

# CRS 2.0 Manual

Information on how to operate test software.

# Ventil

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#### 1 Start up

When starting up the CRS software you will have to sign in to gain access to testing and recipe management.

1. Click on Sign in to continue.

Sign In	
Username	****
Password	admin
	Sign in
	2

#### 2 Main menu

An overview of the main menu buttons.



lcon	Menu text	Description
Test	Test	Starts the test wizard.
Recipes	Recipes	Create, view or edit Recipes.
Valve Models	Valve Models	Create, view or edit Valve Models
Sensors	Sensors	Sensor settings.
Hydraulics	Hydraulics	Hydraulic settings.
Pumps	Pumps	Pump settings.
Machine Statistics	Machine Statistics	Statistics about the use of the machine.

# 

Show	Show	Shows the Diagnostics screen.
Settings	Settings	Application settings.
Sign Out	Sign Out	Sign out current user.
Users	Users	User management.
<b>P</b> Help	Help	Opens this help document.
Support	Support	Opens the Ventil service website.
About	About	Shows Version information and Ventil contact information.
Shut Down	Shut Down	Shuts down the computer.
Design Report	Design Report	Show the report designer.



#### 3 How to perform a test

1. Start the test wizard by clicking on the Test button in the main menu.



2. Select a Valve Model on the left side of the screen.

On the right side of the screen some information about the valve model will be shown.

P SelectValveModelForm			×
Valve Models	Selected valve r	nodel	
م	Name	10" VM	
10" VM 10" Vulcolan 12" VM 12" Vulcolan 14" VM 16" VM 18" VM 20" VM 24" VM	Torque Clamp pressure Description	0 Nm 2 30 Bar	
6" VM 6" Vulcolan 8" VM 8" Vulcolan	Name Size Valve size	10" Oring 292.77 mm 10"	
			Confirm

- 3. Click Confirm to continue.
- 4. Select a recipe on the left side of the screen.

On the right side of the screen some information about the recipe will be shown.

SelectRecipeForm	
Search for Recipe	Recipe Information
Enter text to search	Recipe
Ventil Test 1	Name Ventil Test 1 Description Example recipe
	Selected valve model
	Name 10 <sup>®</sup> VM
	Torque 0 Nm
	Clamp pressure 30 Bar
	Description
	Sealing ring
	Name 10" Oring Size 292.77 mm
	Valve size 10"
	Please select a recipe.



- 5. Click Confirm to continue.
- 6. Click Start to begin testing.

Test											
E	8	Ŕ	J.	$\checkmark$		ES .	$\square$	So.			X
Start	Abort	Manual	Stop	Next	Continue	Fill	Drain	Vent	Unclamp	Fault Reset	Create Report
	Test		Manual	Manual	Manual	Manual	Manual 4	Manual 4	Manual 🖌	Manual	Results 4

Progress can be followed through the recipe tree.

Recipe	Recipe					
Recipe	Ventil Test 1					
Valve model	10" 150#					
Sealing Ring	10" Oring					
Test sequence	Running					
Sequence		Parameter	Status			
Clamp						
Manual C	Clamp	54 Bar	Busy			
Fill - 40 sec						
Actuate	Control	Half Open				
Fill		0:00:40				
Hydrostatic	Body Test - 52 Bar					
Pressuriz	e .	52 Bar				
Stabilize		0:00:30   52 Bar				
Test Wit	h Block	0:00:30   52 Bar				
Vent						
Unclamp						
Manual U	Inclamp					

7. Follow the instructions as they are shown on the screen.

• Ventil CNC Valve Test Software	
Test	
Start Abort Manual Stop Next Continue Fil Dr.	Tain Vent Create Control Parel
Recipe	Measurements
Recipe Ventil Test 1	Test Pressure
Valve model 10° 150# Sealing Ring 10° Oring Test sequence Running	Elapsed time      00:00:10 / 00:00:00        Test direction      A + B        Test System      High pressure Liquid
Clamp  Clamp  Clamp  Manual Clamp  S18 ar  Actuate Control  Actuate Control  Actuate Control  Control  Actuate Control	Valve position Almost closed
U Andre C.A. Tot COD	Clamp Please clamp the valve.
Manual Undamp	0.4 0.2 0.0 0.0 0.0 0.00:00 0:00:01 0:00:02 0:00:04 0:00:05 0:00:06 0:00:07 0:00:08 0:00:09 0:00:10 0:00:11 0:00:12 Torque
	2      -0.2        -0.4      -0.4        -0.4      -0.4        0:00:00      0:00:02      0:00:03      0:00:05      0:00:05      0:00:07      0:00:08      0:00:10      0:00:11      0:00:12



#### For some instructions an operator action is required.

a Ventil CNC Valve Test Software	
⊌ <b>0</b> • ▼ Test	
Start Abort Manual Stop Next Continue RI E	ran Vent Create Report Panel
Test a Manual a Manual a Manual a Manual a Ma	nual / Manual / Results / Demo
Recipe Ventil Test 1	Test Pressure
Valve model 10° 150 # Sealing Ring 10° Oring Test sequence Running Sequence Parameter Status Completed Manual Gamp 54 Bar Completed Fill - 40 sec Completed Completed	Elapsed time 00:01:26 / 00:00:30 Test drection A + B Test System High pressure Liquid Valve position Half Open
	Visual inspection
	Inspect valve for leakage.
	Pass Fail
	0.2 0.2 0.4 0.00:00 0:00:20 0:00:40 0:01:00 0:01:20 0:01:40 0:02:00 0:02:20 0:02:40 0:03:00 0:03:20 0:03:40 Torque 0.4 0.4 0.2 0.4 0.4 0.2 0.4 0.4 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4
	-0.4 0:00:00 0:00:20 0:00:40 0:01:00 0:01:20 0:01:40 0:02:00 0:02:20 0:02:40 0:03:00 0:03:20 0:03:40

Press one of the buttons to continue.

8. When the recipe has been tested the following message will be shown.



Press Ok.

Don't close the window as it is needed for making a test report.



#### 4 Create test report

Make sure you have tested a recipe as shown in: How to perform a test.

1. Click on Create Report

Test									
Ð	×	Ŕ		$\checkmark$		ES .	$\square$	So	X
Start	Abort	Manual	Stop	Next	Continue	Fill	Drain	Vent	Create Report
	Test		Manual 🔒	Manual	🖌 Manual 🔒	Manual 🔺	Manual 🔺	Manual 🦼	Results 🔒

2. On the left side of the screen report information can be filled in.

Report Info		
Date	11/3/2016 10:38	
Work Order No.		٦
Item No.		٦
Serial No.		
Body Heat No.		
Cover Heat No.		
Tag No.		
Size	10"	
Pressure class	150	
Type / Model		
Testing Standard		
Operator		
Remark		*
		÷
Comment		-

3. Press Save, when all relevant information has been filled in.



This will save all test results and report information to the database. A pdf of the report is also being generated.

4. The window can now be closed by clicking on the X.





## 5 Creating, viewing, editing a recipe

Creating, viewing and editing can all be done by clicking on the Recipes button in the main menu.



#### 5.1 View a recipe

1. Recipe information can be found by selecting a recipe on the left side of the screen.

кеар	es	
Filter	Enter text to search	Q
Ventil	Test 1	

In the middle of the screen the structure of the recipe can be seen.

Recipe details
Full recipe
🖃 - Ventil Test 1
A: Clamp
C: Manual Clamp
A: Fill - 40 sec
C: Actuate Control
C: Fill
🖃 - A: Hydrostatic Body Test - 52 Bar
C: Pressurize
C: Stabilize
C: Test With Block
C: Vent
A: Unclamp

2. Detailed information of every action or command can be seen by clicking on desired item.

ull recipe	Recipe		
Ventil Test 1			
A: Clamp	Name V	'entil Test 1	
C: Manual Clamp		short recipe for demo purpose	
A: Fill - 40 sec		and creape for delito purpose.	
C: Actuate Control	Description		
C: Fill			
📄 A: Hydrostatic Body Test - 52 Bar			
···· C: Pressurize	Valve Model 1	0" 150#, Size: 10"	
C: Test With Nock			
C: Vent	Action		
- A: Unclamp			
C: Manual Unclamp	Name	Hydrostatic Body Test - 52 Bar	
	Test direction	A + B	
	Test system	High pressure Liquid	
	escription		
	Command		
	Command		
	Command	Stabilize	
	Command Type Duration	Stabilize 00:00:30	
	Command Type Duration Valve position	Stabilize 00:00:30 - Unknown -	
	Command Type Duration Valve position Pressure	Stabilize 00:00:30 Unknown	Bar
	Command Type Duration Valve position Pressure	Stabilize 00:00:30 Unknown 52	Bar
	Command Type Duration Valve position Pressure Function Torqu	Stabilize        00:00:30        Unknown        52        re        0	Bar Nm
	Command Type Duration Valve position Pressure Function Torqu Allowed Leaka	Stabilize        00:00:30        Unknown        52        pe        0        pe	Bar Nm bubbles/min
	Command Type Duration Valve position Pressure Function Torqu Allowed Leaka	Stabilize        00:00:30        Unknown        52        ie        0        je	Bar Nm bubbles/min
	Command Type Duration Valve position Pressure Function Torqu Allowed Leakay	Stabilize        00:00:30        Unknown        52        pe        0	Bar Nm bubbles/min
	Command Type Duration Valve position Pressure Function Torqu Allowed Leaka	Stabilize        00:00:30        Unknown        52        e        0        pe        0	Bar Nm þubbles/min
	Command Type Duration Valve position Pressure Function Torqu Allowed Leaka Message	Stabilize      00:00:30	Bar Nm bubbles/min
	Command Type Duration Valve position Pressure Function Torqu Allowed Leaka Message	Stabilize        00:00:30        Unknown        0        100:00:20<	Bar Nm bubbles/min



#### 5.2 Create a recipe

1. In the bottom left of the screen you see 4 buttons



Click on 💷 to open a new screen.

2. Recipe information can be typed in the upper left of the screen.

Recipe		
Name		
Description		-
		-

To be able to save the recipe, the recipe has to have a name.

3. In the upper right of the screen a valve model has to be selected.

ValveModel	Model
Value Medel	10* 150#
valve Mouel	10 150#
Description	

4. To program a recipe you fill the "Action Sequence" by selecting an Action from the left list (Available Actions) and clicking on the Add button.

Available Actions		Action Sequence
Filter Enter text to search	ρ	
Clamp		Clamp
Fill - 40 sec		Fill - 40 sec
Hydrostatic Body Test - 52 Bar		
Undamp		
	C Add Adds	an Action to the bottom.

If the correct action isn't available, you can program it, see <u>Programming an Action</u> for more information.

5. Press Save to store the recipe.



This will close the window.

6. You can find the new Recipe at the bottom of the list.





### 5.3 Edit a recipe

1. Select a recipe on the left side of the screen.



- Click on 🔟 to edit the selected recipe.
- 2. It is now possible to change the recipe details.
  - Also Actions can be added/removed/changed.

vailable Actions	Action Sequence
ilter Enter text to search	م
Clamp	Clamp
Fill - 40 sec Hydrostatic Body Test - 52 Bar Unclamp	Fill - 40 sec
	🔇 Add
	3 Remove
ـ ↓ ♥ ↓ 🕷	

3. Press Save to save the changes.



## 6 Creating, viewing, editing an Action

Actions can only be created, viewed, edited while creating or editing a recipe.

#### 6.1 Create an Action

1. Click on Recipes in the Main menu.



2. In the bottom left of the screen you see 4 buttons



Click on 💷 to open the new recipe screen.

3. Under the bottom of the Available Actions list you can see 5 buttons.





4. At the top half of the screen you can set some Action properties.

The name of the Action is required to be able to save.

Action Properties				
Name		Direction	A -> B	•
Description	A	Test System	Low pressure Air	•

5. The Direction determines where to pressurize from and where to measure.

A -> B means pressurize at table A, measure on table B.

- 6. The Test System determines what pumps/medium is used for testing.
- 7. To make the machine do anything you have to add Commands to the Command Sequence

Clamp (Manual) Unclamp (Manual) Closure Open	
--	--

Select a Command and click on Add (Double click on an Command will also add it).



An popup screen appears.

CommandForm	
Command	
Command	ManualClamp
Duration	00:00:00 -
Valve Position	Unknown
Pressure	0 Bar
Allowed Leakage	0 bubbles/min -
Torque	0 Nm
Message	
	· · · ·
	Ok Cancel

- Depending on the the Command different input is required.
  Fill in the necessary fields and press Ok.
  The Command is now added to the Action.
  Add as many Commands as needed.
- 9. Click Save to store the Action and make it available for a recipe.



#### 6.2 Editing an Action

1. Click on Recipes in the Main menu.



2. In the bottom left of the screen you see 4 buttons

Ð	V	D	×
	_	_	_

Click on 😡 or 🚺 to open the (new) recipe screen.

3. Select an Action.



4. Under the bottom of the Available Actions list you can see 5 buttons.

Actions	
Available Actions	
Filter Enter text to search	Q
Clamp	_
Fill - 40 sec	
Hydrostatic Body Test - 52 Bar	
Unclamp	

Click on 🔽 to edit the action.

The Action screen is now opened.

 Double click on an Command in the Command Sequence to view/ edit the command properties. Only Commands in the Command Sequence can be edited.

The command properties screen appears.

6. Click Save when done.





# 7 Command List

An overview of the machine capabilities.

Command	Description
NoCommand	Will stop the machine.
ActuateControl	Turns the actuator to the given position (Open, Close or ½ Open).
Fill	Fills the object with water for a given time.
Pressurize	Pressurizes the object to a given pressure.
Stabilize	Will block pressure in for x time, giving the object time to stabilize.
StabilizeWithFlow	Monitors the pressure for a given time. During this time it will activate a pump when
	pressure drops too low.
StabilizeOnPressureDrop	Monitors the pressure and will activate a pump when pressure drop too low, it will
	continue to stabilize until the pressure drop is below the given leakage.
TestWithBlock	Blocks the pressure in the object and will monitor the pressure drop.
Drain	Purges the object for a given time.
Vent	Vents pressure from the test system including the object.
ManualClamp	Asks the operator to clamp the object.
ManualUnclamp	Asks the operator to unclamp the object.
ManualClosureOpen	Asks the operator to open the closure.
ManualClosureClose	Asks the operator to close the closure.
TestWithCounter	Tests the object for bubbles or drips for a given time on a given pressure.
FunctionTest	
BTO	Brake to open test.
ShowMessage	Displays a message on the screen.
Reset	Resets the drive (in case any errors occur).
FillActuate	Combination of Fill and ActuateControl.
	During actuating the object will be filled for a given time.
DrainActuate	Combination of Drain an ActuateControl.
	During actuating the object will be purged for a given time.