



Value Life

Infusion pumps
The aitecs® Range of Infusion Pumps



aitecs®
Advanced Infusion Pumps

Contents

aitecs® 3017 _____	4
Advanced Infusion Pump	
aitecs® 2017 _____	6
Advanced Syringe Pump	
Drug Error Reduction Software (InfuGard®) _____	8
AIMS _____	10
Docking Stations _____	11
aitecs® 3017 Technical Information _____	12
aitecs® 2017 Technical Information _____	14

Want to know more?

For more information about any of the products featured in this brochure, please contact your **Vygon Representative**.

Alternatively you can contact our **Customer Services** department on **01793 748900** or email vygon@vygon.co.uk

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Delivered 6.22 ml
Remaining 493.72 ml

1 2 3
4 5 6
7 8 9
0 C

STOP START BOLUS

altec's 3017

Delivered 0.982 ml
Time to Bolus 19:00:00

1 2 3
4 5 6
7 8 9
0 C

STOP START BOLUS

altec's 3017

Delivered 55 ml
Time to Bolus 19:00:00

1 2 3
4 5 6
7 8 9
0 C

STOP START BOLUS

altec's 3017

20 30 40 50

the operator's manual may lead to PATIENT RISK.

MOO

Infusi

100 - 240 VAC
50/60 Hz, 350

2 x T5A, 5x20 mm

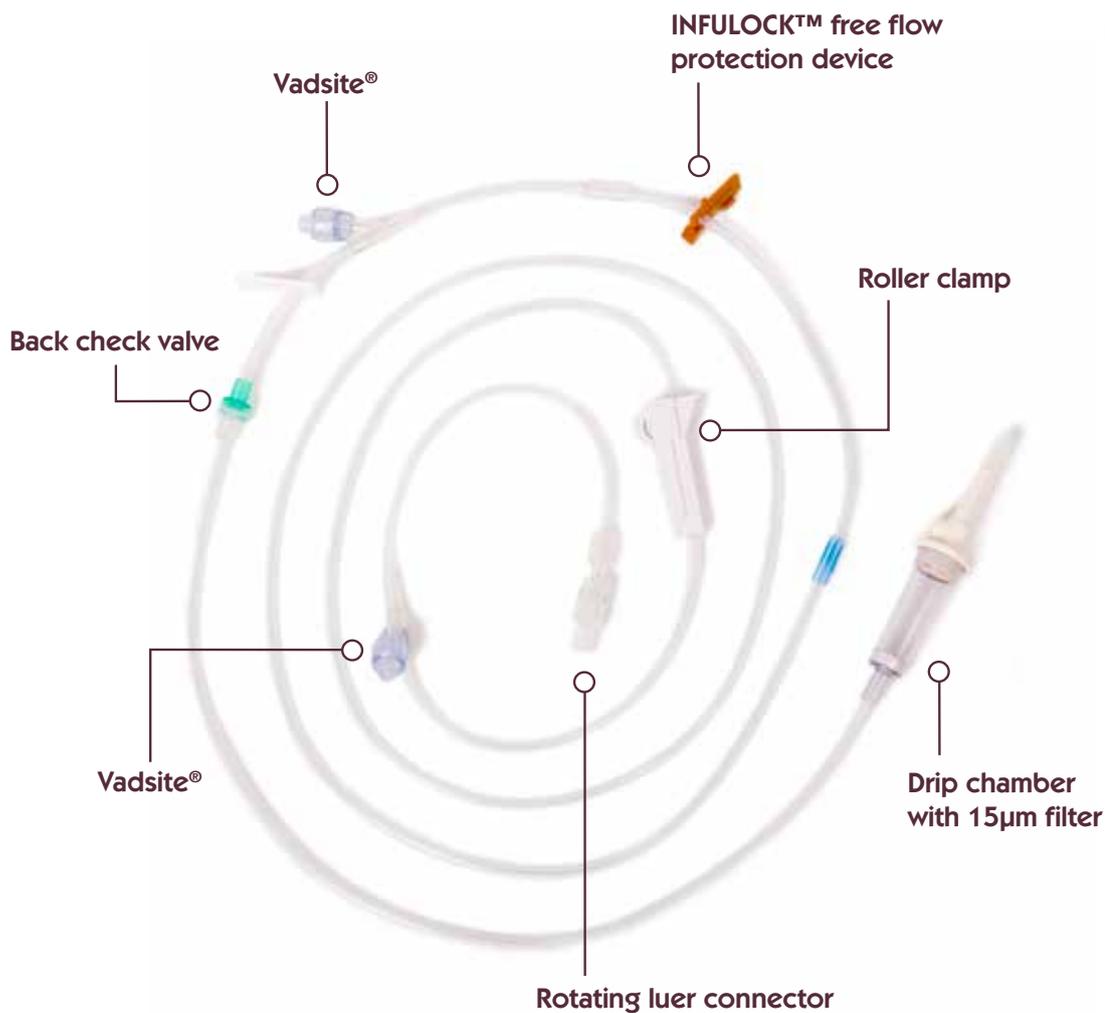
The aitecs[®] 3017 Advanced Infusion Pump

The aitecs 3017 Infusion Pump is an advanced, configurable and large volume, multi-purpose pump.

With a user interface focusing on patient safety common to all aitecs pumps, it has a wide variety of uses ranging from basic infusions to advanced clinical applications.

An extensive choice of administration sets gives the aitecs 3017 Infusion Pump maximum flexibility so they can be used in all clinical environments, in every unit throughout the hospital. All needle-free sets come complete with the Vadsite[®] needle-free connector and, as experts in IV management, Vygon also provides a full range of consumables and accessories.

Prioritising patient safety, all administration sets are fitted with the Infulock to deliver free-flow protection.



Flexible

- Configuration options menu to support changing user requirements, hospital drugs policy with adaptable parameters for each department
- Software based technology to allow for easy configuration and upgrade.

Connectivity

- WiFi enabled via docking station
- Ethernet (RJ45) enabled
- USB ports (B-Type) enabled
- IrDA: Connection to infusion pumps when docked.



See page 12 for the **aitecs® 3017 Infusion Pump** specifications and ordering information

The aitecs[®] 2017 Advanced Syringe Pump

The aitecs 2017 Advanced Syringe Pump is a versatile pump offering enhanced safety features for all clinical environments. Its in-built reliability and flexibility meets the needs of all types of patients from neonatal to adult.

The aitecs 2017 Advanced Syringe Pump can be used as a stand-alone device or be stacked together with other aitecs pumps on the infusion docking station. This provides connectivity compatible with the aitecs infusion management system, Patient Data Management Systems (PDMS) and Hospital Information Systems (HIS) via the open system architecture.

The common user interface across the entire aitecs range promotes ease of use and simplifies device-training needs.

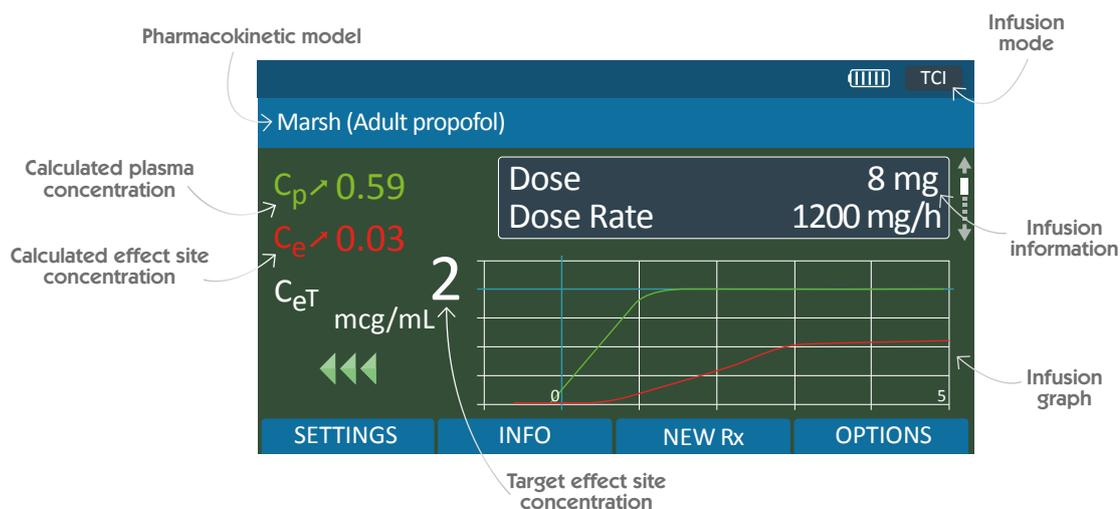
Target Controlled Infusions (TCI)

In TCI mode, the aitecs pump controls and maintains a steady therapeutic level of drug delivery. The clear display shows all the information needed to monitor the infusion including the pharmacokinetic model, calculated plasma concentration and effect site concentration as well as target effect site concentration. The infusion information and graph mode complete the display.

TCI models include:

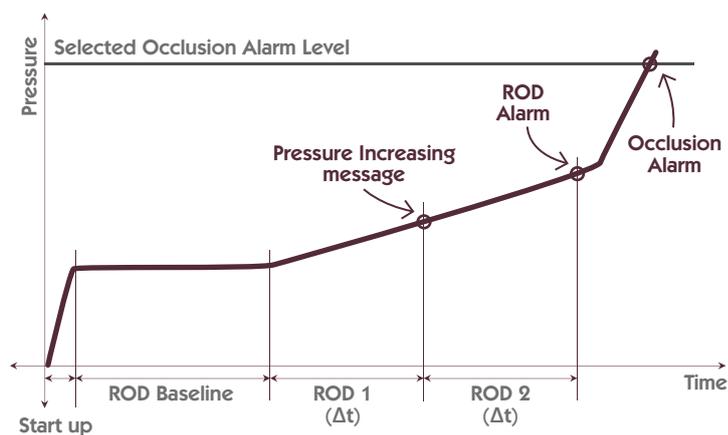
- Marsh
- Schnider
- Paedfusor
- Kataria
- Minto
- Bovill
- Gepts
- Maitre
- Shafer

TCI Screen



Relying on Rapid Occlusion Detection (ROD)

The device's unique software-based rapid occlusion detection (ROD) system helps to prevent blockages in the infusion lines. Set at high sensitivity, an alarm is triggered in less than five minutes so that problems are detected before they become a serious issue and cause a delay in treatment.



See page 14 for the **aitecs® 2017 Advanced Syringe Pump** specifications and ordering information

InfuGard® Drug Error Reduction Software

InfuGard is the drug error reduction software at the heart of the aitecs® range of infusion pumps. InfuGard lets you define dose limits and alert users if programmed doses are too high.

Using the drug library management software

The InfuGard software for IV medication error prevention, helps protect against error at the point of infusion delivery and provides continuous quality improvement data, drug library development, CQI download and presentation and software maintenance.

InfuGard is a PC based drug library management tool that you can customise per hospital/department, by care area configuration or by drug, ensuring multiple pump platforms can be managed with the software. In addition, you can add clinical advisories to each drug for optimal preparation and delivery of medication creating a total configurable platform based on your requirements.

InfuGard manages multiple pump platforms:

- Up to 75 advisory notifications
- 30 profiles (Care Area i.e. NICU)
- 15 categories per profile (Drug Therapy i.e. antibiotics)
- 40 drug protocols per category
- 1,500 individual drug protocols
- Clear visibility on hard and soft drug limits.





INFUGARD



AIMS (aitecs[®] Infusion Monitoring System)

AIMS is a tool for remote infusion monitoring and event aggregation.

The software runs on a central console and collects information from the Infusion Docking Station (IDS) through your standard computer network. This enables you to have remote infusion monitoring for multiple beds at the central station.

The detail displayed includes the facility unit overview (topology view), currently active with recent infusion events plus 'near end of infusion' status displayed in order of importance.

AIMS

- Simple infusion pump information integration and centralised representation, which is especially important to critical care areas
- Features central alarm and 'near end of infusion' management
- Facility/Unit configuration preferences are easily accomplished
- Eliminates the need for a sophisticated solution; requires an Ethernet network (socket/bed and at central station) or PC with screen
- Capable of monitoring up to 30 IDS at once.



Docking Stations

Docking Stations and Connectivity

Infusion Docking Station

The Infusion Docking Station (IDS) is designed to accommodate both the aitecs® 2017 syringe pump and aitecs 3017 large volume pump, and distribute AC mains power to all the fitted pumps using a single mains lead.

In addition, the IDS is capable of retrieving infusion information from the connected pumps and relaying it via standard Ethernet interface to be displayed on the aitecs Infusion Monitoring System (AIMS) or any other third party Patient Data Management Systems (PDMS) or Hospital Information Systems (HIS).

IDS (Infusion Docking Station)

- Docking Tiles 3, 4, 6 and 8
- Central power supply.

Connection types

- WiFi enabled via wireless transmitter
- Ethernet (RJ45) enabled
- USB ports (B –Type) enabled
- IrDA : Connection to infusion pumps when docked.

Communication protocols

- AIMS enabled
- DMS Integration enabled : Pending software drivers from 3rd party
- HIS, PIS enabled : Pending software drivers from 3rd party.

Specifications

Model	IDS-03	IDS-04	IDS-06	IDS-08
No. of pumps to be fitted	3	4	6	8
Protection	Class I, IPX1			
CE0408 marked (TUV)	Complies with Council Directive 93/42/EEC concerning medical devices			
AC power supply	100-240 VAC, 50/60Hz, 200 VA	100-240 VAC, 50/60Hz, 250 VA	100-240 VAC, 50/60Hz, 350VA	100-240 VAC, 50/60Hz, 450 VA
Operating temperature range	+ 5 to + 40°C			
Operating atmospheric pressure	60kPa – 106kPa			
Permissible relative humidity	20 - 90%, no condensation			
Dimensions (W x H x D)	143 x 590 x 67mm (excluding pole clamp)	143 x 710 x 67mm (excluding pole clamp)	143 x 920 x 67mm (excluding pole clamp)	1143 x 1160 x 67mm (excluding pole clamp)
Weight	3.4kg	3.9kg	4.9kg	6.3kg
Communication ports	Ethernet RJ45, USB Slave, USB Master, RS232 (optional)			
Communication protocols	HTTP,TCP/IP, UDP,JSON			



aitecs® 3017

Infusion Pump Specifications

The aitecs 3017 Infusion Pump is an advanced, configurable, multi-purpose infusion pump, with a common user interface to the aitecs range, that provides patient safety by facilitating use from basic infusions to advanced clinical applications. This ensures that the aitecs 3017 Infusion Pump is suitable for use in all units within the hospital.

The aitecs 3017 Infusion Pump can be used as a stand-alone device or be stacked together with other aitecs pumps on the aitecs IDS providing connectivity compatible with the aitecs Infusion Monitoring System, PDMS and/or HIS via the open system architecture.

Infusion Rates	0.1 – 1,500ml/h in 0.01ml/h increments (for lower rates)
Bolus Rates	0.1 – 1,500ml/h, default 600ml/h
Prime Rates	0.1 – 1,500ml/h
Bolus Volume Limit	0.1 – 999ml
Prime Volume	0.1-5 ml (default 2ml)
Volume To Be Infused	0.1 – 9,999ml or Bag Volume selection (50, 100, 250, 500, 1,000, 2,000ml)
Occlusion Levels	10 occlusion levels in range from 80mmHg to 950mmHg
Infusion Dose Units	ml/h, ml/min, ml/24h, ml/kg/h, ml/kg/min, ml/kg/24h, ml/m ² /h, ml/m ² /min, ml/m ² /24h g/h, g/min, g/24h, g/kg/h, g/kg/min, g/kg/24h, g/m ² /h, g/m ² /min, g/m ² /24h mg/h, mg/min, mg/24h, mg/kg/h, mg/kg/min, mg/kg/24h, mg/m ² /h, mg/m ² /min, mg/m ² /24h mcg/h, mcg/min, mcg/24h, mcg/kg/h, mcg/kg/min, mcg/kg/24h, mcg/m ² /h, mcg/m ² /min, mcg/m ² /24h ng/h, ng/min, ng/24h, ng/kg/h, ng/kg/min, ng/kg/24h, ng/m ² /h, ng/m ² /min, ng/m ² /24h U/h, U/min, U/24h, U/kg/h, U/kg/min, U/kg/24h, U/m ² /h, U/m ² /min, U/m ² /24h kU/h, kU/min, kU/24h, kU/kg/h, kU/kg/min, kU/kg/24h, kU/m ² /h, kU/m ² /min, kU/m ² /24h mU/h, mU/min, mU/24h, mU/kg/h, mU/kg/min, mU/kg/24h, mU/m ² /h, mU/m ² /min, mU/m ² /24h mcU/h, mcU/min, mcU/24h, mcU/kg/h, mcU/kg/min, mcU/kg/24h, mcU/m ² /h, mcU/m ² /min, mcU/m ² /24h mol/h, mol/min, mol/24h, mol/kg/h, mol/kg/min, mol/kg/24h, mol/m ² /h, mol/m ² /min, mol/m ² /24h mmol/h, mmol/min, mmol/24h, mmol/kg/h, mmol/kg/min, mmol/kg/24h, mmol/m ² /h, mmol/m ² /min, mmol/m ² /24h mcmol/h, mcmol/min, mcmol/24h, mcmol/kg/h, mcmol/kg/min, mcmol/kg/24h, mcmol/m ² /h, mcmol/m ² /min, mcmol/m ² /24h nmol/h, nmol/min, nmol/24h, nmol/kg/h, nmol/kg/min, nmol/kg/24h, nmol/m ² /h, nmol/m ² /min, nmol/m ² /24h mEq/min, mEq/h, mEq/24h, mEq/kg/min, mEq/kg/h, mEq/kg/24h, mEq/m ² /h, mEq/m ² /min, mEq/m ² /24h
Volumetric Accuracy	+/- 5% (in accordance with EN 60601-2-24, maximum set change interval 72 hours)
Event Log	> 2,000 events
Patient History Log	> 2,000 events
Safety Log	> 1,000 events
Key Log	> 500 key presses
Service Log	> 100 records
Protection against electrical shocks	Class II
Protection against splashing liquid	IP43
Protection against current leakage	Defibrillation-proof type CF applied part
CE Mark	Device complies with the essential requirements of Council Directive 93/42/EEC concerning medical devices



Standards Conformity	IEC/EN 60601-1, IEC/EN 60601-1-2, IEC/EN 60601-1-6, IEC/EN 60601-1-8, IEC/EN 60601-2-24, IEC/EN 62304, IEC/EN 62366, ISO 14971, ISO 15223-1, EN 980, EN 1041
AC Mains Supply	100-240 VAC \pm 10%, 50/60Hz, 50 VA
Battery Type	Li-Ion, 7.4V, 4,400mAh
Battery Charging Time	< 5h to 75% capacity (at an ambient temperature - between 3°C and 23°C)
Battery Operation	10h at 25ml/h
External DC Power Supply	12-16VDC - optional
Memory Retention	> 9 months (when not powered up)
Dimensions (WxHxD)	346mm x 120.5mm x 140mm (excluding pole clamp)
Weight	\approx 2.3kg (excluding pole clamp)
Operating Temperature Range	+5°C to +40°C

aitecs® Administration Sets

Product Code	Description	
VMM50512	PRIMARY Administration Set	
VMM50174	PRIMARY Administration Set, 1 needle-free Y-site	
VMM50173	PRIMARY Administration Set, 2 needle-free Y-sites	
VMM50176	PRIMARY Administration Set, 2 needle-free Y-sites, 1.2µm filter	
VMM50175	LOW SORBING Administration Set, 2 needle-free Y-sites	
VMM50177	LIGHT SENSITIVE Administration Set	
VMM50180	BLOOD Administration Set, 2 IV spikes	
VMM50496	EPIDURAL Administration Set, micro-bore tubing with yellow stripe	
VMM50681	EPIDURAL Administration Set, micro-bore tubing with yellow stripe, Surety® connector	

Ordering Information

Product Code	Description
VMM3017	Vygon aitecs® 3017 Large Volume Pump

Related Products and Accessories

Infusion Docking Station	Centralised power distribution and communication capabilities: IDS (03, 04, 06, 08)
Fixation	Universal pole clamp and other mounting options (including an option to mechanically connect multiple pumps)

aitecs[®] 2017

Syringe Pump Specifications

The aitecs 2017 Syringe Pump is an advanced, configurable and versatile syringe pump offering enhanced safety in all clinical environments. The common user interface across the aitecs range promotes ease of use and simplifies device training needs.

The aitecs 2017 Syringe Pump can be used as a stand-alone device or be stacked together with other aitecs pumps on the aitecs IDS providing connectivity compatible with the aitecs Infusion Monitoring System, PDMS and/or HIS via the open system architecture.

Infusion Rate Range	0.1 – 2,200ml/h in 0.01ml/h increments	
Volumetric Accuracy	±2% (according to EN 60601-2-24)	
Syringe Sizes	2/3ml, 5/6ml, 10/12ml, 20/22ml, 30/35ml, 50/60ml (all major brands, additional brands upon agreement)	
Infusion Modes	<ul style="list-style-type: none"> • Continuous • Volume over time • Dose over time • Intermittent • Total Parenteral Nutrition (TPN) • Total Intravenous Anaesthesia (TIVA) • Target Controlled Infusion (TCI) 	
Dose Units	ml, g, mg, mcg, ng, Units, kUnits, mUnits, mcUnits, mol, mmol, mcmol, mEq, and other configured by the medical personnel	
Occlusion Alarm	10 occlusion levels in range from 50mmHg to 950mmHg	
Rapid Occlusion Detection (ROD)	More sensitive - 5 minutes Moderate - 10 minutes Less sensitive - 15 minutes	
Restart After Occlusion	0-3 (configurable)	
Prime Rates	1-100ml/h (2/3ml syringes) 1-125ml/h (5/6ml syringes) 1-325ml/h (10/12ml syringes) 1-600ml/h (20/22ml, 30/35ml and 50/60ml syringes)	
Bolus Volume Limit	1-100 % of syringe size or 0.01-99.99ml (configurable)	
Bolus Rate Range	0.001-9.999ml/h in 0.001ml/h steps 10.0-99.99ml/h in 0.01ml/h steps 100.0-999.0ml/h in 0.1ml/h steps 1000-2200ml/h in 1ml/h steps	Syringe size 2/3ml - 0.01-100ml/h 5/6ml - 0.03-125ml/h 10/12ml - 0.05-325ml/h 20/22ml - 0.10-600ml/h 30/35ml - 0.10-900ml/h 50/60ml - 0.10-2200ml/h
KVO Volume	0.1-10 % of the syringe volume or OFF (configurable)	
KVO Rate Range	0.10-5.00ml/h (configurable)	
Volume To Be Infused	0.1-999.9ml in 0.1ml steps	
Infusion Time	00:01-200:00 (HH:mm)	
Volume Limit	0.1-999.9ml	
Post VTBI Rate	Stop or KVO	
Standby Time	00:01-23:59 (HH:mm)	
Delayed Start	0:01-06:00 (HH:mm)	
InfuGard [®]	< 1,500 unique drug entries with nested limits available, arranged in up to 30 Profiles with up to 15 Categories with up to 40 Drugs (up to 75 Drug Advisories)	
'near end of infusion' Alarm	3-120 min or 1-50ml (to end of infusion or syringe empty)	
Maximum Volume under Single Fault Condition	< 0.5ml	
Alarm Loudness	5 Levels	
Warnings (Medium Priority)	Syringe Empty – KVO xx ml/min to End of Infusion Standby Time Elapsed End of Infusion – KVO No Mains	Low Battery Pressure Decreasing xx ml/min to Syringe Empty Pressure Increasing Volume limit reached/KVO No keypad activity



Alarms (High Priority)	System Malfunction (Code) Syringe Barrel Not Seated Volume Limit Reached – Stop Replace Battery Syringe Clamp Open Depleted Battery	Occlusion Pusher Disengaged Syringe Empty – Stop Syringe Plunger Not Captured End of Infusion – Stop Recharge Battery
Interfaces	USB (peripheral), IrDa (IR Comms port), Nurse Call (optional)	
Mounting	IDS (Infusion Docking Station), universal pole clamp, Dräger (horizontal) rectangular bar; table top operation	
Event Log	> 2,000 events	
Patient History Log	> 500 events	
Key Log	Last 300 key presses	
Service Log	Last 50 error codes	
Safety Log	> 1,000 events	
Protection against electrical shocks	Class II	
Protection against splashing liquid	IP43	
Protection against current leakage	Defibrillation-proof type CF applied part	
CE Mark	Device complies with the essential requirements of Council Directive 93/42/EEC concerning medical devices	
Standards Conformity	IEC/EN 60601-1, IEC/EN 60601-1-2, IEC/EN 60601-1-6, IEC/EN 60601-1-8, IEC/EN 60601-2-24, IEC/EN 62304, ISO 14971, EN 980	
Power Supply	100-240 VAC, 50/60Hz, 50 VA	
Battery Type	Li-Ion, 7.4 V, 4,400mAh	
Battery Charging Time	Up to 5h to 100% charge	
Battery Operation	not less than 15h @ rates up to 25mL/h (at +20 °C); not less than 12h @ 100mL/h (at +20 °C);	
External DC Power Supply	12-VDC (2 A) – optional	
Memory Retention	> 9 months (when not powered up)	
Dimensions (WxHxD)	346mm x 120.5mm x 140mm (excluding pole clamp)	
Weight	≈ 2.3kg (excluding pole clamp)	

Ordering Information

Product Code	Description
VMM2017	Vygon aitecs® 2017 Syringe Pump

Related Products and Accessories

Infusion Docking Station	Centralised power distribution and communication capabilities: IDS (03, 04, 06, 08)
Fixation	Universal pole clamp and other mounting options (including an option to mechanically connect multiple pumps)

For further information, please contact: vygon@vygon.co.uk

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