

Comparison test of I-R LIGHTNING GUN , DP 2000 S UH , BLUE DEVIL LH

Test Purpose

In order to check the I-R Lightning Gun power, we have tested the DP2000S-UH and the BLUE DEVIL-LH guns under the same conditions, apart the pressure level; as the I-R Lightning Gun cannot be operated over 140 psi-10 bar, (the DP2000S-UH and the BLUE DEVIL guns can be operated at 20 bar)

Test Conditions

The rig has been equipped with left handed Bolt , in order to be able to measure the maximum power of all the guns.

1 st Test

Free Speed Test with 3/8 Gas pressure lane: minimum inner dia. 8

Working Pressure

20 BAR DINAMIC

140 psi (10 bar) DINAMIC



DP 2000 UH

BLUE DEVIL

I-R LIGHTNING GUN

Tightening

Loosening

Tightening

Loosening

Tightening

Loosening

rpm 140psi - 10 bar

6200

6120

11000

11600

6000

6300

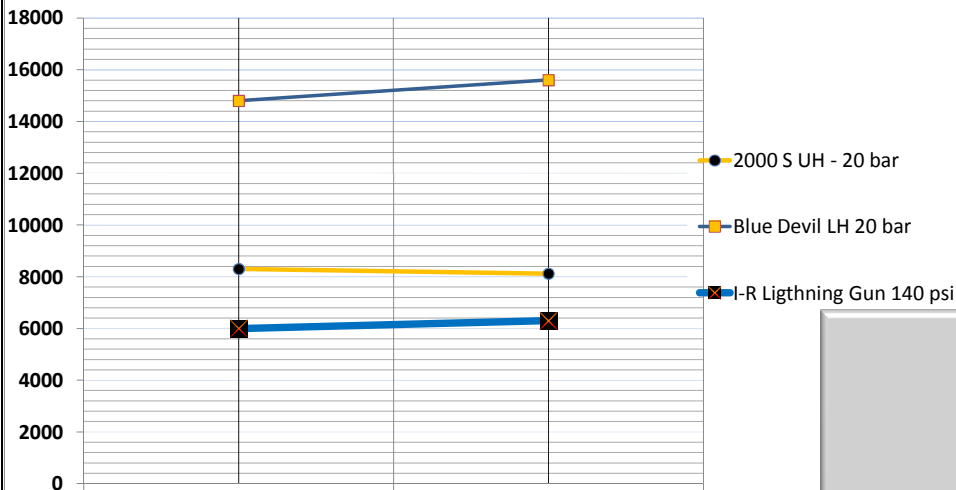
rpm 20bar (290psi)

8300

8120

14800

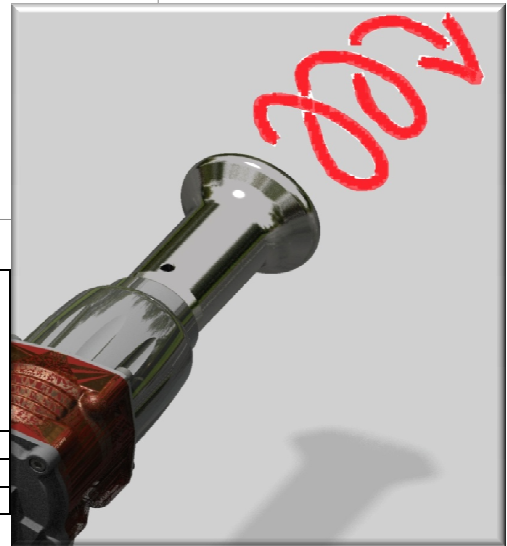
15600




NOTES :

We would like to underline that a faster air gun gives you advantages even during the free rotation as it is able to save time also during this phase of the tightening process. If by example we consider just 2 free revolutions , these are the comparative results:

1	Blue Devil LH	: 0.00770 s / 2 rev
3	Dp 2000S UH	: 0.0146 s / 2 rev
3	I-R Ltngun	: 0.0190 s / 2 rev

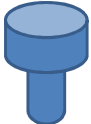


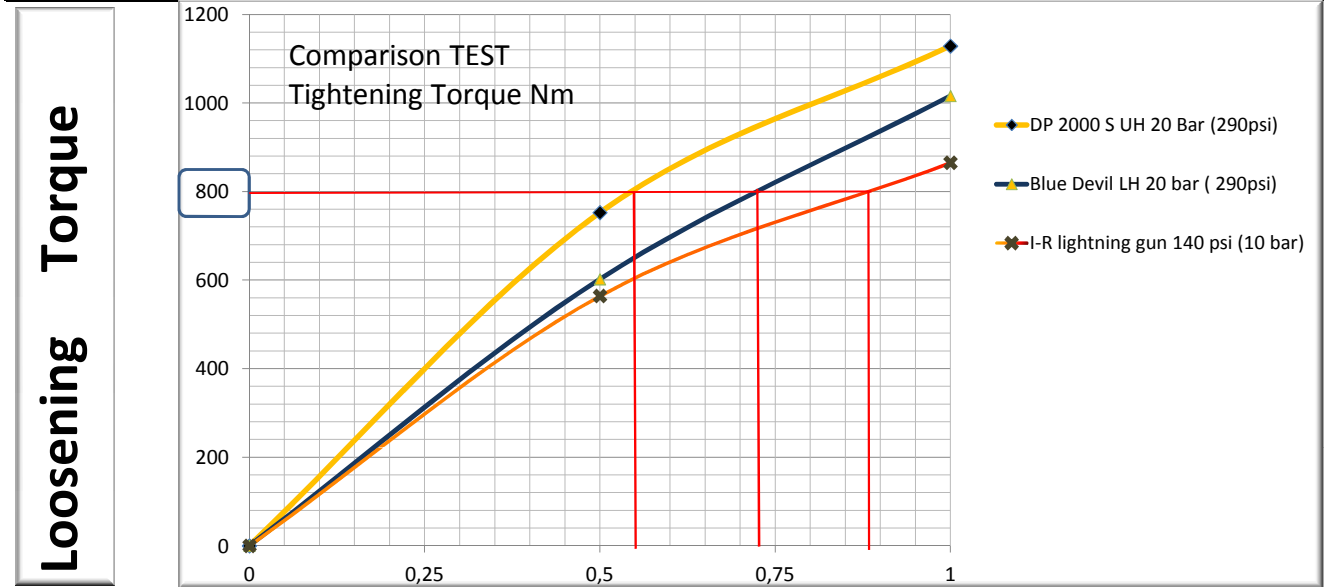
	R & D DEPARTMENT		DATE	
			21/11/2012	
			Air gun engineer	Technical manager
			Spagnolo	Costoli

Comparison test of I-R LIGHTNING GUN , DP 2000 S UH , BLUE DEVIL LH

2 nd Test Torque Test with 3/8 Gas Pressure Lane (minimum Inner dia. 8)

Test Conditions 1"1/4 UNC Screw L.120 Exagon SW 50,8 On SKIDMORE Load Cell 70000 Kg

Bolt size	DP2000S		BLUE DEVIL LH		I-R LIGHTNING GUN		
	Tightening	Loosening	Tightening	Loosening	Tightening	Loosening	
2" (50,8)							
 1 "1/4 UNC (31,75)	Time (sec)						
	0	0,00	0,00	0,00	0,00	0,00	
	0,5	0,00	752,42	0,00	601,93	0,00	564,31
	1	0,00	1128,63	0,00	1015,76	0,00	865,28



Notes

The graphic above shows three torque curves corresponding respectively to the three air-guns DP2000 S UH , Blue Devil LH , I-R Lightning Gun in loosening direction. Assuming a nut tightened at 800 Nm, you can see that the DP 2000 S UH loosens this torque in **0.55s**, while the Blue Devil in **0.73 s**, Finally the I-R Lightning Gun in **0.88 s**.