***ACE:SRS:1***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***ACE:SRS:10***

* PUMP:SDS:60 Here are details of how the human languages are swapped around [ACE:SRS:10]
* PUMP:SVAL:300 This test validates the GUI, including human languages… blah, blah, blah [ACE:SRS:10] [ACE:SRS:100] [ACE:SRS:1000] [ACE:SRS:120]

***ACE:SRS:100***

* PUMP:SDS:70 Here are details of how the battery estimation works [ACE:SRS:100]
* PUMP:SVAL:300 This test validates the GUI, including human languages… blah, blah, blah [ACE:SRS:10] [ACE:SRS:100] [ACE:SRS:1000] [ACE:SRS:120]

***ACE:SRS:1000***

* PUMP:SVAL:300 This test validates the GUI, including human languages… blah, blah, blah [ACE:SRS:10] [ACE:SRS:100] [ACE:SRS:1000] [ACE:SRS:120]

***ACE:SRS:110***

* PUMP:SDS:40 Here are details of how the GUI works…. [ACE:SRS:110] [ACE:SRS:120]
* PUMP:SDS:50 Here are details of how the remaining insulin estimation works… include lots of math …. [ACE:SRS:110]

***ACE:SRS:120***

* PUMP:SDS:40 Here are details of how the GUI works…. [ACE:SRS:110] [ACE:SRS:120]
* PUMP:SVAL:300 This test validates the GUI, including human languages… blah, blah, blah [ACE:SRS:10] [ACE:SRS:100] [ACE:SRS:1000] [ACE:SRS:120]

***ACE:SRS:2***

* PUMP:SDS:20 Here are details of how the basal rate works …. [ACE:SRS:2]
* PUMP:SVAL:200 This test validates basal features… blah, blah, blah [ACE:SRS:2]

***ACE:SRS:5***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***ACE:SRS:6***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***AID:SRS:1***

* PUMP:SDS:30 Here are details of how the PID algorithm works …. [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]
* PUMP:SVAL:500 This test validates remaining volume estimation… blah, blah, blah [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]

***AID:SRS:10***

* PUMP:SDS:30 Here are details of how the PID algorithm works …. [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]
* PUMP:SVAL:500 This test validates remaining volume estimation… blah, blah, blah [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]

***AID:SRS:12***

* PUMP:SDS:30 Here are details of how the PID algorithm works …. [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]
* PUMP:SVAL:500 This test validates remaining volume estimation… blah, blah, blah [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]

***AID:SRS:2***

* PUMP:SDS:30 Here are details of how the PID algorithm works …. [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]
* PUMP:SVAL:500 This test validates remaining volume estimation… blah, blah, blah [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]

***AID:SRS:20***

* PUMP:SDS:30 Here are details of how the PID algorithm works …. [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]
* PUMP:SVAL:500 This test validates remaining volume estimation… blah, blah, blah [AID:SRS:1] [AID:SRS:2] [AID:SRS:10] [AID:SRS:12] [AID:SRS:20]

***BOLUS:SRS:1***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***BOLUS:SRS:12***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:400 This test validates remaining volume estimation… blah, blah, blah [BOLUS:SRS:12]

***BOLUS:SRS:2***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***BOLUS:SRS:5***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***BOLUS:SRS:6***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***BOLUS:SRS:8***

* PUMP:SDS:10 Here are details of how the bolus calculator works …. [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8] [BOLUS:SRS:12] [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6]
* PUMP:SVAL:100 This test validates bolus features… blah, blah, blah [ACE:SRS:1] [ACE:SRS:5] [ACE:SRS:6] [BOLUS:SRS:1] [BOLUS:SRS:2] [BOLUS:SRS:5] [BOLUS:SRS:6] [BOLUS:SRS:8]

***PUMP:HRD:100***

* PUMP:HTP:1100 Test 1100 [PUMP:HRD:100] {PASS}

***PUMP:HRD:1000***

* PUMP:HTP:1300 Test 1300 [PUMP:HRD:1000] {FAIL}

***PUMP:HRD:105***

* PUMP:HTP:1200 Test 1200 [PUMP:HRD:105] {PASS}

***PUMP:HRD:3330***

* PUMP:HTP:1400 Test 1400 [PUMP:HRD:3330] {PASS}

***PUMP:HRD:3350***

* PUMP:HTP:1500 Test 1500 [PUMP:HRD:3350] {NA}

***PUMP:HRS:100***

* PUMP:HRD:100 Details regarding the rechargeable Lithium Polymer Battery. [PUMP:HRS:100]
* PUMP:HTP:100 Test 100 [PUMP:HRS:100] {PASS}

***PUMP:HRS:1000***

* PUMP:HRD:1000 Details regarding the pressure sensors for use in conjunction with the ideal gas law. [PUMP:HRS:1000]
* PUMP: HTP:300 Test 300 [PUMP:HRS:1000] {FAIL}

***PUMP:HRS:103***

* PUMP:HRD:105 Details regarding the fuel gauge hardware for the lithium polymer battery. The battery charge shall be displayed to the user. [PUMP:HRS:103]

***PUMP:HRS:105***

* PUMP: HTP:200 Test 200 [PUMP:HRS:105] {PASS}

***PUMP:HRS:3330***

* PUMP:HRD:3330 Details regarding the size and weight of the pump. [PUMP:HRS:3330]
* PUMP: HTP:400 Test 400 [PUMP:HRS:3330] {PASS}

***PUMP:HRS:3350***

* PUMP:HRD:3350 Details regarding the full color touchscreen. [PUMP:HRS:3350]
* PUMP: HTP:500 Test 500 [PUMP:HRS:3350] {NA}

***PUMP:HTP:100***

* PUMP:HTR:100 Test 100 [PUMP:HTP:100] {PASS}

***PUMP:HTP:1100***

* PUMP: HTR:1100 Test 1100 [PUMP:HTP:1100] {PASS}

***PUMP:HTP:1200***

* PUMP: HTR:1200 Test 1200 [PUMP:HTP:1200] {PASS}

***PUMP:HTP:1300***

* PUMP: HTR:1300 Test 1300 [PUMP:HTP:1300] {FAIL}

***PUMP:HTP:1400***

* PUMP: HTR:1400 Test 1400 [PUMP:HTP:1400] {PASS}

***PUMP:HTP:1500***

* PUMP: HTR:1500 Test 1500 [PUMP:HTP:1500] {NA}

***PUMP:HTP:200***

* PUMP HTR:200 Test 200 [PUMP:HTP:200] {PASS}

***PUMP:HTP:300***

* PUMP: HTR:300 Test 300 [PUMP:HTP:300] {FAIL}

***PUMP:HTP:400***

* PUMP: HTR:400 Test 400 [PUMP:HTP:400] {PASS}

***PUMP:HTP:500***

* PUMP: HTR:500 Test 500 [PUMP:HTP:500] {NA}

***PUMP:PRS:1***

* ACE:SRS:1 The software shall provide a bolus feature which generates boluses in the range of 0.01 to 25 units, which an increment of 0.01 units. [PUMP:PRS:1] [PUMP:TBV:1]
* ACE:SRS:2 The software shall provide a programmable basal rate feature, with basal rates in the range of 0.001 to 15 units/hour in increments of 0.001 u/hr. [PUMP:PRS:1]
* BOLUS:SRS:1 The software shall provide a bolus calculator feature. [PUMP:PRS:1]
* BOLUS:SRS:2 The bolus size shall be estimated as the sum of the insulin needed to cover the current meal (if any) and correct down to 110 mg/dL. If the sum is negative, the bolus is aborted. [PUMP:PRS:1]
* BOLUS:SRS:5 The amount of insulin needed to cover the meal shall be estimated only when the user indicates a meal was consumed. The volume of insulin shall be estimated as the number of carbs divided by the CarbRatio. [PUMP:PRS:1] [PUMP:PRS:5]
* BOLUS:SRS:6 The amount of insulin needed to correct glucose levels shall be estimated by the following formula if and only if the glucose is greater than 110: [PUMP:PRS:1] [PUMP:PRS:3]
* BOLUS:SRS:8 The value of CorrectionBolus shall be set to zero when the glucose is between 80 and 110 mg/dL, inclusive. [PUMP:PRS:1]
* BOLUS:SRS:12 The amount of insulin needed to correct glucose levels shall be estimated by the following formula if and only if the glucose is less than 80. Please note that in this case, the dose amount is a negative number. [PUMP:PRS:1] [PUMP:PRS:8]

***PUMP:PRS:10***

* ACE:SRS:10 The software shall provide a means for the user to select between English, German, French, Spanish, and Czech. [PUMP:PRS:10]

***PUMP:PRS:100***

* PUMP:HRS:100 The pump shall include a rechargeable Lithium Polymer Battery. [PUMP:PRS:100]

***PUMP:PRS:1000***

* PUMP:HRS:1000 The pump shall include pressure sensors for use in conjunction with the ideal gas law. The gas law shall be used to estimate remaining insulin volume. [PUMP:PRS:1000]

***PUMP:PRS:103***

* PUMP:HRS:105 The pump shall include fuel gauge hardware for the lithium polymer battery. The battery charge shall be displayed to the user. [PUMP:PRS:103]

***PUMP:PRS:105***

* ACE:SRS:100 The GUI shall indicate percent battery charge. The charge shall be displayed in increments of 1%.[PUMP:PRS:105]

***PUMP:PRS:3***

* BOLUS:SRS:6 The amount of insulin needed to correct glucose levels shall be estimated by the following formula if and only if the glucose is greater than 110: [PUMP:PRS:1] [PUMP:PRS:3]

***PUMP:PRS:3330***

* PUMP:HRS:3330 The pump shall weight no more than 8 ounces dry. [PUMP:PRS:3330]
* PUMP:HRS:3340 The pump shall fit within a volume of 3” by 2” by 0.75”. [PUMP:PRS:3330]

***PUMP:PRS:3350***

* PUMP:HRS:3350 The pump shall include a full color touchscreen. [PUMP:PRS:3350]

***PUMP:PRS:4000***

* AID:SRS:1 The dosing algorithm shall include a proportional gain term. The algorithm shall allow proportional gains in the range of 0 to 2.0 in increments of 0.001 [PUMP:PRS:4000] [PUMP:DER:2]
* AID:SRS:2 The dosing algorithm shall include a derivative gain term. The algorithm shall allow derivative gains in the range of 0 to 2.0 in increments of 0.001[PUMP:PRS:4000] [PUMP:DER:2]
* AID:SRS:10 The dosing algorithm shall include an integral gain term. The algorithm shall allow integral gains in the range of 0 to 2.0 in increments of 0.001[PUMP:PRS:4000] [PUMP:DER:2]
* AID:SRS:12 The dosing algorithm shall include an integrator window to minimize limit-cycling. The window shall be settable at compile time to a range of 0.002 to 0.01 in increments of 0.001 [PUMP:PRS:4000] [PUMP:DER:2]
* AID:SRS:20 The dosing algorithm shall include anti-windup reset protection. [PUMP:PRS:4000] [PUMP:DER:2]

***PUMP:PRS:5***

* ACE:SRS:5 The software shall provide a programmable correction factor feature. The software shall support correction factors in the range of 1:10 to 1:600 u/mg/dL. [PUMP:PRS:5]
* BOLUS:SRS:5 The amount of insulin needed to cover the meal shall be estimated only when the user indicates a meal was consumed. The volume of insulin shall be estimated as the number of carbs divided by the CarbRatio. [PUMP:PRS:1] [PUMP:PRS:5]

***PUMP:PRS:6***

* ACE:SRS:6 The software shall provide a programmable carb ratio feature. The software shall support carb ratios in the range of 1:10 to 1:600 u/g. [PUMP:PRS:6]

***PUMP:PRS:8***

* BOLUS:SRS:12 The amount of insulin needed to correct glucose levels shall be estimated by the following formula if and only if the glucose is less than 80. Please note that in this case, the dose amount is a negative number. [PUMP:PRS:1] [PUMP:PRS:8]

***PUMP:RISK:10***

* PUMP:PRS:2 The pump shall limit boluses to not exceed 25 units. [PUMP:RISK:10]

***PUMP:RISK:20***

* PUMP:PRS:3 The pump shall limit boluses to not exceed 15 units/hour. [PUMP:RISK:20]

***PUMP:RISK:30***

* PUMP:PRS:8 The software shall provide a reverse correction feature for the bolus calculator. [PUMP:URS:8] [PUMP:RISK:30]

***PUMP:RISK:40***

* PUMP:PRS:105 The pump shall include fuel gauge hardware for the lithium polymer battery. The battery charge shall be displayed to the user. [PUMP:URS:103] [PUMP:RISK:40]

***PUMP:RISK:50***

* PUMP:PRS:1000 The pump shall include pressure sensors for use in conjunction with the ideal gas law. The gas law shall be used to estimate remaining insulin volume. [PUMP:URS:1000] [PUMP:RISK:50]

***PUMP:SVAL:100***

* PUMP:SVATR:100 Test 100 [PUMP:SVAL:100] {PASS}

***PUMP:SVAL:200***

* PUMP:SVATR:200 Test 200 [PUMP:SVAL:200] {PASS}

***PUMP:SVAL:300***

* PUMP:SVATR:300 Test 300 [PUMP:SVAL:300] {FAIL}

***PUMP:SVAL:400***

* PUMP:SVATR:400 Test 400 [PUMP:SVAL:400] {PASS}

***PUMP:SVAL:500***

* PUMP:SVATR:500 Test 500 [PUMP:SVAL:500] {NA}

***PUMP:URS:1***

* PUMP:PRS:1 The pump shall provide both a bolus and basal feature. [PUMP:URS:1]

***PUMP:URS:10***

* PUMP:PRS:10 The software shall provide a means for the user to select between at least five different European human languages. [PUMP:URS:10]

***PUMP:URS:100***

* PUMP:PRS:100 The pump shall include a rechargeable Lithium Polymer Battery. [PUMP:URS:100]

***PUMP:URS:1000***

* PUMP:PRS:1000 The pump shall include pressure sensors for use in conjunction with the ideal gas law. The gas law shall be used to estimate remaining insulin volume. [PUMP:URS:1000] [PUMP:RISK:50]

***PUMP:URS:103***

* PUMP:PRS:105 The pump shall include fuel gauge hardware for the lithium polymer battery. The battery charge shall be displayed to the user. [PUMP:URS:103] [PUMP:RISK:40]

***PUMP:URS:3***

* PUMP:PRS:4 The software shall provide a programmable correction factor feature. [PUMP:URS:3]
* PUMP:PRS:5 The software shall provide a programmable carb ratio feature. [PUMP:URS:3]

***PUMP:URS:3330***

* PUMP:PRS:3330 The pump shall weight no more than 8 ounces dry. [PUMP:URS:3330]
* PUMP:PRS:3340 The pump shall fit within a volume of 3” by 2” by 0.75”. [PUMP:URS:3330]

***PUMP:URS:3350***

* PUMP:PRS:3350 The pump shall include a full color touchscreen. [PUMP:URS:3350]

***PUMP:URS:4000***

* PUMP:PRS:4000 The pump shall include an automated dosing algorithm. [PUMP:URS:4000]

***PUMP:URS:8***

* PUMP:PRS:8 The software shall provide a reverse correction feature for the bolus calculator. [PUMP:URS:8] [PUMP:RISK:30]