



**PRODUCT DATA SHEET**

March, 2002

**4" D & D DIGESTER HYDRAULIC SUBMERSIBLE & 400D POWER UNIT**

**GENERAL INFORMATION**

The hydraulic power unit (HPU) is located high above the pump and connected via hydraulic hoses. The pump is submerged in the liquid being pumped and is powered by circulating hydraulic fluid. Suction lift and priming are not considerations. This pump can run dry without damage. **CAUTION: HYDRAULIC FLUID IS UNDER HIGH PRESSURE.**

**PERFORMANCE DATA**

➤ Design Speed:	.....	2200 rpm max (1800 norm.)
➤ Max. Operating Head:	.....	93 ft (40 psi) <sup>(1)</sup> (64' @ 1800RPM)
➤ Min/Max Flow:	.....	150 gpm / 1000 gpm
➤ Max. Volute Pressure:	.....	280 psi
➤ Maximum Temperature:	.....	190° F
➤ Maximum Solids Size:	.....	4" spherical

**PUMP SPECIFICATIONS**

➤ Impeller Diameter:	.....	8.00" (semi-open)
➤ Bearing Lubrication:	.....	Hydraulic oil
➤ No. Impeller Vanes:	.....	Six
➤ Mech. Seal Lubrication:	.....	Hydraulic oil
➤ Discharge Connection:	.....	4" male NPT
➤ Pump Weight:	.....	135 lbs.
➤ Pump Dimensions:	.....	Height - 28", diameter - 20"
➤ Hydraulic Motor:	.....	Vickers 35M80A1C20, or Vickers 25M65-dd
➤ Quick Disconnects:	.....	Aeroquip 5100S2 & 5100S5
➤ Hydraulic Hoses:	.....	Hi Press - 1" x 50' (Rated @ 3000 psi) Lo Press - 1 1/4" x 50' (Rated @ 2000 psi)

**HPU SPECIFICATIONS**

➤ HPU/Trailer Weight:	.....	4,100 lbs. <sup>(2)</sup>
➤ HPU/Trailer Height:	.....	6'-6"
➤ HPU/Trailer Width:	.....	5'-0"
➤ HPU/Trailer Length:	.....	10'-6"
➤ Hydraulic Fluid:	.....	Chevron Clarity Hydraulic Oil AW ISO 68 (biodegradable), or equal
➤ Actuator Valve:	.....	Vickers CT-06-F-50
➤ Relief Valve Setting:	.....	2,500 psi
➤ Max. Hydraulic Oil Flow:	.....	44 gpm
➤ Max. Hydraulic Oil Press:	.....	2500 psi
➤ Oil Reservoir Capacity:	.....	75 gallons

**HPU SPECIFICATIONS – con't**

➤ Hydraulic Filters:	.....	100 mesh suction screen & 10 Micron return filter
➤ Hydraulic Pump:	.....	Vickers 30VQ28A11C20
➤ Hydraulic Shutdowns:	.....	Low oil level / High oil temp.

**MATERIAL SPECIFICATIONS**

➤ Pump Volute:	.....	Carbon steel
➤ Mechanical Seal Faces:	.....	Carbon/Ni-hard steel
➤ Shafts:	.....	316 stainless steel
➤ Elastomers:	.....	Buna N
➤ Impeller:	.....	AR-225 steel

**ENGINE SPECIFICATIONS**

➤ Engine Make/Model:	.....	John Deere 4045D
➤ Max. Continuous BHP:	.....	80
➤ Crankcase Oil:	.....	SAE 10W40 <sup>(3)</sup>
➤ Crankcase Oil Capacity:	.....	14 quarts
➤ Oil Press @ 800 RPM:	.....	15 psi minimum
➤ Safety Shutdowns:	.....	Lo oil press./High water
➤ Grease Lubrication:	.....	No. 2 <sup>(3)</sup>
➤ Fuel Capacity:	.....	112 gallons
➤ Fuel Consumption:	.....	2.5 gal/hr @ 2000 RPM
➤ Fuel Type:	.....	Grade No. 2 diesel
➤ Combustion System:	.....	Direct injection
➤ Run Time:	.....	44 hours (@ 2000 RPM)
➤ Coolant Type:	.....	50/50 water/antifreeze mix
➤ Coolant Capacity:	.....	6 gallons
➤ Slow Idle Speed:	.....	850 rpm
➤ Number of Cylinders:	.....	Four
➤ Bore x Stroke:	.....	4.19" x 5.00"
➤ Fuel Filter:	.....	John Deere RE60021
➤ Hydraulic Oil Filter:	.....	NAPA 1759
➤ Engine Oil Filter:	.....	John Deere RE59754
➤ Engine Air Filter:	.....	Donaldson P181054

**Notes:**

- <sup>(1)</sup> Based on 1.0 specific gravity
- <sup>(2)</sup> Includes weight of trailer, hydraulic oil tank and engine
- <sup>(3)</sup> Midrange compromise. See John Deere manual.