

# ACCURATE dispensing system

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## GETTING STARTED

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### Each Accurate dispensing system contains

- 1 ea Control unit (24VDC, 35VA)
  - 1 ea Pump unit (24VDC, 30W)
  - 1 ea Power Supply (Input 100-240VAC, 50/60Hz, 800mA. Output 24VDC, 35VA)
  - 1 ea connection cable with one male and one female 9-pole D-sub connector to be used between the Control unit and the Pump unit
  - 1 ea User Guide
- Customised remote cables, foot pedals or other accessories may added on request
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### How to set up the ACCURATE dispensing system

#### **WARNING!**

**No other parts will be used for this system except parts delivered from Oina VV AB!  
Oina VV AB is not responsible for any injury or damage caused by wrong use!**

- \*Connect Control unit and Pump unit to each other via the enclosed connection cable with one male and one female 9-pole D-sub connector.  
Female to be connected to the control unit and the male to the pump unit to.
  - \*Connect remote control cable or foot pedal or other accessories if requested
  - \*Connect the enclosed Power Supply to the Control unit, then to the main power, (100-240VAC, 50/60Hz, 800mA)
  - \*Green LEED with "METERING" will light now.
  - \* The Control unit will remember the last program when it will be connected next time or after power failure,
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## **FUNCTIONS:**

**Metering:** Speed control in 1000 steps, 2-100% speed. **Max speed = 1500rpm**

**Single dispensing:** 1-999 seconds/dispensing

**Single dispensing:** 1-999 strokes/dispensing

**Single dispensing + Suck Back:** 1-999 strokes/dispensing and 1-999 strokes for Suck Back

**Multidispensing, endless:** 1-999 strokes/dispensing, pause time 1-999 sec between dispensings

**Multidispensings + Suck Back, endless:** 1-999 strokes/dispensing, 1-999 strokes Suck back, pause time 1-999 sec between dispensings

**Multidispensings, 1-999 times:** 1-999 strokes/dispensing, pause time 1-999 sec between dispensings

**Multidispensings + Suck Back, 1-999 times:** 1-999 strokes/dispensing, 1-999 strokes Suck back, pause time 1-999 sec between dispensings

**Home position, chosen manually**

**Others:** Forward, Reverse and momentary Max Speed (only Metering)

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## **Remote Control Functions via 15 poles D-sub**

### **In signals**

Start Forward, Internal pull-up to +5V (10kOhm)

Start Reverse, Internal pull-up to +5V (10kOhm)

Stop, Internal pull-up to +5V (10kOhm)

0-20mA

4-20mA

Off

### **Out signals**

Forward Output logic level 0-5V in serial with 1kOhm

Reverse Output logic level 0-5V in serial with 1kOhm

Stop Output logic level 0-5V in serial with 1kOhm

0-20mA

4-20mA

Delay 0,01sec-10 sec (Special function for Magnetic valve)

**RS232 via 9 pole D-sub, not in function**

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## **METERING:**

\*Press **I/O** to light up display for **METERING**. Green LED lights up in the same time.

(If “out” or “inP” is visible, and green LED for **METERING** is off, press **I/O** above the **METERING** display again until numbers are visible and green LED lightening.

If some of the other displays are visible, switch them off with the **I/O** above the display)

\*Set % **SPEED** via **+** and **-** arrows from 2.0-100% (speed less than 2.0 is not stable)

\*Start metering via **FWD** or **REV** arrows

\*Press **MAX** for momentary max speed for ex. for flush

\*Press **STOP** for stop

\*Press **STOP** when changing direction between **FWD** and **REV**

You are always able to change speed during running.

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## **SINGLE DISPENSING, 1-999 sec:**

\*Set % **SPEED** as with **METERING**

\*Press **I/O** to light up display for **MULTIDISPENSING**

\* Set dispensing time via **+** and **-** arrows from 1-999 seconds.

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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## **SINGLE DISPENSING, 1-999 strokes:**

\*Set % **SPEED** as with **METERING**

\*Press **I/O** to light up display for **SINGLE DISPENSING**

\*Display with **MULTIDISPENSING** must be off!

\* Set **NUMBER OF STROKES** via **+** and **-** arrows, 1-999 strokes

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **SINGLE DISPENSING, 1-999 strokes + Suck Back, 1-999 strokes:**

\*Set % SPEED as with METERING

\*Press **I/O** to light up display for SINGLE DISPENSING

\*Display with MULTIDISPENSING must be off!

\* Set NUMBER OF STROKES via **+** and **-** arrows, 1-999 strokes

\*Press **MODE**, green LED above **MODE** will light up and all displays will show 000

\*Set numbers of strokes from 1-999 strokes for Suck Back via **+** and **-** arrows.  
Higher numbers than 000 will light up SUCK BACK

\*Press **MODE**, green LED above **MODE** will be off now,  
but red LED will light up SUCK BACK

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **MULTIDISPENSING, endless:**

\*Set % SPEED as with METERING and NUMBER OF STROKES as with SINGLE DISPENSING.

\*Press **I/O** to light up display for MULTIDISPENSING

\* Set INTERVALS IN SEC via **+** and **-** arrows from 1 to 999 seconds

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **MULTIDISPENSING, endless + Suck Back :**

\*Set % SPEED as with METERING and NUMBER OF STROKES as with SINGLE DISPENSING.

\*Press **I/O** to light up display for MULTIDISPENSING

\* Set INTERVALS IN SEC via **+** and **-** arrows, from 1 to 999 seconds

\*Press **MODE**, green LED will light up and all displays will show 000

\*Set numbers of strokes for Suck Back via **+** and **-** arrows. Higher numbers than 000 will light up SUCK BACK

\*Press **MODE**, green LED above **MODE** will be off now,  
but red LED will light up SUCK BACK to indicate that Suck Back function is on.

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **MULTIDISPENSING, 1-999 times:**

\*Set % SPEED as with METERING and NUMBER OF STROKES as with SINGLE DISPENSING.

\*Press **I/O** to light up display for MULTIDISPENSING

\* Set INTERVALS IN SEC via **+** and **-** arrows from 1 to 999 seconds

\*Press **MODE**, green LED will light up and all displays will show 000

\*Set numbers of dispensing from 1-999 under the REPEATS display via **+** and **-** arrows.  
Higher numbers than 000 will light up REPEATS

\*Press **MODE**, green LED above **MODE** will be off now,  
but red LED will light up REPEATS to indicate that numbers of dispensing is on.

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **MULTIDISPENSING, 1-999 times + Suck Back 1-999 strokes:**

\*Set % SPEED as with METERING and NUMBER OF STROKES as with SINGLE DISPENSING.

\*Press **I/O** to light up display for MULTIDISPENSING

\* Set INTERVALS IN SEC via **+** and **-** arrows from 1 to 999 seconds

\*Press **MODE**, green LED will light up and all displays will show 000

\*Set numbers of dispensing from 1-999 under the REPEATS display via **+** and **-** arrows.  
Higher numbers than 000 will light up REPEATS

\*Set numbers of strokes for Suck Back via **+** and **-** arrows. Higher numbers than 000 will  
light up SUCK BACK

\*Press **MODE**, green LED above **MODE** will be off now,  
but red LED will light up REPEATS and SUCK BACK to indicate that numbers of dispensing  
and Suck Back function is on.

\*Start dispensing via **FWD** or **REV** arrows

\*Press **STOP** for stop

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### **MODE FUNCTION “RATIO”**

Will be used when gearbox is added to the motor.

\*Press **MODE**, green LED will light up and all displays will show 000

\*Set gear ratio, choice from 1-999

\*Press **MODE**, green LED above **MODE** will be off now,  
but red LED will light up RATIO to indicate that gear ratio function is on.

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### **MANUALLY SET UP FOR HOME POSITION:**

\* Press **STOP**

\*Press **STOP** and **MAX** in the same time

\*Adjust shaft or pump head position by hand for wished home position

\*Start dispensing or metering. The pump will stop each time in the chosen position.

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## REMOTE CONTROL FUNCTIONS:

\*Press **I/O** with **METERING**. Green LEED will go out and Remote control functions will be visible

**METERING** display shows now **inP** (for In signals) and **out** (for Out signals)

**SINGLE DISPENSING** display shows

When **inP** is active:

**For** (for FORWARD) to start the pump FORWARD via remote control  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**bAc** (for REVERSE) to start the pump REVERSE via remote control  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**StP** (for STOP) to stop the pump via remote control  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**cur** (for current) to control the speed via remote control  
Choice **OFF** (for no remote control) or **0.20** (for 0-20mA) or **4.20** (for 4-20mA)  
via arrows on **MULTIDISPENSING** display

When **out** is active:

**For** (for FORWARD) signal out via remote control when pump run FORWARD  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**bAc** (for REVERSE) signal out via remote control when pump run REVERSE  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**StP** (for STOP) signal out via remote control when the pump stop  
Choice **HI** (for high) or **LO** (for low) via arrows on **MULTIDISPENSING** display

**cur** (for current) signal out via remote control when the pump running

**dEL** (for delay)

DELAY FUNCTION FOR 12VDC MAGNETIC VALVE:

THIS FUNCTION IS ONLY FOR FORWARD DIRECTION!

Choice length of the delay time from 0,01 to 9,99 seconds on **MULTIDISPENSING** display

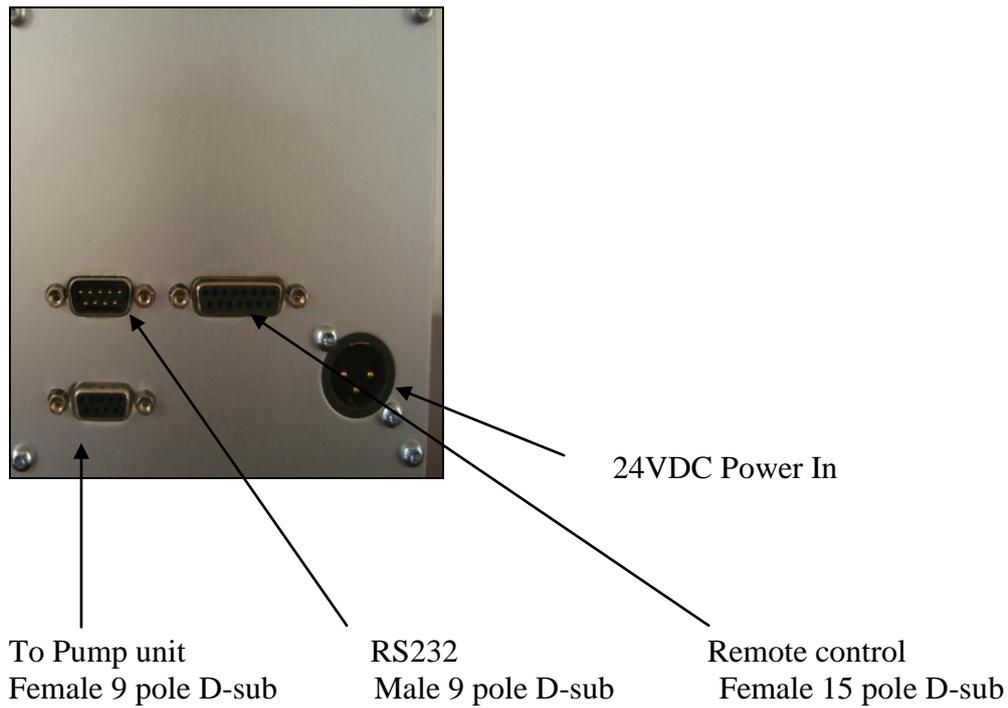
When all remote function futures are choicen

\*Press **I/O** with **METERING**. Green LEED will light up

\*Press **FWD** arrow for start metering or dispensing

# ACCURATE dispensing system

Control unit connections, rear panel  
(1)



## Few samples for different programs

2010-11-2929/11/2010

Start position / METERING  
(2)



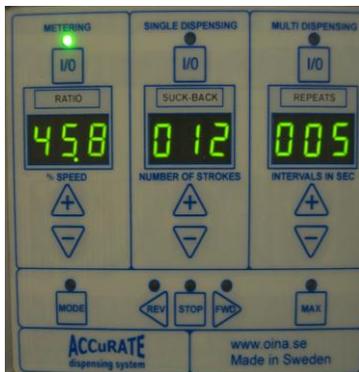
Metering 45,8% Speed

SINGLE DISPENSING 1-999 sec  
(3)



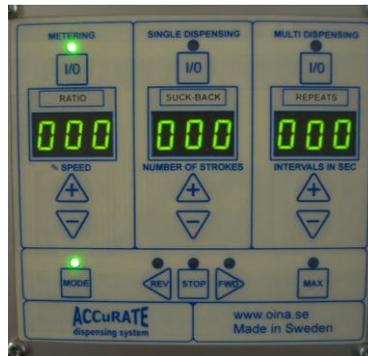
Single dispensing, 5sec/disp at 45,8% Speed

Multidispensing, endless  
(4)



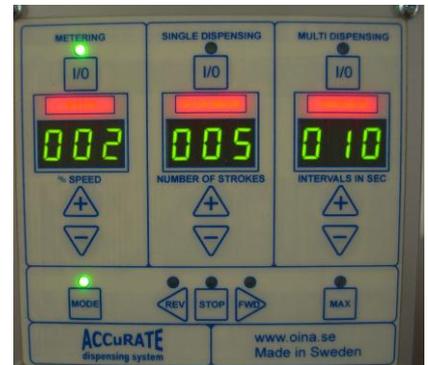
45,8/Speed, 12 strokes/disp  
5 sec intervals between  
dispensings

Start of mode program  
(5)



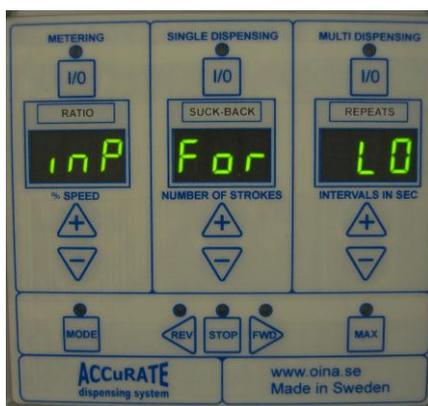
Starting set up MODE

Mode chosen for RATIO,  
SUCK-BACK and REPEATS  
(6)



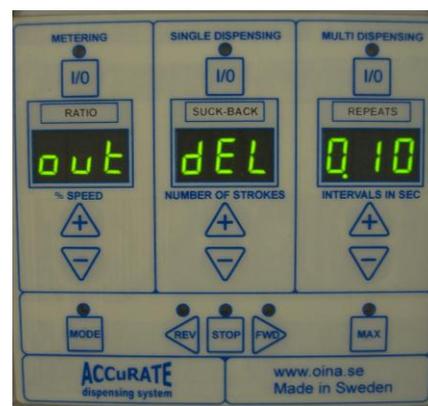
MODE program for  
Ratio 2  
Suck Back 5 strokes  
10 cycles

Remote control  
Out-signals  
(7)



In signal, Forward, Low

Remote control  
Out signals, Delay function  
(8)



Out signal delay 0,10 sec