Using

Variable Influenceable Period- Settings

with influences

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Example: Variable Heating and Venting strategy during day and night

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iSii ViPs and influences

- ○ Function of iSii ViPs *(Variable Influenceable Period – Settings)*
    - Easily Oversee and adjust a 24 hour Strategy in one single setting!
    - Example: control different temperatures setpoints during 24 hours , like a colder temperature during the night and a higher temperature during the day.
    - Visual mouse control: Drag and drop functionality.

- ○ Function of influences
    - Always create an optimal growing climate regarding continuously changing inside- and outside conditions
    - Example: use a different greenhouse temperature strategy according to the available radiation levels outside

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Point the mouse cursor at the influence name: the value of the measured influence is shown

iSii ViPs and influences

1. You can set 10 periods in iSii
2. Start time of each period
    1. Start time hours, minutes and before/after
    2. Relative to one type of clock
        1. Astronomic sunrise and sunset
        2. Fixed 24-hour clock
3. There are set values for every period
    °C, % RH, gr/m^3 HD, ppm CO2, etc. ….
4. Set values can be influenced
5. 9 influences are possible per ViP
6. Adjustments can differ between periods

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Influences

○ These mainly consist of measurements:
- Radiation: W/m^2, %, J/cm^2, MSc, PAR, PARsum
- Outside temperature
- Greenhouse, heating, ventilation temperature
- Windspeed/wind direction (dry, humid, cold, warm)
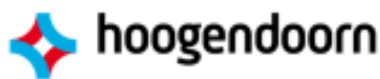- Universal-measurements and universal-ViP values
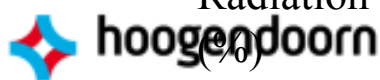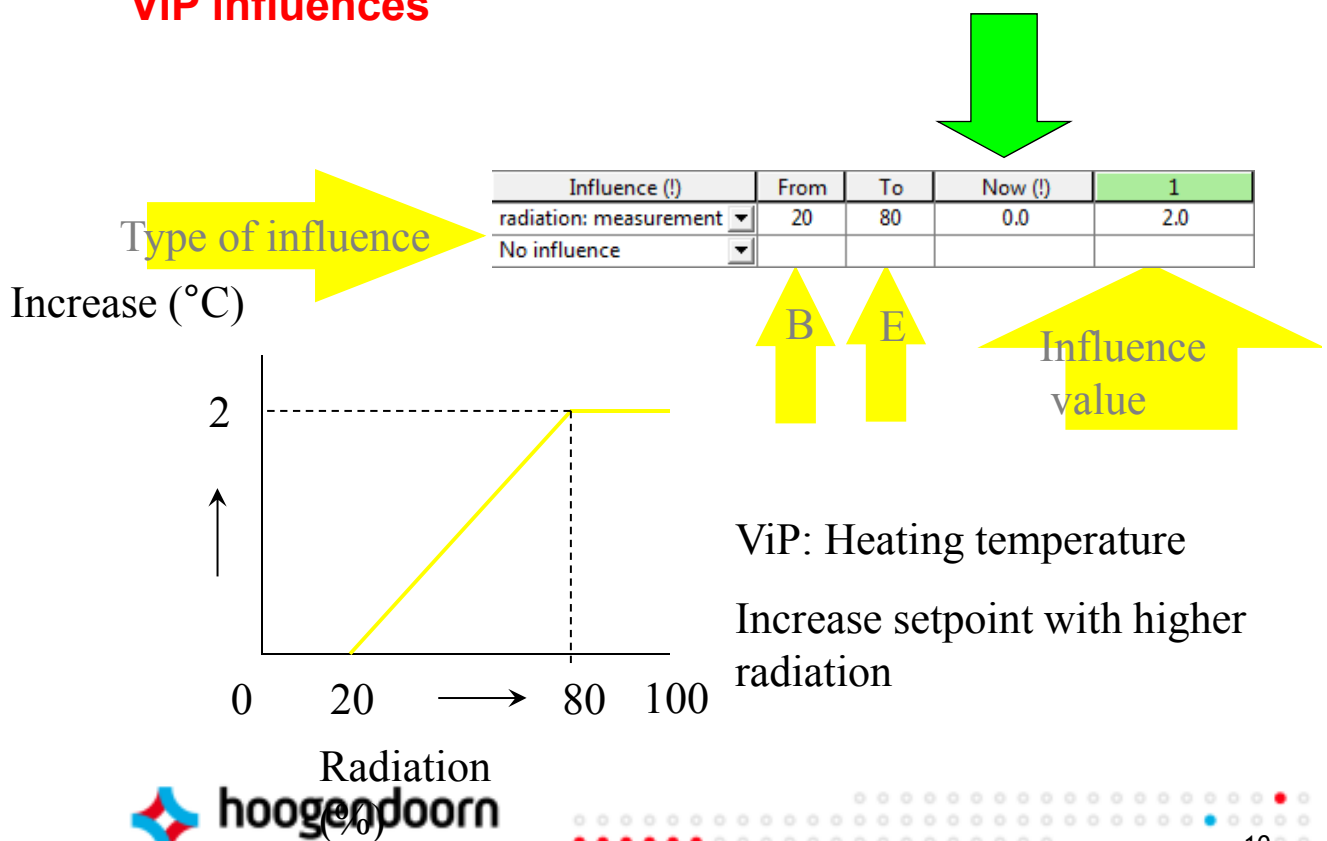
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Influences (continued)

- Deviation between measurement and setting
  - RH deviation
  - HD deviation
    - Between measured RH / HD and ViP RH / HD
  - Heating temperature deviation
  - Ventilation temperature deviation
    - Between measured greenhouse temp. and ViP heat. / vent. temp.
  - Outside temperature deviation
- Deviation between two measurements
  - Outside temperature deviation
    - Between greenhouse and outside temp.
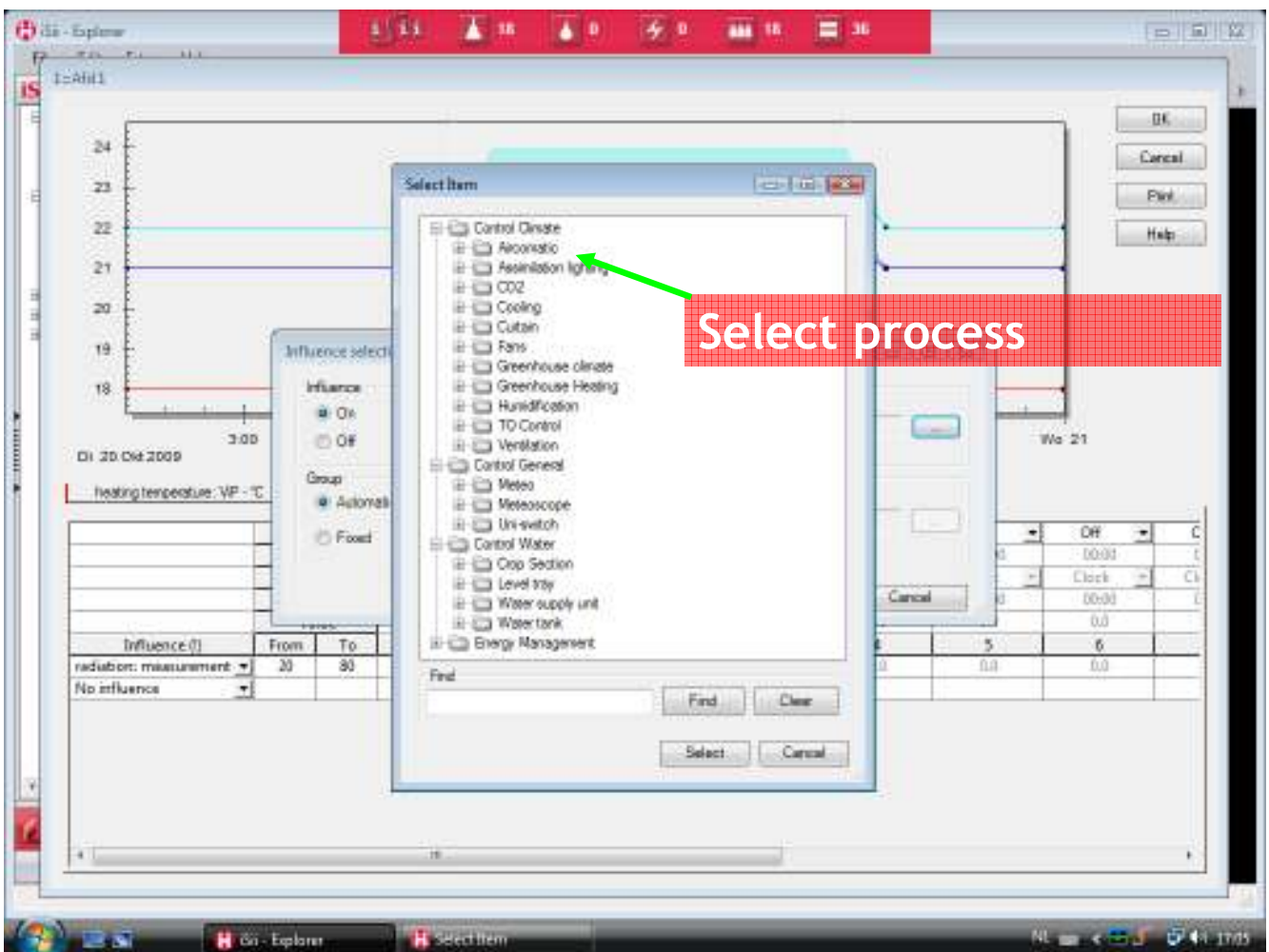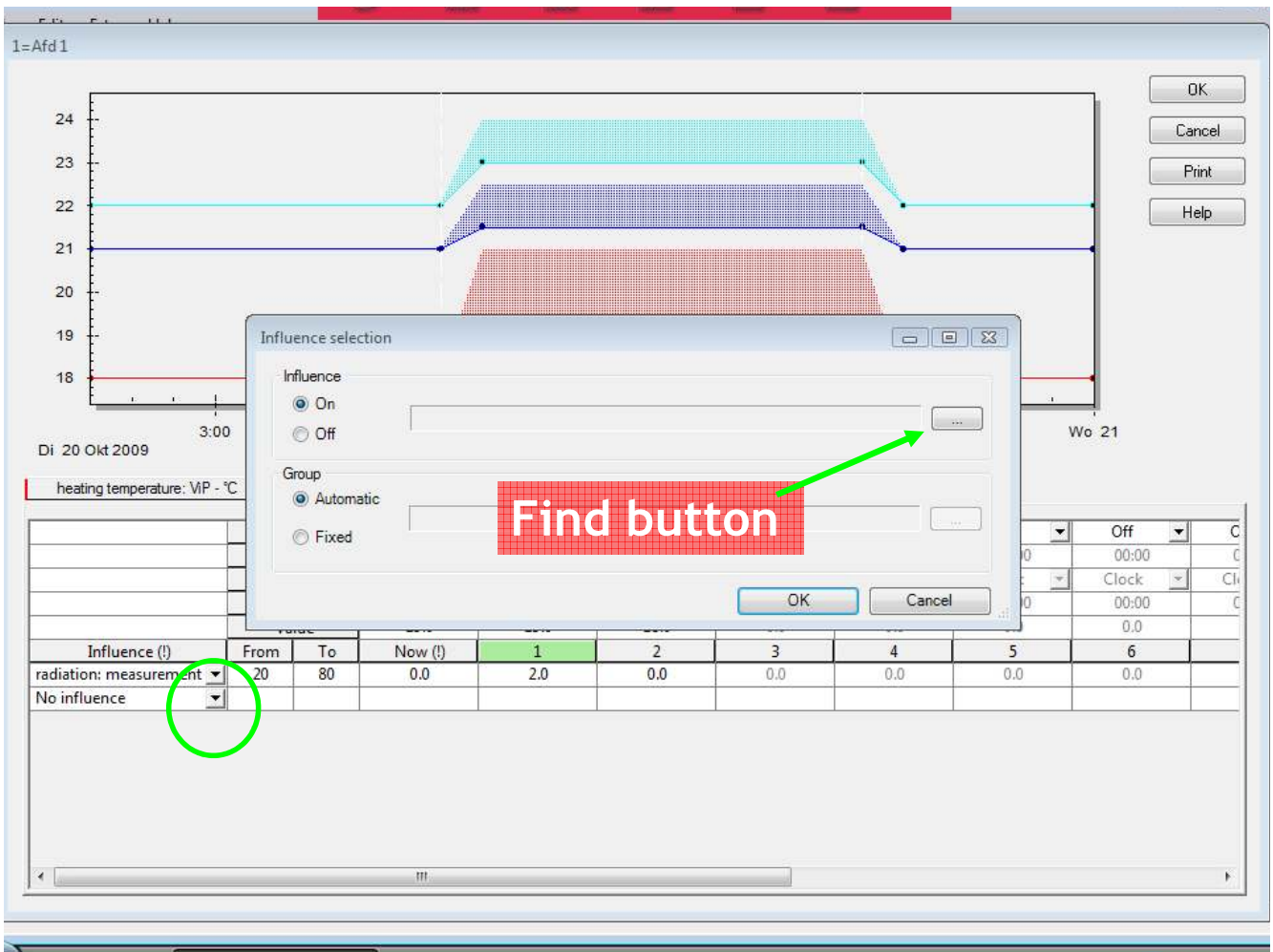
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ViP influences

Influence (!)	From	To	Now (!)	1
radiation: measurement ▼	20	80	0.0	2.0
No influence ▼				

Type of influence

B E

Influence value

Increase (°C)

2

0   20   →   80   100

Radiation (%)

ViP: Heating temperature

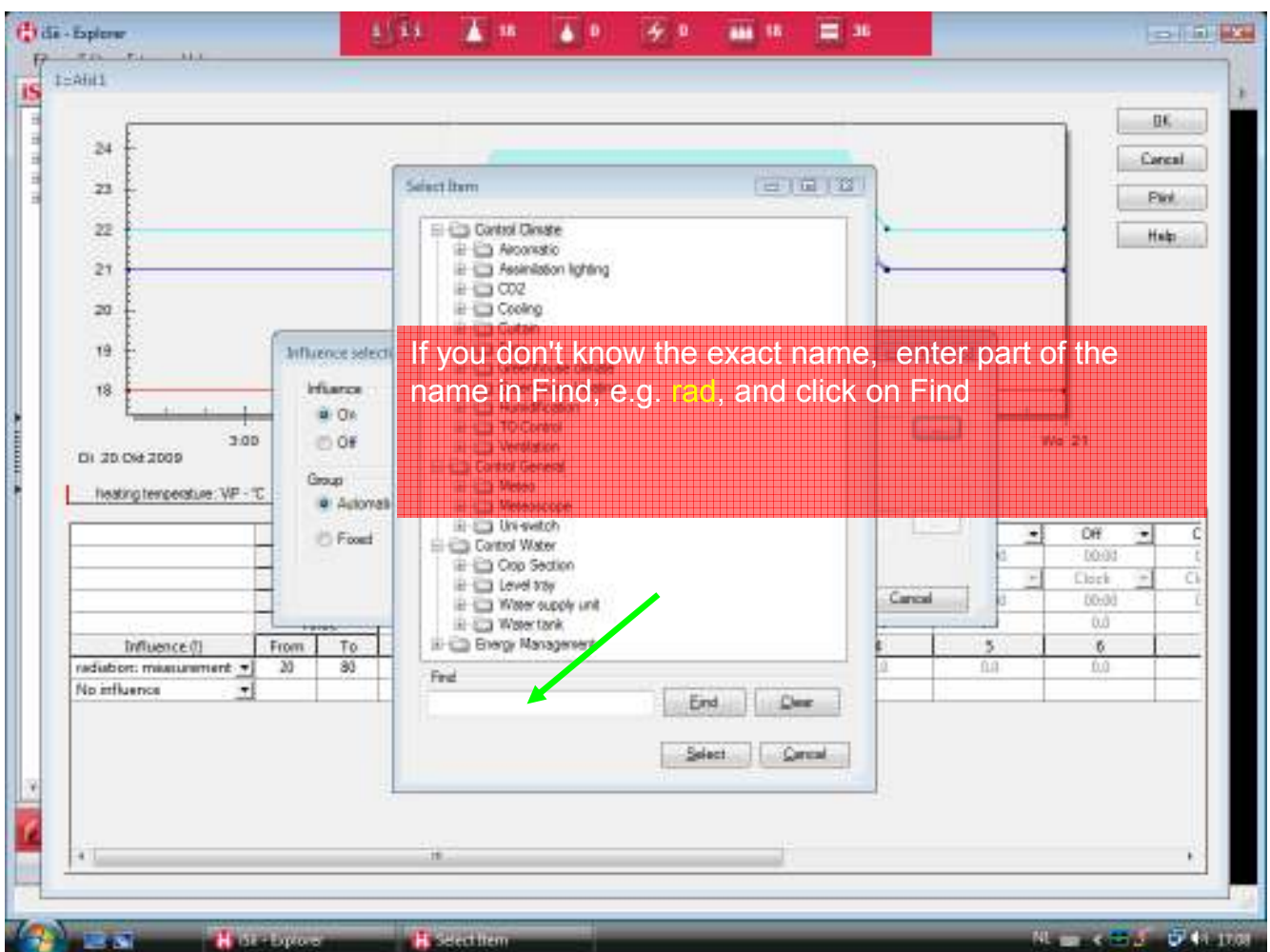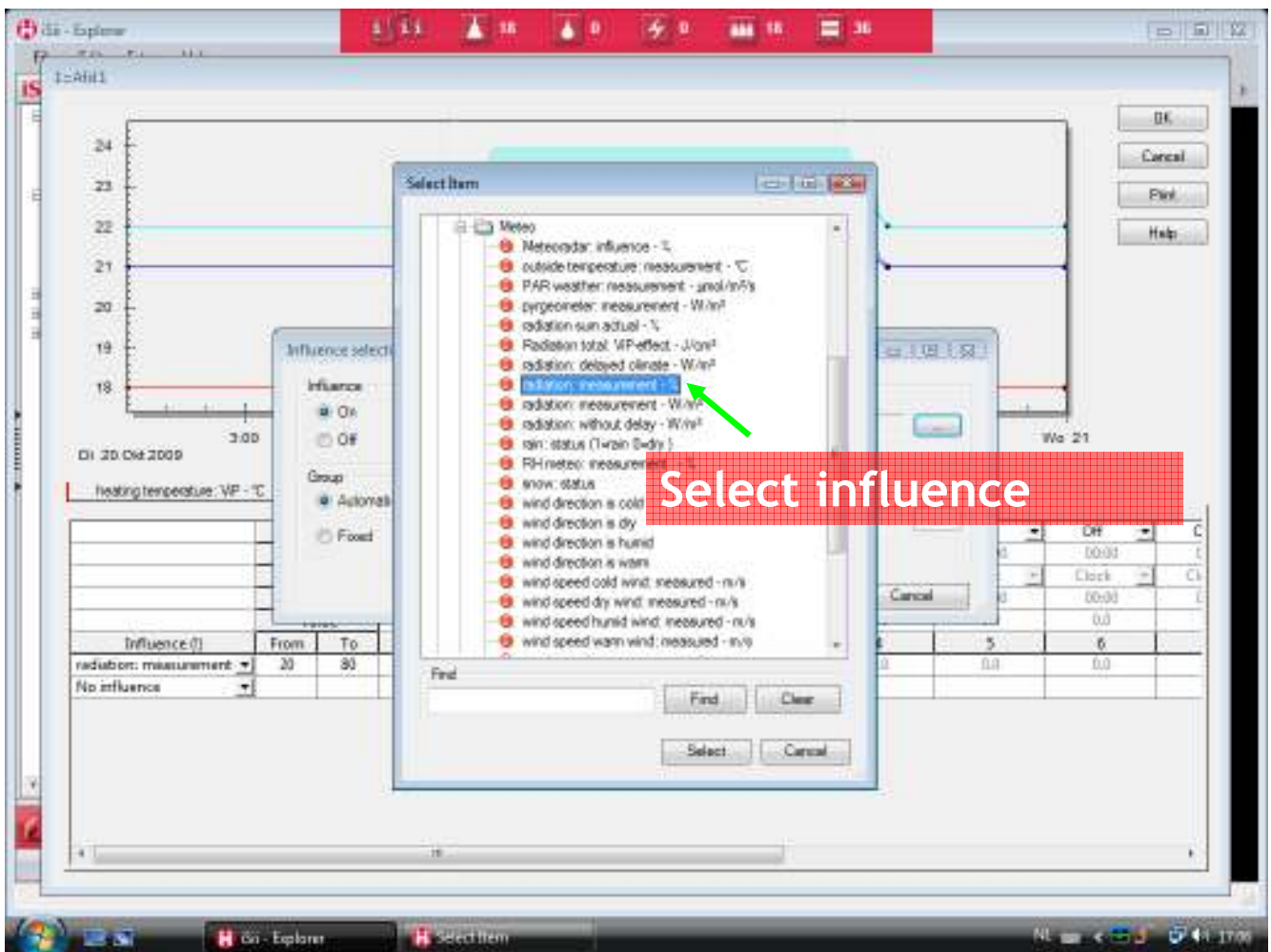Increase setpoint with higher radiation

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- ○ Click on "no influence" in the control
- ○ The "influence selection" screen appears
- ○ There are two options:
  - • Influence
    - – On/off
    - – Selection (freely selectable)
  - • Group
    - – Automatic: i.e. linked to the same group,
      e.g. minimum pipe heating gr 1, and RH from climate gr 1
    - – Fixed: i. e. select a group,
      e.g. curtain gap control gr 1 on IR camera 3
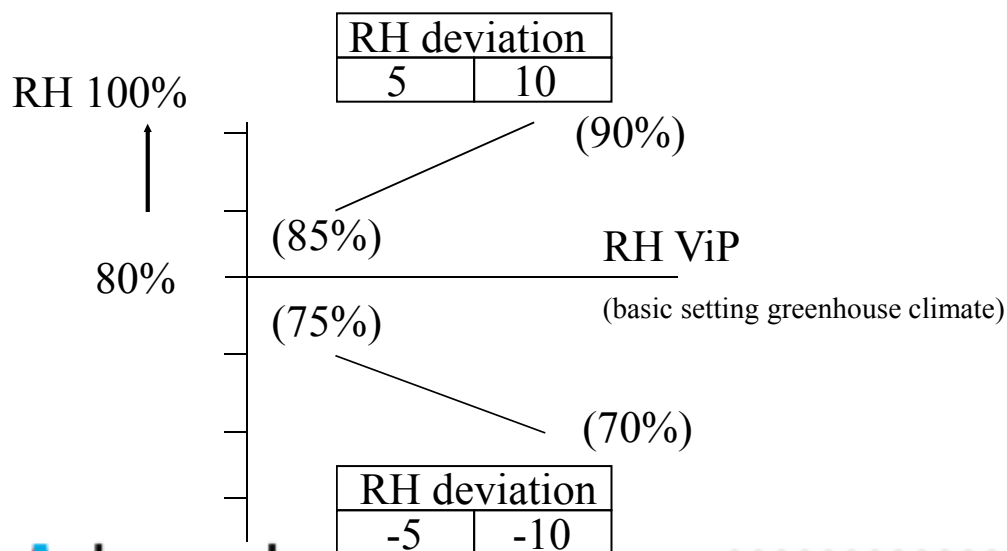   e.g. curtain energy gr 1 on additional aspirator 4

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Find button

Select process

Select influence

If you don't know the exact name, enter part of the name in Find, e.g. rad, and click on Find

Now select the required influence

Influences RH / VD (1)

○ Influence based on the deviation between "basic" RH ViP of greenhouse climate and RH measurement.

RH 100%

RH deviation	
5	10

(90%)

(85%)   RH ViP

80% — (basic setting greenhouse climate)
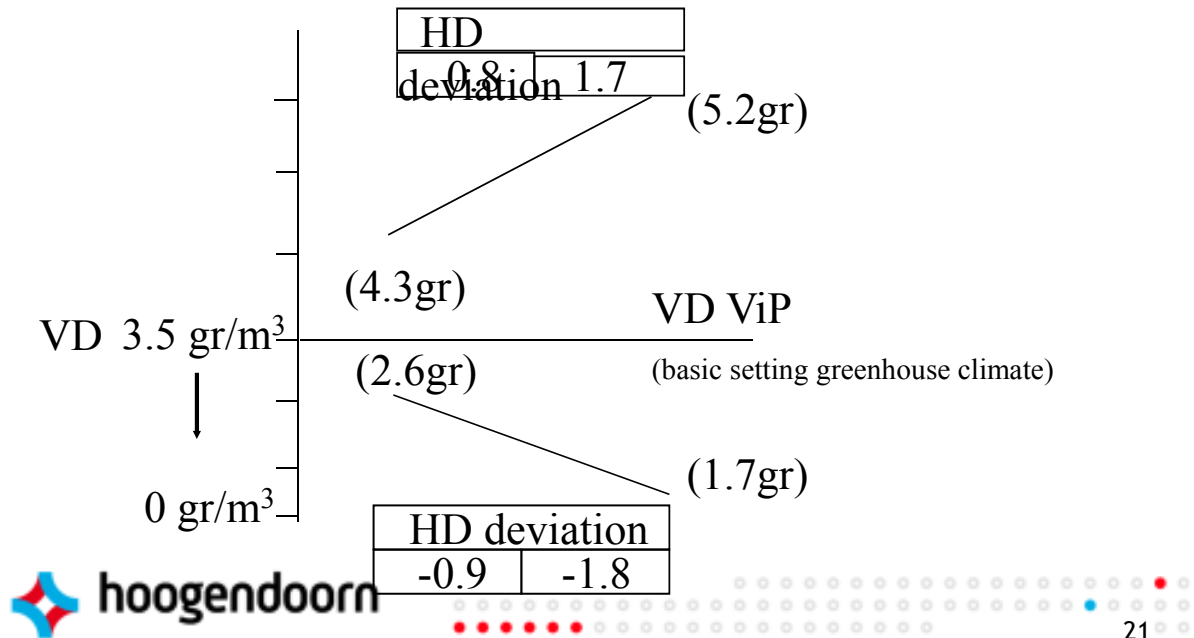
(75%)

(70%)

RH deviation	
-5	-10

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Influences RH / VD (2)

○ Influence based on the deviation between "basic" HD ViP of greenhouse climate and measurement.

HD deviation	
0.8	1.7

(5.2gr)

(4.3gr)

VD 3.5 gr/m^3

VD ViP

(basic setting greenhouse climate)

(2.6gr)

(1.7gr)

0 gr/m^3

HD deviation	
-0.9	-1.8

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ViP influence rules

1. Up to 9 influences are possible for each ViP
2. Count increases and/or reductions
3. Add up influences, but no higher than the highest set influence
4. Deduct influences from each other, but no lower than the lowest set influence

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Example 1
(minimum vent position on humidity or temperature)

Influence	From	To	Now	1
outside temperature: measurement - ° ▼	5.0	12.0		5
ventilation: deviation RH average - ViP ▼	0	5		5

Base RH = 80%

RH	Outside temp.	Calculated
80	5.0	…
82.5	5.0	…
85	5.0	…
80	8.5	…
80	12.0	…
82.5	8.5	…
85	12.0	…

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Example 2
(minimum pipe responding to humidity and radiation)

40		Value			40
Influence (!)		From	To	Now (!)	1
radiation: measurement - W/m² ▼		250	350		-20
heating: deviation RH measured - ViP ▼		0.0	5.0		10

Base RH = 80%

RH	Radiation	Calculated
80	250	…
82.5	250	…
85	250	…
80	300	…
80	350	…
82.5	300	…
85	350	…

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