



USER MANUAL

TEST UNIT ASF 100 ATEX

Title:	TEST UNIT ASF 100 ATEX
Customer:	
Customer ref.:	289701
HYTOR ref. no.:	289701
Ref. doc.:	41-10-0082
Id. no:	41-31-0024-R01

Revision history:

Rev.	Issue date	Description	Created by	Approved by
01	15.10.2014	AS BUILT	KR	PF

USER MANUAL

TEST UNIT ASF 100 ATEX



INDEX

1.	SAFETY PRECAUTIONS	3
2.	GENERAL	3
3.	MOUNTING	3
4.	BEFORE START UP	4
5.	OPERATION	4
6.	MAINTENANCE	5
7.	STORAGE	5
8.	DISPOSAL	5
9.	MARKING	5
10.	FAULT FINDING	6
11.	PROCESDIAGRAM	7
12.	ITEM LIST	8
13.	DECLARATION OF CONFORMITY	9

Title:	TEST UNIT ASF 100 ATEX			Customer:				Page 2 of 9
Customer ref.:	289701	Ref. doc.:	41-10-0082	Created by:	KR	Date:	15.10.2014	
HYTOR ref. no.:	289701	Id. no.:	41-31-0024-R01	Approved by:	PF	Date:	15.10-2014	

USER MANUAL

TEST UNIT ASF 100 ATEX



1. SAFETY PRECAUTIONS

This test unit is designed for hydrostatic pressure test of equipment with water (H₂O) supplied directly from the public service system.

Do not use any other test fluid than water without Hytor's acceptance.

It is of important to clarify that the attached equipment can withstand the pressure and fluid (water) equal to the test unit data.

The supply power is compressed air with max. 10 bar pressure.

The area where this test is planned to be carried out must be secured according to safety regulations.

Never stand in the front of the outlet ports where water under high pressure may occur at faulty operation or faulty hook up. This may result in person body damages or material damages.

Noise will be at a level equal to 80 dB(A)

Use always protection goggles when operating with high pressure.

The test unit is equipped with an emergency stop button that stops the liquid pump by removing the air supply.

The accumulated pressure energy remains inside the unit.

The air regulating valve has a maximum outlet air pressure which corresponds to maximum hydrostatic pressure.

2. GENERAL

This test unit has been produced according to documents below:

Flow diagram 41-10-0082

Item list 41-01-0079

Declaration of Conformity 41-81-0038

The output pressure is adjustable up to maximum pressure as indicated on the diagram.

3. MOUNTING

Place the test unit, which is a mobile unit, on horizontal ground.

The test unit may be used in Ex Zone II 2G c T6

Title:	TEST UNIT ASF 100 ATEX			Customer:				Page 3 of 9
Customer ref.:	289701	Ref. doc.:	41-10-0082	Created by:	KR	Date:	15.10.2014	
HYTOR ref. no.:	289701	Id. no.:	41-31-0024-R01	Approved by:	PF	Date:	15.10.2014	

USER MANUAL

TEST UNIT ASF 100 ATEX



4. BEFORE START UP

Unload the pressure regulating valve, Air regulator, by turning the adjustment screw to the left (anti clockwise) to start the unit without load.

Connect a test gauge on the outlet marked "Test gauge" and close the corresponding valve.

Connect a data recorder on the outlet marked "Pressure recorder" and close the corresponding valve.

Close the valve marked "Vent".

Connect the equipment to be tested to the outlet marked "Pressure Out" and close the corresponding valve.

Connect water to the inlet marked "Water inlet".

Close the valve marked "Air inlet" and connect pressure air to the inlet marked the same way.

5. OPERATION

Open the valves marked "Air inlet" and "Pressure out".

Adjust the air pressure gradually to the required level by turning the adjustment screw, marked "Air regulator", to the right (clockwise). The pressure can be seen on the pressure gauge marked "Pressure out".

Bleed, if necessary, the system by opening the valve marked "Vent" until airless water flows out of the outlet opening. Close the valve when airless water flows in a steady stream.

Open the valve marked "Test gauge" and "Pressure recorder" gradually to protect these against peak pressure and damage.

Close the valve marked "Pressure out" to keep the test pressure inside the attached equipment.

Reduce the air pressure to 0 bar and remove the air hose to avoid inexpedient refilling of the system and to prevent the risk of personal body damage caused by fall in hoses lying in the work area.

Remove the water hoses of the same reason.

Unload the system after finished pressure test by opening the valve marked "Vent".

Open the valve marked "Pressure out".

Check that all gauges shows 0 bar.

The system can now be disassembled.

Title:	TEST UNIT ASF 100 ATEX			Customer:				Page 4 of 9
Customer ref.:	289701	Ref. doc.:	41-10-0082	Created by:	KR	Date:	15.10.2014	
HYTOR ref. no.:	289701	Id. no.:	41-31-0024-R01	Approved by:	PF	Date:	15.10.2014	

USER MANUAL

TEST UNIT ASF 100 ATEX



6. MAINTENANCE

The test unit requires no specific maintenance as stainless steel materials and maintenance free components have been used.

However, always clean and check the unit for possible damages.

7. STORAGE

The test unit requires no specific considerations regarding storage.

All openings should be plugged to prevent contamination due to dirt in the system.

8. DISPOSAL

The unit must be disassembled and disposed according to domestic and international directives in order to protect the environment.

No particular polluting materials has been used in the design.

9. MARKING

The test unit has a name plate including:

HYTOR contact data

Unit type description

Serial no.

Year of manufacture

CE marking acc. to directives 2006/42/EC (98/37), 97/23/EF and 94/9/EC

The technical dossier will be stored at HYTOR A/S for min. 10 years after production date.

Title:	TEST UNIT ASF 100 ATEX			Customer:				Page 5 of 9
Customer ref.:	289701	Ref. doc.:	41-10-0082	Created by:	KR	Date:	15.10.2014	
HYTOR ref. no.:	289701	Id. no.:	41-31-0024-R01	Approved by:	PF	Date:	15.10-2014	

USER MANUAL

TEST UNIT ASF 100 ATEX



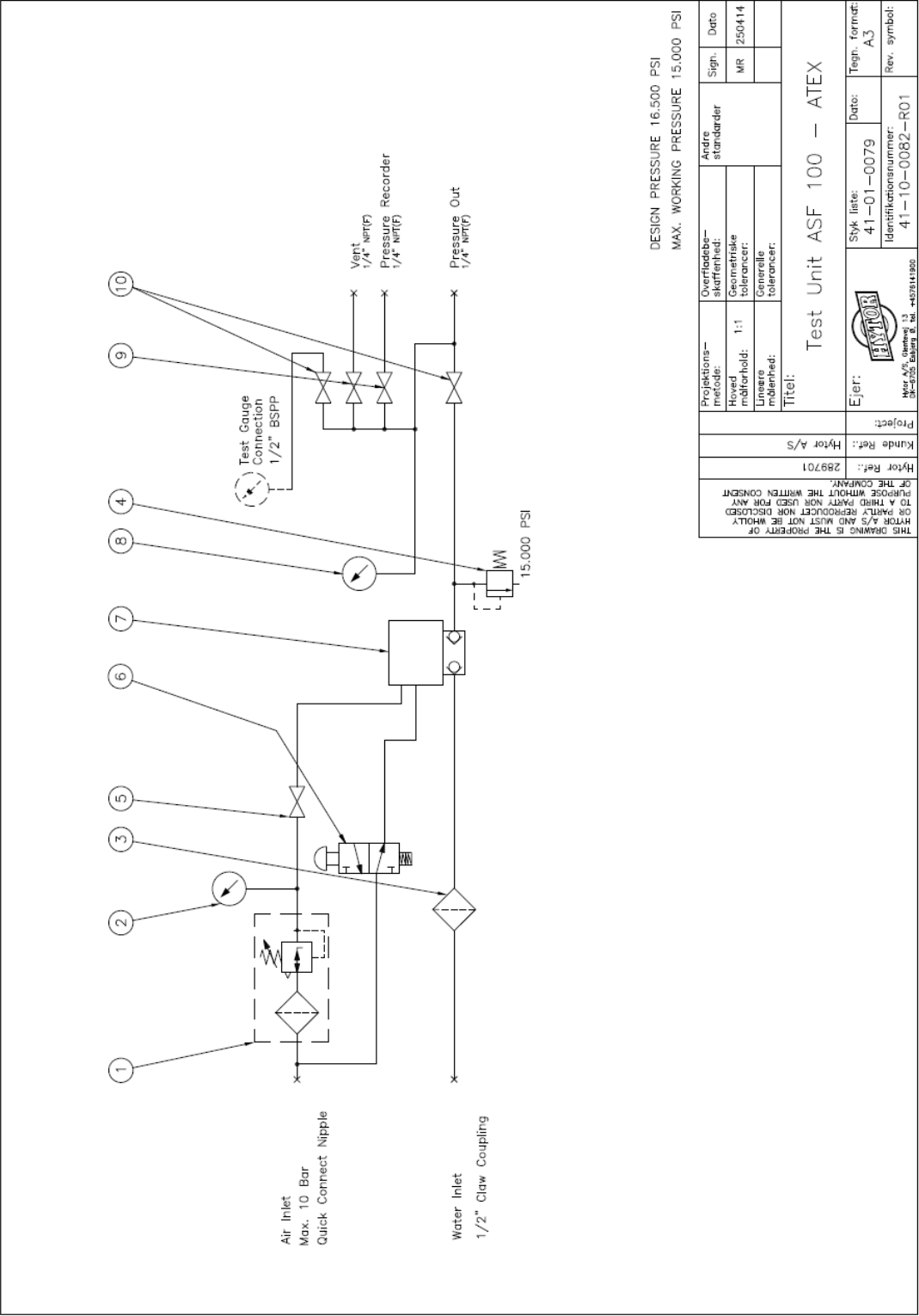
10. FAULT FINDING

The pump does not work	The pump gets no air to the drive section	Open the valve, item 5
		Increase the pressure on the regulator, item 1
		Check the gauge, item 8
	The pump gets no water to the hydraulic section	Check the water hose connection
	The pump is defect	Repair or shift the pump
The outlet pressure is too low	The air drive pressure is too low	Increase the pressure on the regulator, item 1
		Check the gauge, item 8
		Repair or shift the pump

USER MANUAL
TEST UNIT ASF 100 ATEX



11. PROCESDIAGRAM



USER MANUAL

TEST UNIT ASF 100 ATEX



12. ITEM LIST



Item no.:	Qty.:	Description:	Manufacturer:	Part no.:	TAG no.:
1	1	Bifold filter-regulator, 1/2" NPTF, 0-145 PSI, SS316	BIFOLD	SH12FRSM10X4L46	
2	1	Pressure gauge, 1/2" NPT back, d=63 mm, Front ring, Glycerine filled glass, 0-145 PSI, SS316/SS304 housing	ARMATURENBAU	06B00000100TEN2G	
3	1	Y-Strainer, 1/2" NPT (F), 1450 PSI, 70 Mesh, SS316	BARTON FIRTOP	00615	
4	1	Relief valve, 1/4" S.P., 2.500 - 25.000 PSI Set point = 15.000 PSI, SS316	HASKEL	1570025	
5	1	Panel Mount Ball Valve, 1/2" NPT (F), 928 PSI, SS316 to NACE, Marine handle kit	ALCO	SB4NSM	
6	1	3/2 - Way manually operated control valve, 1/4" NPTF, hold in activated position - spring return, SS316	VERSA	VIZ3302316125REP	
7	1	Liquid Pump, 1.5HP, 1/2" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316	HASKEL	ASF100ATEX	
8	1	Pressure gauge, double scale, 1/4" M/P, d=100 mm, Front ring, Glycerine filled, 20.000 PSI/bar, SS316/SS304 housing	ARMATURENBAU	10PB00000T020TEM2G	
9	2	2 Way Straight Valve 1/4" M/P, 20.000 PSI, SS316	BUTECH	20UV41VPM	
10	2	2 Way Angle Valve 1/4" M/P, 20.000 PSI, SS316	BUTECH	20UV42VPM	
	1 LOT	1/2" Fitting, A-LOK, SS316	PARKER		
	1 LOT	1/4" Fitting, A-LOK, SS316	PARKER		
	1 LOT	1/4" Fitting, M/P, SS316	BUTECH		
	1 LOT	1/2" OD, Tubing, 0.065" WT, SS316	SANDVIK		
	1 LOT	1/4" OD, Tubing, 0.065" WT, SS316	SANDVIK		
	1 LOT	1/4" M/P Tubing, 0.109" ID, SS316	BUTECH		

Title:	TEST UNIT ASF100 ATEX	Customer:		Page 2 of 2
Customer ref.:	289701	Ref. doc.:	41-10-0082	
HYTOR ref. no.:	289701	Id. no.:	41-01-0079-R01	
		Created by:	KR	Date: 02.09.2014
		Approved by:	JRG	Date: 02.09.2014

USER MANUAL

TEST UNIT ASF 100 ATEX



13. DECLARATION OF CONFORMITY



EF-OVERENSSTEMMELSESESKLÆRING EC-DECLARATION OF CONFORMITY

ID No. : 41-81-0038-R01

Fabrikant
Manufacturer : HYTOR A/S
Høgevej 8
6705 Esbjerg Ø.
Danmark

erklærer hermed at
hereby declares that

Udstyr
Equipment : Type : 41-10-0082
Unit : Test Unit ASF 100 ATEX
Owner : Hytor A/S

Er fremstillet i henhold til:
2006/42/EF - Maskindirektivet
97/23/EF - PED, artikel 3.3
Has been manufactured according to:
2006/42/EC - Machinery Directive
97/23/EC - PED Pressure Equipment Directive, article 3.3

Designtryk
Design pressure : 1,138 bar

Atex mærkning
Atex marking : II 2 G c T6

Kunde ref. nr.
Customer ref. no. : 289701

HYTOR ref. nr.
HYTOR ref. no. : 289701

Navn:	Stilling:	Underskrift:	Dato:
Name:	Position:	Signature:	Date:
Jonas Månson	Project Coordinator	 HYTOR A/S Høgevej 8 - 6705 Esbjerg Ø Tlf. 76 14 19 00 - Fax 76 14 19 09	15-10-2014

Title:	TEST UNIT ASF 100 ATEX			Customer:	Page 9 of 9			
Customer ref.:	289701	Ref. doc.:	41-10-0082	Created by:	KR	Date:	15.10.2014	
HYTOR ref. no.:	289701	Id. no.:	41-31-0024-R01	Approved by:	PF	Date:	15.10.2014	