise, of any nature whatsoever, whether direct or consequential, caused by improper use of this device.**

Special attention must be paid to the stability of the Pilot. Use the device in horizontal position, on a table or with the I.V. pole accessories.

We recommend you partially or completely recharge the battery when you receive the device or in the case of prolonged storage so as to prevent all risk of premature discharge.

The device must not be used in the presence of inflammable anaesthetic agents due to the risk of explosion. It should always be used away from all risk areas.

The recommended temperature for normal use of the device is between +10° and +40°C.

The device may only be connected to the mains with the power cord supplied by the manufacturer. Check that the supply voltage corresponds with the value indicated on the label placed underneath the device.

Fuses should be replaced by equivalent parts. Refer to the part list of the technical manual for full specification.

Do not exceed the permitted voltage whether the supply is from the mains, an external source or via the different external connections. DC adapter should not be used. Only external battery like vehicle battery can be attached to drive the pump from external power. ***Fresenius Vial*** recommend the used of the external power source cable for Pilot.

To preserve the environment, remove the battery from the device prior to destruction or at the end of the device life and as during normal maintenance replacement, return it to a competent recycling organisation. Proceed in the same way for the device itself (electronic boards, plastics…).

Avoid short circuit and excessive temperature.

This device can be disturbed by a large electromagnetic fields, external electrical influences and electrostatic discharges above the limits stipulated by EN 60 601-1-2 and EN 60 601-2-24. It can also be disturbed by pressure or pressure variations, mechanical shocks, heat ignition sources, etc.
If you wish to use the device in special conditions, please contact our After-Sales Department.

Only use Luer Lock three-part syringes from the list of pre-programmed brands. If a syringe is used which does not correspond to the syringe list on the device, the specified precision level cannot be guaranteed.

Use only sterile catheter extensions which can resist pressures of up to 2000 HPa.

The use of unscrewable extension lines or syringes may result in spillage if infusions are carried out at high flow rates and/or high pressure. Infusion line set up must be done in accordance with local standard operating procedures and good clinical practice. ***Fresenius Vial*** recommends the use of the Luer Lock type infusion lines proposed in page 13.

Standard precaution should be taken to prevent contamination or injuries while discarding the associate disposable (e.g. syringes, extension sets, needles, etc.).

The device is designed to infuse any medical substance that can be injected. The physiological effects of medicine can be influenced by the characteristics of the device and disposable syringe. Check that they are compatible with prescriptions, the characteristics of trumpet curves and occlusion alarm setting times in relation to the programmed flow rate.

While in use, negative pressure variation may occur in the syringe, by the relative height from the device to the injection site or by combined infusion devices such as blood pump, alternative clamp, etc.

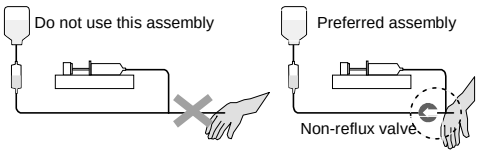
When the device is placed higher than the injection site, please pay attention to correctly secure the syringe and manipulate the syringe only when the extension set is clamped or disconnected from patient side.

High depression may create syringe siphoning. In this situation, you must check the integrity if the syringe used (possible leakage), and if necessary insert anti-siphon valves.

Pressure variation may generate flow discontinuity mainly noticeable at low flow rates and depending of the infusion system characteristics such as friction force, stickiness, compliance of syringes and mechanical back lash. Anti-siphon valves will also eliminate any risk of free flow during syringe changes. An air leakage in a syringe with a line not equipped with an anti-siphon valve may generate an uncontrolled flow delivery.

Do not use in conjunction with positive pressure infusion devices that could generate back pressure higher than 2 000 Hpa susceptible to damage infusion disposable and the device.

Fresenius Vial recommends the use of one way valves or positive pressure infusion devices for multi-line infusions. If there is no one way valve on a gravity infusion line during a multi-line infusion, this will make it impossible to detect occlusions on the patient side, and could result in accumulation of the drug being infused in the gravity line, which could later be infused in an uncontrolled manner when the occlusion is released. Place the connection between the feeder line and the syringe-driver line as near to the start of the catheter as possible in order to minimise the dead space and consequently the impact of any change in flow rate on the feeder line.



Opening the pump or the battery cover must only be carried out by the qualified personnel in your establishment, and taking all the necessary technical precautions. Non-respect of these procedures is dangerous to the personnel and may damage the syringe pump. We recommend you follow the maintenance procedures defined in the technical maintenance manual. To obtain a copy of the technical maintenance manual, please contact our After-Sales Department or our Commercial Department specifying the identification number of the device.

Cleaning and disinfection

The Pilot is part of the patient's immediate environment. It is advisable to clean and disinfect the device's external surfaces on a daily basis in order to protect patient and staff.

- Disconnect the device from its mains supply before starting to clean.
- Do not place in an AUTOCLAVE nor IMMERSE the device. Do not let liquids enter the device's casing.
- If the device is placed in a high contamination risk unit, it is advisable to leave it in the room during aerial disinfection, after having disinfected it with a moist cloth.
- Use a cloth soaked in DETERGENT-DISINFECTANT, previously diluted with water if required, to destroy micro-organisms. Avoid abrasive scrubbing which could scratch the casing. Do not rinse or wipe surfaces.
- Do not use: TRICHLOROETHYLENE-DICHLOROETHYLENE - AMMONIA - AMMONIUM CHLORIDE - CHLORINE and AROMATIC HYDROCARBON - ETHYLENE DICHLORIDE-METHYLENE CHLORIDE - CETONE. These aggressive agents could damage the plastic parts and cause device malfunction.
- Take care also with ALCOHOL BASED SPRAYS (20% - 40% alcohol). They lead to tarnishing of and small cracks in the plastic, and do not provide the necessary cleaning prior to disinfection. Using disinfecting applies by SPRAYS may be done, in accordance with the manufacturer recommendations, from a distance of 30 cm of the device, avoid the accumulation of the product in liquid form.

Please contact the appropriate service, handling suitable cleaning and disinfection products, in your establishment for further details.

Storage

The device should be stored in a dry, cool place. In case of prolonged storage, the battery should be disconnected via the battery access flap situated underneath the device. This should be done by a qualified technician.

- Storage temperature: -10°C + 60°C.
- Permissive relative humidity: maxi 85%, no condensation.

Servicing

To ensure normal performance of the device, it is recommended to replace the internal battery each 3 years. This should be done by a qualified technician.

The qualified technicians in your establishment or our After-Sales Service should be informed if the device is dropped or if any of malfunction occurs. In this case, the device must not be used.

For further information concerning the pump servicing or its use, please contact our After-Sales Service or our Customer service.

If the device has to be returned to our After-Sales Department, proceed to its cleaning and desinfection. Then , pack it very carefully, if possible in its original packaging, before sending it.

Fresenius Vial is not liable for loss or damage to the device during transport to our After-Sales Department.

Regular inspections

In order to check that the device is functioning optimally, regular inspections are recommended every 12 months.

A regular control check consists of various inspection operations listed in the Technical manual. These control checks must be performed by an experienced technician and are not covered by any contract or agreement provided by ***Fresenius Vial***.

Note: the pump must be checked, serviced and repaired only by ***Fresenius Vial*** or by a qualified technician. Failure to comply with these maintenance procedures can damage the device and lead to a functional failure.

Quick check procedure - Pilot A2

This protocol allows a quick check of the pump functionality.

Serial number (ID/N): ..... Date: ..... / ..... / ..... Department: ..... Name: .....

1. Check the state of the device : absence of impact marks and noises (turn upside down the device), presence of all labels as well as their legibility.
2. Press ON (power supply lead not connected): the indicator illuminates.
3. Check the condition of the power lead and connect the device to the mains source : the mains indicator illuminates. YES ☐ NO ☐
4. Install a syringe.

Auto-control mode : press simultaneously on and keys.

Indicator light test.

1. Press to start the test.
2. Check the presence of all luminous indicators and press .
3. Select OKAY (comply) ; no (no comply) or Ctr.1 (return) by pressing , and confirm . YES ☐ NO ☐

Alarms test.

1. Press to start the test : ALAR appears on display.
2. The DISENGAGED MECHANISM and ANTI-SIPHON indicators flash. Disengage pusher block: constant indicators light up. The confirm signal flashes: press .
3. The SYRINGE BARREL CLASP and HIGH flash. Position the syringe barrel clasp on upper position: constant indicator and HIGH light up. The confirm signal flashes: press .
4. The flashing display indicates CC. Turn the syringe barrel clasp into the closed position and check the detected capacity by the device. The confirm signal flashes: press .
5. The SYRINGE BARREL CLASP and LOU flash. Remove the syringe and position the syringe barrel clasp on lower position: constant indicator and LOU light up. The confirm signal flashes: press . YES ☐ NO ☐
6. Select OKAY or Ctr.2 (return) by pressing and confirm .

Pusher block advance test.

1. Press to start the test.
2. Install a 50 or 20 ml syringe filled at 7 cc.
3. Select syringe and start the test : run appears on displays. The end of the test is signalled by : message OKAY and 5 cc (volume infused) for 50 and 20 ml syringe (check the advance of syringe plunger: 5 cc ± 0.5 cc).
4. Select OKAY ; no or Ctr.3 (return) by pressing and confirm .
5. After the validation of OKAY, the message End indicates the end of the auto control test.
6. Press to restart device on normal mode. YES ☐ NO ☐

Visa : **All control result comply:** **YES ☐ NO ☐**

12-15 V power source

A socket positioned on the rear panel makes it possible to use a 12-15 V 15 W supply in rescue vehicles.

Operation from the external power can be recognised by the mains indicator .

The battery automatically recharges.

Operation with the internal battery

The Pilot contains an internal battery which automatically takes over when the mains supply is disconnected and ensures normal function with no loss of the programmed data.

When mains is disconnected, the bAt message is displayed and a warning signal is turned on.

Press to acknowledge this warning.

Operation from the battery can be recognised by the battery indicator .

Recharging the battery

To recharge battery, just connect the **Pilot** to a mains power supply. Recharging of the battery is visualised by the mains indicator .

Battery life indicator

While the pump is running on battery, battery life may be displayed. Battery life displayed takes care of the current flow rate.

bAt 4h50
autonomy in h/min

Note: use charging mode for a complete battery life indicator when device is turned off.

Charging mode

It includes total duration of charging battery when device is not used.

1. Remove syringe and press .

2. Charging mode activation:  CHAr
(continuous press)

Note: to leave the charging mode, press  (continuous press)

Accessories

***Fresenius Vial* recommends the use of Pilot range accessories.**

Transfix
cat # 073416

Composed of transport handle (cat # 073419) and the multi-purpose clamp (cat # 073418), this system enables rapid fixation to a horizontal rail or vertical support, decreases loss of space and provides perfect stability.

Transport Handle
cat # 073419

Multi-purpose clamp - cat # 073418

RS 232 cord
Cat. # 073413 (9m/9f)
Cat. # 073414 (9m/25)

Battery supply cable
cat # 073415

Power Fix 2 - cat # : 073428.

Power Fix 4 - cat # : 073429.

1 power cord only to connect 2 or 4 Pilot to mains.

Power Fix 2 and 4 : includes mounting clamps for I.V. pole.

CE marking - complies with EN 60-601.1. 230 V ~ - 50/60 Hz (110 V on request).

Installation with 2 POWER FIX 2, 1 POWER LINK ; 1 ROLLING STAND 180 (cat # 073070)

Power Link - cat # : 073430.
To connect a POWER FIX 2 to a POWER FIX 2 or 4 together.

Disposable

SE 2400Y - 2 channel - Sterile catheter extension set in PVC.

Injectomat Line PVC 150 cm – Extension line for infusion.

Injectomat Line PE 200 orange - Opaque extension line for infusion of light sensitive drugs or for drugs not compatible with PVC.

SE 1500 AR - 1 channel - Sterile catheter extension set in PVC with Y connector equipped with one way valve.

SE 1600 AR AS - 1 channel - Sterile catheter extension set in PVC with anti-siphon valve and Y connector equipped with one way valve.

Note that the expiry date is written on the packaging (set can be used for 5 years from the manufacturing date also written on the peel-open pouch).

All sets are designed and controlled by Fresenius in order to guarantee the performances and the safety features of our pumps. The manufacturing is done by Fresenius (CE0123, CE0459) or by its qualified subcontractors (CE0123, CE0318) for and on behalf of Fresenius in exclusive distribution. The CE certificates are available on request.

Conditions of guarantee

Fresenius Vial **guarantee that this product is free from defects in materials and workmanship (excluding batteries and accessories) for a period of one year from the date of invoice. If you comply to benefit from the materials and workmanship guarantee from our After-Sales Service or an agent authorised by *Fresenius Vial*, the following conditions must be respected:**

- The device must have been used according to the instructions in this Operator's Guide.
- The device must not have been damaged when in storage, at the time of repair, or show signs of improper handling.
- The device must not have been altered or repaired by non-qualified personnel.
- The serial number (ID/N°) must not have been altered, changed, or erased.

In case of non-respect of these conditions, ***Fresenius Vial*** will prepare an estimate for repair covering the parts and labour required.

Where return and repair of a device is necessary, please contact ***Fresenius Vial*** Customer or After-Sales Department.

Notes

Useful addresses

All requests for information or documentation (technical files, tubing sets catalogue or brochures) must be sent to:

CUSTOMER SERVICE - AFTER-SALES SERVICE:

Fresenius Vial
Le Grand Chemin
F-38590 BREZINS (France)
Tel: +33 (0)4 76 67 10 10
Fax: +33 (0)4 76 67 11 34

Consult our Web site

www.fresenius-vial.fr

A company of Fresenius Kabi

Fresenius Vial
Infusion Technology