PRECICE STRYDE

3rd Generation Limb Lengthening System

Surgeon Introduction Presentation

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Purpose

The STRYDE System leverages an unparalleled advanced technology to remotely control an implant from outside the body with incredible precision.

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Technology at a Glance

Total Cases	Surgeon Users	# of Countries
9000+	1000+	30+

STRYDE Overview

The newly released STRYDE Limb Lengthening and Compression System represents NuVasive Specialized Orthopedics, Inc.'s latest advancement in the PRECICE family of products. This 3rd generation advanced solution builds upon the reputation and efficacy of the PRECICE proprietary technology and utilizes a stronger material[1] (Biodur 108 SS). With thousands of devices implanted and 30+ peer reviewed clinical studies published since its commercial release in 2011, NuVasive continues to innovate with the mission to transform the current standards of orthopedic care.

PRODUCT FEATURES:

- 400% increased post-operative weight bearing (vs. PRECICE)[1]
- Reinforced internal mechanism
- Patient preferred treatment option[2]
- Customizable lengthening protocol
- Up to 80 mm of non-invasive distraction capability
- Nail may be reversed
- Pre-implantation device customization w/ Fast Distractor

1 Data on File. PRECICE STRYDE Max Patient Weight Assessment. Report LR0838-1.
2 Herzenberg JH, Standard SC, Specht SC. Limb lengthening in children with a new, controllable internal device. European Paediatric Orthopaedic Society (EPOS); April 17-20, 2013. Athens, Greece.

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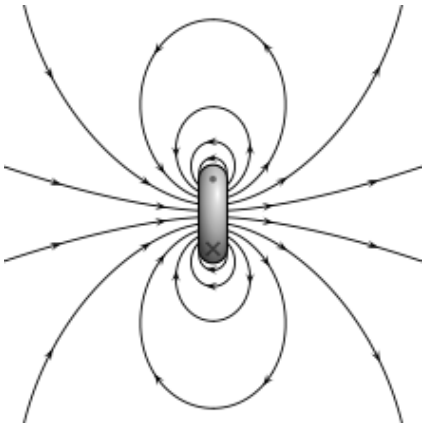
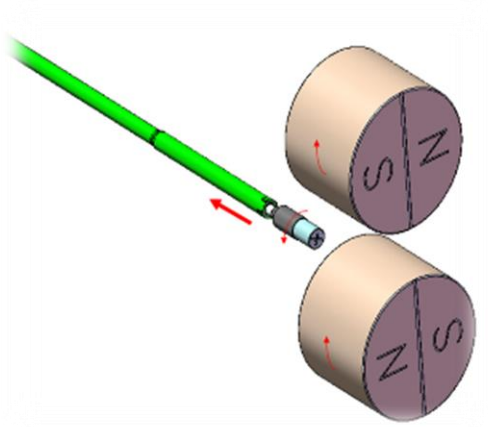
Core Technology Overview

Core Technology

Rare Earth Magnets:
Neodymium Iron Boron (NdFeB)



Rotational Force ⟹ Axial Force



The interaction between the internal implant magnets and external remote control magnets are used to non-invasively adjust implant dimensions. STRYDE utilizes the same PRECICE mechanism to post-operatively adjust the device.

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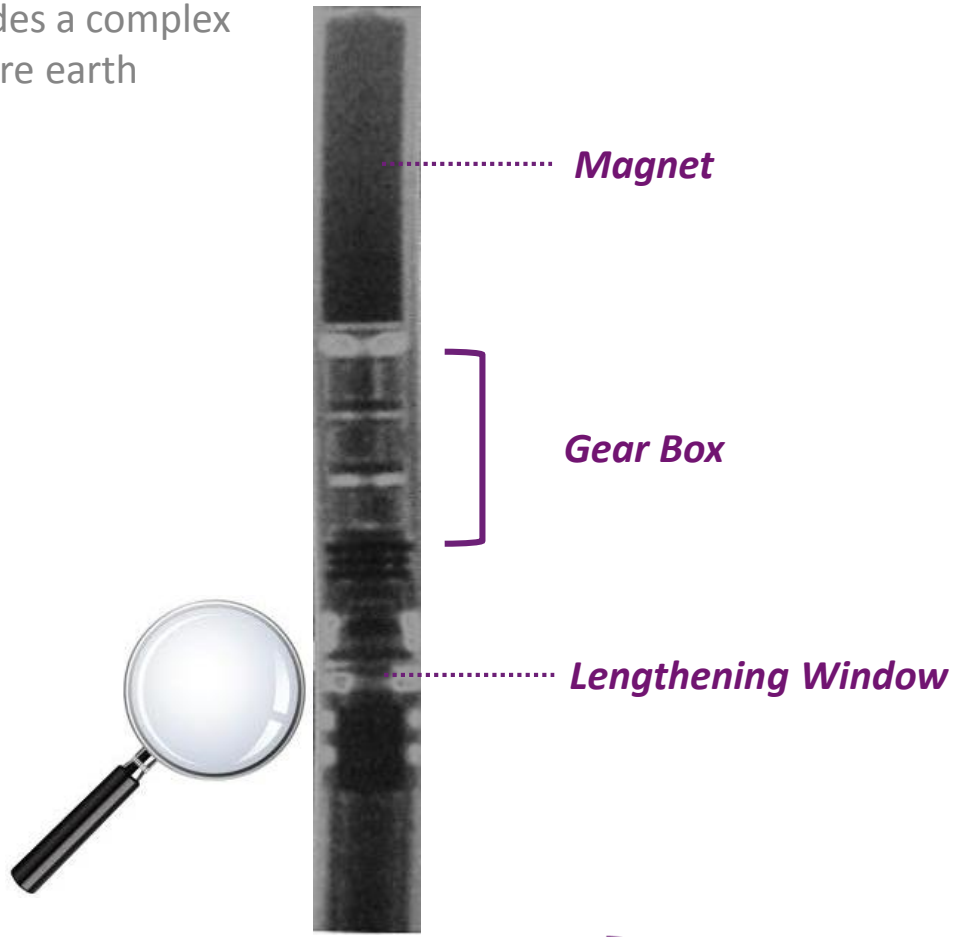
A Closer Look at the Mechanism

The proprietary PRECICE STRYDE technology includes a complex internal gear system powered and controlled by rare earth magnets.

- Internal Magnet
- Complex Gear Box
- Lengthening Window/Lead Screw



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External Remote Controller (ERC)

The ERC is a portable, hand held unit that precisely lengthens or compresses the STRYDE nail through the touch of a button. The ERC is fully customizable to each patient based on their post-operative prescription and needs.

- Daily lengthening sessions are performed by the patient in the comfort of his/her home
- Rate of distraction, frequency and goals can be adjusted at any time during treatment by the physician
- Designed to be used in the femur, tibia and humerus

ERC1

ERC2P

ERC3P

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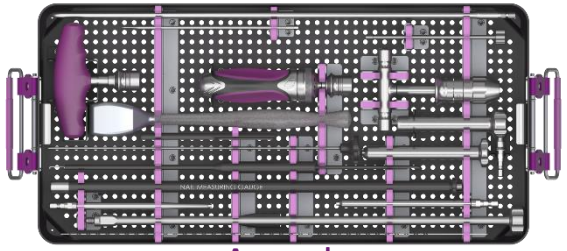
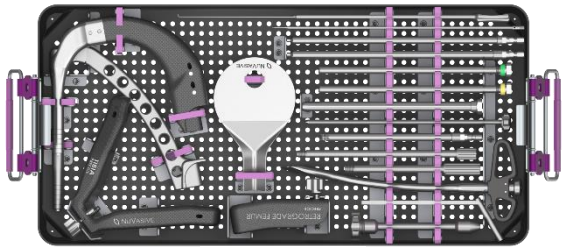
Surgical Instrumentation

The Next Generation Instruments (NGI) are the latest instrument advancements by NuVasive Specialized Orthopedics, Inc. The NGI system offers:

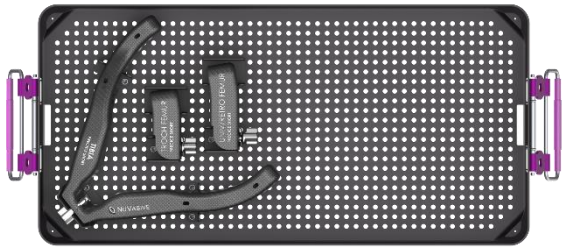
- Carbon fiber/radiolucent targeting
- Suprapatellar approach instrumentation
- Compatibility with all PRECICE implants



Approach Tray



Targeting Tray



Specialty Tray

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Product Offering and Technical Details

Implant Offering

Nail Configuration	Maximum Distraction (mm)	Overall Nail Length (mm)	Diameter (mm)
Tibia	50	235	10.0 11.5
	65	250	
	80	265, 280, 305, 335, 365	
Femur (Piriformis/Troch)	50	235	10.0 11.5 13.0
	65	250	
	80	265, 280, 305, 335, 365	

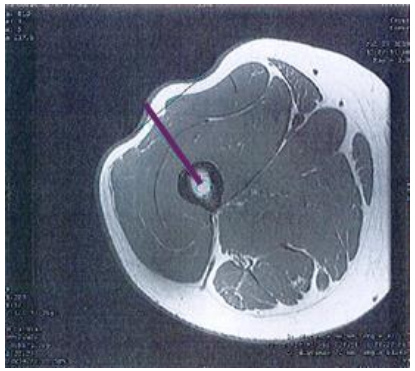
PARTIALLY THREADED LOCKING SCREWS

- **4.0 mm**
  - 20 – 75 mm
- **4.5 mm**
  - 20 – 80 mm
- **5.0 mm**
  - 20 – 80 mm

** In 2.5 mm increments up to 50 mm*

Weight Bearing/Soft Tissue Gap

Limb Type	Nail Diameter (mm)	Soft Tissue Gap (mm)	Maximum Patient Weight Guidance
Tibia	10.0	13	150lbs/69kg
	11.5		200lbs/91kg
	x		x
Femur	10.0	50	150lbs/69kg
	11.5	65	200lbs/91kg
	13.0	80	250lbs/114kg

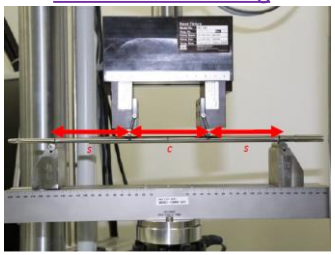


Strength Testing

The STRYDE device offers a significant increase in device strength and post-operative weight bearing guidance (400%+) when compared to PRECICE.[1] The STRYDE 10.0 mm nail can withstand a load of 150 lbs (69 kgs), the 11.5 mm nail a load of 200 lbs (91 kgs) and the 13.0 mm nail a load of 250 lbs (114 kgs).[1] The following tests and protocols were followed to evaluate the strength of the STRYDE nail:

- Static & Dynamic Four Point Bending (ASTM Standards)
- Static Torsion
- Static & Dynamic Screw Bending
- Static = Load to Failure (i.e. One-time event)
- Dynamic = Repeated Loads (i.e. Fatigue)
- All dynamic/fatigue @ 1 Million Cycles w/o Failure

Four Point Bending



Torsion Test

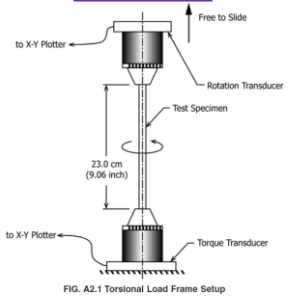
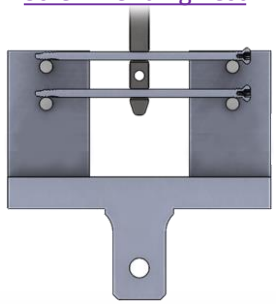


FIG. A2.1 Torsional Load Frame Setup

Screw Bending Test



References
1. Data on File. PRECICE STRYDE Max Patient Weight Assessment. Report LR0838-1

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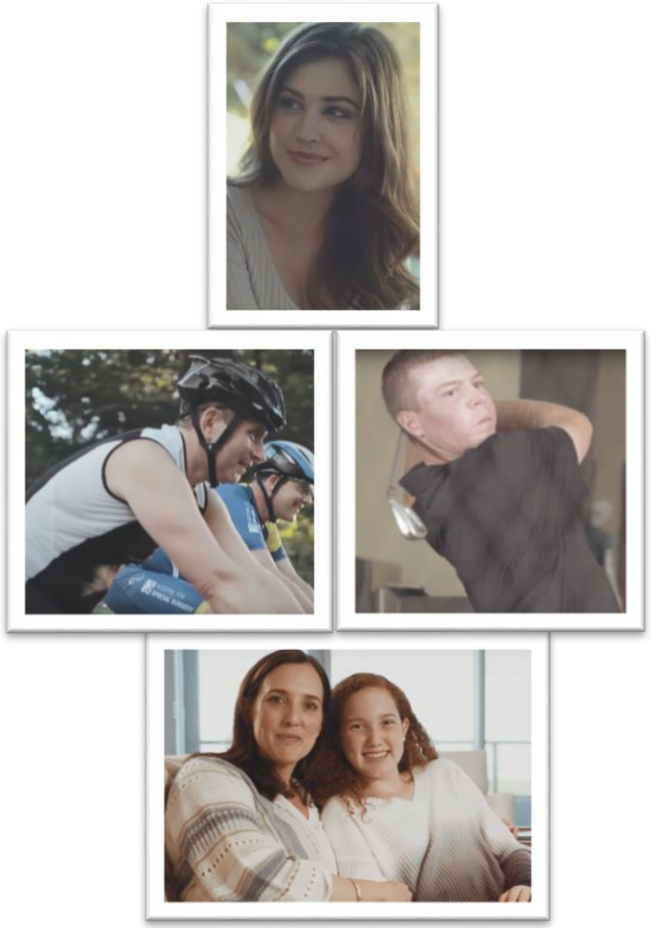
Patient First Approach

Our mission is to transform the current standards of orthopedic care and we take great pride in always putting the patient first. Below is a high level snap-shot of the rigorous 7-stage process each and every PRECICE implant must successfully navigate prior to being shipped to a hospital:

- Every individual part is inspected by team members (50+ parts makes up one STRYDE implant)
- Every STRYDE implant is assembled by hand and takes 1-hour to build
- Every STRYDE implant is fully distracted and fully compressed to ensure proper function
- Every STRYDE implant is tested to confirm force requirements are met and 100% functionality
- Every STRYDE implant undergoes high definition radiographic imaging to confirm every part is correctly in place
- Every STRYDE implant is placed into its own protective packaging
- Every STRYDE implant is terminally sterilized for patient safety



Actual PRECICE Patients

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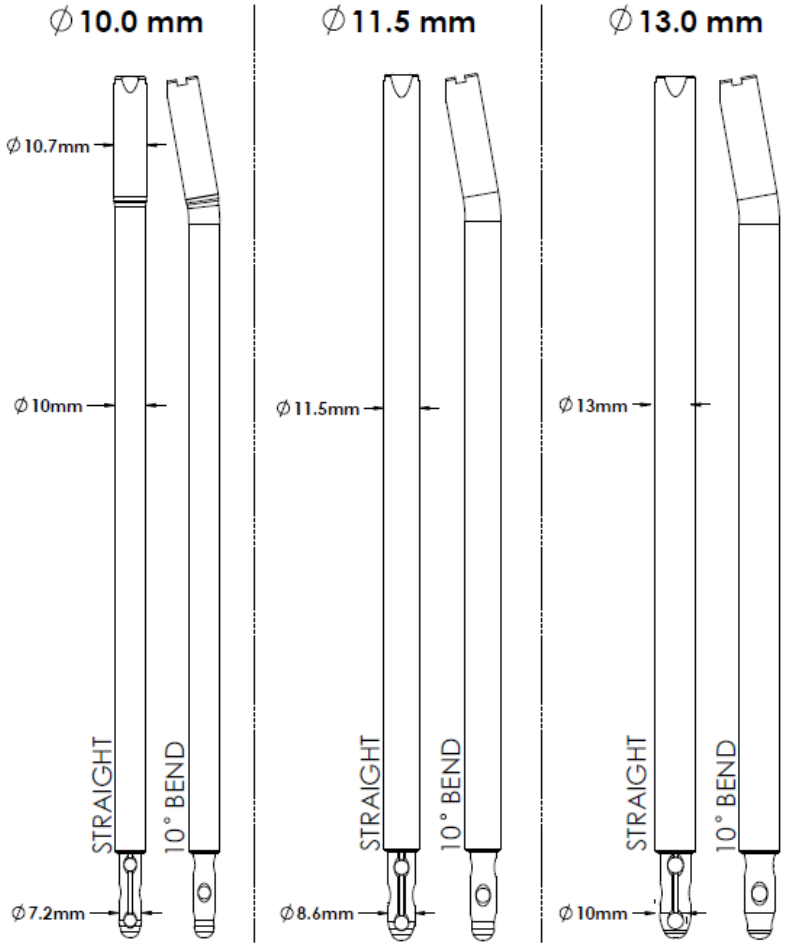
Nail Specifications

Nail Specifications – Diameters & Screws



Nail Diameter (mm)	Proximal Screw (mm)	Distal Screw (mm)
10.0	5.0	4.0
11.5		4.5
13.0		5.0

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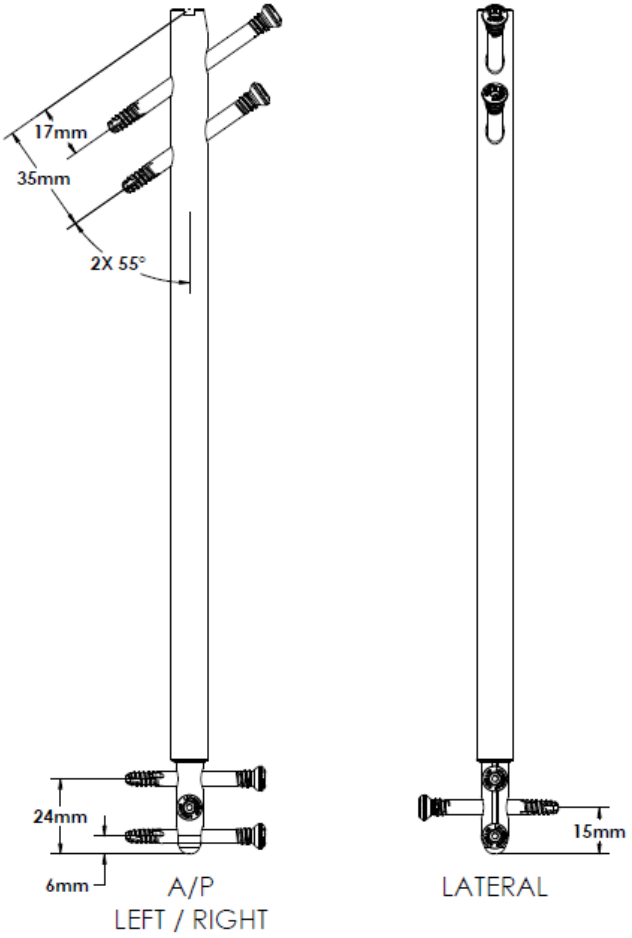
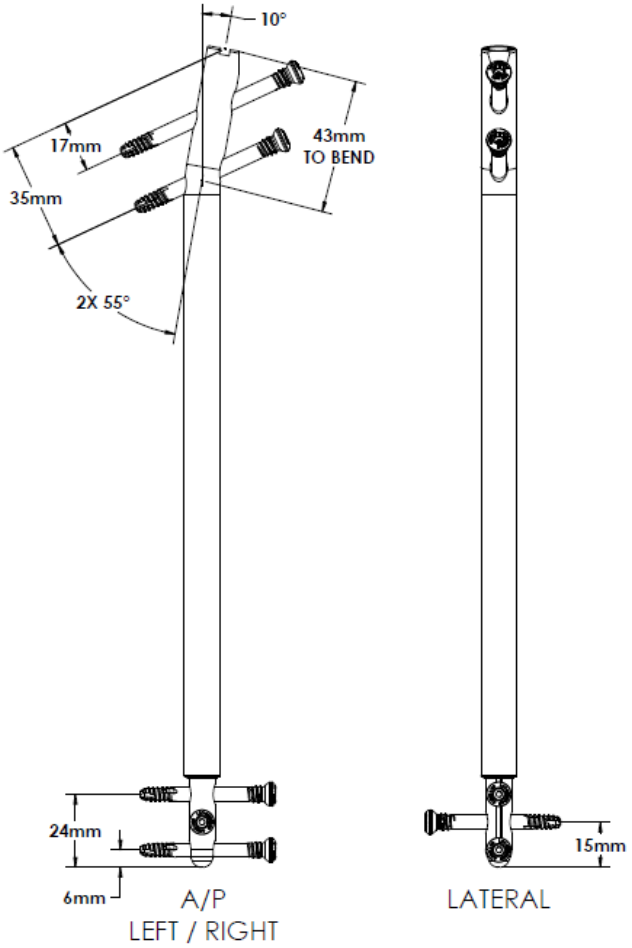
Nail Specifications – Piriformis & Troch





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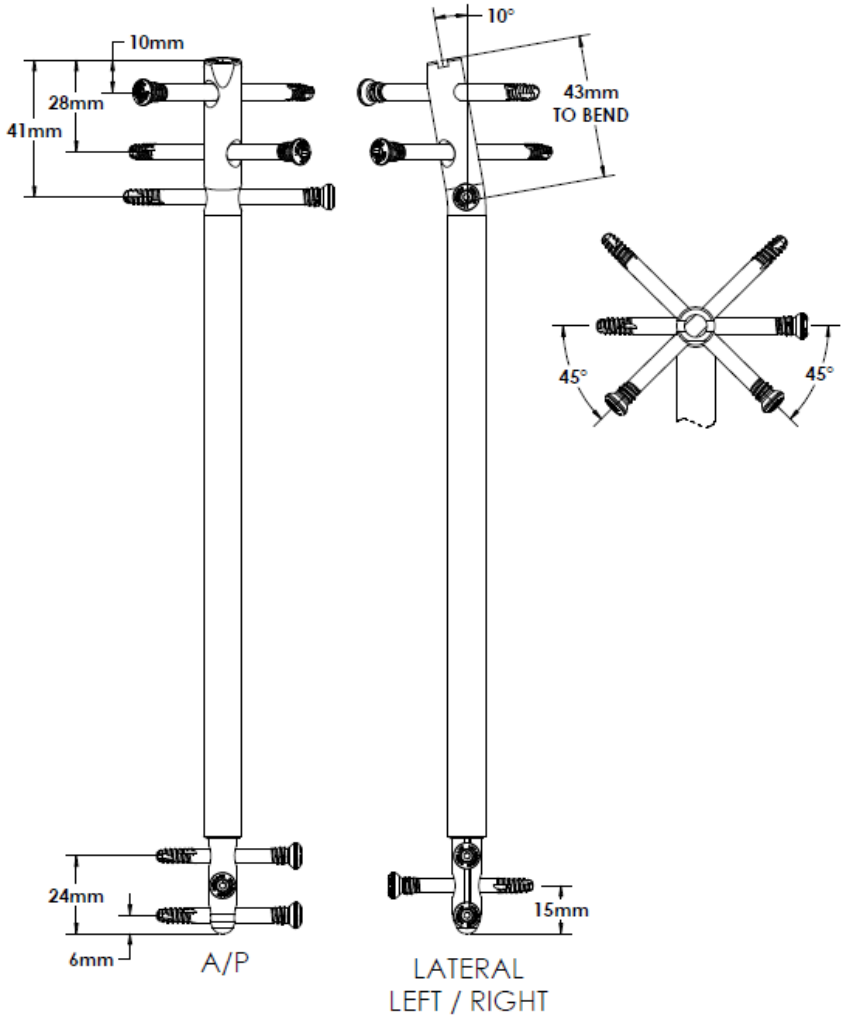
Nail Specifications – Antegrade Tibia



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THANK YOU!

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