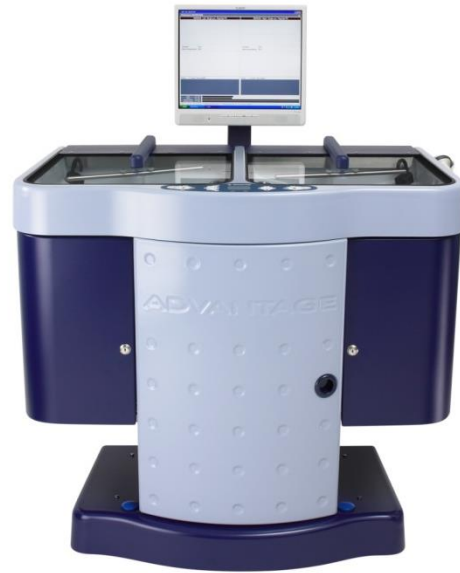# Advantage® Plus
Automated Endoscope Reprocessor

ADVANTAGE PLUS

Easy to use!

- Large basin size, ergonomic design for easy loading

- Individual channel connectivity and blockage monitoring

- Continuous leak testing with automatic detergent and alcohol flush

- PC-based for scope-specific cycle programming, operation, and cycle performance documentation

- Remote diagnostic service capabilities

- Compatible w/ Rapicide® PA Peracetic Acid

- Optional FDA-cleared cleaning claim that eliminates manual cleaning

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Two Independent Basins

- Asynchronous operation
  - reprocess two patients at the same time
- Large capacity for longer scopes
- Compatible with all scopes
- Capable of holding two scopes in one basin (certain scope models only)
- Spray and immersion operation
- Hands-free lid opening/closing

Reprocess more scopes in less time to reduce costs!

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Channel Connectivity Assurance

Individual Channel Monitoring thru Hook-up Connection Blocks

- Ensures correct connectivity
    - Detects when connector is not fully connected
    - Detects if connector popped off
- Continuous leak testing
    - Enables reprocessing prior to leak repair
- Ensures correct water and disinfectant flow rates per scope manufacturers' specs
- Blockage sensed by channel pressure increase
- Alarms – individual channels identified

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Cycle Documentation

- Powerful reporting system
- Stores cycle data
- Tracks IDs: scopes, patient, physician, assistant
- Select/sort by cycle criteria
  - Example: Report showing all patients who were examined with XX scope from October 1, 2008 to December 31, 2008
- Immediate report & print out
- Mirrored hard drives for immediate data backup

Medivators ensures
Infection Control!

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Networking & Remote Diagnostics

Network Switch
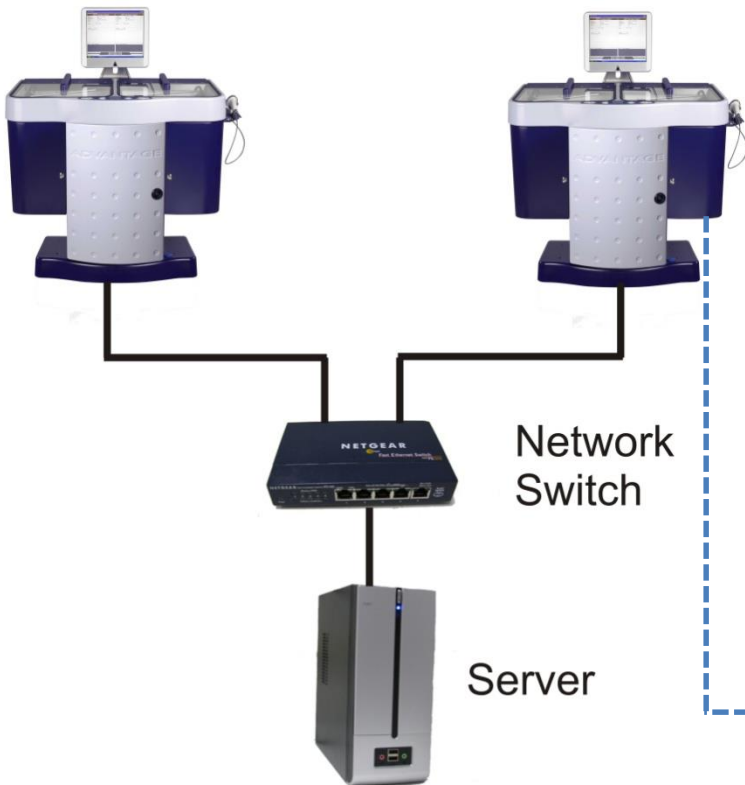
Server

- Multiple Advantage Plus units can be connected to facility network (4)
- Track patient IDs thru facility's internal network system/server (HIPPA Compliant)
- Dial into ability allows Medivators Technical Staff live troubleshooting capabilities
- Automated software updates
- Integrates to ENDORA
  - Verifies reprocessing steps completed and send HLD results

MEDIVATORS/Distributor

MEDIVATORS
A Cantel Medical Company

Hookups

- Hook-up Connector Block
  - Center block
  - Tubing
  - Connectors
- Separate connection per port
- Cleaning adapters included*
- Leak test connector included
- Designed for channel monitoring

*some exceptions apply

MEDIVATORS
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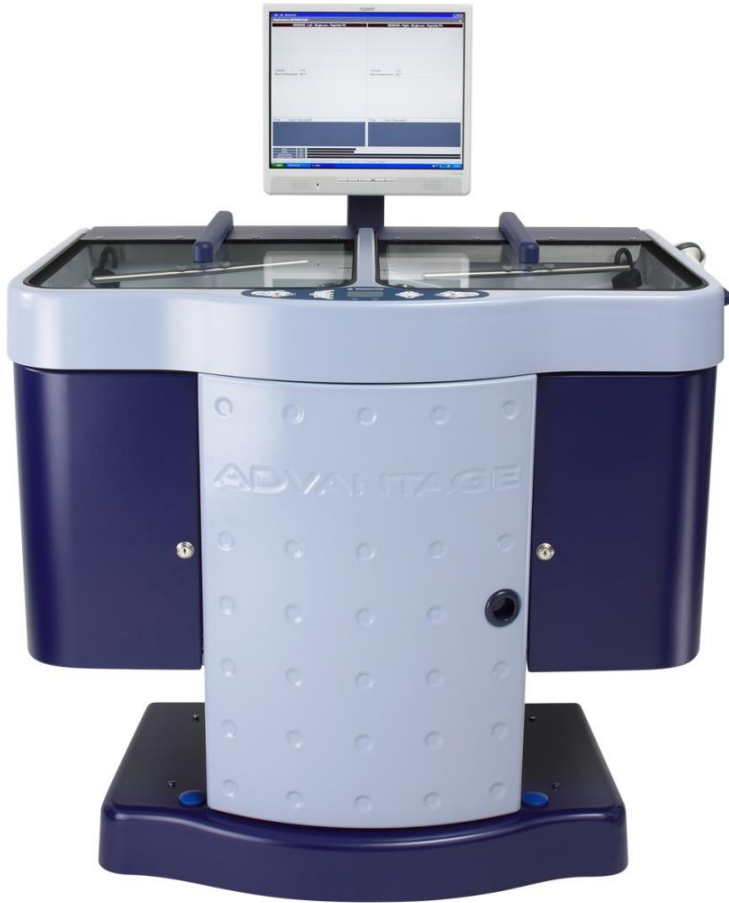
Endoscope Compatibility

Tee Probe Hookup example

- All flexible endoscopes
- TEE Probes
- Dilators
- EUS/EBUS
- Probes
- Cystoscopes
- Semi-critical rigid scopes (check availability)

Endoscope model number and serial number are needed for entry into Advantage Plus

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Specifications

- 49"w x 62"h x 42"d
- 120VAC, single phase
- Water hardness: < 12 gpg
- Min. water flow: 1.32 gpm, 35-87 psi
- Incoming water temp: 35°C +/- 2°C
- Mixing valve required
- Water filter: 0.1 micron
- Air compressor optional
- Microsoft SQL database
- Ave. cycle time: 28 min (w/o wash)
- Installation time: approx 1 day
- Order numbers:
  - ADV-1007 with air compressor
  - ADV-1008 w/o air compressor

Rapicide® PA


Single-Shot Peracetic Acid HLD

- 5 minute contact time
- 30° C (minimal compatibility risk)
  - Lowest temperature HLD available!
- 2 rinses
- No worker exposure
- Breaks down rapidly
- Environmentally friendly
  - No neutralization required
- Proven endoscope compatibility
- Kills MRSA, C. *diff*, VRE
- 22 shots/bottle set
  - 44 shots per case

MEDIVATORS
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Cleaning Cycle

- Optional FDA-cleared cleaning claim eliminates need for manual brushing and flushing

- Requires use of Intercept detergent
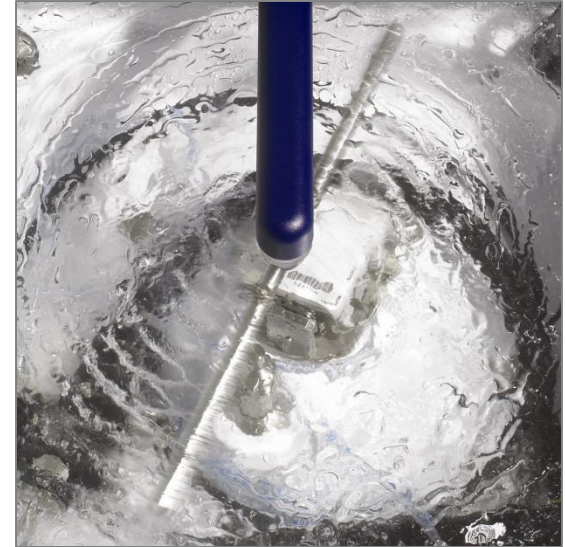
Customer Benefits

- Quality Assurance

- Endoscope Integrity & Monitoring

- Efficiency & Compatibility

- Occupational Health & Safety

- Service & Performance Guarantee

Quality Assurance

How does the Advantage Plus AER provide improved Quality Assurance?

1) Certified reprocessing cycles

- Each stage and error encountered during the reprocessing cycle is saved to a file within the software of the Advantage

- The data that is logged for each reprocessing cycle cannot be altered and provides a guarantee that the data is 100% accurate for audit / review purposes

- The certified reprocessing cycles offer the ability to transition into paperless record storage and eliminate paper printouts / manual log books

- Cycle data can be extracted and saved into an Excel / CSV file for importing into a database of choice

- Each cycle includes leakage test, optional pre-wash/cleaning, disinfection, rinse, alcohol, air

ADV - Management (V2.1.0.2)

General

Cycles

Events

Endoscopes

Users

Physicians/Assistants

Configuration

Cycle reports

Cycle details of machine number 19078503 - Right, cycle number 218

Error logged during disinfection phase

Cycle details

Phase	Step	Description - (ID)	Version	Start	Stop	Duration
6	2	Fill and check channels [all] - (SK:rib)	v2.1	8/15/2008 12:50:49 PM	8/15/2008 12:50:50 PM	00:00:01
6	3	Fill basin - (SV:rib)	v2.1	8/15/2008 12:50:50 PM	8/15/2008 12:50:50 PM	00:00:00
6	4	Circulating fluid through channels - (SS:ri0)	v2.1	8/15/2008 12:50:50 PM	8/15/2008 12:50:51 PM	00:00:00
6	5	Check channels [rinse] - (SC:ri0)	v2.1	8/15/2008 12:50:51 PM	8/15/2008 12:50:51 PM	00:00:00
6	6	Drain - (SR:rx2)	v2.1	8/15/2008 12:50:51 PM	8/15/2008 12:50:51 PM	00:00:00
6	7	Purge channels - (SB:ri0)	v2.1	8/15/2008 12:50:52 PM	8/15/2008 12:50:52 PM	00:00:00
7		Flush rinse - (FS:ri0)	v2.1	8/15/2008 12:50:52 PM	8/15/2008 12:50:53 PM	00:00:01
7	1	Flushing endoscope channels - (ST:ri0)	v2.1	8/15/2008 12:50:52 PM	8/15/2008 12:50:52 PM	00:00:00
7	2	Drain - (SR:rx0)	v2.1	8/15/2008 12:50:52 PM	8/15/2008 12:50:53 PM	00:00:01
7	3	Purge channels - (SB:rif)	v2.1	8/15/2008 12:50:53 PM	8/15/2008 12:50:53 PM	00:00:00
8		Post rinse - (FN:ri0)	v2.1	8/15/2008 12:50:53 PM	8/15/2008 12:50:56 PM	00:00:03
8	1	Fill and check channels [all] - (SK:rib)	v2.1	8/15/2008 12:50:53 PM	8/15/2008 12:50:54 PM	00:00:00
8	2	Fill basin - (SV:rib)	v2.1	8/15/2008 12:50:54 PM	8/15/2008 12:50:54 PM	00:00:00
8	3	Circulating fluid through channels - (SS:ri0)	v2.1	8/15/2008 12:50:54 PM	8/15/2008 12:50:55 PM	00:00:01
8	4	Check channels [rinse] - (SC:ri0)	v2.1	8/15/2008 12:50:55 PM	8/15/2008 12:50:55 PM	00:00:00
8	5	Drain - (SR:rx1)	v2.1	8/15/2008 12:50:55 PM	8/15/2008 12:50:55 PM	00:00:00
8	6	Purge channels - (SB:ri0)	v2.1	8/15/2008 12:50:56 PM	8/15/2008 12:50:56 PM	00:00:00
9		Disinfection - (FD:ri0)	v2.1	8/15/2008 12:50:56 PM	8/15/2008 1:11:43 PM	00:20:46
9	1	... - (SX:rx0)	v2.1	8/15/2008 12:50:56 PM	8/15/2008 12:50:56 PM	00:00:00
9	2	Fill and check channels [all] - (SK:rit)	v2.1	8/15/2008 12:50:56 PM	8/15/2008 12:52:08 PM	00:01:11
9	3	Fill basin - (SV:rit)	v2.1	8/15/2008 12:52:08 PM	8/15/2008 1:02:14 PM	00:10:06

Events | Parameters | Measurements

❌ Failure	12:58:26 PM	S-643 Disinfectant reservoir not empty
ⓘ Restart	1:01:36 PM	
ⓘ Operator start	1:01:36 PM	
ⓘ End	1:02:14 PM	

Phase	Step	Description - (ID)	Version	Start	Stop	Duration
9	4	Circulating fluid through channels - (SS:rit)	v2.1	8/15/2008 1:02:14 PM	8/15/2008 1:06:00 PM	00:03:45
9	5	Check channels [rinse] - (SC:rit)	v2.1	8/15/2008 1:06:00 PM	8/15/2008 1:06:56 PM	00:00:56
9	6	Return disinfectant to reservoir - (SR:rit)	v2.1	8/15/2008 1:06:56 PM	8/15/2008 1:09:47 PM	00:02:50
9	7	Purge channels - (SB:rit)	v2.1	8/15/2008 1:09:47 PM	8/15/2008 1:11:43 PM	00:01:56
10		Flush rinse - (FS:ri0)	v2.1	8/15/2008 1:11:43 PM	8/15/2008 1:12:53 PM	00:01:10
10	1	Flushing endoscope channels - (ST:ri0)	v2.1	8/15/2008 1:11:43 PM	8/15/2008 1:12:43 PM	00:01:00
10	2	Drain - (SR:rx0)	v2.1	8/15/2008 1:12:43 PM	8/15/2008 1:12:52 PM	00:00:08
10	3	Purge channels - (SB:rif)	v2.1	8/15/2008 1:12:52 PM	8/15/2008 1:12:53 PM	00:00:01
11		Post rinse - (FN:ri0)	v2.1	8/15/2008 1:12:53 PM	8/15/2008 1:12:56 PM	00:00:03
11	1	Fill and check channels [all] - (SK:rib)	v2.1	8/15/2008 1:12:53 PM	8/15/2008 1:12:53 PM	00:00:00
11	2	Fill basin - (SV:rib)	v2.1	8/15/2008 1:12:53 PM	8/15/2008 1:12:54 PM	00:00:01

start

General
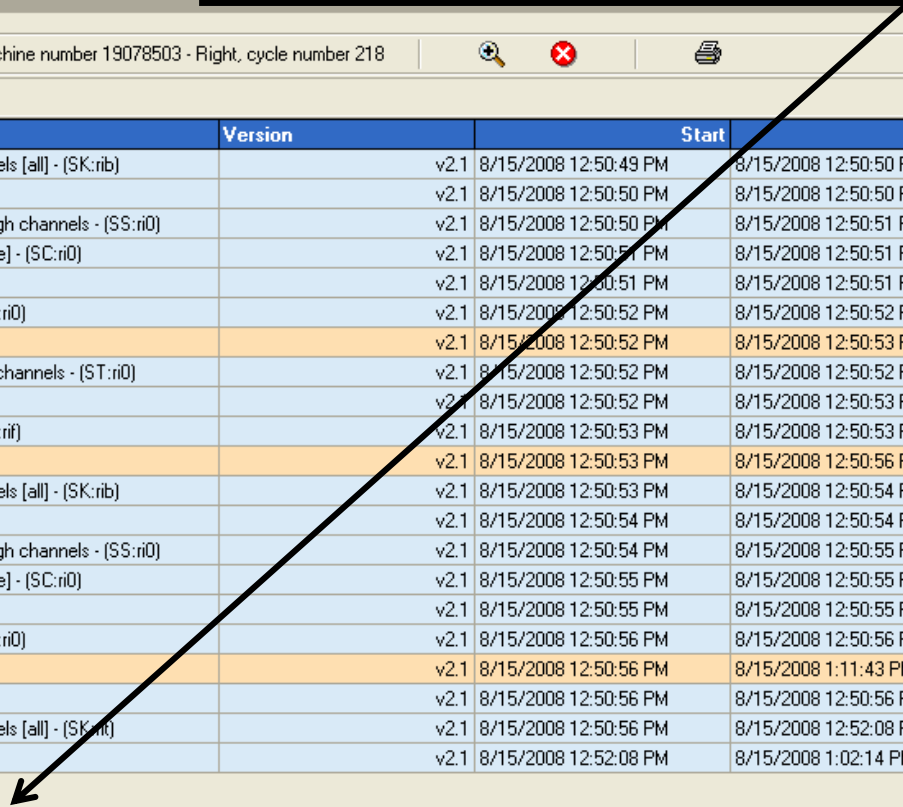
Cycle reports

Cycles

Events

Endoscopes

Users

Physicians/Assistants

7? | Q | 🔍 ▾ | from date | 5/ 1/2010 ▾ | to date | 8/24/2010 ▾

Cycles retrieved

Machine	Basin	Cycle	Date/Time	Duration	Parameter s	Result	MRC result	Location	Endoscope	Patient
7777	Right	608	5/14/2010 2:22:45	00:34:20	1-24-101 A	Correct	Passed	.	5	
7777	Left	451	5/14/2010 2:10:33	00:11:21	1-24-602 A	LIO (Failure)	N/A	.	7	
7777	Right	607	5/14/2010 1:43:30	00:35:14	1-24-402 A	Correct	Passed	.	6	
7777	Left	450	5/14/2010 1:37:51	00:31:50	1-24-602 A	Stop (Failure)	N/A	.	7	
7777	Right	606	5/14/2010 12:58:4:	00:35:40	1-24-502 A	Correct	Passed	.	4	
7777	Right	605	5/14/2010 12:57:0!	00:01:21	1-24-502 A	Stop (Failure)	N/A	.	4	
7777	Right	604	5/14/2010 12:39:5;	00:03:42	1-24-402 A	Stop (Failure)	N/A	.	6	
7777	Left	449	5/14/2010 12:37:0;	00:33:42	1-24-101 A	Failure	N/A	.	5	
7777	Right	603	5/14/2010 12:31:3(	00:05:31	1-24-402 A	Stop (Failure)	N/A	.	6	
7777	Right	602	5/14/2010 11:47:0:	00:39:01	1-24-698 A	Correct	Passed	.	3	
7777	Left	448	5/14/2010 11:36:0·	00:38:37	1-24-501 A	Correct	Passed	.	2	
7777	Left	447	5/14/2010 11:34:4!	00:00:00	1-24-501 A	Aborted	N/A	.	2	
7777	Left	446	5/14/2010 11:24:4!	00:00:00	1-24-501 A	Aborted	N/A	.	2	
7777	Left	445	5/14/2010 8:35:28	00:42:18	1-24-701 A	Correct	Passed	.	1	
7777	Left	444	5/14/2010 8:34:34	00:00:42	1-24-701 A	Stop (Failure)	N/A	.	1	
7777	Left	443	5/13/2010 3:46:13	00:26:50	1-16-502 A	Correct	Passed	.		
7777	Left	442	5/13/2010 2:27:50	00:51:10	S-Disinfect-30	Correct !!!	N/A	.		
7777	Left	441	5/13/2010 2:24:38	00:00:06	S-Disinfect-30	Stop (Operato	N/A	.		
7777	Left	440	5/13/2010 1:42:31	00:41:49	S-Disinfect-30	Correct	N/A	.		
7777	Left	439	5/13/2010 11:23:1(	00:33:57	1-16-505 A	LIO (Failure)	N/A	.		
7777	Left	438	5/13/2010 10:31:0;	00:37:00	1-16-505 A	Stop (Operato	Failed	.		
7777	Right	601	5/13/2010 10:30:1°	01:03:21	1-16-502 A	Stop (Failure)	N/A	.		
7777	Left	437	5/13/2010 10:05:1°	00:25:36	1-16-505 A	LIO (Failure)	N/A	.		
7777	Right	600	5/13/2010 10:04:5!	00:25:00	1-16-502 A	SCU (Incorrec	N/A	.		
7777	Left	436	5/13/2010 9:30:17	00:26:42	1-16-502 A	Correct	Passed	.		
7777	Left	435	5/13/2010 9:20:06	00:10:01	1-16-502 A	Stop (Failure)	N/A	.		
7777	Right	599	5/13/2010 9:19:57	00:40:42	1-16-505 A	Correct	Passed	.		
7777	Left	434	5/12/2010 5:26:55	00:00:30	1-14-501 B Te	Stop (Operato	N/A	.		
7777	Left	433	5/12/2010 5:21:11	00:00:51	1-14-501 B Te	Stop (Operato	N/A	.		
7777	Left	432	5/12/2010 5:20:21	00:00:39	1-14-501 B Te	Stop (Operato	N/A	.		
7777	Left	431	5/12/2010 5:19:58	00:00:15	1-14-501 B					
7777	Left	430	5/12/2010 5:19:23	00:00:14	1-14-501 B					
7777	Right	598	5/12/2010 4:38:30	00:07:34	1-16-402 A					
7777	Left	429	5/12/2010 4:23:42	00:26:30	1-16-502 A					
7777	Right	597	5/12/2010 4:23:31	00:14:29	1-16-402 A					
7777	Left	428	5/12/2010 3:35:38	00:26:32	1-16-502 A	LIO (Failure)	N/A	.		
7777	Right	596	5/12/2010 3:35:27	00:31:35	1-16-505 A	SCU (Incorrec	N/A	.		
7777	Left	427	5/12/2010 2:49:45	00:33:24	1-14-501 B Te	Correct !!!	Passed	.		
7777	Right	595	5/12/2010 2:49:35	00:34:13	1-16-505 A	LIO (Failure)	N/A	.		
7777	Right	594	5/12/2010 1:55:21	00:34:22	1-16-502 A	Stop (Operato	Failed	.		
7777	Left	426	5/12/2010 1:55:05	00:36:23	1-16-505 A	Correct	Passed	.		
7777	Left	425	5/12/2010 1:07:53	00:37:31	1-16-505 A	Stop (Operato	Failed	.		
7777	Left	422	5/12/2010 11:16:0;	00:10:28	1-16-402 A	SCU (Incorrec	N/A	.		

Cycle information

Run ID	1050
Machine	7777
Basin	Right
Cycle	602
Date/Time	5/14/2010 11:47:03 AM
Date/Time	5/14/2010 12:26:05 PM
Duration	00:39:01
Parameter set	1-24-698 A
Description	2-8-610, 611
Result	Correct
MRC result	Passed
Basin temperature	35.00
Contact time	00:05:15
Program ID	1
Program type	20
Unit Type	16
Location	.
Load login	Production
Load name	Production
Load code	
Unload login	Production
Unload name	Production
Unload code	
Endoscope code	3
Endoscope position	0
Endoscope type	TJF-M20
Endoscope internal id	TJF-M20
Endoscope serial number	0303
Endoscope type number	
Patient	
Physician ID	
Physician	
Assistant ID	
Assistant	

Cycle summary for highlighted cycle

Cycle log showing all cycles from selected date range

Configuration

Quality Assurance

How does the Advantage Plus AER provide improved Quality Assurance?

2) Cycle Monitoring

- The Advantage Plus has an integrated **Safety Control Unit (SCU)** that independently monitors the parameters of each reprocessing cycle

- The SCU is unique to the Advantage Plus and works coordinately with the PC to ensure that all faults are detected during the cycle and the user is alerted

- The SCU has two functions:

    1. Communicates between the peripheral sensors and the PC

    2. Independently monitors the critical parameters of the disinfection cycle (contact time, temp, etc.)

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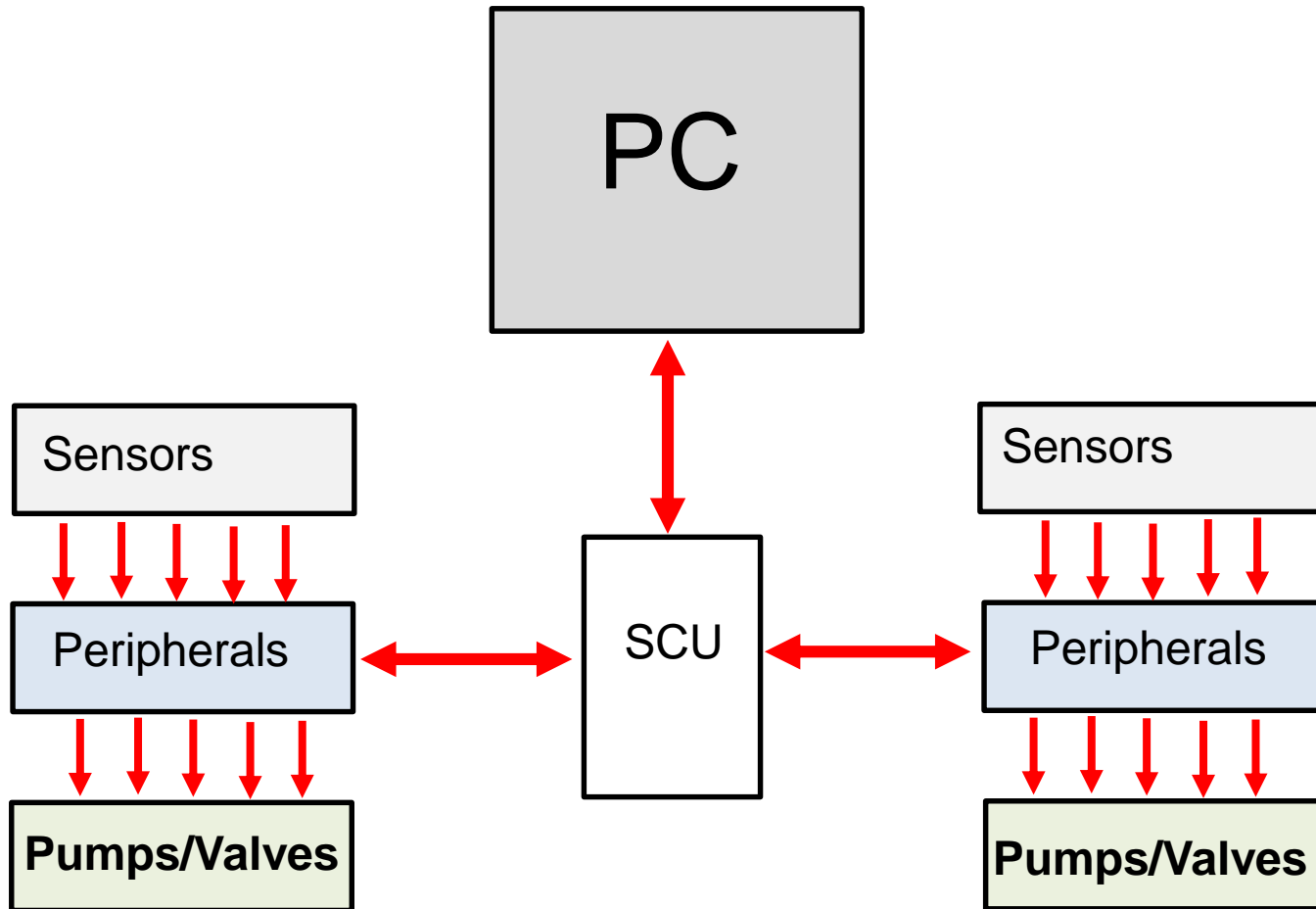
Quality Assurance

How does the Advantage Plus AER provide improved Quality Assurance?

3) Custom hookup connectivity monitoring

- The Advantage AER utilizes a hookup that connects to each channel individually to deliver water, detergent, disinfectant, alcohol & air during the cycle.

- Barcode scanning of hookup block & endoscope allows for confirmation that the correct hookup/parameter set is being used for the endoscope

- The Advantage checks at the beginning of each stage of the cycle to ensure that the endoscope hookup to each individual channel has not become disconnected AND that none of the channels in the endoscope are blocked

- Once the system identifies that the hookup is no longer connected to the endoscope or a channel is blocked and preventing flow, the unit alarms to inform the operator as to which channel is affected.

MEDIVATORS
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Failed cycle due to the hookup block not being connected properly

Errors are color coded with description

20820102 - Right - Single-use - Rapicide PA

Program	Endoscope disinfection
Endoscope	0AQE014
Parameter set	1-25-698 A
Operator	Engineer, Engineer
Cycle	182

Status   **Failure**

Endoscope

Expected completion **15:43**   Time remaining **00:23:25**

Volume   2 ml
Basin temperature 34.7°

2.4   Flush rinse

Time	Code	Description
15:19:47	S—117	Air channel disconnected

Min. contact time : 5 min.   Serial number : 20820102   25 January 2010   3:20 PM

2:04:37 PM   0   Post rinse
2:04:40 PM   9   Disinfection
2:13:07 PM   9.6
(-300) SCU F-047/S095 (Channel: Elevator)
2:17:49 PM   9
Basin temperature [°C] = 33.10
2:17:49 PM   0

Block not pressurized or not connected	S-106

Cause: The endoscope is not properly connected.
Action: Stop the machine and check if the leak test connections and the terminal block are properly placed. Connect the leak test and block again. Start the program.
Cause: Machine fault.
Action: Consult the maintenance department.

Quality Assurance

How does the Advantage Plus AER provide improved Quality Assurance?

4) *Data Management Software*

- PC-based system for complete monitoring and storage of all cycle parameters including: ***disinfectant cycles, errors & faults, cycle counts, water line & filter disinfection***

- The cycle data is easily exported in a CSV or XLS format for quick for analysis or cross referencing with patient chart or instrument tracking systems

- Mirrored hard drives for immediate data back-up

- Data Backup of the endoscope inventory & cycle databases can be done to the network, CD ROM or USB

- Select / sort cycle data by set criteria – Example: Report showing all patients who were examined with XX scope from October 1, 2007-December 31, 2007

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Quality Assurance - Reporting

Endoscope serial number	Endoscope Type	# USES
1010263	Bronch	6
1211386	Bronch	8
1311927	Bronch	2
2200091	D Colono	4
2303829	Gastro	34
2400245	ERCP	2
2400246	ERCP	19
2600796	Gastro	5
2603901	Colono	75
2603907	Colono	77
2603909	Colono	99
2603912	Colono	45
2603914	Colono	73
2603916	Colono	69
2603917	Colono	66
2604711	Gastro	35
2604765	Gastro	63
2604768	Gastro	51
2604787	Gastro	49
2700059	Enteroscope	6
2811391	Loaner	2
2900612	ERCP	7

Number of uses by Serial # of Endoscope
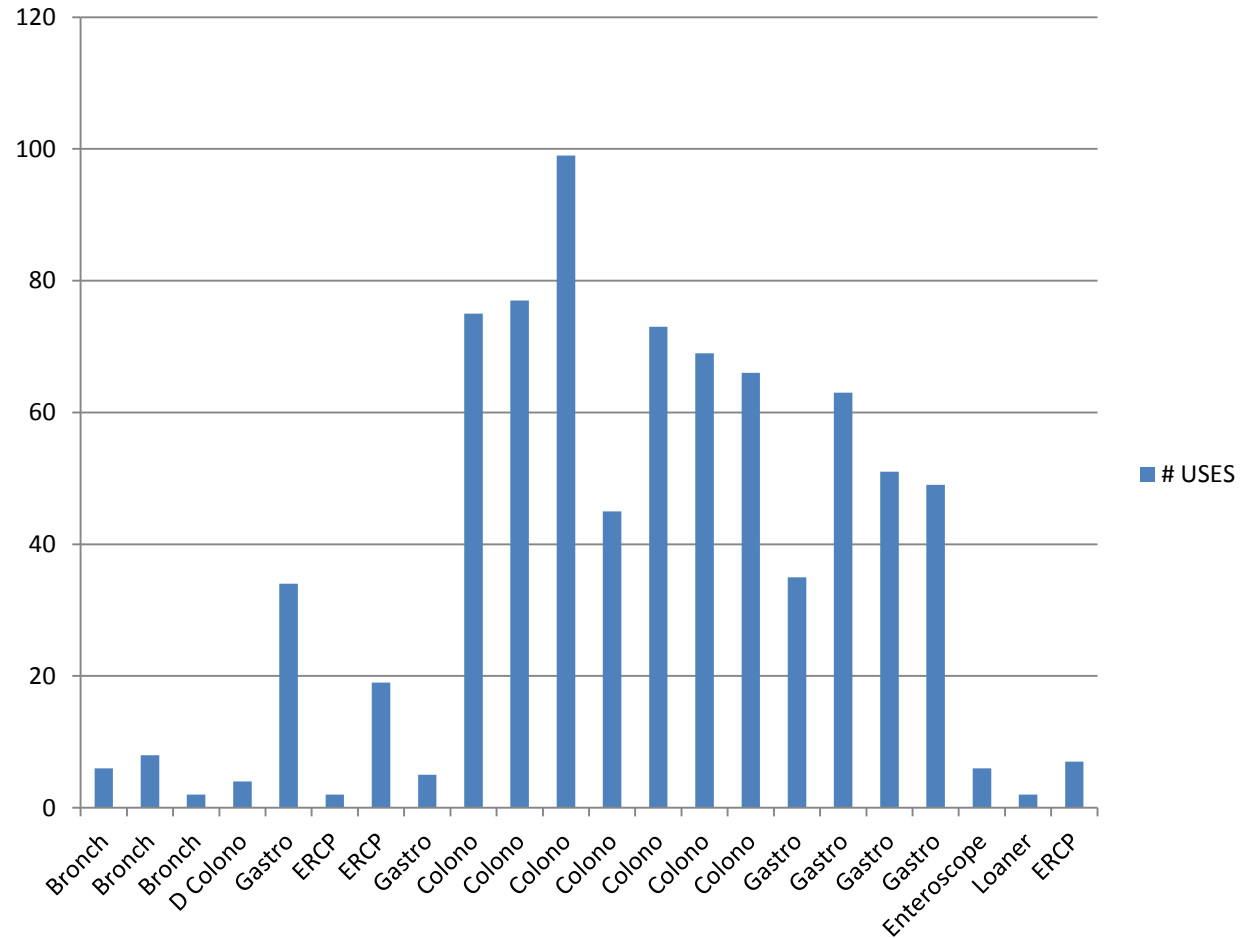
Quality Assurance - Reporting

Number of Cycles loaded & unloaded by user

Load ID	# Uses
Biomed	26
Dorothy	114
Joy Anna	62
Karrie	214
Linnett	319
Mary	278
Nancy	174
Roxanne	175
Selina	112
Sue	142

- Biomed
- Dorothy
- Joy Anna
- Karrie
- Linnett
- Mary
- Nancy
- Roxanne
- Selina
- Sue
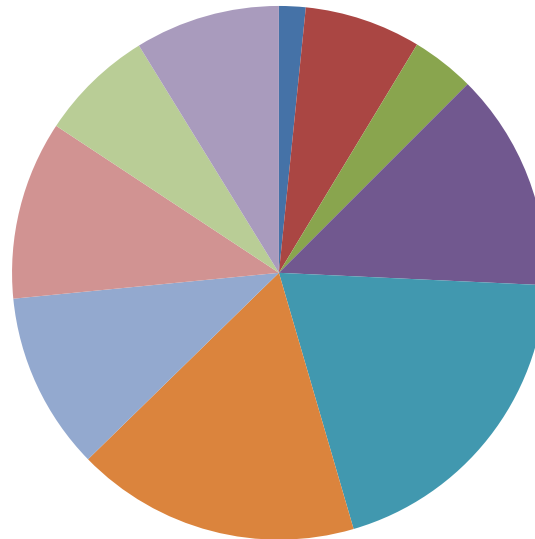
The data management software also provides the ability to analyze staff workflow as shown above

ADV - Management (V3.0.0.22)

General

- Cycles
- Events
- Endoscopes
- Users
- Physicians/Assistants

Cycle reports

✕ ⊡   Cycle summary of machine 7777 - Right, cycle number 602   🖨

Disinfection cycle log

Machine serial number	: 07777, Right
Location	: .
Endoscope	: 3
Endoscope ID	: TJF-M20
Patient	:
Physician	: ()
Assistant	: ()
Program	: 1-24-698 A
Cycle number	: 602
Cycle completion date	: 5/14/2010
Operator loading	: Production
Operator unloading	: Production
MRC validation	: Passed

CYCLE : PASS

```
11:47:04 AM          Endoscope disinfection
11:47:04 AM    1     Leak  test
11:48:03 AM    2     Flush rinse
11:53:43 AM    3     Wash
11:58:00 AM    3
 Detergent contact time = 00:02:06
11:58:00 AM    3
 Basin temperature [°C] = 33.10
11:58:00 AM    4     Flush rinse
11:58:01 AM    5     Post rinse
12:04:43 PM    5
 Rinse contact time = 00:02:32
12:04:43 PM    5
 Basin temperature [°C] = 34.60
12:04:43 PM    6     Wash
12:04:44 PM    7     Flush rinse
12:04:45 PM    8     Post rinse
12:04:45 PM    9     Disinfection
12:14:41 PM    9
 Disinfectant contact time = 00:05:15
12:14:41 PM    9
 Basin temperature [°C] = 35.00
12:14:41 PM    10    Flush rinse
12:16:28 PM    11    Post rinse
12:16:29 PM    12    Post rinse
12:16:30 PM    13    Final rinse
12:21:29 PM    13
 Rinse contact time = 00:02:53
12:21:29 PM    13
 Basin temperature [°C] = 35.00
12:21:29 PM    14    Vent
12:26:04 PM    14
 Alcohol delivered
12:26:05 PM          Cycle end
```

Cycle Review screen
"Print out" view

Endoscope Integrity

How does the Advantage Plus maintain the Integrity of my endoscopes?

1) Continuous Leakage Test

- The Advantage Plus reprocessor performs a leak test in the endoscope prior as the first stage of the cycle for 70 seconds

  - Once the leak test has passed, the pressure in the endoscope is reduced but positive pressure is maintained throughout the cycle and monitored to ensure no channels are compromised during the cycle

Leak tester is specific to each endoscope manufacturer

MEDIVATORS
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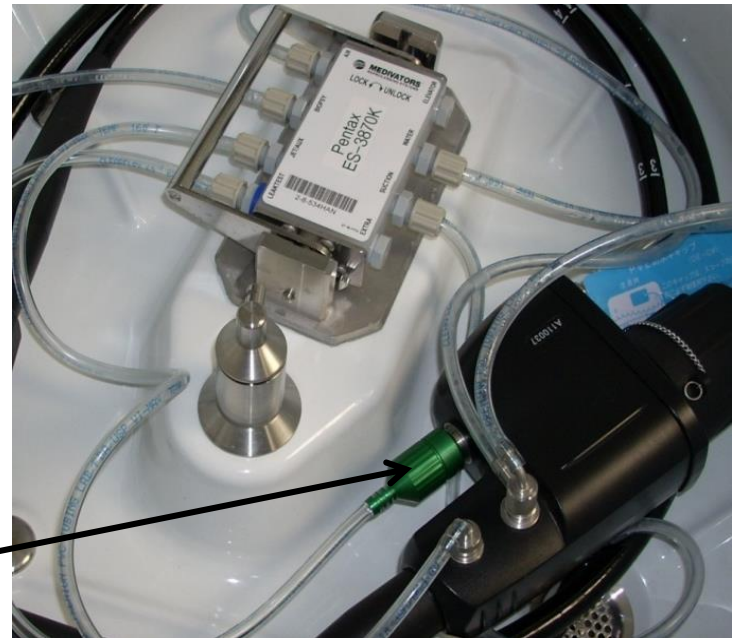
Endoscope Integrity

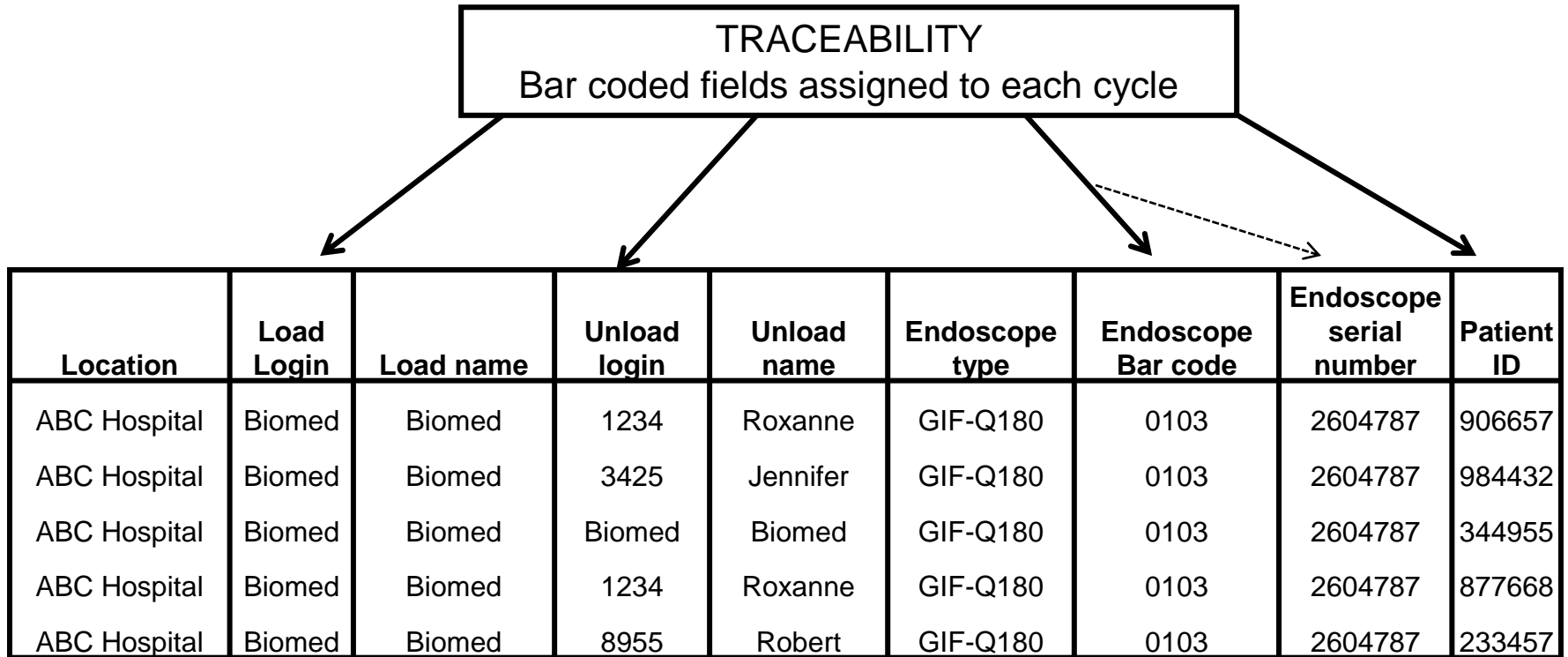How does the Advantage Plus maintain the Integrity of my endoscopes?

2) Traceability

- Barcoding system eliminates input errors for ID entry of operators, patients & physicians

- Storing information error free allows for easy tracking of scope serial number directly to patient ID through the entire process of disinfection

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General

Cycles
Events
Endoscopes
Users
Physicians/Assistants

Endoscopes

Endoscopes

Code	Endoscope type	Connection block	Brand	Barcode	Type number	Serial number	Internal ID	Tag ID	Status	Memo
1	PCF-H180AL	2-8-611	OLYMPUS		3	2801575	0001		In service	
2	PCF-H180AL	2-8-611	OLYMOUS		3	2801733	0002		In service	
3	PCF-H180AL	2-8-611	OLYMPUS		3	2801808	0003		In service	
4	PCF-H180AL	2-8-611	OLYMPUS		3	2801739	0004		In service	
5	PCF-H180AL	2-8-611	OLYMPUS		3	2801742	0005		In service	
6	PCF-H180AL	2-8-611	OLYMPUS		3	2801737	0006		In service	
7	PCF-H180AL	2-8-611	OLYMPUS		3	2801718	0007		In service	
8	GIF-H180	2-8-511	OLYMPUS			2807778	0008		In service	
9	EC-250HL	2-8-522	FUJI			3C214D020	0009			
10	EG-450WR5	2-8-421	FUJI			IG300A400	0010			
88	EG-3830TK	2-8-633	Pentax	101	Double Channel Ga	E110088	4246		In service	
99	999	1-9-001	Simulator	99	simulator	999	999	T99	In service	
167	EC-3490LK	2-8-537	Pentax	122	Conoscope	A110167	8101		In service	
168	EC-3490LK	2-8-537	Pentax	121	Colonoscope	A110168	8102		In service	
259	EG-3430K	2-8-535	Pentax	105	Gastroscope	E110259	4248		In service	
260	EC-3838TLK	2-8-633	Pentax	114	Colonoscope	E110260	6842		In service	
325	EC-3872TLK	2-8-630	Pentax	120	Colonoscope	A110325	7155		In service	
327	EC-3872TLK	2-8-630	Pentax	115	Colonoscope	A110327	7007		In service	
328	EC-3872TLK	2-8-630	Pentax	116	Colonoscope	A110328	7006		In service	
335	EC-3872TLK	2-8-630	Pentax	118	Colonoscope	A110335	7154		In service	
336	EC-3872TLK	2-8-630	Pentax	119	Colonoscope	A110336	7159		In service	
346	EC-3872TLK	2-8-630	Pentax	117	Colonoscope	A110346	7153		In service	
379	EC-3830TLK	2-8-633	Pentax	111	Colonoscope	E110379	4249		In service	
390	EC-3830TLK	2-8-633	Pentax	112	Colonoscope	E110390	4242		In service	
580	EG-2730K	2-8-431	Pentax	103	Gastroscope	E110580	4243		In service	
584	EG-2730K	2-8-431	Pentax	104	Gastroscope	E110584	4247		In service	
644	EC-3430LK	2-8-532	Pentax	113	Colonoscope	E110644	4250		In service	
648	EG-2730K	2-8-431	Pentax	102	Gastroscope	E110648	4245		In service	
1443	EG-3430K	2-8-535	Pentax	107	Gastroscope	B11443	6845		In service	
1455	EG-2930	2-8-431	Pentax	106	Gastroscope	B11455	6846		In service	
1781	EG-2970K	2-8-534	Pentax	109	Gastroscope	A111781	7160		In service	
1782	EG-2970K	2-8-534	Pentax	108	Ga					
1783	EG-2970K	2-8-534	Pentax	110	Ga					

Status notes if scope is "In service"

Endoscope types

Endoscope type	Number of channel	Leak test	Connection block
EG-2730K	4	1	2-8-431
EG-2930	4	1	2-8-431
EG-2970K	5	1	2-8-534
EG-3430K	5	1	2-8-535
EG-3830TK	6	1	2-8-633
EG-450WR5	5	1	2-8-421
GIF-H180	6	1	2-8-511
PCF-H180AL	7	1	2-8-611

Parameter sets

Parameter set	Parameter set comment

Endoscope Integrity

How does the Advantage Plus maintain the Integrity of my endoscopes?

> **TRACEABILITY**
> Bar coded fields assigned to each cycle

Location	Load Login	Load name	Unload login	Unload name	Endoscope type	Endoscope Bar code	Endoscope serial number	Patient ID
ABC Hospital	Biomed	Biomed	1234	Roxanne	GIF-Q180	0103	2604787	906657
ABC Hospital	Biomed	Biomed	3425	Jennifer	GIF-Q180	0103	2604787	984432
ABC Hospital	Biomed	Biomed	Biomed	Biomed	GIF-Q180	0103	2604787	344955
ABC Hospital	Biomed	Biomed	1234	Roxanne	GIF-Q180	0103	2604787	877668
ABC Hospital	Biomed	Biomed	8955	Robert	GIF-Q180	0103	2604787	233457

Endoscope Integrity

How does the Advantage Plus maintain the Integrity of my endoscopes?

3) Low temperature, low concentration disinfectant – Rapicide PA

- High level disinfectant that has an effective concentration of 0.1% peracetic acid and 0.18% hydrogen peroxide

- Rapicide PA is effective at **30°C** and is guaranteed to not compromise endoscope integrity

Minntech provides a 100% Guarantee of Material Compatibility

The Rapicide PA has a 5 minute contact time to achieve high level disinfection and contains emulsifiers with corrosion inhibitors to protect endoscope surfaces even at the low temperature, low concentration and low 5 minute contact time.

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Infection Control

How does the Advantage Plus meet Infection Control Standards?

1) Self-disinfection

- Programmable cycle ensures **all water pathways and filters** are terminally disinfected

- The Advantage Plus meets the newest ISO 15883-4:2008 (Washers-disinfectors Part 4) standard. This standard requires that all rinse water delivered to the washer / disinfector contain no more than 10cfu per 100mL post waterline disinfection

- All water is removed from the hoses and reservoirs after each run to avoid the formation of unwanted bacteria

- Pre-filtration system allows for absolute bacterial retention down to 0.1μ in size

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Infection Control

How does the Advantage Plus meet Infection Control Standards?

2) Single-shot Disinfectant – Rapicide PA

- High level disinfectant that has an effective concentration of 0.1% peracetic acid and 0.18% hydrogen peroxide with a 5 minute contact time

- Rapicide PA is effective at 30°C or 20°C* and is guaranteed to not compromise endoscope integrity – *Medivators provides a 100% Guarantee of material compatibility*

- Single-shot chemistry is diluted into a weak acid at a neutral pH and is safe for the environment

Use conditions vary by country

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Infection Control

How does the Advantage Plus meet Infection Control Standards?

3) Hands-Free Operation

- The foot switch operation of the lid eliminates infection control issues associated with handling the outer components of the reprocessor with contaminated personal protective equipment / endoscope

Efficiency

How does the Advantage Plus improve Efficiency & Compatibility?

1) Asynchronous reprocessing

- The Advantage Plus is configured with 2 separate basins to allow the user to load 1 endoscope at a time and start the two cycles independent from one another

- By starting cycles independent of one another and a 28 minute cycle time, the endoscope inventory is utilized more efficiently

Efficiency

How does the Advantage Plus improve Efficiency & Compatibility?

1) Networking capability

- The Advantage Plus can be networked to another Advantage Plus, a local PC, a local server or a centralized server

- Networking provides for centralized cycle log data storage and control

  - Easy software upgrades and changes can be completed once with a network, versus individually for each machine

  - Adding endoscopes, parameter sets and operators is easier

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Compatibility

How does the Advantage Plus improve Efficiency & Compatibility?

2) Compatibility

- The Advantage Plus is compatible with the most diverse line of flexible endoscopes in the market including Pentax, Olympus, Fujinon, Storz, Wolf, Gyrus & ACMI

- The generous basin size and wide range of endoscope hookups have been designed to facilitate EUS, EBUS, & many OR endoscopes

- Also compatible to reprocess soak-only devices and semi-critical rigid scopes and probes

OSHA

How does the Advantage Plus impact Occupational Safety & Health?

1) Ergonomics

- The Advantage Plus is designed for upright loading that eliminates the need to bend or lean over the AER in order to load the endoscope into the unit

- The Advantage Plus is designed so that the unit is angled up toward the back of the basin to prevent the operator from having to reach or bend down to load the endoscope

42"

39"
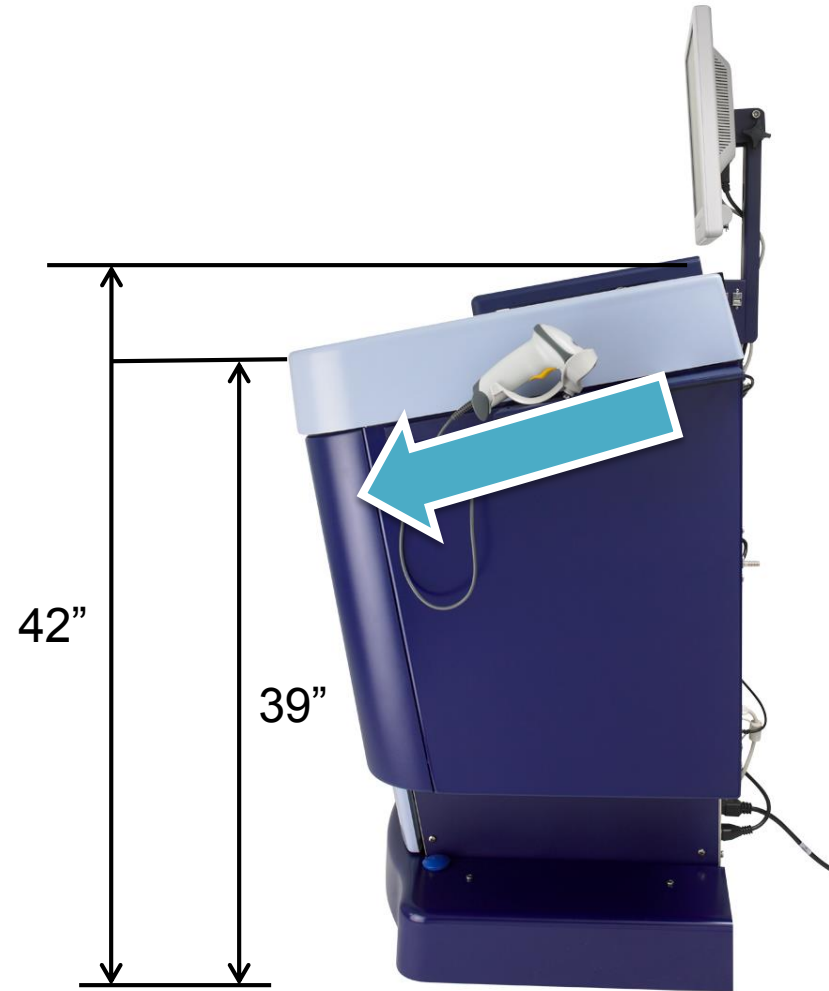
OSHA

2) *Vapor Management System of HLD Rapicide PA*

- The Advantage Plus unit is a completely closed system that requires no vapor management for user safety

- Air exchange requirement for endoscope reprocessing suites 10-12 per hour –recommend all AERs are placed with Vapor Management and the Advantage Plus has 2 options:

  - Active Vapor Management Carbon filtration unit attached to the back
  - Passive Vapor Management – vent attached to hospital HVAC system

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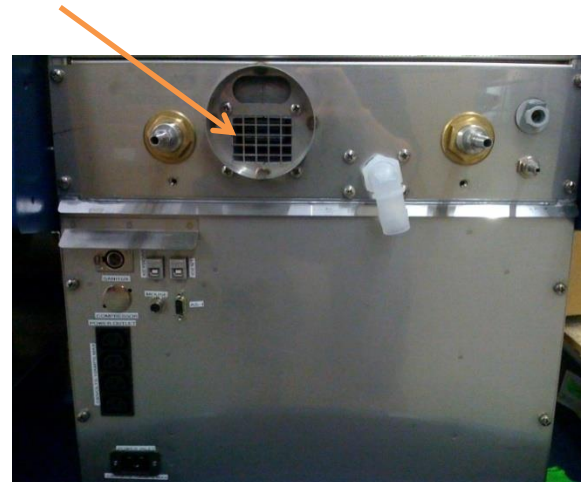
OSHA

How does the Advantage Plus impact Occupational Safety & Health?

3) Single-shot chemistry – Rapicide PA

- The Advantage Plus unit utilizes Rapicide PA chemistry that is a 5L concentrate of Part A and Part B (acid & buffer)

- The Part A & Part B are dosed by the Advantage Plus unit each cycle and require no user handling or reloading in between cases

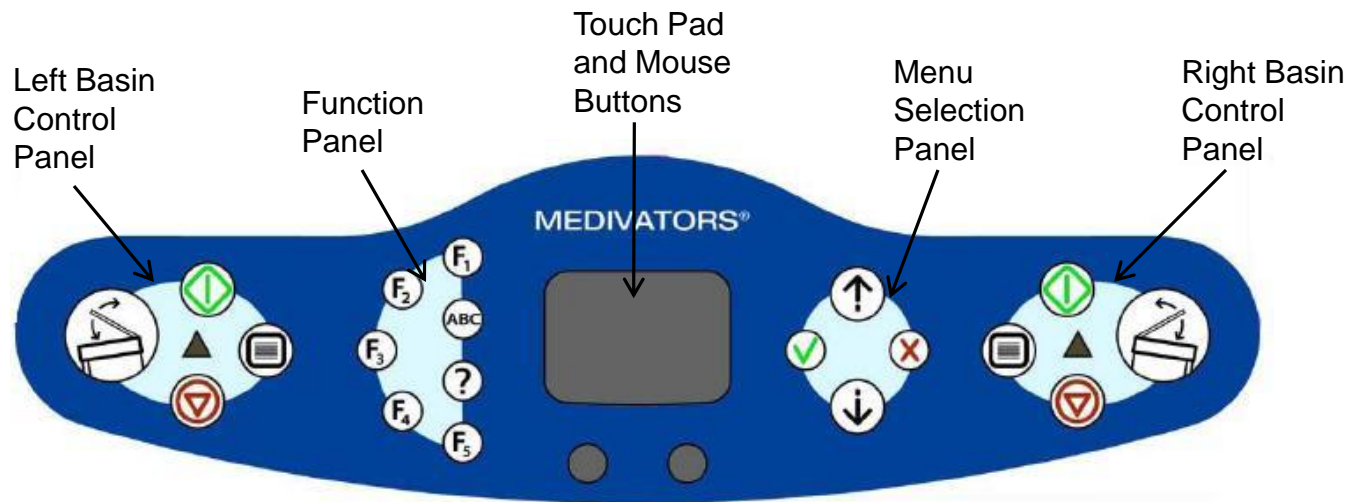- After 22 cycles, the Part A and Part B component containers are changed

Service

How does the Advantage Plus improve Service & Uptime?

1) Ease of Use

- The Advantage Plus unit is user-friendly and despite the fact that it is based upon a PC, the unit is quite basic and integrates well with users who are used to a push button AER concept

- Barcode scanner makes data entry easy

Touch Pad and Mouse Buttons

Left Basin Control Panel

Function Panel

Menu Selection Panel

Right Basin Control Panel

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Service

2) Remote Diagnostics

- The Advantage Plus unit is the first AER designed to provide remote diagnostics and repair capabilities via an internet connection

- Once connected, our service professionals can perform many common corrective procedures without delay and costs associated with travel

- The Advantage Plus system can be operated and configured from a remote location, systems can be monitored for performance evaluation or failures & operators can be assisted with reprocessing cycle errors or bar code updates

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