Tentec

Part of the Atlas Copco Group

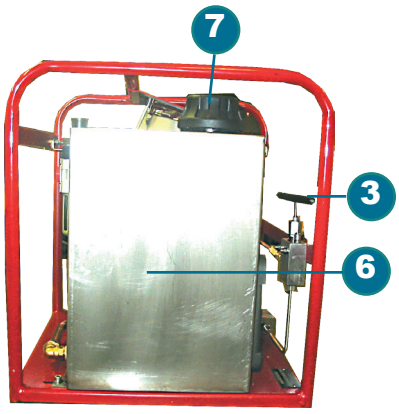
Instruction Document

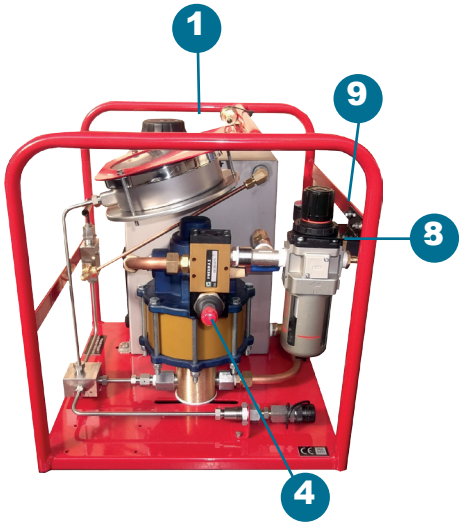
Tensioner Air Driven Pump Unit

Model: HTT.6271
Model: HTT.6272
High Flow: Model: HTT.6978
High Flow: Model: HTT.9384

Document No:TDR127 R8
Date: 09 September 2014

Model	Max Working Pressure	
	bar	psi
HTT.6271	1500	21750
HTT.6272	2275	33000
Hi-Flow HTT.6978	1500	21750
Hi-Flow HTT.9384	2275	33000





Part Identifier

1 - Frame
2 - Oil outlet, female quick release coupling
3 - Pressure release valve
4 - Safety On/Off Valve
5 - Pump Unit
6 - Oil Reservoir
7 - Filler cap
8 - Air Inlet
9 - Air pressure gauge
10 - Pressure Gauge

ISO14001 ISO18001 ISO9001

Engineering Construction Industry Training Board

FPAL empowered by Achilles Registered

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TDR127R7

1.0 General Hydraulic System Safety Warnings

Failure to practice the following safety warnings could lead to personal injury and/or equipment damage

Always wear recommended protective clothing during the tensioning procedure.

Never exceed the maximum working pressure of the tensioning system. The maximum working pressure of the whole system is determined by the lowest pressure rated component.

Treat hydraulic hose with respect. Do not sharply bend or kink the hose when connecting tensioning tools. Be aware of the minimum bend radius of the hose. Sharply bending or kinking hose can lead to premature hose rupture.

Do not drop sharp objects on to the hydraulic hose, do not drive any type of vehicle over hydraulic hose. Doing so will cause internal hose damage and lead to premature hose failure.

Never lift tensioning tools by the hydraulic hose or hydraulic connections.

Never touch pressurised hoses or couplers. Escaping high pressure oil can penetrate your skin and is extremely dangerous. Seek urgent medical attention if oil penetrates skin.

Never preset the pump unit relief valve to a pressure greater than the lowest rated pressure component in the system. Do ing so may lead to injury and or equipment damage.

If prior to the tensioning operation you have any doubt in the correct and safe use of Tentec bolt tensioning equipment. Contact Tentec for advise.

Thoroughly read all instruction documentation prior to using the tensioning equipment. Ensure all safety precautions are followed to avoid personal injury and/or equipment damage during the tensioning procedure. Tentec can not be held responsible for injury or damage to equipment caused by product misuse or by lack of equipment maintenance.

2.0 Specific Bolt Tensioner Safety Warnings.

Bolt tensioning systems should only be used by trained and experienced personnel familiar with safe operating practices of bolt tensioning systems.

Bolting calculations should only be carried out by trained and qualified engineers who have been appropriately trained or have suitable experience in bolting technology.

Always wear suitable protective clothes including boots, gloves and eye protection during the tensioning procedure.

Always ensure that all personnel in the near vicinity are aware that pressurisation of high ressure equipment is about to take place. Cordon off the work area and exclude anyone from the area who is not involved directly with the tensioning procedure.

Never exceed the maximum working pressure of the system. The maximum working pressure of the tensioning tool is hard stamped on the tensioner body component.

Never exceed the maximum piston stoke capability of the tensioning tool. A red maximum piston stroke line will become visible as the tensioner approaches maximum stroke. The maximum piston stroke value will be hard stamped on the tensioner body.

Never stand in-line with the bolt axis during the tensioning or de-tensioning procedure. Unexpected bolt failure can result in serious personal injury or death. Premature bolt failure can lead to parts of the tensioner or bolt becoming high velocity projectiles. Alert all personnel to the consequences of premature bolt failure and clear the area of non essential personnel before the procedure starts.

Only approach pressurised tensioning tools when you are certain that the pressure is holding steady. Continually monitor the pump pressure at all times. If the pressure is not holding steady do not approach the system but release the pressure to zero and then investigate the cause of pressure loss. Never investigate at high pressure.

Thoroughly inspect the main thread of the thread insert component, look for sign of thread damaged or worn threads. Replace any worn or damaged parts. Ensure you have adequate thread engagement between the thread insert component and the bolt being tensioned.

Never attempt to disconnect an hydraulic coupler while at pressure.

Before pressure is applied to the system check that each hydraulic hose is connected correctly. Physically pulling on the connector will determine if the male couplers are correctly fitted to the female connectors.

Never pressurise an unconnected male coupler. Male couplers are not designed to withstand high pressure, in the unconnected mode. Pressurising an unconnected Male coupler can lead to serious personal injury or death.

It is safe to pressurise the unconnected female coupler fitted to the last tensioner in the circuit.

Check that the bolt is capable of taking the initial load applied by the tensioners. Tensioners are capable of breaking bolts if the bolt material is not strong enough to withstand the tensioner load.

Users should be aware at all times that pressure can build up very quickly and a member of the tensioning team should be ready to release pressure at any time.

Never leave a pressurised system unattended.

All investigation, maintenance or repair work should only be carried out when the tensioner is at zero pressure.

All tensioner specifications can be found hard stamped on the body of the tool. Be aware of the maximum working pressure and the maximum piston stoke capability.

The calculated required working pressure of the tensioners will typically be less than the maximum working pressure of the tool. Never exceed the maximum rated working pressure of the tensioner.

Tensioner Air Driven Pump Unit

IF YOU ARE IN ANY DOUBT ABOUT ANY INSTRUCTION DETAILED IN THIS PROCEDURE, DO NOT HESITATE TO CONTACT TENTEC

Introduction

The operating and maintenance procedures listed within this manual should be adhered to and will enable the operator to obtain maximum efficiency and reliability from the equipment.

Precautions

Prior to connection the hydraulic pump to any equipment, the user is to ensure that -

- The working pressure of the hydraulic pump and the equipment to be operated are compatible.
- The reservoir pump capacity is adequate to operate the equipment throughout its range.

The hydraulic oil specification used within the pump and the equipment are compatible.

Tentec Air Driven Pump Unit

Tentec Air Driven Pump Units operate on the simple but efficient principle of power magnification through the use of differential areas. A relatively large air-operated piston drives the smaller piston, which provides fluid flow at high pressures. All Tentec air driven pump units are fitted into an easily transportable, tubular steel frame.

The pump units are available, fitted with a large choice of pressure gauges and are supplied complete with an air pressure regulator which can be set to stall the pump unit when it reaches the pressure required for each particular tensioning application.

Technical Specifications

Tentec supply many different air driven pump units, of varying pressure and fluid discharge specifications.

Note: Average Operating Noise Level - 80dB

Model	Max Working Pressure		Model Ratio	Hydraulic Piston Diameter		Hydraulic Piston Area		Volume Per Stroke		Guage Model	Air Consumption	Weight (Empty)	W	B	D	Reservoir Capacity
	bar	psi		mm	In	mm^2	In^2	mm^3	In^3	psi	SCFM	kg	cm	cm	cm	L
HTT.6271	1500	21750	440	6.35	0.25	31.61	0.049	999.6	0.061	0-25000	28	23	42	42	46	9
HTT.6272	2275	33000	440	6.35	0.25	31.61	0.049	999.6	0.061	0-40000	28	23	42	42	46	9
Hi-Flow HTT.6978	1500	21750	740	6.35	0.25	31.61	0.049	2015.6	0.123	0-25000	56	25	42	42	60	9
Hi-Flow HTT.9384	2275	33000	740	6.35	0.25	31.61	0.049	2015.6	0.123	0-40000	56	25	42	42	60	9

Approximate Air to Hydraulic Pressure Ratios Static Condition

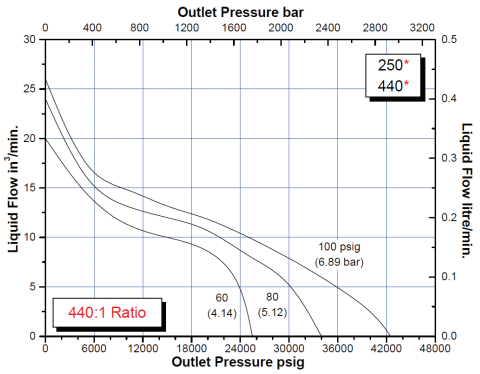
Model	Air Pressure (psi)									
	10	20	30	40	50	60	70	80	90	100
HTT.6271	5000	8000	12500	16500	21000	25500	30000	34000	38000	42500
HTT.6272	5000	8000	12500	16500	21000	25500	30000	34000	38000	42500
Hi-Flow HTT.6978	6000	13000	21000	27000	34000	40500	46000	52000	59000	65000
Hi-Flow HTT.9384	6000	13000	21000	27000	34000	40500	46000	52000	59000	65000
	Output Pressure (psi)									

Recommended Oil

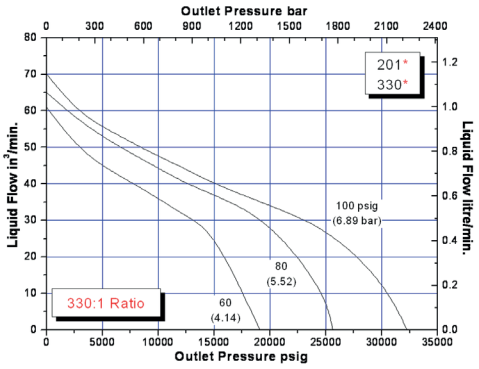
ISO Grade 10, 32 and 68
Example: Shell Morlina oil 10

Approximate Rate of Discharge

Model: HTT.6271 & HTT.6272



Model: HTT.6978 & HTT.9384



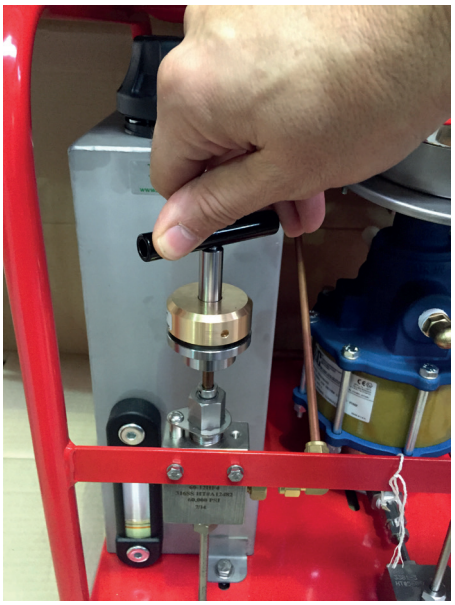
Before Connecting the Air Supply

It is strongly recommended that the pump is regulated in order to stall at the required tensioning pressure.
This is achieved by adjustment of the Air Regulator Valve

Important
Before connecting an air supply, it is important to check the following –

- The pressure release valve is fully open.
- The On /Off valve is off (In the horizontal position). The On/OFF valve is by default closed until manually operated and held.
- The oil reservoir has sufficient oil (Grade ISO 10, 32, 68).
- Check that the cap seal plug has been removed.

THE OIL TANK ON THIS PUMP UNIT IS FITTED WITH A CAP SEAL PLUG TO PREVENT OIL SPILLAGE DURING TRANSIT. REMOVE THE M6 CAP SCREW & SEAL FROM TANK CAP PRIOR TO USE.



Setting pump stall pressure.

Step 1
Tentec supply all pump units with the air pressure regulator set to stall the pump at its maximum working pressure.
Connect the main air supply to the pump unit.
Slowly activate the safety On/Off valve by holding the control down, the pump will begin to operate, no pressure can be generated because the pressure release valve is open the oil is simply circulated through the system back to the tank.

Step 2
Before adjusting the pressure on the air filter/regulator it is necessary for the ‘Snap Action Lock’ to be in the up position. By turning the adjustment knob anti-clockwise on the regulator, reduce the air pressure to zero PSI, the pump will slow down considerably and may even stop.

Step 3
Fully close the pressure release valve, as this is done, a slight pressure will be generated on the pressure gauge and the pump will finally stall.

Step 4
Slowly increase the air supply pressure by turning the adjustment knob clockwise, the oil pressure gauge will indicate a higher pressure as more and more air is allowed into the pump unit. Stop the air adjustment when the oil pressure gauge indicates the desired tensioning pressure.

Step 5
Stop the pump by turning the On/Off valve and release the pressure by slowly opening the pressure return valve, the pump gauge will fall to zero. Lock the air regulator by pushing down on to the ‘Snap Action Lock’.

Try the pump again and allow it to stall, check the pressure and further adjust if necessary. When satisfied that the pump stall pressure is correct the pump unit is now ready for the tensioning operation.

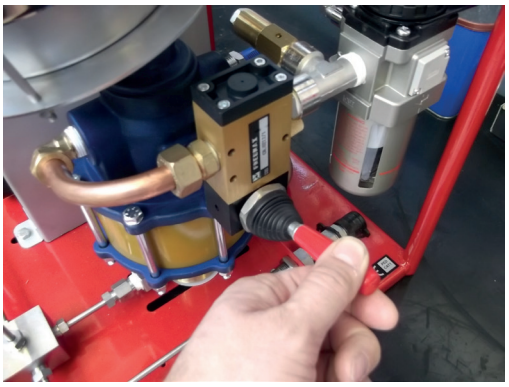
Pump Preparation

Step 1

Ensure the pressure release valve is in the open position (turn anti - clockwise). Pressure relief valve is fitted with a torque limiter to prevent overtightening. Limiter will ‘Click Out’ as a preventative measure.

Step 2

Ensure the safety on/off valve is set to the off position. Note this is a manually triggered spring loaded mechanism, the valve is off/ closed in the un-held position. Depress and hold to open/on the valve.



Step 3

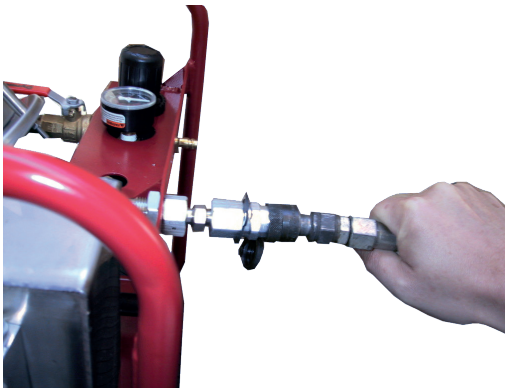
Connect the air hose to the air inlet connector.

Step 4

Connect the hydraulic link hose to the female quick connector. (Refer to the operation manual supplied with your tensioners for correct hydraulic link hose configuration)

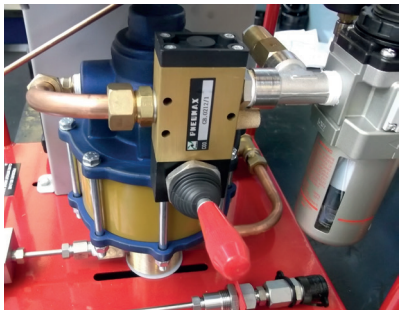
Step 5

Ensure an adequate volume of oil is contained in the oil tank.

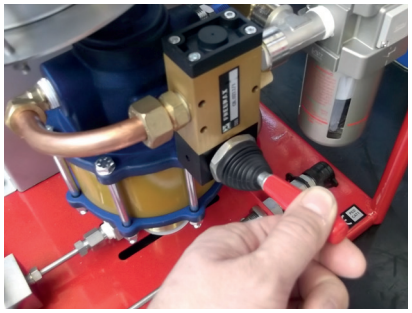


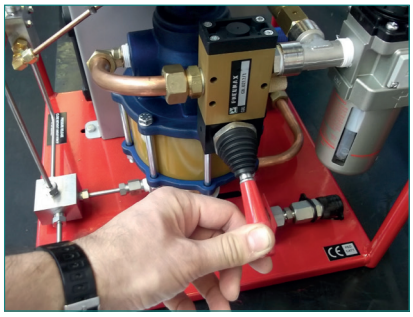
Safety On/Off Valve

The pump unit is fitted with a safety on off valve. The spring loaded valve defaults to off when the valve handle is untouched. Holding the valve handle in the down position turns the pump On. Releasing the handle turns the pump off.



Safety On/Off Valve - Default position = Off





Safety On/Off Valve - Handle held down = On

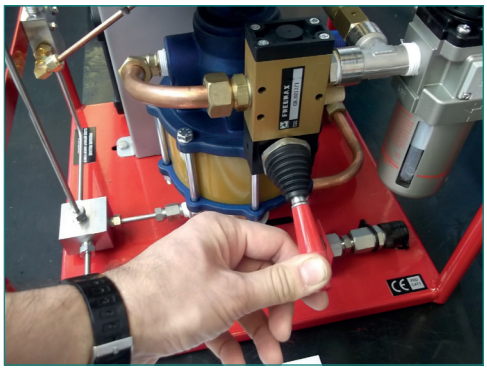
Pump Operation

Step 1

Close the pressure release valve (clockwise).
Pressure relief valve is fitted with a torque limiter to prevent overtightening.
Limiter will ‘Click Out’ as a preventative measure.

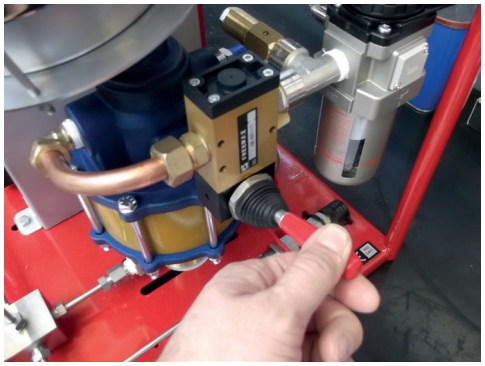
Step 2

Slowly, hold down the on/off valve. The pressure gauge will slowly indicate pressure.



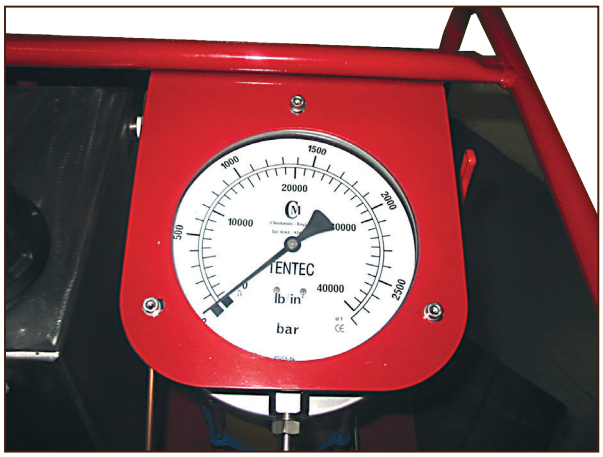
Step 3

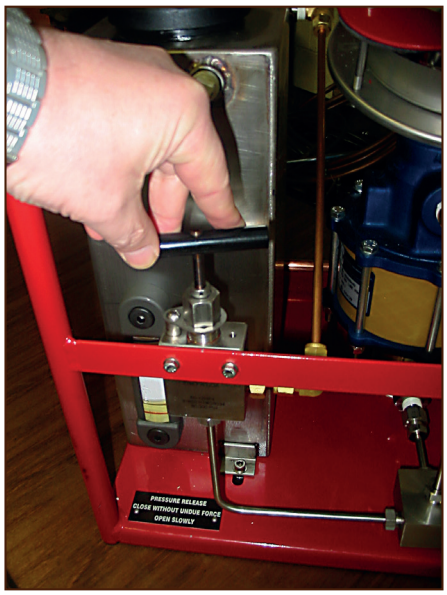
Once the desired pressure is reached, release the safety On/Off valve. The valve will spring back to the Off position. The gauge will indicate a held pressure. (ensure the pressure is holding firm before approaching any pressurised bolt tensioning equipment)



Step 4

To release the hydraulic pressure slowly open the pressure release valve (anticlockwise) The pressure will slowly fall





Safety Note
It is recommended that the pressure should never exceed 90% of the gauge maximum pressure rating

Shut down procedure

Disconnect the main air supply

Open the oil pressure release valve

Open the On/Off valve (Air will vent through the exhaust)

Close the On/Off valve

Drain water from the air filter

Top-up oil reservoir

Store in pump box supplied.

Adjustment of Pressure Release Valve (PRV)

The PRV is factory set to vent air should the pump over-pressurise. Adjustment is not necessary

ALL DIMENSIONS IN MM

IF IN DOUBT ASK

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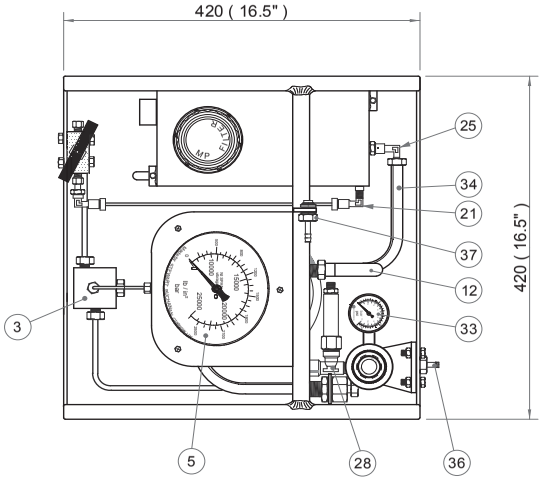
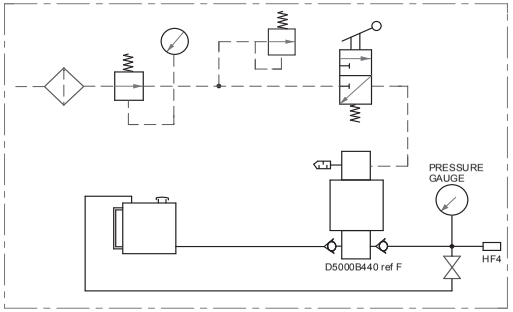
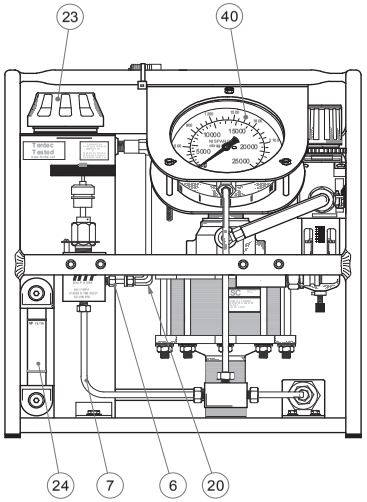
DRAWING MODIFICATION HISTORY		
DMR No.	DATE	REV
6000	13/06/2007	B
7210	17/06/2009	C
8635	21/06/2012	D
9471	29/04/2013	E
10490	21/01/2015	F
10636	21/01/2015	G

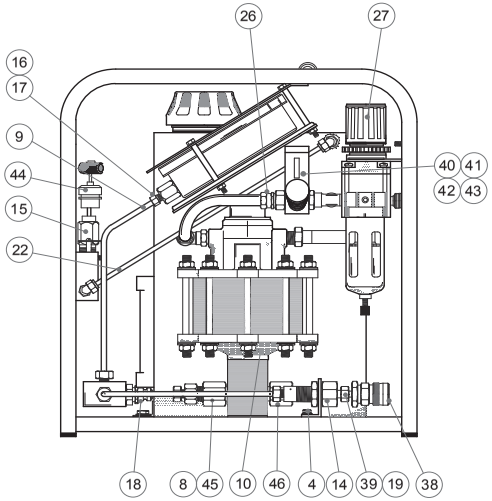
AIR DRIVEN HYDRAULIC PUMP FITTED WITH 0 - 25,000psi PRESSURE GAUGE

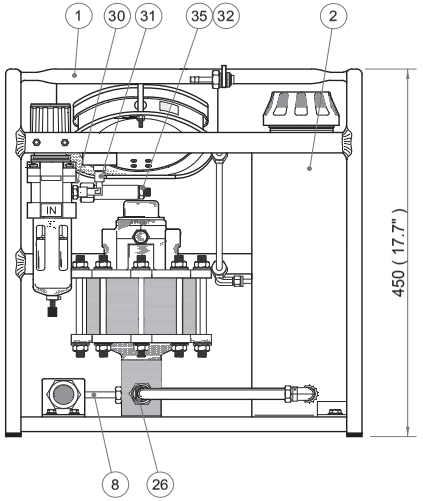


SCHEMATIC DIAGRAM









No	DESCRIPTION	Qty	MATERIAL	TENTEC PART No.	REMARKS	PART NUMBER
46	INLET CHECK VALVE	1		HTT.6271.046		11 - 5021 S000
45	OUTLET CHECK VALVE	1		HTT.6271.045		11 - 6116 S000
44	VALVE PROTECTION CLUTCH	1		HTT.6271.044		HTT.11400.000C
43	SILENCER	1		HTT.6271.043		712 - 1/4
42	LEVER SPRING VALVE - THE VALVE BODY TO BE INVERTED 180 deg	1		HTT.6271.042		224.32.9.1/1-G1/4"-3/2
41	REDUGNSNIPPLE 1/4" BSP (M) x 1/2 BSP (M)	1		HTT.6271.041		RA012 1/4" - 1/2"
40	REDUCING ADAPTOR 15mm O/D x 1/4" BSP	1		HTT.6271.040		611 15mm (F) x 1/4" BSP (M)
39	MALE COUPLING KUTERLITE	1		HTT.6271.039		MALE 611 15mm X 3/8"
38	JOUCOMATIC F/F ELBLOW	1		HTT.6271.038		RA 021 1/8" - 1/8"
37		1		HTT.6271.037		
36	PLUG HOLLOW	1		HTT.6271.036		GF NO 291 S 1/2"
35	LABEL	1		HTT.6271.035		PRESSURE RELEASE OPEN SLOWLY
34	COPPER TUBE	600m		HTT.6271.034		15mm OD
33	AIR GAUGE	1		HTT.6271.033		40mm DIA 0-160PSI/BAR
32	AIR RELIEF VALVE	1		HTT.6271.032		2550 BSP
31	FEMALE TEE 1/2 x 1/2 x 1/2	1		HTT.6271.031		LV 3420 1/2"
30	HEX NIPPLE	1		HTT.6271.030		RIV MA02 1/8"
29		1		HTT.6271.029		
28	MALE RUN TEE	1		HTT.6271.028		RA025 ½"
27	FILTER REGULATOR	1		HTT.6271.027		AW40 -04B - X126
26	MALE COUPLING KUTERLITE	1		HTT.6271.026		611 15mm x ½" BSPT
25	MALE ELBOW KUTERLITE	1		HTT.6271.025		616 15mm x ½" BSPT
24	5" SIGHT LEVEL	1		HTT.6271.024		LAV 20 with 10mm nuts
23	FILTER BREATHER	1		HTT.6271.023		TAP 90
22	COPPER TUBE	300m		HTT.6271.022		1/4" OD
21	MALE ELBOW	1		HTT.6271.021		DUM 4-6N-B
20	ELBOW	1		HTT.6271.020		DL 4-B
19	¼" CEJN x HN4 ADAPTOR	1		HTT.6271.019		19 950 0022
18	NIPPLE	1		HTT.6271.018		60-HM4-3.5
17	HF4 COLLAR	3		HTT.6271.017		60-2H4
16	HF4 GLAND NUT	3		HTT.6271.016		60-2HM4
15	PRESSURE RELEASE VALVE	1		HTT.6271.015		60-12HF4
14	BULKHEAD COUPLING	1		HTT.6271.014		60-21HF4-B
13	PUMP OUTLET ADAPTOR	1		HTT.6271.013		11-6117 S000
12	SILENCER	1		HTT.6271.012		346 00 409
11	PUMP	1		HTT.6271.011		D5000B440 Rev F
10	3/4" - 1/2" REDUCER	1		HTT.6271.010		GF721.910.837
9	GAUGE PIPE	1		HTT.6271.009		3301-9
8	OUTLET PIPE	1		HTT.6271.008		3301-8
7	PRESSURE RELEASE PIPE	1		HTT.6271.007		3301-7
6	VENT STANDPIPE ADAPTOR	1		HTT.6271.006		3301-6
5	LEXAN GAUGE GUARD	1		HTT.6271.005		3301-5
4	BULKHEAD BRACKET	1		HTT.6271.004		3301-4
3	OUTLET BLOCK	1		HTT.6271.003		3301-3
2	TANK ST. ST.	1		HTT.6271.002		3301-2
1	FRAME	1		HTT.6271.001		3301-1

TOTAL WEIGHT 22.5 kg

TENTEC LIMITED				DRAWING TITLE	DRAWING No
ORIGINAL SCALE: 1 : 4	GEN TOLERANCE: ± 0.25mm			D500 AIR OPERATED HYD PUMP 0 - 25,000 Lb/in²	HTT.6271.000G
DRAWN BY: JMG	DATE: 18/03/05	CHECKED BY: DME	DATE: 18/03/05		5L - SS - 300

ALL DIMENSIONS IN MM

IF IN DOUBT ASK

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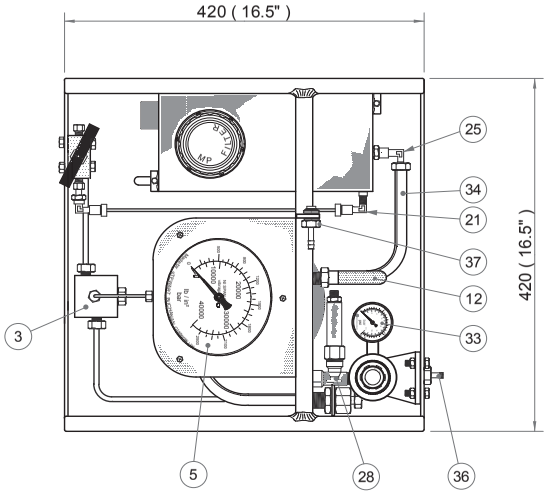
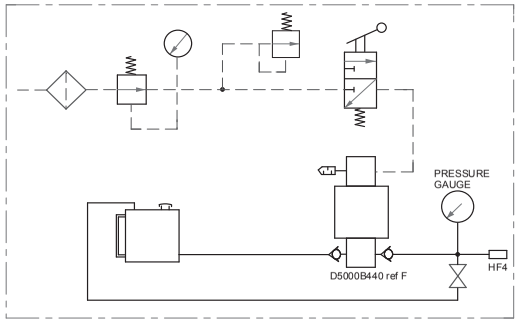
DRAWING MODIFICATION HISTORY

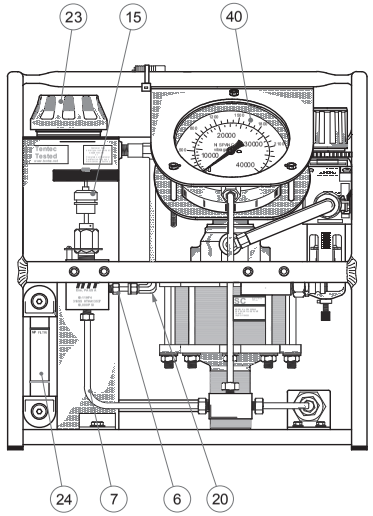
DMR No.	DATE	REV
6000	13/06/2007	B
7210	17/06/2009	C
8634	21/06/2012	D
9470	29/04/2013	E
10634	13/04/2015	F
10635	13/04/2015	G

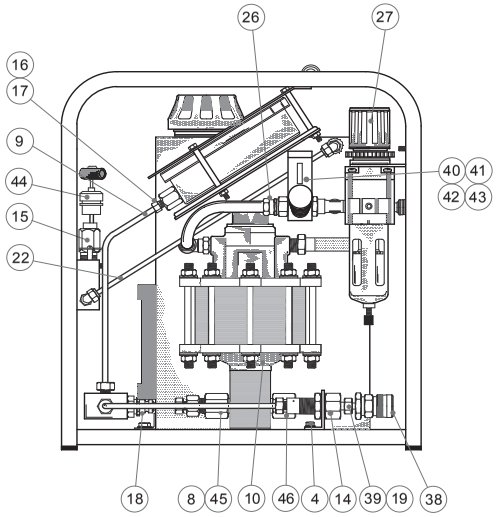
AIR DRIVEN
HYDRAULIC PUMP
FITTED WITH 0 - 40,000psi
PRESSURE GAUGE

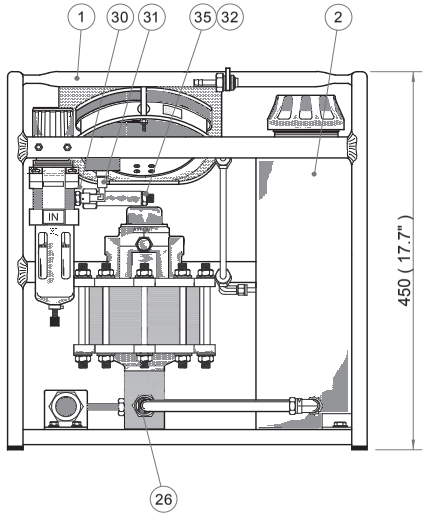


SCHEMATIC DIAGRAM









No	DESCRIPTION	QTY	MATERIAL	TENTEC PART No.	REMARKS	PART NUMBER
46	INLET CHECK VALVE	1		HTT.6272.046		11 - 5021 S000
45	OUTLET CHECK VALVE	1		HTT.6272.045		11 - 6116 S000
44	VALVE PROTECTION CLUTCH	1		HTT.6272.044		HTT.11400.000C
43	SILENCER	1		HTT.6272.043		712 - 1/4
42	LEVER SPRING VALVE - THE VALVE BODY TO BE INVERTED (180 deg)	1		HTT.6272.042		224.32.9.1/1-G1/4"-3/2
41	REDUCINGNIPPLE 1/4" BSP (M) x 1/2 BSP (M)	1		HTT.6272.041		RA012 1/4" - 1/2"
40	REDUCING ADAPTOR 19mm OD x 1/4" BSP	1		HTT.6272.040		611 15mm (F) x 1/4" BSP (M)
39	MALE COUPLING KUTERLITE	1		HTT.6272.039		MALE 611 15mm X 3/8"
38	JOUCOMATIC F/F ELBLOW	1		HTT.6272.038		RA 021 1/8" - 1/8"
37		1		HTT.6272.037		
36	PLUG HOLLOW	1		HTT.6272.036		GF NO 291 S 1/2"
35	LABEL	1		HTT.6272.035		PRESSURE RELEASE OPEN SLOWLY
34	COPPER TUBE	600m		HTT.6272.034		15mm OD
33	AIR GAUGE	1		HTT.6272.033		40mm DIA 0-160PSI/BAR
32	AIR RELIEF VALVE	1		HTT.6272.032		2550 BSP
31	FEMALE TEE 1/2 x 1/2 x 1/2	1		HTT.6272.031		LV 3420 1/2"
30	HEX NIPPLE	1		HTT.6272.030		RIV MA02 1/8"
29		1		HTT.6272.029		
28	MALE RUN TEE	1		HTT.6272.028		RA025 ½"
27	FILTER REGULATOR	1		HTT.6272.027		AW40 -04B - X126
26	MALE COUPLING KUTERLITE	1		HTT.6272.026		611 15mm x ½" BSPT
25	MALE ELBOW KUTERLITE	1		HTT.6272.025		616 15mm x ½" BSPT
24	5" SIGHT LEVEL	1		HTT.6272.024		LAV 20 with 10mm nuts
23	FILTER BREATHER	1		HTT.6272.023		TAP 90
22	COPPER TUBE	300m		HTT.6272.022		1/4" OD
21	MALE ELBOW	1		HTT.6272.021		DLM 4-6N-B
20	ELBOW	1		HTT.6272.020		DL 4-B
19	¼" CEJN x HN4 ADAPTOR	1		HTT.6272.019		19 950 0022
18	NIPPLE	1		HTT.6272.018		60-HM4-3.5
17	HF4 COLLAR	3		HTT.6272.017		60-2H4
16	HF4 GLAND NUT	3		HTT.6272.016		60-2HM4
15	PRESSURE RELEASE VALVE	1		HTT.6272.015		60-12HF4
14	BULKHEAD COUPLING	1		HTT.6272.014		60-21HF4-B
13	PUMP OUTLET ADAPTOR	1		HTT.6272.013		11-6117 S000
12	SILENCER	1		HTT.6272.012		346 00 409
11	PUMP	1		HTT.6272.011		D5000B440 Rev F
10	3/4" - 1/2" REDUCER	1		HTT.6272.010		GF721.910.837
9	GAUGE PIPE	1		HTT.6272.009		3301-9
8	OUTLET PIPE	1		HTT.6272.008		3301-8
7	PRESSURE RELEASE PIPE	1		HTT.6272.007		3301-7
6	VENT STANDPIPE ADAPTOR	1		HTT.6272.006		3301-6
5	LEXAN GAUGE GUARD	1		HTT.6272.005		3301-5
4	BULKHEAD BRACKET	1		HTT.6272.004		3301-4
3	OUTLET BLOCK	1		HTT.6272.003		3301-3
2	TANK ST. ST.	1		HTT.6272.002		3301-2
1	FRAME	1		HTT.6272.001		3301-1

TOTAL WEIGHT 22.5 kg

TENTEC LIMITED

ORIGINAL SCALE: 1 : 4 | GEN TOLERANCE: ± 0.25mm

DRAWN BY: JMG | DATE: 18/03/05 | CHECKED BY: DME | DATE: 18/03/05

DRAWING TITLE: D500 AIR OPERATED HYD PUMP 0 - 40,000 Lb/in²

DRAWING No: HTT.6272.000G

5L - SS - 300

ALL DIMENSIONS IN MM

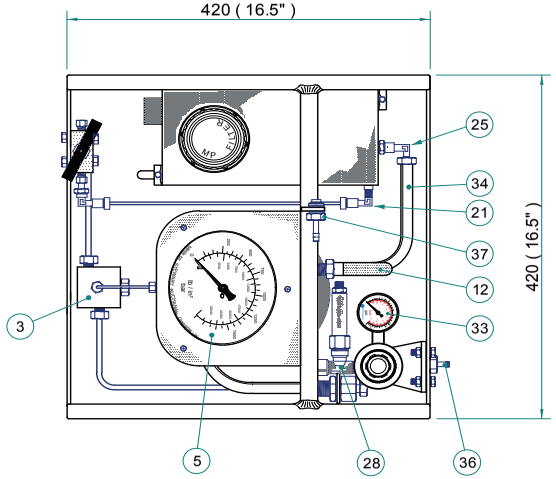
IF IN DOUBT ASK

Tentec®
www.tentec.net

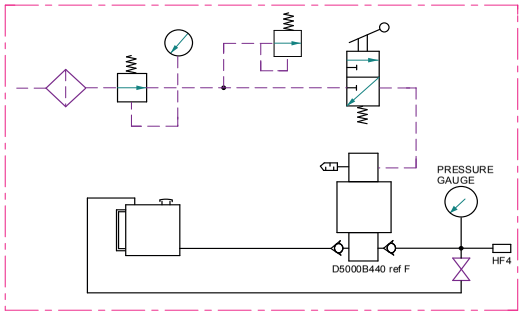
DRAWING MODIFICATION HISTORY

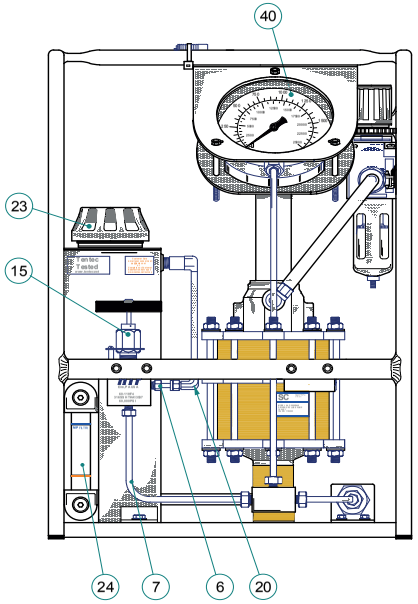
DMR No.	DATE	REV
7211	17/06/09	B

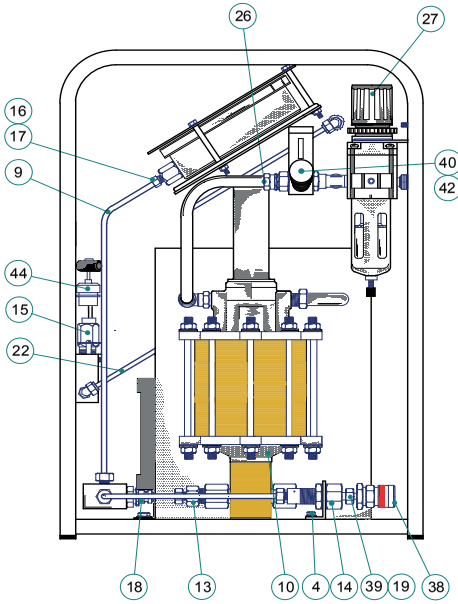
AIR DRIVEN HYDRAULIC PUMP FITTED WITH 0 - 25,000psi PRESSURE GAUGE

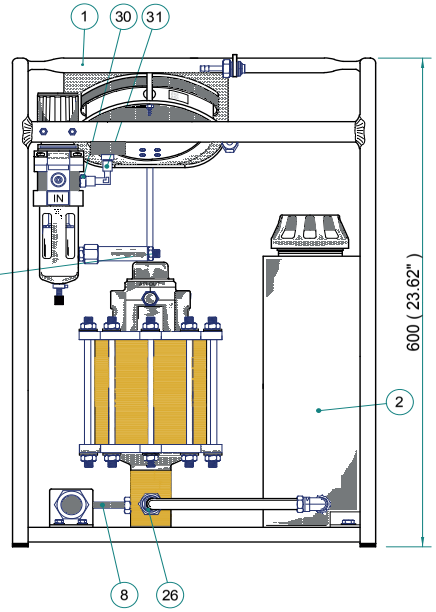


SCHEMATIC DIAGRAM









No	DESCRIPTION	Qty	MATERIAL	SPECIFICATION	REMARKS	PART NUMBER
44	VALVE PROTECTION CLUTCH	1				HTT.11400.000C
43	SILENCER	1				712 - 1/4
42	LEVER SPRING VALVE - THE VALVE BODY TO BE LIMITED 180 deg.	1				224.32.9.1/1-G1/4"-3/2
41	REDUCING NIPPLE 1/4" BSP (M) x 1/2 BSP (M)	1				RA012 1/4" - 1/2"
40	REDUCING ADAPTOR 15mm O/D x 1/4" BSP	1				611 15mm (F) x 1/4" BSP (M)
39	MALE COUPLING KUTERLITE	1				MALE 611 15mm X 3/8"
38	JOUCOMATIC F/F ELBLOW	1				RA 021 1/8" - 1/8"
37		1				
36	PLUG HOLLOW	1				GF NO 291S 1/2"
35	LABEL	1				PRESSURE RELEASE OPEN SLOWLY
34	COPPER TUBE	600m				15mm OD
33	AIR GAUGE	1				40mm DIA 0-160PSI/BAR
32	AIR RELIEF VALVE	1				2550 BSP
31	FEMALE TEE 1/2 x 1/2 x 1/2	1				LV 3420 1/2"
30	HEX NIPPLE	1				RIV MA02 1/8"
29		1				
28	MALE RUN TEE	1				RA025 ½"
27	FILTER REGULATOR	1				AW40 -04B - X126
26	MALE COUPLING KUTERLITE	1				611.15mm x ½" BSPT
25	MALE ELBOW KUTERLITE	1				616 15mm x ½" BSPT
24	5" SIGHT LEVEL	1				LAV 20 with 10mm nuts
23	FILTER BREATHER	1				TAP 90
22	COPPER TUBE	300m				1/4" OD
21	MALE ELBOW	1				DLM 4-6N-B
20	ELBOW	1				DL 4-B
19	¼" CEJN x HN4 ADATOR	1				19 950 0022
18	NIPPLE	1				60-HM4-3.5
17	HF4 COLLAR	3				60-2H4
16	HF4 GLAND NUT	3				60-2HM4
15	PRESSURE RELEASE VALVE	1				60-12HF4
14	BULKHEAD COUPLING	1				60-21HF4-B
13	PUMP OUTLET ADAPTOR	1				30-21HF4NMC
12	SILENCER	1				346 00 409
11	PUMP	1				D5000B440 Rev F
10	3/4" - 1/2" REDUCER	1				GF721.910.837
9	GAUGE PIPE	1				3301-9
8	OUTLET PIPE	1				3301-8
7	PRESSURE RELEASE PIPE	1				3301-7
6	VENT STANDPIPE ADAPTOR	1				3301-6
5	LEXAN GAUGE GUARD	1				3301-5
4	BULKHEAD BRACKET	1				3301-4
3	OUTLET BLOCK	1				3301-3
2	TANK ST. ST.	1				3301-2
1	FRAME	1				3301-1

D600B330 - HF4

TOTAL WEIGHT 26.5 kg

TENTEC LIMITED

ORIGINAL SCALE: 1 : 4

GEN TOLERANCE: ± 0.25mm

DRAWN BY: JMG | DATE: 08/04/09 | CHECKED BY: DME | DATE: 17/06/09

DRAWING TITLE: D600 AIR OPERATED HYD PUMP 0 - 25,000 Lb/in²

DRAWING No: HTT.6978.000B

D600

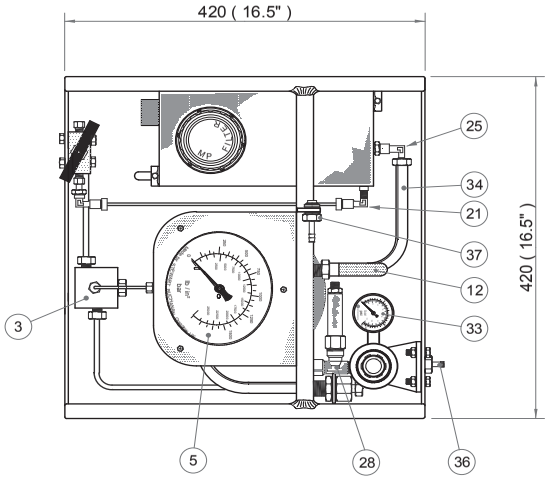
ALL DIMENSIONS IN MM

IF IN DOUBT ASK

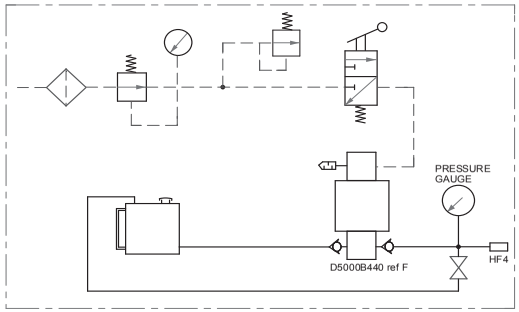
Tentec®
www.tentec.net

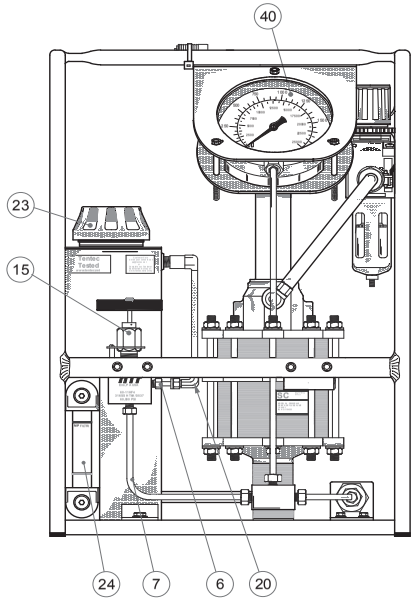
DRAWING MODIFICATION HISTORY		
DMR No.	DATE	REV

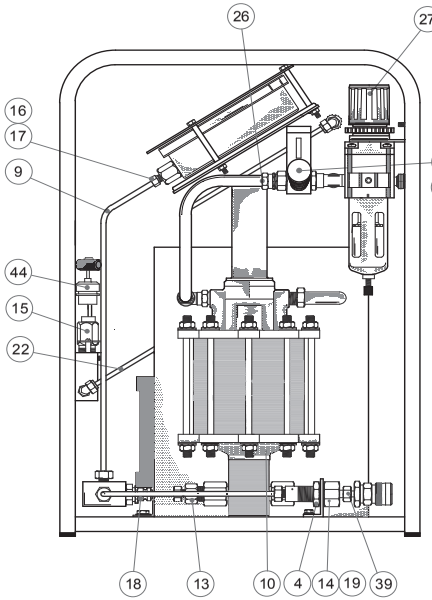
AIR DRIVEN HYDRAULIC PUMP FITTED WITH 0 - 40,000psi PRESSURE GAUGE

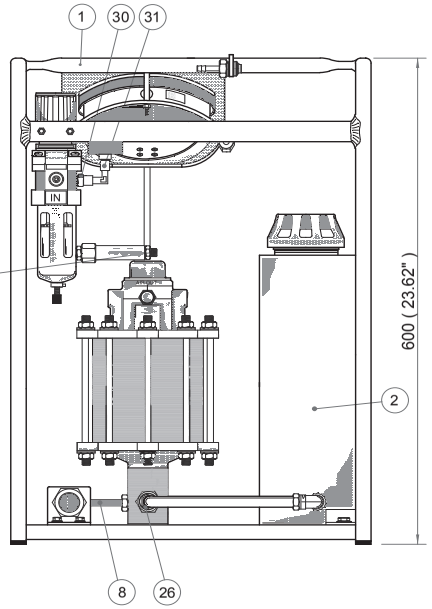


SCHEMATIC DIAGRAM









No	DESCRIPTION	Qty	MATERIAL	SPECIFICATION	REMARKS	PART NUMBER
44	VALVE PROTECTION CLUTCH	1				HTT.11400.000C
43	SILENCER	1				712 - 1/4
42	LEVER SPRING VALVE - THE VALVE BODY TO BE INVERTED 180 deg	1				224.32.9.1/1-G1/4"-3/2
41	REDUCING NIPPLE 1/4" BSP (M) x 1/2 BSP (M)	1				RA012 1/4" - 1/2"
40	REDUCING ADAPTOR 15mm O/D x 1/4" BSP	1				611 15mm (F) x 1/4" BSP (M)
39	MALE COUPLING KUTERLITE	1				MALE 611 15mm X 3/8"
38	JOUCOMATIC F/F ELBLOW	1				RA 021 1/8" - 1/8"
37		1				
36	PLUG HOLLOW	1				GF NO 291S 1/2"
35	LABEL	1				PRESSURE RELEASE OPEN SLOWLY
34	COPPER TUBE	600m				15mm OD
33	AIR GAUGE	1				40mm DIA 0-160PSI/BAR
32	AIR RELIEF VALVE	1				2550 BSP
31	FEMALE TEE 1/2 x 1/2 x 1/2	1				LV 3420 1/2"
30	HEX NIPPLE	1				RIV MA02 1/8"
29		1				
28	MALE RUN TEE	1				RA025 ½"
27	FILTER REGULATOR	1				AW40 -04B - X126
26	MALE COUPLING KUTERLITE	1				611 15mm x ½" BSPT
25	MALE ELBOW KUTERLITE	1				616 15mm x ½" BSPT
24	5" SIGHT LEVEL	1				LAV 20 with 10mm nuts
23	FILTER BREATHER	1				TAP 90
22	COPPER TUBE	300m				1/4" OD
21	MALE ELBOW	1				DLM 4-6N-B
20	ELBOW	1				DL 4-B
19	¼" CEJN x HN4 ADATOR	1				19 950 0022
18	NIPPLE	1				60-HM4-3.5
17	HF4 COLLAR	3				60-2H4
16	HF4 GLAND NUT	3				60-2HM4
15	PRESSURE RELEASE VALVE	1				60-12HF4
14	BULKHEAD COUPLING	1				60-21HF4-B
13	PUMP OUTLET ADAPTOR	1				30-21HF4NMC
12	SILENCER	1				346 00 409
11	PUMP	1				D5000B440 Rev F
10	3/4" - 1/2" REDUCER	1				GF 721.910.837
9	GAUGE PIPE	1				3301-9
8	OUTLET PIPE	1				3301-8
7	PRESSURE RELEASE PIPE	1				3301-7
6	VENT STANDPIPE ADAPTOR	1				3301-6
5	LEXAN GAUGE GUARD	1				3301-5
4	BULKHEAD BRACKET	1				3301-4
3	OUTLET BLOCK	1				3301-3
2	TANK ST. ST.	1				3301-2
1	FRAME	1				3301-1

D600B330 - HF4

TOTAL WEIGHT 26.5 kg

TENTEC LIMITED				DRAWING TITLE	DRAWING No
ORIGINAL SCALE	GEN TOLERANCE			D600	HTT.9384.000A
1 : 4	± 0.25mm			AIR OPERATED HYD PUMP	
DRAWN BY	DATE	CHECKED BY	DATE	0 - 40,000 Lb/in²	D600
JMG	09/09/14	PJP	09/09/14		

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