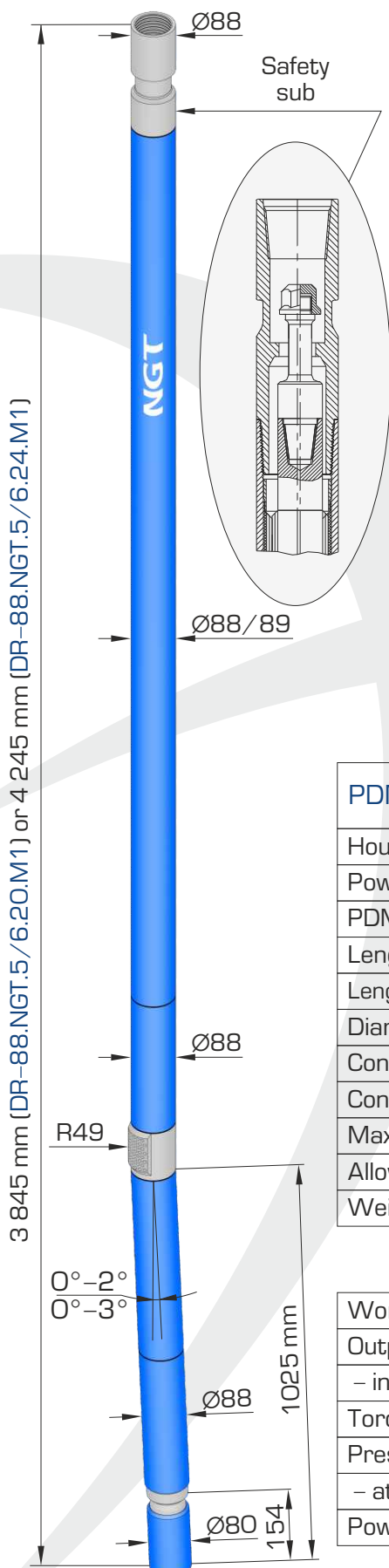


DR-88.NGT.5/6.20.M1 and DR-88.NGT.5/6.24.M1



PDM's DR-88.NGT.5/6.20.M1 and DR-88.NGT.5/6.24.M1 are new universal hydraulic downhole motors used for:

- drilling of oil and gas wells with 98.4 – 120.6 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°.

Bearing section has axial multi-row rolling bearing and radial hard alloy bearings. Due to a very short shoulder up to the point of axes misalignment (only 1025 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 3M glue, and each motor is complete 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 200 hrs.

Technical specification

PDM model	DR-88.NGT.5/6.20.M1	DR-88.NGT.5/6.24.M1
Housing OD, mm	88	88/89
Power section lobe configuration	5/6	5/6
PDM length, mm	3 845	4 245
Length of stator rubber lining, mm	2 000	2 400
Length of bearing section up to a curvature point, mm	1 025	1 025
Diameter of bits used, mm	98,4–120,6	98,4–120,6
Connecting thread to drill pipes	2 3/8 Reg	2 3/8 Reg
Connecting thread to bits	2 3/8 Reg	2 3/8 Reg
Maximum density of drilling mud, g/cm ³	1,6	1,6
Allowed axial load, kN	50	50
Weight, kg	137	151

Power specification

Working fluid flow rate, l/s	5–7	4,3–12,8
Output shaft rotation speed:		
- in no-load conditions, RPM	270–400	108–325
Torque at maximum power, kN*m	1,1–1,3	1,53
Pressure drop:		
- at maximum power, MPa	10–13	4,5
Power, kW	27–43	47