



# BD BodyGuard™ T Syringe Pump

Evolution from CME T34™ Ambulatory syringe driver



The intent of this document is to explain evolutions from CME T34™, CME T34™ 3<sup>rd</sup> Edition to the New BD BodyGuard™ T

**BD BodyGuard™ T key changes versus CME T34™ include:**

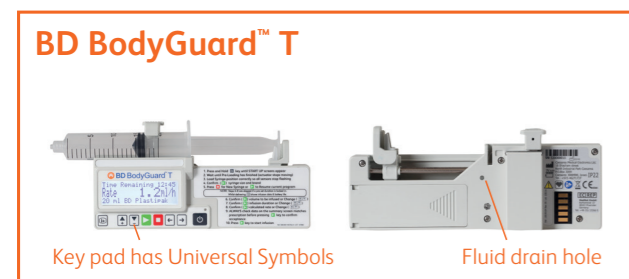
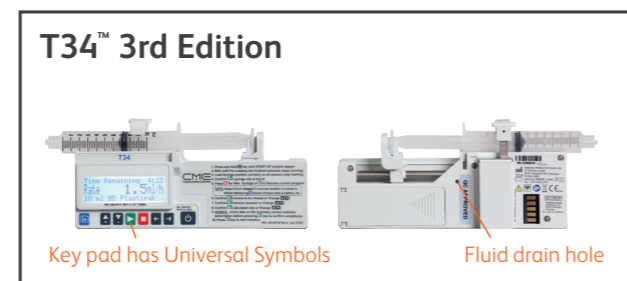
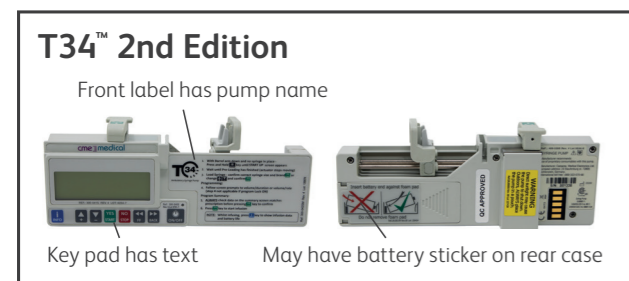
- Pump name to BD BodyGuard™ T
- BD Branded labeling
- Reference number: 999-103BDEN for English  
999-103BDSE for Swedish
- New packaging that include pump, DFU, QRG
- Removal of the patient guide
- Battery life enhancement
- Extra level of security for Bolus enabling function
- Near End of Infusion alarm activated 15 min prior the end of infusion
- Removal of KVO function

**Alarms**

BD BodyGuard™ T syringe pump - alarm tones and priorities

Description	Alarm Type	Audio Signal as per 60601-1-8	Visual Signal as per 60601-1-8			
Down occlusion	<b>High Priority Alarm</b> Requires immediate user response	<b>High Priority</b> Volume min. 45 dBA approx	<b>RED flashing visual</b> <b>Operation LED flashes RED</b>			
End battery						
End of infusion						
Syringe displaced during infusion						
Restart pump Switch off and on ERROR XX						
Pump paused too long	<b>Low Priority Alarm</b> Requires user awareness	<b>Low Priority</b> <b>2 or 3 pulses</b> Volume min. 45 dBA approx	<b>YELLOW solid visual</b> <b>Operation LED solid YELLOW</b>			
Low battery						
Near end						
Bolus started/completed	<b>Information Signal</b> Provides information that may or may not require actions from clinicians	<b>1 or 2 pulses</b>	<b>No visual</b>			
Keypad lock/unlock						
Syringe plunger at the limit of travel						
Syringe loaded						
Purge started/end						
Power on/off						
Infusion started/resumed/ stopped by user						
Service interval alert						
9V battery power failure				Backup alarm	<b>Buzzer</b>	<b>No visual</b>
Alarm output volume failure				Backup alarm	<b>Buzzer</b>	<b>RED flashing visual</b> <b>Operation LED flashes RED</b>

**Main visual changes**



**Default Syringe Brands Configured for Use**

Manufacturer	Syringe Sizes (ml) T34™ 2nd Edition							Syringe Sizes (ml) T34™ 3rd Edition and BD BodyGuard™ T						
	-	3	5	10	20	30	50	-	3	5	10	20	30	50
BD Plastipak	-	3	5	10	20	30	50	-	3	5	10	20	30	50
Braun Omnifix	2	-	5	10	20	30	50	2	-	5	10	20	30	50
Monoject	-	-	6	12	20	35	50	-	3	6	12	20	35	-
Codan/Once	2.5	-	5	10	20	30	50	-	-	-	10	20	30	50
Terumo	-	-	5	10	20	30	50	-	-	5	10	20	30	50
Nipro	-	-	-	-	-	-	-	-	-	5	10	20	30	50

It is possible to disable default syringes from memory. This procedure is not detailed in the DFU as it should only be undertaken by trained, certified service centres or biomedical engineers. Please consult a biomed engineer or your local T34™/BD BodyGuard™ T syringe pump supplier should this need arise.

Category	3rd Edition versus 2nd edition	BD BodyGuard™ T versus CME T34™
Battery life	Battery life update: 25h @ 1ml/h 20h @ 5ml/h Always check battery power prior to each infusion	Battery life update: 50h @ 1ml/h 35h @ 5ml/h Always check battery power prior to each infusion
Time to alarm before end of infusion	Fixed to 3 min before end of infusion	Fixed to 15 min before end of infusion
Low battery alarm before end of battery	Activated hours before end of battery alarm (depending on battery brand)	Enhanced to at least 30 min before end of battery alarm (depending on battery brand)
Epidural indication - intended use	Intended use removed	Intended use removed
Immunoglobulins, biosimilar - intended use	Intended use updated to include	Intended use updated to include
Minimum flow rate	Range updated to 0.1-650ml/h	Range updated to 0.1-650ml/h
Flow rate increments	Range updated to: 0.1–10 ml/h in 0.01 ml/h increments 10–29.9 ml/h in 0.1 ml/h increments 30–49.5 ml/h in 0.5 ml/h increments 50–299 ml/h in 1 ml/h increments 300–650 ml/h in 5 ml/h increments.	Range updated to: 0.1–10 ml/h in 0.01 ml/h increments 10–29.9 ml/h in 0.1 ml/h increments 30–49.5 ml/h in 0.5 ml/h increments 50–299 ml/h in 1 ml/h increments 300–650 ml/h in 5 ml/h increments.
Bolus function	Updated to include new function	Adding 1 level of security by adding an enable/disable option in technician menu
Minimum occlusion pressure	Updated from 100mmHg to 200mmHg	100mmHg to 200mmHg
Fluid ingress - classification	IP22	IP22
Weight	Updated from 210g to 230g	230g
New connectors - battery	Update to rear assembly	Update to rear assembly
Cover labels and branding	Update to CME labels	Update to BD BodyGuard™ T labels
Rear label	Updated to comply with standards	Updated to comply with standards
KVO Rate Operation	Update to range from 2.0 ml/h to 5.0 ml/h	KVO option removed
Rear drainage	New design feature to avoid fluid accumulation	New design feature to avoid fluid accumulation
GTIN barcode labels	Updated to comply to GTIN standard	Updated to comply to GTIN standard
Packaging		New box contains pump, direction for use and quick reference guide

Clinical updates

Technical updates

Category	3rd Edition versus 2nd edition	BD BodyGuard™ T versus CME T34™
Software	Update to software	Update to software
Add primary sound self-test into boot-up process	Update to software	Update to software
Update BD BodyComm™ software for 3rd edition pump software	BD BodyComm™ v3.0 & later	BD BodyComm™ v3.2 & later
Service interval alert added (1-year period)	New default at 12 months - can be switched off in Tech. mode	New default at 12 months - can be switched off in Tech. mode
Reduce safe stop current threshold and use this threshold during travel calibration ("Pinch Hazard")	New limits	New limits
Date input order changed	Updated to date: year, month, day	Updated to date: year, month, day
RTC battery changed	Updated from disposable battery to rechargeable 3V battery	Updated from disposable battery to rechargeable 3V battery
RTC battery failure	Need to update time and date under 'Change Set Up', then to reset service due date under Tech mode.	Can update date and time when turning on the pump
Add microphone test and threshold	New alarm test during startup	New alarm test during startup
Add backup alarm test into Tech. mode	New test function in 3rd edition	New test function in 3rd edition
Add LEDs test into Tech. mode	New test function in 3rd edition	New test function in 3rd edition
Add microphone level calibration into Tech. mode	New feature in 3rd edition	New feature in 3rd edition
Keypad LED yellow colour	LED colour update from red and green to red, yellow and green	LED colour update from red and green to red, yellow and green
Part differences - hardware	Update included in TSM	Update included in TSM
Battery indication (vs voltage) was changed	Changes to battery measurement method in 3rd Edition	Battery gauge accuracy enhancement
Pressing on/off or stop key disabled the alarm	Update 3rd edition pump alarms if 9V battery is removed	Update 3rd edition pump alarms if 9V battery is removed
Bolus option	In Clinical menu	Adding 1 level of security by adding a enable/disable option in technician menu
Pump master	N/A	Allows software update via the pump serial port

For further information, contact REM SYSTEMS



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