

**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 2018****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2020-07-10**for **DNV GL**This Certificate is valid until **2025-07-09**.DNV GL local station: **Certification & Inspection Services**Approval Engineer: **Srujanbabu Sridharala**

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**Meindert van Mierlo**  
**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: **262.1-026743-3**  
 Certificate No: **TAD000011B**  
 Revision No: **3**

## 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	F	KIT, SPLIT INNER PACKER
J-28703-1	F	TJ ENERGIZING PACKER WITH SEAL KIT, 21" BARREL
J-28579-1	E	KIT, TJ SPLIT PACKER, INNER, 21" BARREL
J-28689-1	F	TJ ENERGIZING PACKER WITH SEAL KIT, 21" BARREL
J-28576-1	J	KIT, PACKER ELEMENT

## 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, & J-28576-1	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)
IPA-150661-001	-	Certification Plan for LORD Split Telescopic Joint Packer (P/N: J-28576-1)

## 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 TELESCOPIC 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 TELESCOPIC JOINT PACKER (P/N J-28579-1) WITH ENERGIZING PACKER (P/N J-28689-1)
IPA-150661-002	-	API 16F 2 <sup>nd</sup> EDITION TEST RESULTS FOR LORD SPLIT TELESCOPIC JOINT

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Doc. No.                      Rev.   Title  
  PACKER (P/N: J-28576-1)

## Marking of product

For traceability the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's name or trademark
3. Additional marking at manufacturer's option

## Periodical assessment

For retention of the Type Approval, DNV GL's surveyor shall perform periodical assessment after 2 years and after 3.5 years in accordance with DNV GL's Class Programme DNVGL-CP-0338, Section 4.

## Other conditions/comments

1. Procedures related to testing, welding, NDT, and other quality control requirements are to be reviewed/approved by DNV GL's local surveyor.
2. DNV GL ref.: A0833555.

## Revision History

<u>Rev.</u>	<u>Date</u>	<u>Description of Change</u>
0	2019-01-14	N/A
1	2019-01-15	Removed unnecessary drawings, Added DNVGL-SI-0166 to scope. Expiration date was not extended.
2	2019-05-01	Added third split joint packer (P/N J-28576-1). Associated drawings, materials specifications, calculations and tests were added. Expiration date was not extended.
3	2020-07-10	Minor updates to drawings.