

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

Revision history:

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



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1. SAFETY PRECAUTIONS

This test unit is designed for hydrostatic pressure test of equipment with water (H_2O) 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

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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.

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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.

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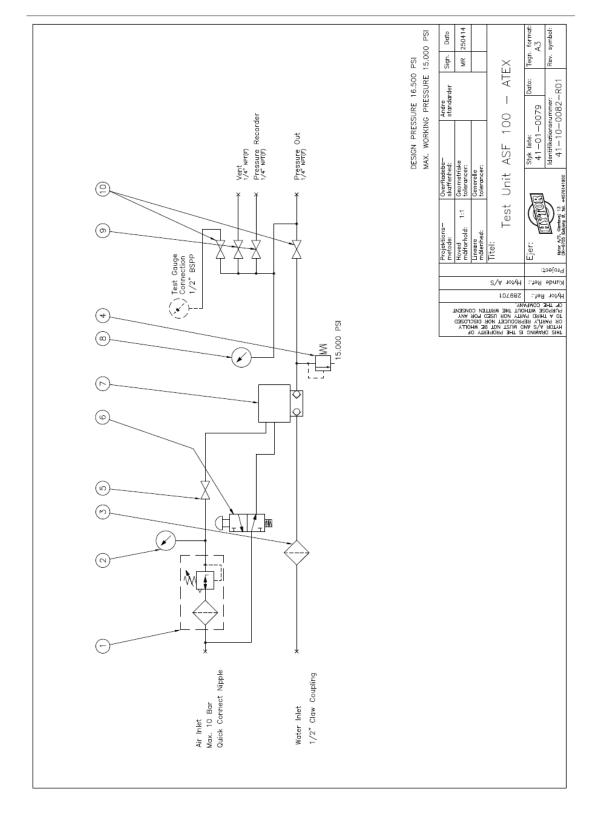
10. FAULT FINDING

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

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11. PROCESDIAGRAM



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12. ITEM LIST



1 1 Birdod filter-regulator, ½" NPTF, 0-145 PSI, SS316 BIFOLD SH12FRSM10X4146 2 1 Pressure alleadge, ½" NPTF, 0-145 PSI, SS316 BARTON FIRADU 06B0000010TENZG 3 1 Y-Strainer, ½" NPT (F), 1450 PSI, SS316 BARTON FIRADU 06B0000010TENZG 3 1 Y-Strainer, ½" NPT (F), 1450 PSI, SS316 BARTON FIRADU 06B000010TENZG 4 1 Relief valve, ½" SP1 (F), 1450 PSI, 200 HSI BARTON FIRADD 06615 5 1 PSationer, ½" NPT (F), 928 PSI, BARTON FIRADD 06615 5 1 Panel Mount Ball Valve, ½" NPT, (F), 928 PSI, ALCO SB4NSM 6 1 AS316 HASKEL NIZ3302316125REP 7 1 Liqued Pamp, 154P, ½" NPT, Displacement/oytel = 6,7ml, HASKEL 7 1 Liqued Pamp, 154P, ½" NPT, Displacement/oytel = 6,7ml, HASKEL 8 1 Reventent/oytel = 6,7ml, HASKEL ASF100ATEX 8 1 Iqued Pamp, 1560 PSI, SS316 Dutter JUSC 8 1 Iqued Pamp, 1560 PSI, SS	Item no.:	Qty.:	Description:	Manufacturer:	Part no.:	TAG no.:
1 Pressure gauge, ¼" NPT back, d=63 mm, Front ring, Glycenine filled glass, 0-145 PSI, SS316/SS304 housing Glycenine filled glass, 0-145 PSI, SS316/SS304 housing BARTON FIRTOP ARMATURENBAU 1 Y-Straier, ½" NPT (F), 1450 PSI, 70 Mesh, SS316 BARTON FIRTOP 1 Relief valve, ¼" SP, 2.500 PSI, S3316 BARTON FIRTOP 1 Relief valve, ¼" SP, 2.500 PSI, S3316 to NACE, Marine handle kit HASKEL 1 S3316 to NACE, Marine handle kit ALCO 2 S3316 to NACE, Marine handle kit VERSA 1 J2- Way manually operade position - sping return, S3316 ALCO 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316 ARMATURENBAU 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316 ARMATURENBAU 2 Z Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH Liquid Pump, 1.5HP 2 Z Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH Litter, ALCK, SS316 2 Z Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH Litter, ALCK, SS316 2 Z Way Straight Valve ½" M/P, 20.000 PSI, SS316	-	-	Bifold filter-regulator, ½" NPTF, 0-145 PSI, SS316	BIFOLD	SH12FRSM10X4L46	
1 Y-Strainer, ½" NPT (F), 1450 PSI, 70 Mesh, SS316 BARTON FIRTOP 1 Relief valve, ¼" S.P, 2.500 - 25.000 PSI HASKEL 2 Set point = 15.000 PSI, SS316 HASKEL 1 Relief Allow, ¼" S.P, 2.500 - 25.000 PSI HASKEL 2 Set point = 15.000 PSI, SS316 HASKEL 1 Pane Mount Ball Valve, ½" NPT (F), 928 PSI, S3316 to NACE, Marine handle kit ALCO 2 S3316 to NACE, Marine handle kit VERSA 1 3/2 - Way manually operated control valve, ¼" NPT (F) VERSA 1 3/2 - Way manually operated control valve, ¼" NPT (F) VERSA 1 3/2 - Way manually operated control valve, ¼" NPT (F) VERSA 1 J/2 - Way manually operated control valve, ¼" NPT (F) VERSA 1 J/2 - Way manuelly operated control valve, ¼" NPT (F) VERSA Max on and body in SS316 RAMATURENBAU Income the pressure 16.500 PSI, ATEX approved for zone 1, Pressure gauge, double scale, ¼" M/P, d=100 mm, Front ring, RAMATURENBAU 1 Divertie filled, 20.000 PSI, SS316 BUTECH 2 Z Way Angle Valve ¼" M/P, 20.000 PSI, SS316 BUTECH <td>2</td> <td>-</td> <td>Pressure gauge, ¼" NPT back, d=63 mm, Front ring, Glycerine filled glass, 0-145 PSI, SS316/SS304 housing</td> <td>ARMATURENBAU</td> <td>06B0000100TEN2G</td> <td></td>	2	-	Pressure gauge, ¼" NPT back, d=63 mm, Front ring, Glycerine filled glass, 0-145 PSI, SS316/SS304 housing	ARMATURENBAU	06B0000100TEN2G	
1 Relief valve, ¼" S.P, 2.500 - 25.000 PSI HASKEL 5et point = 15.000 PSI, SS316 ALCO 1 Set point = 15.000 PSI, SS316 ALCO 1 Panel Mount Ball Valve, ½" NPT (F), 928 PSI, SS316 ALCO 1 Satility to Noute Ball Valve, ½" NPT, Displacement/cycle = 6,7 ml, HASKEL ALCO 1 3/2 - Way manuality operated control valve, ¼" NPT, Displacement/cycle = 6,7 ml, HASKEL VERSA 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, HASKEL Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Pressure gaucy in SS316 ARMATURENBAU 1 Pressure gaucy in SS316 ARMATURENBAU Arguerine filled, 20.000 PSI, ATEX approved for zone 1, Pressure gaucy in SS316 ARMATURENBAU 2 Z Way Straight Valve ¼" MIP, 20.000 PSI, SS316 BUTECH Arguerine filled, 20.000 PSI, SS316 2 Z Way Angle Valve ¼" MIP, 20.000 PSI, SS316 BUTECH Arguerine filled, 20.000 PSI, SS316 BUTECH 2 Z Way Angle Valve ¼" MIP, 20.000 PSI, SS316 BUTECH Arguerine filled, 20.000 PSI, SS316 BUTECH 1 ILOT ½" Fitting, ALOK, SS316 BUTECH Arguerine Arguerine 1 IL	e	-	Y-Strainer, ½" NPT (F), 1450 PSI, 70 Mesh, SS316	BARTON FIRTOP	00615	
1 Panel Mount Ball Valve, ½" NPT (F), 928 PSI, S3316 to NACE, Marine handle kit ALCO 1 3/2-U Samine handle kit VERSA 1 3/2-U Samine handle kit VERSA 1 3/2-U Samine handle kit VERSA 1 13/2-U Samine handle kit VERSA 1 13/2-U Samine handle kit VERSA 1 13/2-U Samine handle kit VERSA 1 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, 1 Max outlet pressure 16 500 PSI, ATEX approved for zone 1, PASKEL 1 Piston and body in SS316 S316 1 Pressure qaued, oubble scale, ½" MIP, d=100 mm, Front ring, ARMATURENBAU 2 2 Way Straight Valve ½" MIP, 20.000 PSI, SS316 BUTECH 2 2 Way Straight Valve ½" MIP, 20.000 PSI, SS316 BUTECH 1 1007 ½" Fitting, ALOK, SS316	4	-	Relief valve, ¼" S.P, 2.500 - 25.000 PSI Set point = 15.000 PSI, SS316	HASKEL	1570025	
1 3/2 - Way manually operated control valve, ½" NPTF, hold in activated position - spring return, SS316 VERSA 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, HASKEL HASKEL 1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, HASKEL MATURENBAU 1 Max ouble scale, ½" M/P, d=100 mm, Front ring, RMMTURENBAU Bixton and body in S3316 BUTECH 1 Pressure gauge, double scale, ½" M/P, d=100 mm, Front ring, Givenine filled, 20.000 PSI, S3316 BUTECH Liquid Pump, 1.5HP, % 2 2 2 Way Straight Valve ½" M/P, 20.000 PSI, S3316 BUTECH Ling 2 2 Way Angle Valve ½" M/P, 20.000 PSI, S3316 BUTECH Ling 1 11.00 ½" Fitting, A-LOK, SS316 PARKER 1 11.01 ½" Fitting, M/P, S3316 BUTECH 1 11.01 ½" Fitting, M/P, S3316 BUTECH 1 11.01 ½" OD, Tubing, 0.065" WT, S3316 BUTECH 1 11.01 ½" M/P Tubing, 0.065" WT, S3316 BUTECH 1 11.01 ½" OD, Tubing, 0.065" WT, S3316 BUTECH 1 11.01 ½" OD, Tubing, 0.065" WT, S3316 SANDVIK 1 11.01 ½" M/P Tubing, 0.109" ID, S3316 BUTECH	2	-	Panel Mount Ball Valve, ½" NPT (F), 928 PSI, SS316 to NACE, Marine handle kit	ALCO	SB4NSM	
1 Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316 HASKEL 1 Pressure and body in SS316 Burte Pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316 HASKEL 1 Pressure gauge, double scale, ¼" M/P, d=100 mm, Front ring, Glycerine filled, 20.000 PSI/bar, SS316/SS304 housing ARMATURENBAU 2 Z Way Straight Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 2 Z Way Angle Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 1 1 ½" Fitting, ALOK, SS316 BUTECH 1 100 ½" Fitting, ALOK, SS316 BUTECH 1 11.00 ½" Fitting, MP, SS316 BUTECH 1 100 ½" OD, Tubing, 0.065" WT, SS316 SANDVIK 1 100 ½" M/P Tubing, 0,109" ID, S3316 BUTECH	9	-	3/2 - Way manually operated control valve, ¼" NPTF, hold in activated position - spring return, SS316	VERSA	VIZ3302316125REP	
1 Pressure gauge, double scale, ½" M/P, d=100 mm, Front ring, Glycerine filled, 20.000 PSI/bar, SS316/SS304 housing ARMATURENBAU 2 2 Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH I 2 2 Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH I 2 2 Way Straight Valve ½" M/P, 20.000 PSI, SS316 BUTECH I 1 2 2 Way Angle Valve ½" M/P, 20.000 PSI, SS316 BUTECH I 1 1 ½" Fitting, A-LOK, SS316 PARKER I I 1 1 ½" Fitting, A-LOK, SS316 PARKER I ILOT ILOT Y" Fitting, A-LOK, SS316 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I </td <td>2</td> <td>-</td> <td>Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316</td> <td>HASKEL</td> <td>ASF100ATEX</td> <td></td>	2	-	Liquid Pump, 1.5HP, ½" NPT, Displacement/cycle = 6,7 ml, Max outlet pressure 16.500 PSI, ATEX approved for zone 1, Piston and body in SS316	HASKEL	ASF100ATEX	
2 2 Way Straight Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 2 2 Way Angle Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 1 2 2 Way Angle Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 1 1.00 ½" Fitting, A-LOK, SS316 BUTECH 1 1.00 ½" Fitting, A-LOK, SS316 PARKER 1 1.00 ½" Fitting, M/P, SS316 BUTECH 1 1.00 ½" Fitting, M/P, SS316 BUTECH 1 1.00 ½" Fitting, M/P, SS316 BUTECH 1 1.00 ½" N/P Tubing, 0.065" W/T, SS316 SANDVIK 1 1.00 ½" M/P Tubing, 0.109" ID, SS316 BUTECH 1 1.00 ½" M/P Tubing, 0.109" ID, SS316 SANDVIK	æ	-	Pressure gauge, double scale, ¼" M/P, d=100 mm, Front ring, Glycerine filled, 20.000 PSI/bar, SS316/SS304 housing		10PB0000T020TEM2G	
2 2 Way Angle Valve ¼" M/P, 20.000 PSI, SS316 BUTECH 1 1.LOT ½" Fitting, A-LOK, SS316 PARKER 1 1.LOT ½" Fitting, A-LOK, SS316 PARKER 1 1.LOT ½" Fitting, M/P, SS316 PARKER 1 1.LOT ½" Fitting, M/P, SS316 BUTECH 1 1.LOT ½" OD, Tubing, 0,065" WT, SS316 SANDVIK 1 1.LOT ½" OD, Tubing, 0,065" WT, SS316 SANDVIK 1 1.LOT ½" OD, Tubing, 0,065" WT, SS316 SANDVIK 1 1.LOT ½" M/P Tubing, 0,065" WT, SS316 BUTECH	6	2	2 Way Straight Valve ¼" M/P, 20.000 PSI, SS316	BUTECH	20UV41VPM	
	10	2	2 Way Angle Valve ¼" M/P, 20.000 PSI, SS316	BUTECH	20UV42VPM	
		1 LOT	12" Fitting, A-LOK, SS316	PARKER		
		1 LOT	14" Fitting, A-LOK, SS316	PARKER		
		1 LOT	14" Fitting, M/P, SS316	BUTECH		
		1 L O T	12" OD, Tubing, 0,065" WT, SS316	SANDVIK		
		1 LOT	14" OD, Tubing, 0,065" WT, SS316	SANDVIK		
		1 LOT	14" M/P Tubing, 0,109" ID, SS316	BUTECH		

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		Date:	Date:	
		KR	JRG	
		Created by:	Approved by:	
Customer			01	
		41-10-0082	41-01-0079-R(
		Ref. doc.:	ld. no.:	
VIT ASE100 ATEX		289701	289701	
TEST UI		Customer ref .:		
Title:		Customer	HYTOR ref. no.	









13. DECLARATION OF CONFORMITY



EF-OVERENSSTEMMELSESERKLÆRING

EC-DECLARATION OF CONFORMITY

ID No.	12	41-81-0038	R01			
Fabrikant Manufacturer	1	HYTOR A/S Høgevej 8 6705 Esbjer Danmark				
				hermed at leclares that		
Udstyr <i>Equipment</i>	1	Type Unit Owner	: 41-10-00 : Test Uni : Hytor A/	t ASF 100 ATEX		
		2006/42/EF 97/23/EF - F Has been n 2006/42/EC	- Machinery	ktivet 3.3 I <i>according to:</i>	live, article 3.3	
Designtryk <i>Design pressure</i>	÷	1,138 bar				
Atex mærkning Atex marking	:	II 2 G c T6				
Kunde ref. nr. <i>Customer ref. no.</i>	:	289701				
HYTOR ref. nr. HYTOR ref. no.	1	289701				
Navn:		Stilling:		Underskrift-		Dato:
Name:		Position:		Signature:	1	Date:
Jonas Månson		Project Coo		HYTO B Høgever 5 - 105 E 76 1 19 00 - Fax	US sbjerg Ø 76 14 19 09	15-10-2014
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