

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Marine Riser Equipment**with type designation(s)  
**Split Telescopic Joint Packers**

Issued to

**Lord Corporation**  
**Cary, NC, USA**is found to comply with  
**DNVGL-OS-E101 – Drilling facilities, Edition January 2018**  
**API Spec 16F, Marine Drilling Riser Equipment, 2nd Edition**  
**DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2017****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2019-01-14**for **DNV GL**This Certificate is valid until **2024-01-13**.DNV GL local station: **Certification & Inspection Services**Approval Engineer: **Marco Romero**

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**Christian Nilsen**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-026743-1**  
Certificate No: **TAD000011B**  
Revision No: **1**

## Product description

The telescopic joint packer provides a seal in the annular space between the inner and outer barrels of the telescopic joint.

The equipment is manufactured at the following locations:

- LORD Corporation, Cambridge Springs, PA, USA

## Application/Limitation

<u>Design Parameter</u>	<u>Value</u>
Rated Working Pressure	: 500 psi
Minimum Design Temperature	: 32°F to 180°F
Designation of Systems; Equipment	: Marine drilling riser; Telescopic Joint; Packer
Service	: Standard

## Type Approval documentation

<u>Drwg. No.</u>	<u>Rev.</u>	<u>Title</u>
J-28688-1	C	KIT, SPLIT INNER PACKER
J-28703-1	C	NOV ENERGIZING PACKER WITH SEAL KIT, 21" BARREL
J-28579-1	C	KIT, TJ SPLIT PACKER, INNER, 21" BARREL
J-28689-1	D	TJ ENERGIZING PACKER WITH SEAL KIT, 21" BARREL

## Material Specifications

<u>Components</u>	<u>Material Spec</u>	<u>Part No.</u>	<u>Minimum Yield Strength</u>	<u>Avg. Charpy Impact</u>
Split Ring	ASTM A-29	J-28688-1 & J-28579-1	60,000 psi	31 ft-lbs @ 32°F
Packer	Nitrile Elastomer	J-28703-1 & J-28689-1	N/A	N/A

## Calculations

<u>Doc. No.</u>	<u>Rev.</u>	<u>Title</u>
IPA17-0004	B	Certification Plan For LORD Split, Telescopic Joint Packer (P/N J-28579-1) With Energizing Packer (P/N: J-28689-1)
IPA-160863-004	-	Certification Plan For LORD Split Telescopic Joint Packer (P/N: J-28688-1) With Energizing Packer (P/N: J-28703-1)

## Tests carried out

<u>Doc. No.</u>	<u>Rev.</u>	<u>Title</u>
IPA-160863-004	3	API 16F 2 <sup>ND</sup> EDITION TEST RESULTS FOR LORD SPLIT TELESCOPING JOINT PACKER (P/N J-28688-1) WITH ENERGIZING PACKER (P/N J-28703-1)
IPA-150662-001	-	API 16F 2 <sup>ND</sup> EDITION TEST RESULTS FOR LORD SPLIT TELESCOPING JOINT PACKER (P/N J-28579-1) WITH ENERGIZING PACKER (P/N J-28689-1)

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## **Marking of product**

Marking shall:

1. Be reviewed and approved by the DNV GL local surveyor
2. Identify and differentiate each production unit <i.e. serial number>
3. Establish traceability to product design and fabrication documentation
5. Be in accordance with API 16F

## **Periodical assessment**

For retention of the Type Approval, DNV GL's surveyor shall perform a survey every second year in accordance with DNV GL Type Approval Scheme DNVGL-CP-0338, September 2018 Edition.