



NPO ENERGO MASH

named after academician V.P. Glushko
founded in 1929



RD-180 engine
Liquid propellant rocket engine
for first stages of «Atlas III»
and «Atlas V» LV
of Lockheed Martin (USA)





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RD-180 engine

Main parameters of RD-180 engine

Liquid propellant rocket engine with afterburning of oxidizer-rich gases
Propellant: LOX + kerosene

Thrust, sea level / vacuum, tf	390 / 424
Specific impulse, sea level/vacuum, sec	311,3 / 337,8
Pressure in combustion chamber, kgf/cm ²	272
Mass, dry / filled, kg	5400 / 5850
Dimensions, height / diameter, mm	3600 / 3200
Development period	1994–1999
Destination	for first stages of «Atlas III» and «Atlas V» LV of Lockheed Martin (USA)

Milestones of RD-180 program

- Announcement about Lockheed Martin's choice of NPO Energomash project in competition for development of LRPE for «Atlas» LV – January, 1996
- Contract awards with Pratt&Whitney on development of RD-180 engine – June, 1996
- Beginning of fire tests of RD-180 engine at NPO Energomash – November, 1996
- Delivery of first serial production RD-180 engine in USA – January, 1999
- RD-180 engine certification – March, 1999
- First launch of «Atlas III» LV – May, 2000
- First launch of «Atlas V» LV – August, 2002

- MOU of Lockheed Martin – request on 101 engines
- Signed contracts for 50 engines delivery
- 31 serial production engines had delivered in USA
- 3 launches of «Atlas III» and «Atlas V» LV were conducted in 2005

- 6 launches of «Atlas III» LV and 7 launches of «Atlas V» LV totally
- Total engine running time in flights – 2856,8 sec
- Total running time at test stand – 31 615,125 sec at 176 firings



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