

Advanced AID System

AID mode operates with programmed basal rates  
approved for Humalog U100 and Novo Rapid U100  
aged 6 years plus

body weight 25 to 140 kg

average total daily dose of insulin (TDD) 10 to 100 IUs

## Calculate

### Algorithm

- calculates insulin delivery by using the predicted glucose values 30 minutes in advance
- enter all conventional pump parameters to be able to use the AID mode of Control-IQ™

### additionally required pump parameters when starting AID

- body weight
- total daily dose of insulin (TDD)
  - initially of the past 14 days, then daily recalculation from the past 6 days

### AID correction dose of Control-IQ™

- delivers 60% of the calculated correction dose, max. 6 units
- calculated from: correction factor (CorrF) in personal profile + predicted glucose value in 30 minutes + insulin on board + TDD
- delivery every 60 minutes after last manual bolus administration, max 1 per hour

### AID basal rate adjustment of Control-IQ™

- max. delivery rate for automated basal rate increase is 50% of the TDD within 2 hours, max. 15 IU/h
- calculated from: glucose value + CorrF + insulin on board + predicted glucose value in 30 minutes

### Special features of Control-IQ™

- manual correction dose optional at any time
- **option of** extended bolus, limited to max. 2 hours
- AID mode can be activated immediately
- boluses can still be entered when the basal rate is switched off and any remaining boluses from an extended bolus delivery continue to be delivered

### the AID mode of Control-IQ™

- allows setting up 3 activity profiles
  - normal activity
    - $\geq 180$  mg/dl (10.0 mmol/l) automatic correction bolus
    - $\geq 160$  mg/dl to 180 mg/dl (8.9 mmol/l to 10.0 mmol/l) basal rate is increased
    - $\geq 112.5$  mg/dl to 160 mg/dl (6.3 mmol/l to 8.9 mmol/l) basal rate according to programmed BR profile
    - $\leq 112.5$  mg/dl to 70 mg/dl (6.3 mmol/l to 3.9 mmol/l) basal rate is reduced
    - $\leq 70$  mg/dl (3.9 mmol/l) basal rate is stopped
  - sleep activity
    - $\geq 120$  mg/dl (6.7 mmol/l) basal rate is increased
    - $\leq 112.5$  mg/dl (6.3 mmol/l) basal rate is reduced
    - $\leq 70$  mg/dl (3.9 mmol/l) basal rate is stopped
    - no automatic correction bolus delivery
    - recommended for a sleeping time  $> 5$  h
  - exercise activity
    - $\geq 180$  mg/dl (10.0 mmol/l) automatic correction bolus
    - $\geq 160$  mg/dl (8.9 mmol/l) basal rate is increased
    - $\leq 140$  mg/dl (7.8 mmol/l) basal rate is reduced
    - $\leq 80$  mg/dl (4.4 mmol/l) basal rate is stopped

## Adjust

### User can modify in AID mode

- insulin-to-carb ratios (meal bolus)
- basal rates with up to 6 programmed profiles
- insulin sensitivity factor (for correction dose)
- various activity profiles
- changes in glucose target ranges can be achieved by switching between activity profiles

### User cannot modify in AID mode

- active insulin time (5 hours)
- correction target of 110 mg/dl (6.1 mmol/l)
- target values/ ranges and switch-off limits in the 3 different activity ?page

s

### Revert

#### Revert to “manual mode”

- if no CGM values are given for 20 minutes, the basal rate is limited to max. 3 IU/h regardless of the pump programming
- no low-glucose suspend available in manual mode
  - cannot be added either

### Educate

#### Key education points

- **User** can make changes to many settings to improve system performance
- set sleep activity schedule for every night when sleeping longer than 5 hours
  - **tighter** target range 112.5 mg/dl to 120 mg/dl (6.2 mmol/l to 6.7 mmol/l) with no autocorrection boluses
  - switch on for children when parents go to bed
- bolus calculator autopopulates sensor glucose value
  - read bolus prompts carefully
- temporary basal rates cannot be used during Control-IQ™
  - 3 different activity profiles are available to adapt to different life situations (see above)
- extended bolus in AID mode can be programmed, but only for a maximum of 2 hours
- **4 personal profiles allow quick dose changes for increased or decreased activity, menses, etc.**

### Sensor / Share

#### Dexcom G6® Sensor

- factory calibrated sensor (manual calibration optional)
- sensor service life up to 10 days
- sensor glucose value can be used for diabetes management if sensor value and arrow are present
- sensor glucose value is automatically transferred to the bolus calculator
- glucose values can be monitored remotely via the Follow app
- automatic data storage in the cloud