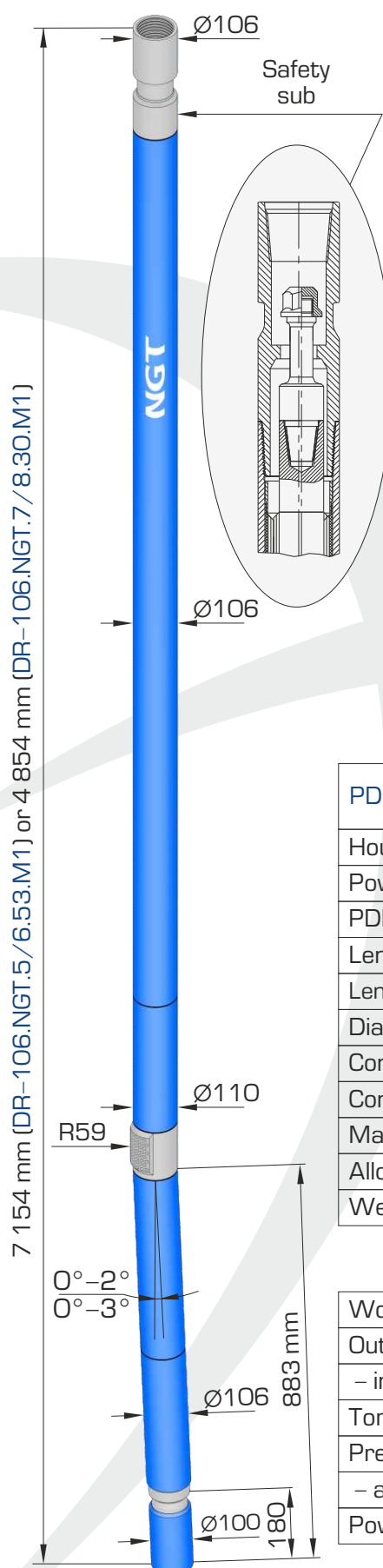


DR-106.NGT.5/6.53.M1 and DR-106.NGT.7/8.30.M1



PDM's DR-106.NGT.5/6.53.M1 and DR-106.NGT.7/8.30.M1 are new universal hydraulic downhole motors used for:

- drilling of oil and gas wells with 120.6 – 149.2 mm bits,
- well reconstruction by sidetracking with rock bits, PDC bits, including bicentric ones;
- well workover operations.

An adjustable bent sub is placed between bearing section and power section. The adjustment range is between 0° and 2° or between 0° and 3°. PDMs are completed with the bearing section of enhanced operational life, exceeding 300 hrs.

The bearing section is fitted with the axial sliding bearing, having operating surfaces made of synthetic diamond, and the radial hard alloy bearings. Due to a very short shoulder up to the point of axes misalignment (only 883 mm) drillers can:

- perform tripping without significant pressing of a bit to internal walls in the production string;
- perform sidetracking of complex profile where it is required to alternate deviated intervals of more than 5°/10 m built rate and stabilization intervals with rotation of a drill string without the assembly tripping-out to replace the bend angle;
- minimize risk of leaving the motor parts in the well, as all the threads are screwed applying Loctite glue, and each motor is completed with safety sub;
- do a large volume of work with one motor (it is especially important for hard-to-reach regions) as the overhaul life reaches approximately 300 hrs.

Technical specification

PDM model	DR-106.NGT.5/6.53.M1	DR-106.NGT.7/8.30.M1
Housing OD, mm	105/110	106/110
Power section lobe configuration	5/6	7/8
PDM length, mm	7 154	4 854
Length of stator rubber lining, mm	5 320	3 000
Length of bearing section up to a curvature point, mm	883	883
Diameter of bits used, mm	120,6–149,2	120,6–149,2
Connecting thread to drill pipes	NC 31	NC 31
Connecting thread to bits	2 7/8 Reg	2 7/8 Reg
Maximum density of drilling mud, g/cm ³	1,6	1,6
Allowed axial load, kN	80	80
Weight, kg	369	250

Power specification

Working fluid flow rate, l/s	6–12	6–12
Output shaft rotation speed:		
– in no-load conditions, RPM	161–321	96–192
Torque at maximum power, kN*m	3,25	2,3–3,5
Pressure drop:		
– at maximum power, MPa	8	5–10
Power, kW	99	53