

# NGC

Rail Vehicle Gearboxes





## **About Us**

NGC Rail Vehicle Gearbox BU is dedicated to providing gearbox products, technology, and solutions for metro, tramcar, intercity train, high speed train and locomotive applications. Today, more than 20,000 rail vehicle gearboxes from NGC are working in vehicles all over the world, including but

not limited to China, North America, South America, Europe, Australia, Southeast Asia and Africa. Equipped with advanced facilities and testing devices, NGC strives to provide reliable, safe and low-noise products for our customers.





Working closely with customers all over the world, we produce high quality products using state of art manufacturing technology. Our in-depth knowledge, as well as our comprehensive global service network guarantee our customers safe and efficient operations.

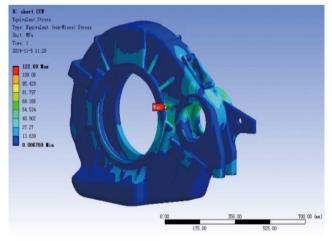




## **NGC Benefits**

With over 40 years' experience in drive technology, NGC has a wide range of expertise in gearbox development. We do everything to ensure the highest standards of safety and reliability: from concept design to gear strength analysis, gear modification, gear LTCA and FEA; from gearbox system simulation to noise calculation. Every step and detail is

carefully implemented – including raw materials, machining, heat treatment, assembly, detection, painting and delivery – to ensure that our products run flawlessly for the whole product life and create added value for customers.



FEA of main elements



Strict materials quality control and heat treatment process control

## **NGC Products**

NGC develops and delivers gearbox technology for metro, intercity train and tramcar applications. Our products are certified according to ISO9001, ISO14001, OHSAS18001,

IRIS, and meet mass production demand all over the world. NGC provides advanced high quality customized products.

|  |    | Center<br>Distance | Ratio | Design<br>Speed | Traction<br>Torque | Short Circuit<br>Torque |
|--|----|--------------------|-------|-----------------|--------------------|-------------------------|
| PSM348 series<br>single-stage<br>metro gearbox           |    | 348 mm             | 7.1   | 80 km/h         | 1,348 Nm           | 5,500 Nm                |
| PSM352 series<br>single-stage<br>metro gearbox           |    | 352 mm             | 7.1   | 80 km/h         | 2,117 Nm           | 7,700 Nm                |
| PSM355 series<br>single-stage<br>metro gearbox           |    | 355 mm             | 6.3   | 110 km/h        | 1,568 Nm           | 9,800 Nm                |
|  |    |                    | 6.3   | 90 km/h         | 1,583 Nm           | 9,800 Nm                |
|  |    |                    | 6.7   | 80 km/h         | 1,696 Nm           | 10,667 Nm               |
| PDM370 series<br>double-stage<br>metro gearbox           |    | 370 mm             | 5.0   | 135 km/h        | 1,800 Nm           | 10,000 Nm               |
|  |    |                    | 5.5   | 100 km/h        | 1,582 Nm           | 10,000 Nm               |
|  |    |                    | 6.2   | 100 km/h        | 1,550 Nm           | 10,000 Nm               |
| PDM385 series<br>double-stage<br>metro gearbox           | 38 | 385 mm             | 5.5   | 130 km/h        | 2,568 Nm           | 9,534 Nm                |
|  |    |                    | 6.4   | 80 km/h         | 1,655 Nm           | 10,000 Nm               |
|  |    |                    | 6.9   | 80 km/h         | 1,525 Nm           | 10,000 Nm               |
| PDM400 series<br>double-stage<br>metro gearbox           |    | 400 mm             | 5.8   | 120 km/h        | 2,278 Nm           | 12,188 Nm               |
|  |    |                    | 7.4   | 80 km/h         | 1,200 Nm           | 7,700 Nm                |
| PDM490 series<br>double-stage<br>metro gearbox           |    | 490 mm             | 6.9   | 90 km/h         | 1,690 Nm           | 10,000 Nm               |
| PSM360 series<br>single-stage intercity<br>train gearbox |    | 360 mm             | 6.3   | 120 km/h        | 1,536 Nm           | 10,000 Nm               |
| PSM361 series<br>single-stage intercity<br>train gearbox | 2  | 361 mm             | 5.3   | 120 km/h        | 1,547 Nm           | 12,483 Nm               |
|  |    |                    | 6.3   | 100 km/h        | 1,421 Nm           | 11,722 Nm               |
| PSM363 series<br>single-stage intercity<br>train gearbox |    | 363 mm             | 4.9   | 160 km/h        | 2,420 Nm           | 12,100 Nm               |



|  |     | Center<br>Distance | Ratio | Design<br>Speed | Traction<br>Torque | Short Circuit<br>Torque |
|--|-----|--------------------|-------|-----------------|--------------------|-------------------------|
| PSM365 series<br>single-stage intercity<br>train gearbox |     | 365 mm             | 5.9   | 100 km/h        | 2,108 Nm           | 10,540 Nm               |
| PSM370 series<br>single-stage intercity<br>train gearbox |     |                    | 4.1   | 160 km/h        | 2,072 Nm           | 9,500 Nm                |
|  |     | 370 mm             | 4.7   | 160 km/h        | 2,078 Nm           | 11,304 Nm               |
|  |     |                    | 6.3   | 90 km/h         | 1,550 Nm           | 10,000 Nm               |
| PSM380 series<br>single-stage intercity<br>train gearbox |     | 380 mm             | 5.7   | 176 km/h        | 2,300 Nm           | 15,500 Nm               |
| PDM437 series<br>double-stage intercity<br>train gearbox |     | 437 mm             | 4.2   | 160 km/h        | 1,710 Nm           | 9,500 Nm                |
| PDM460 series<br>double-stage intercity<br>train gearbox |     | 460 mm             | 5.3   | 132 km/h        | 1,750 Nm           | 11,300 Nm               |
| VDT230 series<br>tramcar gearbox                         | O   | 230 mm             | 7.9   | 80 km/h         | 884 Nm             | 3,000 Nm                |
| VDT635.5 series tramcar gearbox                          |     | 235 mm             | 6.0   | 80 km/h         | 962 Nm             | 3,400 Nm                |
| VST469 series<br>tramcar gearbox                         | No. | -                  | 5.6   | 90 km/h         | 1321 Nm            | 4,939 Nm                |
| VDMS300 series<br>monorail gearbox                       | 1   | 300 mm             | 6.6   | 90 km/h         | 2,074 Nm           | 3,000 Nm                |
| PSH370 high<br>speed gearbox                             |     | 370 mm             | 3.6   | 250 km/h        | 2650 Nm            | 11,500 Nm               |
| Locomotive gears   |     |                    |       |                 |                    |                         |



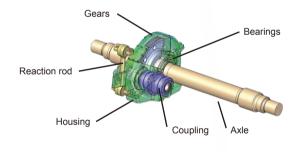
## **NGC Services**

NGC service teams consist of design engineers, application engineers, field engineers, and authorized service partners. We are prepared to offer our customers a fully optimized maintenance strategy, including troubleshooting, routine inspections, repairs, daily maintenance and training. Our service is there throughout the whole product life.

## Maintenance and Overhaul of Gearbox, Rod and Coupling



#### **Customized Products**



### **Technical Support**



#### **Spare Parts**



#### **Maintenance Tools and Test Rig**



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