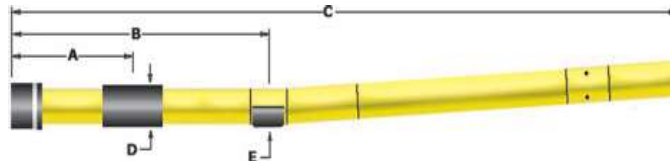


TAQA Drilling Motors

Motor Sections Catalog 4.75" • 6.75" • 8.00"

COUGAR

DRILLING SOLUTIONS



	Imperial		Metric	
A. Distance to Stabilizer	18	inch	457	mm
B. Box to Bend	62	inch	1,575	mm
C. Overall Length	358	inch	9,101	mm
D. Thread Prot. Diameter	5.38	inch	137	mm
E. Kick Pad Diameter	5.25	inch	133	mm

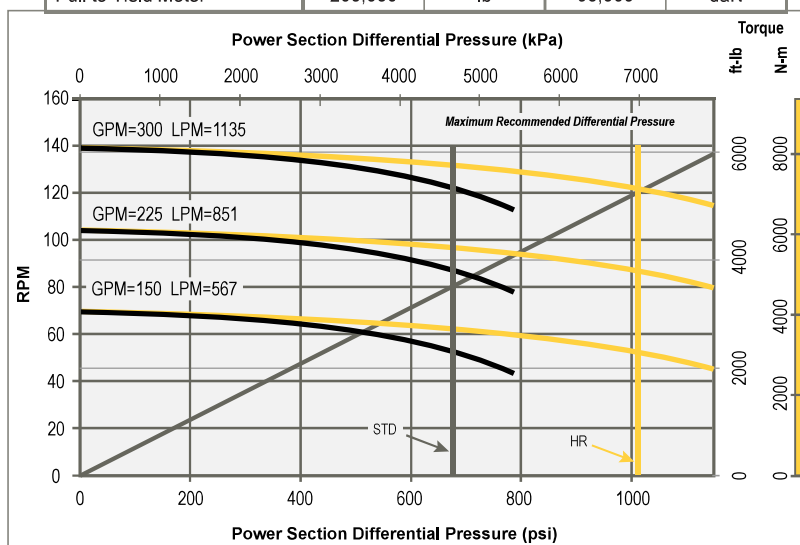
Top Connection	AS PER REQUEST			
Bottom Connection	3 1/2" Reg		3 1/2" Reg	
Weight	1,164	lb	516	daN

Build Rate (degrees per 100 ft / 30 m)												
Bend Settings (deg.)	Hole Size and Stabilization											
	Slick				Partial				Full			
	5 7/8"	6"	6 1/4"	6 3/4"	5 7/8"	6"	6 1/4"	6 3/4"	5 7/8"	6"	6 1/4"	6 3/4"
	149 mm	152 mm	159 mm	171 mm	149 mm	152 mm	159 mm	171 mm	149 mm	152 mm	159 mm	171 mm
0.26	0.00	0.00	0.00	0.00	2.41	2.35	2.23	1.98	1.60	1.47	1.23	0.74
0.52	1.37	1.06	0.00	0.00	3.95	3.89	3.76	3.52	3.04	2.91	2.67	2.18
0.78	2.90	2.59	1.96	0.00	5.48	5.42	5.30	5.05	4.47	4.35	4.11	3.62
1.03	4.37	4.06	3.44	2.19	6.96	6.89	6.77	6.53	5.86	5.73	5.49	5.00
1.27	5.79	5.48	4.85	3.60	8.37	8.31	8.19	7.94	7.18	7.06	6.82	6.33
1.50	7.14	6.83	6.20	4.95	9.73	9.67	9.54	9.30	8.45	8.33	8.09	7.60
1.72	8.44	8.12	7.50	6.25	11.03	10.96	10.84	10.60	9.67	9.55	9.30	8.82
1.93	9.67	9.36	8.73	7.48	12.26	12.20	12.08	11.84	10.83	10.71	10.47	9.98
2.12	10.79	10.48	9.85	8.60	13.38	13.32	13.20	12.96	11.88	11.76	11.52	11.03
2.30	11.85	11.54	10.91	9.66	14.45	14.39	14.26	14.02	12.88	12.76	12.51	12.02
2.60	13.62	13.30	12.68	11.42	16.22	16.15	16.03	15.79	14.54	14.41	14.17	13.68
2.82	14.91	14.60	13.97	12.72	17.51	17.45	17.33	17.08	15.75	15.63	15.39	14.90
2.95	15.67	15.36	14.74	13.48	18.28	18.22	18.09	17.85	16.47	16.35	16.10	15.61
3.00	15.97	15.65	15.03	13.78	18.57	18.51	18.39	18.14	16.75	16.62	16.38	15.89

COUGAR

DRILLING SOLUTIONS

Performance Details		Imperial		Metric	
Speed Ratio		0.463	rev/gal	0.122	rev/L
Pressure at Full Load - STD		680	psi	4,650	kPa
Pressure at Full Load - HR		1,010	psi	6,980	kPa
Torque at Full Load - STD		3,500	ft-lb	4,750	N-m
Torque at Full Load - HR		5,250	ft-lb	7,120	N-m
Torque Slope		5.185	ft-lb/psi	1.020	N-m/kPa
Max. Flow Rate		300	gpm	1,140	Lpm
Max. Power - STD		93	hp	69	kW
Max. Power - HR		132	hp	98	kW
Max. Weight on Bit	Dynamic	43,000	lb	19,000	daN
	Static	118,000	lb	52,000	daN
Max. Allowable Pull		118,000	lb	52,000	daN
Pull to Yield Motor		200,000	lb	90,000	daN



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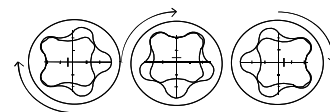
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Dubai: Oilfields Supply Center, Bldg B-30, P.O. Box 261039, Dubai, UEA, Tel: 011-971-4-8100310, Fax: 011-971-4-8100313

Model No: DD475784.5 SX
4.75" 7/8 Lobes 4.5 Stages



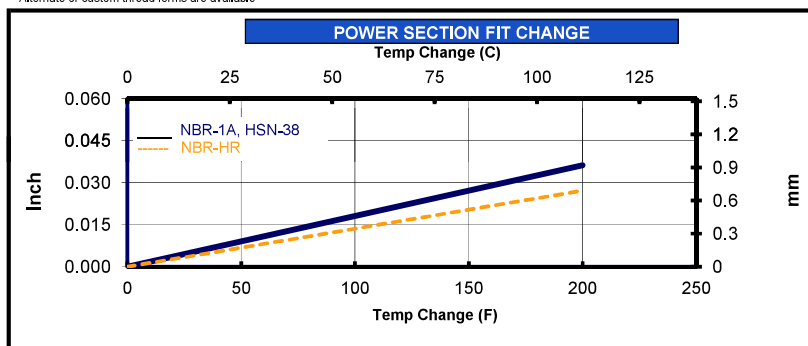
POWER SECTION

ROTOR SPECIFICATIONS		
	Inch	mm
Overall Length	220.0	5588
Contour Length	214.3	5442
Eccentricity	0.172	4.37
Major Diameter	3.091	78.51
Head Diameter	2.750	69.90
Weight	323 (lbs) 146.5 (kg)	
Material	17-4SS	
Thread Form*	2 3/8 Hughes External Flush Mod	

* Alternate or custom thread forms are available

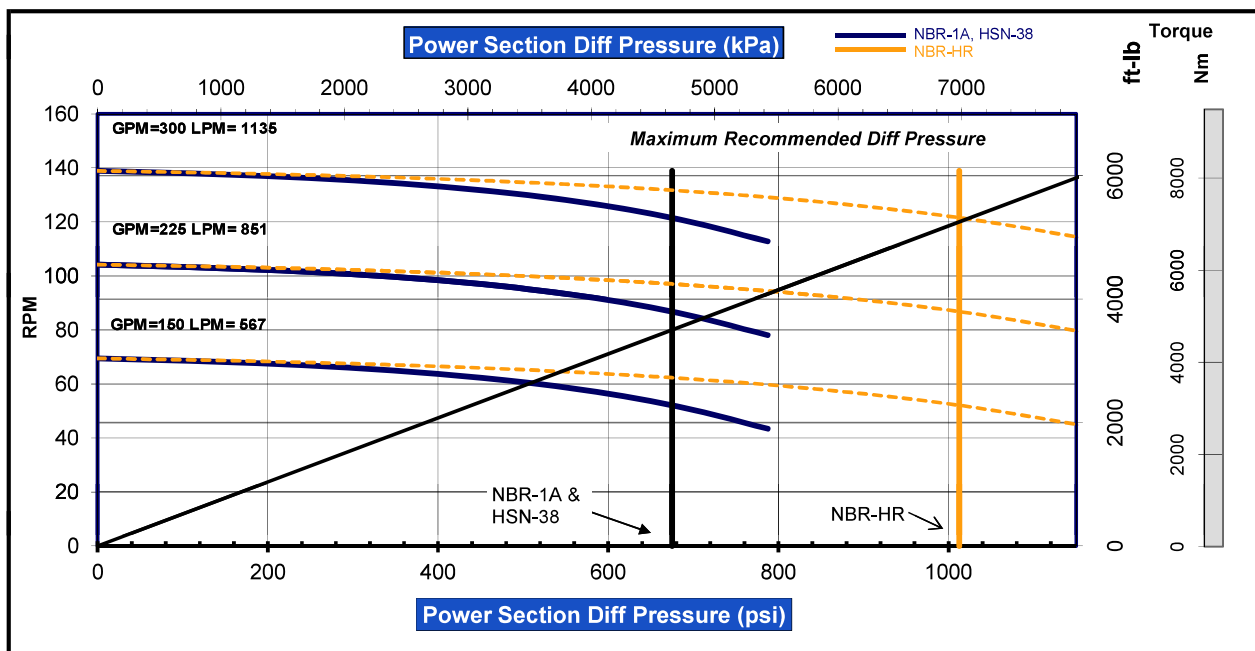
STATOR SPECIFICATIONS		
	Inch	mm
Overall Length	229.3	5823
Rubber Cut Back	8.0	203
Tube O.D.	4.75	120.7
Tube I.D.	3.75	95.3
Weight	396 (lbs) 180 (kg)	
Number of Stages	4.5	
Rubber Type	NBR-1A, HSN-38, NBR-HR	
Tube Material	4142 Seamless Tubing	

FIT INFORMATION		
NBR-1A & HSN-38	Minor Diameter	
Stator Size	Inch	mm
Standard	2.744	69.70
Overize	2.762	70.15
Double Overize		
Nominal Fit at 75 F (25 C)		
Standard	0.005	0.13
Overize	-0.013	-0.33
Double Overize		



FIT INFORMATION		
NBR-HR	Minor Diameter	
Stator Size	Inch	mm
Undersize		
Standard	2.746	69.75
Overize	2.763	70.18
Nominal Fit at 75 F (25 C)		
Undersize		
Standard	0.003	0.08
Overize	-0.014	-0.36
Double Overize		

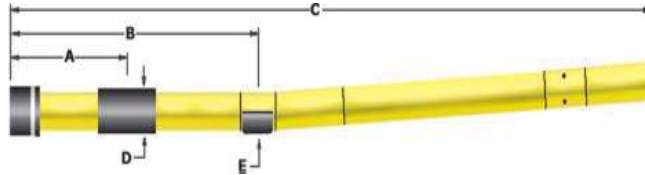
PERFORMANCE SPECIFICATIONS			PERFORMANCE DETAILS		
Torque Slope	5.185 ft-lb/psi	1.020 Nm/kPa	Max Diff Press psi (kPa)	NBR-1A AND HSN-38 680 (4650)	NBR-HR 1010 (6980)
Flow Range	150 to 300 GPM	570 to 1140 Litre/min	Max Torque ft-lb (Nm)	3500 (4750)	5250 (7120)
Rotation	0.463 Rev/Gal	0.122 Rev/Litre	Stall Diff Press psi (kPa)	1010 (6980)	1520 (10470)
Speed Range	69 to 140 RPM		Stall Torque ft-lb (Nm)	5250 (7120)	7870 (10680)
Off Bottom Press	68 psi	470 kPa	Max Recommended HP(kW)	93 (69)	132 (98)



Operating a power section above the maximum recommended differential pressure will reduce stator life. Performance Curves are for reference only. Actual power section performance may vary depending on the down hole temperature and rotor/stator fit. Performance data are subject to change without notice. Power calculation is based on maximum RPM and full torque. Stator sizes subject to change without notice. Copyright 2011 Dyna-Drill® Technologies, Inc. All rights reserved.



6-3/4" (171 mm) 6-7 5.0 S tage



	Imperial		Metric	
A. Distance to stabilizer	22	inch	559	mm
B. Box to Bend	76	inch	1,930	mm
C. Overall Length	350	inch	8,890	mm
D. Thread Prot. Diameter	7.19	inch	183	mm
E. Kick pad Diameter	7.00	inch	178	mm

Top Connection		4" IF		4" IF	
Bottom Connection		4-1/2" Reg		4-1/2" Reg	
Weight		2,273	lb	1,011	daN
Maximum Flow Rate		600	gpm	2.27	m ³ /min
Maximum Torque		7,132	ft-lb	9,670	N-m
Maximum Power		306	hp	229	kW
Maximum Weight on Bit	Dynamic	87,300	lb	38,800	daN
	Static	247,000	lb	109,000	daN
Maximum Allowable Pull		218,500	lb	97,000	daN
Pull to Yield Motor		475,000	lb	212,000	daN

Build Rate (degrees / 100ft (30m))			
Bend Settings (degrees)	Hole Sizes (in, mm)		
	8 - 1/2"	8 - 3/4"	9 - 7/8"
	216 mm	223 mm	251 mm
0.26	0.00	0.00	0.00
0.52	0.39	0.00	0.00
0.78	1.70	0.90	0.00
1.03	3.71	2.90	0.71
1.27	5.63	4.83	1.22
1.50	7.48	6.67	3.06
1.72	9.24	8.44	4.83
1.93	10.93	10.13	6.51
2.12	12.45	11.65	8.04
2.30	13.90	13.10	9.48
2.60	16.31	15.51	11.89
2.82	18.08	17.28	13.66
2.95	19.13	18.32	14.71
3.00	19.53	18.72	15.11



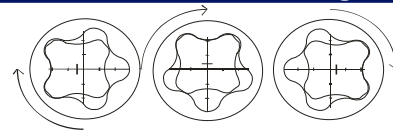
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Canada: 2900, 350-7th Avenue, Calgary, Alberta T2P-3N9 Tel: (403) 206-3052 Fax: (403) 206-3053

Model No: DD675675.0
6.75" 6/7 Lobes 5 Stages



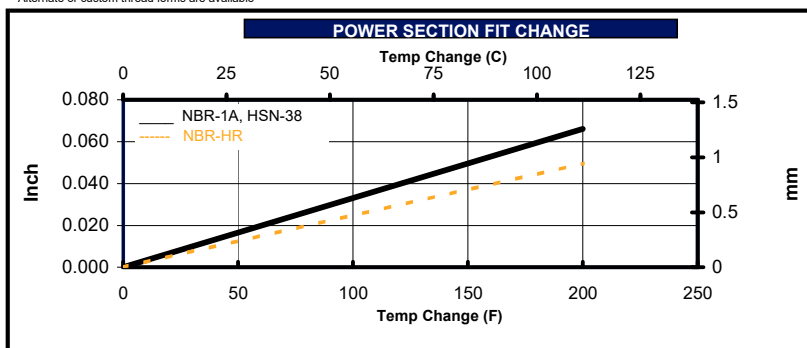
POWER SECTION

ROTOR SPECIFICATIONS		
	Inch	mm
Overall Length	194.0	4928
Contour Length	188.0	4775
Eccentricity	0.288	7.32
Major Diameter	4.316	109.63
Head Diameter	4.000	101.60
Weight	521 (lbs) 236.3 (kg)	
Material	17-4SS	
Thread Form*	2 7/8 API REG	

* Alternate or custom thread forms are available

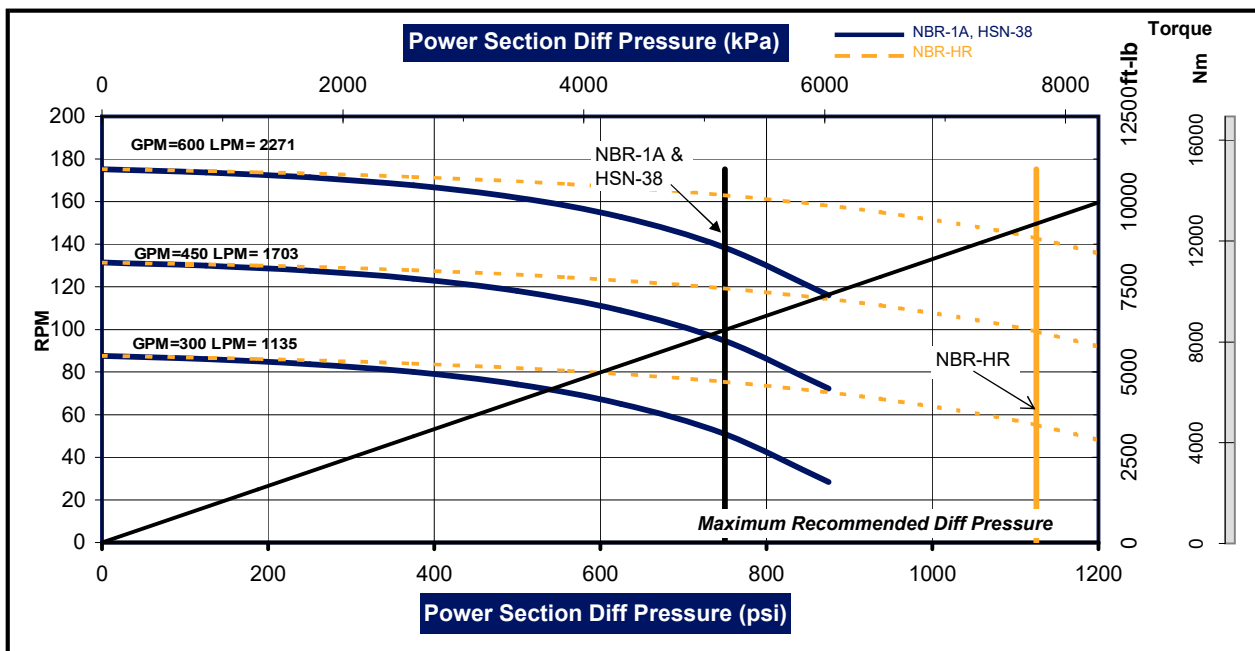
STATOR SPECIFICATIONS		
	Inch	mm
Overall Length	200.0	5080
Rubber Cut Back	7.3	184
Tube O.D.	6.75	171.5
Tube I.D.	5.50	139.7
Alternate Length	204	5182
Weight	755 (lbs) 342 (kg)	
Number of Stages	5.00	
Rubber Type	NBR-1A, HSN-38, NBR-HR	
Tube Material	4142 Seamless Tubing	

FIT INFORMATION		
NBR-1A & HSN-38	Minor Diameter	
Stator Size	Inch	mm
Standard	3.738	94.95
Oversize	3.759	95.48
Double Oversize		
Nominal Fit at 75 F (25 C)		
Standard	0.001	0.03
Oversize	-0.020	-0.51
Double Oversize		



FIT INFORMATION		
NBR-HR	Minor Diameter	
Stator Size	Inch	mm
Undersize		
Standard	3.744	95.10
Oversize		
Nominal Fit at 75 F (25 C)		
Undersize		
Standard	-0.005	-0.13
Oversize		

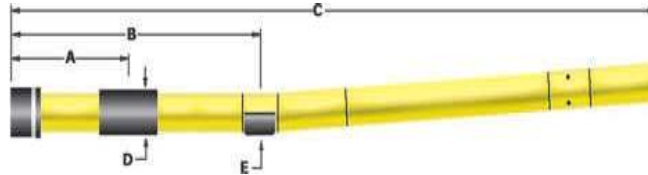
PERFORMANCE SPECIFICATIONS			PERFORMANCE DETAILS		
			NBR-1A AND HSN-38	NBR-HR	
Torque Slope	8.313 ft-lb/psi	1.635 Nm/kPa	Max Diff Press psi (kPa)	750 (5170)	1130 (7760)
Flow Range	300 to 600 GPM	1140 to 2270 Litre/min	Max Torque ft-lb (Nm)	6230 (8450)	9350 (12680)
Rotation	0.292 Rev/Gal	0.077 Rev/Litre	Stall Diff Press psi (kPa)	1130 (7760)	1690 (11630)
Speed Range	87 to 180 RPM		Stall Torque ft-lb (Nm)	9350 (12680)	14030 (19020)
Off Bottom Press	110 psi	760 kPa	Max Recommended HP(kW)	177 (132)	290 (216)



Operating a power section above the maximum recommended differential pressure will reduce stator life. Performance Curves are for reference only. Actual power section performance may vary depending on the down hole temperature and rotor/stator fit. Performance data are subject to change without notice. Power calculation is based on maximum RPM and full torque. Stator sizes subject to change without notice. Copyright 2008 Dyna-Drill® Technologies, Inc. All rights reserved.



8" (203 mm) 7-8 4.0 Stage



	Imperial		Metric	
A. Distance to stabilizer	28	inch	711	mm
B. Box to Bend	87	inch	2,210	mm
C. Overall Length	368	inch	9,347	mm
D. Thread Prot. Diameter	8.63	inch	219	mm
E. Kick pad Diameter	8.06	inch	205	mm

Top Connection	6 5/8" reg 7 H90		6 5/8" reg 7 H90	
Bottom Connection	6-5/8" Reg		6-5/8" Reg	
Weight	3,398	lb	1,512	daN
Maximum Flow Rate	900	gpm	3.41	m ³ /min
Maximum Torque	11,469	ft-lb	15,550	N-m
Maximum Power	368	hp	274	kW
Maximum Weight on Bit	Dynamic	139,500	lb	62,000
	Static	412,800	lb	183,000
Maximum Allowable Pull	324,000	lb	144,000	daN
Pull to Yield Motor	930,000	lb	414,000	daN

Build Rate (degrees / 100ft (30m))			
Bend Settings (degrees)	Hole Sizes (in, mm)		
	9 7/8" 251 mm	10 5/8" 270 mm	12 1/4 311 mm
0.26	0.00	0.00	0.00
0.52	0.42	0.00	0.00
0.78	2.45	0.20	0.00
1.03	4.39	2.15	0.00
1.27	6.26	4.20	0.84
1.50	8.06	5.81	0.95
1.72	9.77	7.53	2.66
1.93	11.41	9.16	4.30
2.12	12.89	10.64	5.78
2.30	14.29	12.05	7.18
2.60	16.63	14.39	9.52
2.82	18.35	16.10	11.24
2.95	19.36	17.12	12.25
3.00	19.75	17.51	12.64



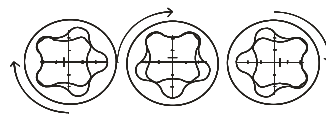
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Dubai: Oilfields Supply Center, Bldg B-30, P.O. Box 261039, Dubai, UEA, Tel: 011-971-4-8100310, Fax: 011-971-4-8100313

Model No: DD800784.0
8" 7/8 Lobes 4 Stages



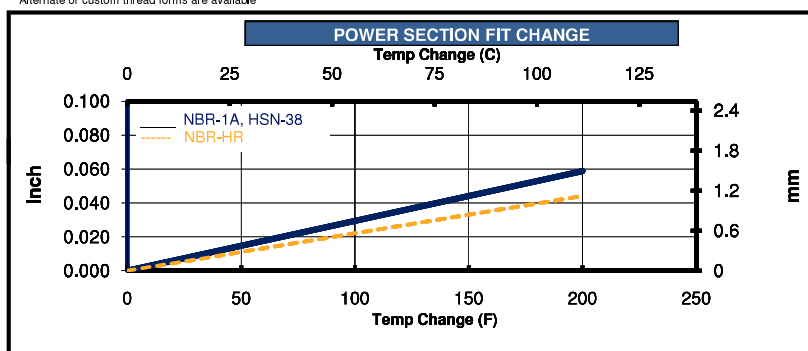
POWER SECTION

ROTOR SPECIFICATIONS		
	Inch	mm
Overall Length	196.3	4985
Contour Length	188.3	4782
Eccentricity	0.293	7.44
Major Diameter	5.186	131.72
Head Diameter	4.750	120.70
Weight	883 (lbs) 400.5 (kg)	
Material	17-4SS	
Thread Form*	3 1/2 API IF	

* Alternate or custom thread forms are available

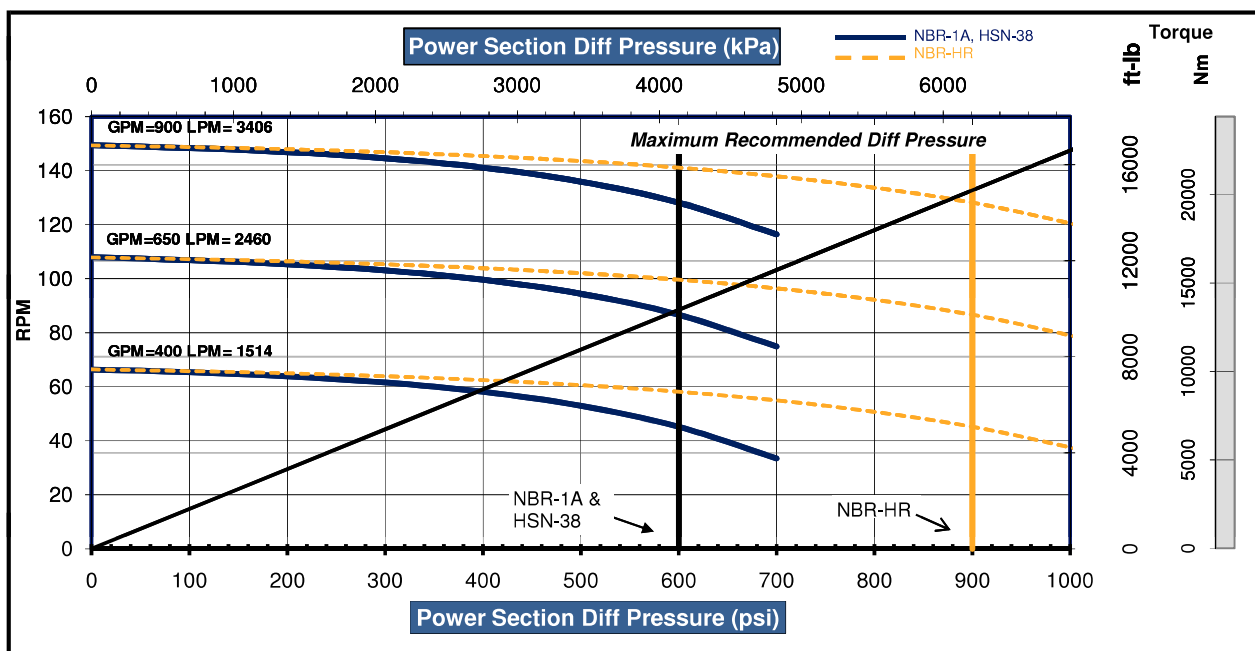
STATOR SPECIFICATIONS		
	Inch	mm
Overall Length	203.2	5161
Rubber Cut Back	8.0	203
Tube O.D.	8.00	203.2
Tube I.D.	6.25	158.8
Weight	1253 (lbs) 568 (kg)	
Number of Stages	4.00	
Rubber Type	NBR-1A, HSN-38, NBR-HR	
Tube Material	4142 Seamless Tubing	

FIT INFORMATION		
NBR-1A & HSN-38	Minor Diameter	
Stator Size	Inch	mm
Standard	4.581	116.36
OverSize	4.606	116.99
Second OverSize		
Nominal Fit at 75 F (25 C)		
Standard	0.019	0.48
OverSize	-0.006	-0.15
Second OverSize		



FIT INFORMATION		
NBR-HR	Minor Diameter	
Stator Size	Inch	mm
Undersize		
Standard	4.588	116.54
OverSize		
Nominal Fit at 75 F (25 C)		
Undersize		
Standard	0.012	0.30
OverSize		

PERFORMANCE SPECIFICATIONS			PERFORMANCE DETAILS		
Torque Slope	16,589 ft-lb/psi	3.262 Nm/kPa	Max Diff Press psi (kPa)	NBR-1A AND HSN-38 600 (4140)	NBR-HR 900 (6210)
Flow Range	400 to 900 GPM	1510 to 3410 Litre/min	Max Torque ft-lb (Nm)	9950 (13490)	14930 (20240)
Rotation	0.166 Rev/Gal	0.044 Rev/Litre	Stall Diff Press psi (kPa)	900 (6210)	1350 (9310)
Speed Range	66 to 150 RPM		Stall Torque ft-lb (Nm)	14930 (20240)	22400 (30360)
Off Bottom Press	126 psi	870 kPa	Max Recommended HP(kW)	283 (211)	401 (299)



Operating a power section above the maximum recommended differential pressure will reduce stator life. Performance Curves are for reference only. Actual power section performance may vary depending on the down hole temperature and rotor/stator fit. Performance data are subject to change without notice. Power calculation is based on maximum RPM and full torque. Stator sizes subject to change without notice. Copyright 2011 Dyna-Drill® Technologies, Inc. All rights reserved.