



# VIKING

Power Technologies

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## DuraTorque Power Section

700 78 57 DT

7.00" OD 7/8 Lobes 5.7 Stages

### Rotor Specification

Overall Length	252.00 in.
Contour Length	245.00 in.
Head Length	7.00 in.
Head Diameter	4.50 in.
Major Diameter	4.644 in.
Eccentric	0.247 in.
Material	17-4 PH
Weight	994 lbs.
Thread Form	Contact Factory

### Stator Specification

Overall Length	260.00 in.
Contour Length	244.00 in.
Tube O.D.	7.00 in.
Tube I.D.	5.75 in.
Cutback (Band / Non-Band)	8.00 / 8.00 in.
Stages	5.7
Material	4140 HT
Weight	1,014 lbs.
Thread Form	Contact Factory

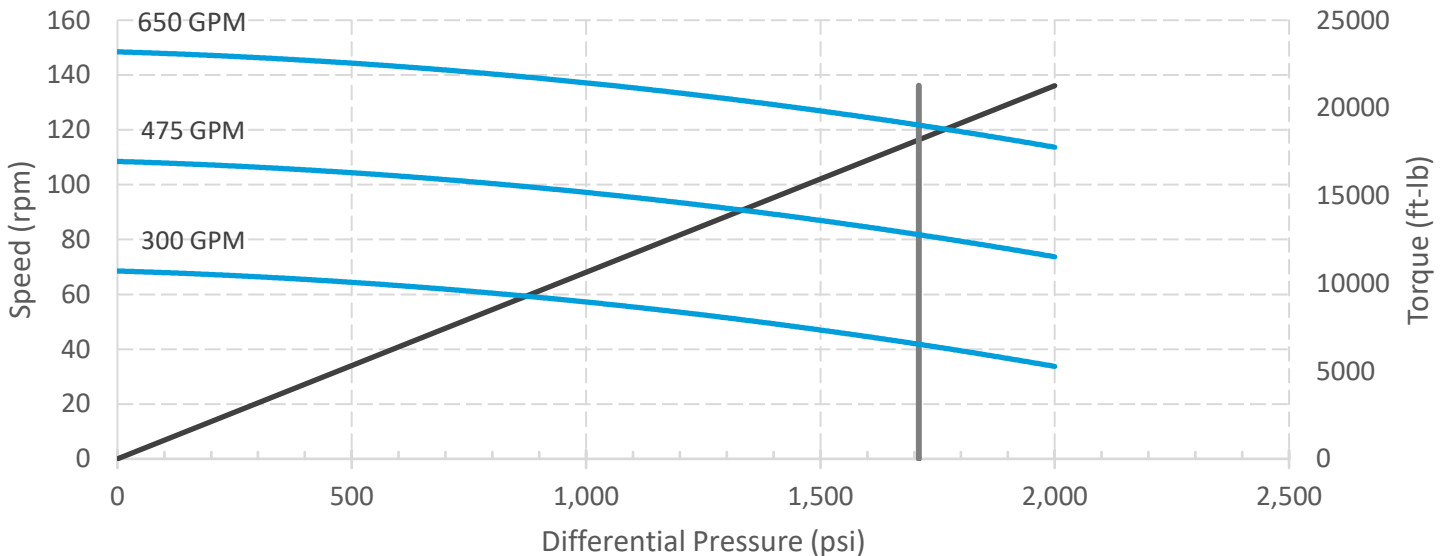
### Downhole Performance Specifications

Torque Slope	10.63 ft-lbs/psi	Max Diff. Pressure	1,710 psi	1,710 psi
Flow Range	300 - 650 gpm	Max Torque	18,180 ft-lbs	14,660 ft-lbs
Speed Range	69 - 148 rpm	Speed (Max Diff. & Flow)	122 rpm	105 rpm
Rotation	0.228 rev/gal	Max HP	420 hp	290 hp
Off-Bottom Pressure	105 psi	Stall Diff. Pressure	2,680 psi	
		Stall Torque	28,500 ft-lbs	

### Dyno Performance

### Elastomer Performance

	007			VPX		
	Temperature Slope 0.000165 in/°F			Temperature Slope 0.000202 in/°F		
	Minor	Nominal Fit	Optimal Temperature	Minor	Nominal Fit	Optimal Temperature
1.0 Undersize	4.143	0.007	105 - 235 °F	4.158	-0.008	175 - 275 °F
Standard	4.154	-0.004	170 - 295 °F	4.164	-0.014	200 - 305 °F
0.5 Oversize						
1.0 Oversize						
1.5 Oversize						
2.0 Oversize						



Power section performance curves are for reference only. Actual performance will vary with different downhole conditions and rotor/stator fits. If operated above the optimal differential pressure, stator life will be reduced. Optimal load power calculation is based on maximum RPM and optimal load torque. Information contained in this document is subject to change without notice.



### Rotor Specification

Overall Length	6400.8 mm
Contour Length	6223.0 mm
Head Length	177.8 mm
Head Diameter	114.30 mm
Major Diameter	117.96 mm
Eccentric	6.27 mm
Material	17-4 PH
Weight	451 kgs
Thread Form	Contact Factory

### Stator Specification

Overall Length	6604.0 mm
Contour Length	6197.6 mm
Tube O.D.	177.8 mm
Tube I.D.	146.1 mm
Cutback (Band / Non-Band)	203.2 / 203.2 mm
Stages	5.7
Material	4140 HT
Weight	460 kgs
Thread Form	Contact Factory

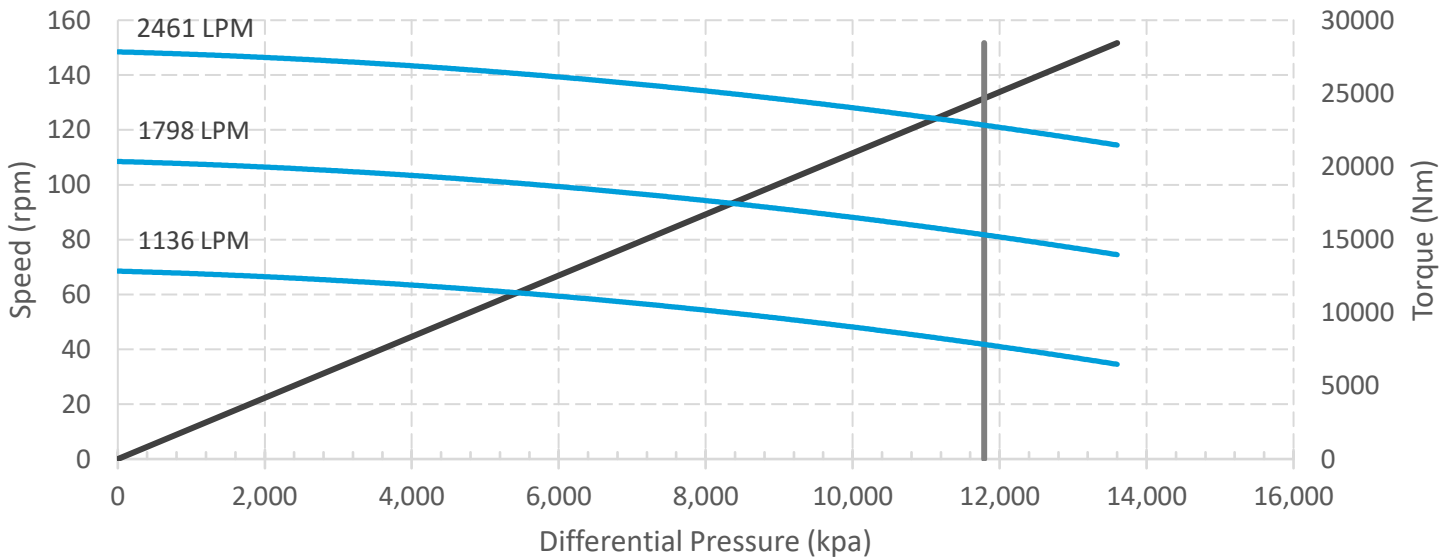
### Downhole Performance Specifications

Torque Slope	2.09 Nm/kPa	Max Diff. Pressure	11790 kPa	11790 kPa
Flow Range	1136 - 2461 lpm	Max Torque	24649 Nm	19876 Nm
Speed Range	69 - 148 rpm	Speed (Max Diff. & Flow)	122 rpm	105 rpm
Rotation	0.0602 rev/liter	Max HP	313 kW	216 kW
Off-Bottom Pressure	724 kPa	Stall Diff. Pressure	18478 kPa	
		Stall Torque	38641 Nm	

### Dyno Performance

### Elastomer Performance

	007			VPX		
	Minor	Nominal Fit	Optimal Temperature	Minor	Nominal Fit	Optimal Temperature
	Temperature Slope 0.007544 mm/°C			Temperature Slope 0.009235 mm/°C		
1.0 Undersize	105.23	0.18	41 - 113 °C	105.61	-0.20	79 - 135 °C
Standard	105.51	-0.10	77 - 146 °C	105.77	-0.36	93 - 152 °C
0.5 Oversize						
1.0 Oversize						
1.5 Oversize						
2.0 Oversize						



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