



**DR. GEAR™**

## **Cubic Inch Displacement Gallons per Minute**

**HWI IDAHO**  
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**20/30 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0043	0.98	2400
3/4"	0.0064	1.47	2400
1"	0.0085	1.97	2400
1-1/4"	0.0106	2.46	2400
1-1/2"	0.0128	2.95	2400
1-3/4"	0.0149	3.44	2100
2"	0.0170	3.94	2100

**20/30 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
3/4"	0.008	0.210	2400
1"	0.010	0.280	2400
1-1/4"	0.013	0.350	2400
1-1/2"	0.015	0.420	2400
1-3/4"	0.018	0.490	2100
2"	0.020	0.560	2100

**21/31 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0043	0.98	2750
3/4"	0.0064	1.47	2750
1"	0.0085	1.97	2750
1-1/4"	0.0106	2.46	2750
1-1/2"	0.0128	2.95	2750
1-3/4"	0.0149	3.44	2500
2"	0.0170	3.94	2500

**21/31 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
3/4"	0.008	0.210	2750
1"	0.010	0.280	2750
1-1/4"	0.013	0.350	2750
1-1/2"	0.015	0.420	2750
1-3/4"	0.018	0.490	2500
2"	0.020	0.560	2500

**50 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0056	1.28	2400
3/4"	0.0083	1.93	2400
1"	0.0111	2.57	2400
1-1/4"	0.0139	3.21	2400
1-1/2"	0.0167	3.85	2400
1-3/4"	0.0194	4.49	2200
2"	0.0222	5.14	2200
2-1/4"	0.0250	5.78	2200
2-1/2"	0.0278	6.43	2200

**50 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
3/4"	0.010	0.260	2400
1"	0.013	0.347	2400
1-1/4"	0.016	0.434	2400
1-1/2"	0.020	0.521	2400
1-3/4"	0.023	0.607	2200
2"	0.026	0.694	2200
2-1/4"	0.029	0.781	2200
2-1/2"	0.033	0.868	2200

**51 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0056	1.28	2750
3/4"	0.0083	1.93	2750
1"	0.0111	2.57	2750
1-1/4"	0.0139	3.21	2750
1-1/2"	0.0167	3.85	2750
1-3/4"	0.0194	4.49	2400
2"	0.0222	5.14	2400
2-1/4"	0.0250	5.78	2400
2-1/2"	0.0278	6.43	2400

**51 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
3/4"	0.010	0.260	2750
1"	0.013	0.347	2750
1-1/4"	0.016	0.434	2750
1-1/2"	0.020	0.521	2750
1-3/4"	0.023	0.607	2400
2"	0.026	0.694	2400
2-1/4"	0.029	0.781	2400
2-1/2"	0.033	0.868	2400

**75 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
3/4"	0.0131	3.03	2300
1"	0.0175	4.04	2300
1-1/4"	0.0219	5.05	2100
1-1/2"	0.0263	6.06	2100
1-3/4"	0.0306	7.07	2100
2"	0.0350	8.08	2100
2-1/4"	0.0394	9.09	2100
2-1/2"	0.0438	10.09	2100
2-3/4"	0.0481	11.09	2000
3"	0.0525	12.09	2000

**75 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
1"	0.020	0.505	2300
1-1/4"	0.025	0.631	2100
1-1/2"	0.030	0.758	2100
1-3/4"	0.035	0.884	2100
2"	0.040	1.010	2100
2-1/4"	0.045	1.263	2100
2-1/2"	0.050	1.515	2100
2-3/4"	0.055	1.768	2000
3"	0.060	2.020	2000

**76 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
3/4"	0.0131	3.03	2750
1"	0.0175	4.04	2750
1-1/4"	0.0219	5.05	2500
1-1/2"	0.0263	6.06	2500
1-3/4"	0.0306	7.07	2500
2"	0.0350	8.08	2500
2-1/4"	0.0394	9.09	2500
2-1/2"	0.0438	10.09	2500
2-3/4"	0.0481	11.09	2500
3"	0.0525	12.09	2500

**76 MOTOR**

GEAR SIZE	AVERAGE INPUT FLOW PER/REVOLUTION	AVERAGE TORQUE PER/PSI	MAXIMUM PRESSURE PSI
1"	0.020	0.505	2750
1-1/4"	0.025	0.631	2500
1-1/2"	0.030	0.758	2500
1-3/4"	0.035	0.884	2500
2"	0.040	1.010	2500
2-1/4"	0.045	1.263	2500
2-1/2"	0.050	1.515	2500
2-3/4"	0.055	1.768	2500
3"	0.060	2.020	2500

**330 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0480	0.985	3500
3/4"	0.0640	1.47	3500
1"	0.0853	1.97	3500
1-1/4"	0.1066	2.46	3500
1-1/2"	0.1280	2.95	3500
1-3/4"	0.1493	3.44	3250
2"	0.1706	3.94	3000

**350 PUMP**

GEAR SIZE	DISPLACEMENT/REVOLUTION (THEORETICAL)		MAXIMUM PRESSURE PSI
	U.S. GALLONS	CUBIC INCHES	
1/2"	0.0062	1.28	3500
3/4"	0.0083	1.17	3500
1"	0.0111	2.57	3500
1-1/4"	0.0139	3.21	3500
1-1/2"	0.0167	3.85	3500
1-3/4"	0.0194	4.49	3250
2"	0.0222	5.14	3000
2-1/4"	0.0250	5.78	2750
2-1/2"	0.0278	6.43	2500

U.S. Gallons X RPM = Output of pump  
Avg Torque X PSI = Torque in inch-lbs

Calculations above are theoretical and based on averages and do not include any allowances for in-efficiencies. Therefore, actual results may vary from the above tabulations

HWI  
800-452-9440

DR. GEAR™