

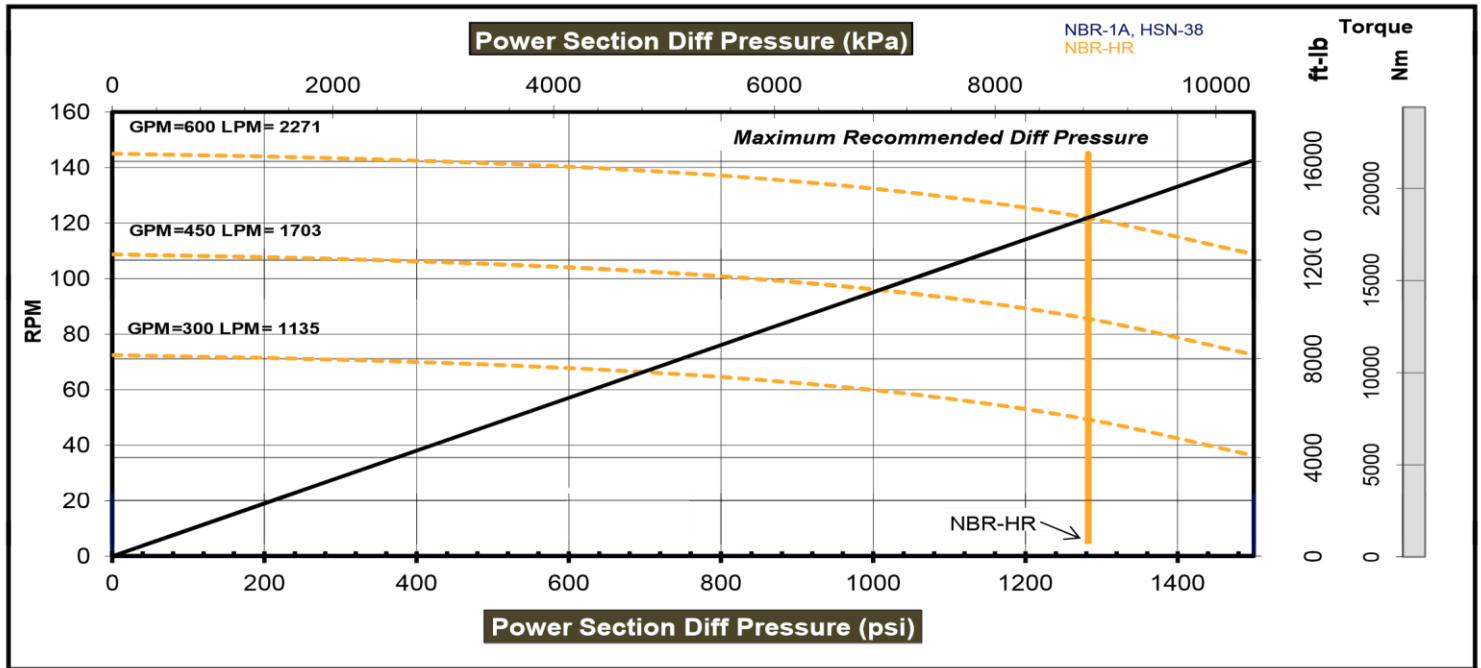


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SUPERHAWK 650 – 7:8 Profile 5.7 Stage HR - 6 1/2" O.D.

GENERAL DATA			
BIT SIZES	7 7/8" thru 9 7/8"	MAX. WOB – (w/flow)	110,000 lbs
BIT CONNECTION	4 1/2 REG	OPTIMUM WOB - (w/flow)	55,000 Lbs
TOP CONNECTION	4 1/2 IF	MAX. WOB – (w/o flow)	220,000 lbs
TORQUE - CONNECTIONS	18,500 ft-lb	MAX. BIT PULL – (w/damage)	380,000 lbs
TORQUE - ABH	26,500 ft-lb	MAX BODY PULL – (w/damage)	625,000 lbs

PHYSICAL PROPERTIES	
BIT TO BEND LENGTH (ABH)	82.50 in.
BIT TO BEND LENGTH (FIXED)	64.25 in.
NOMINAL LENGTH	375 in.
WEIGHT	2750 lbs.
PERFORMANCE DATA	
FLOW RANGE	300 – 600 gpm
SPEED RANGE	72 - 150 rpm
SPEED RATIO	0.242 rev/gal
MAX. DIFFERENTIAL PRESSURE	1280 psi
TORQUE RATIO	10.698 ft-lb/psi
TORQUE AT MAX DIFFERENTIAL	13,720 ft-lb
STALL TORQUE	20,580 ft-lb



Angle (Deg)	CALCULATED BUILD UP RATES – DEGREES / 100 ft.* (FIXED)							
	Hole Size (in) – Slick Sleeve				Hole Size (in) - Stabilized			
	7 7/8"	8 1/2"	8 3/4"	9 7/8"	7 7/8"	8 1/2"	8 3/4"	9 7/8"
0.25	2.0	1.5	1.3		1.4	1.8	1.9	2.5
0.50	3.3	2.7	2.5		2.8	3.2	3.3	3.9
0.75	4.5	4.0	3.8	2.8	4.2	4.6	4.7	5.3
1.00	5.7	5.2	5.0	4.0	5.6	6.0	6.1	6.7
1.25	7.0	6.4	6.2	5.2	7.0	7.3	7.5	8.1
1.50	8.2	7.7	7.5	6.5	8.4	8.7	8.9	9.5
1.75	9.5	8.9	8.7	7.7	9.8	10.1	10.3	10.9
2.00	10.7	10.1	9.9	8.9	11.2	11.5	11.7	12.3
2.25	11.9	11.4	11.2	10.2	12.6	12.9	13.1	13.7
2.50	13.2	12.6	12.4	11.4	14.0	14.3	14.5	15.1
2.75	14.4	13.8	13.6	12.6	15.4	15.7	15.9	16.5
3.00	15.6	15.1	14.9	13.9	16.8	17.1	17.3	17.9

Angle (Deg)	CALCULATED BUILD UP RATES – DEGREES / 100 ft.* (ABH)							
	Hole Size (in) – Slick Sleeve				Hole Size (in) - Stabilized			
	7 7/8"	8 1/2"	8 3/4"	9 7/8"	7 7/8"	8 1/2"	8 3/4"	9 7/8"
0.25	1.1				1.3	1.7	1.8	2.4
0.50	2.3	2.0	1.9		2.7	3.0	3.1	3.7
0.75	3.5	3.2	3.1	2.6	4.0	4.3	4.4	5.0
1.00	4.8	4.5	4.4	3.8	5.3	5.6	5.7	6.3
1.25	6.0	5.7	5.6	5.1	6.6	6.9	7.1	7.7
1.50	7.2	6.9	6.8	6.3	7.9	8.2	8.4	9.0
1.75	8.5	8.2	8.1	7.5	9.2	9.6	9.7	10.3
2.00	9.7	9.4	9.3	8.8	10.5	10.9	11.0	11.6
2.25	10.9	10.6	10.5	10.0	11.9	12.2	12.3	12.9
2.50	12.2	11.9	11.8	11.2	13.2	13.5	13.6	14.2
2.75	13.4	13.1	13.0	12.5	14.5	14.8	14.9	15.5
3.00	14.6	14.3	14.2	13.7	15.8	16.1	16.3	16.9