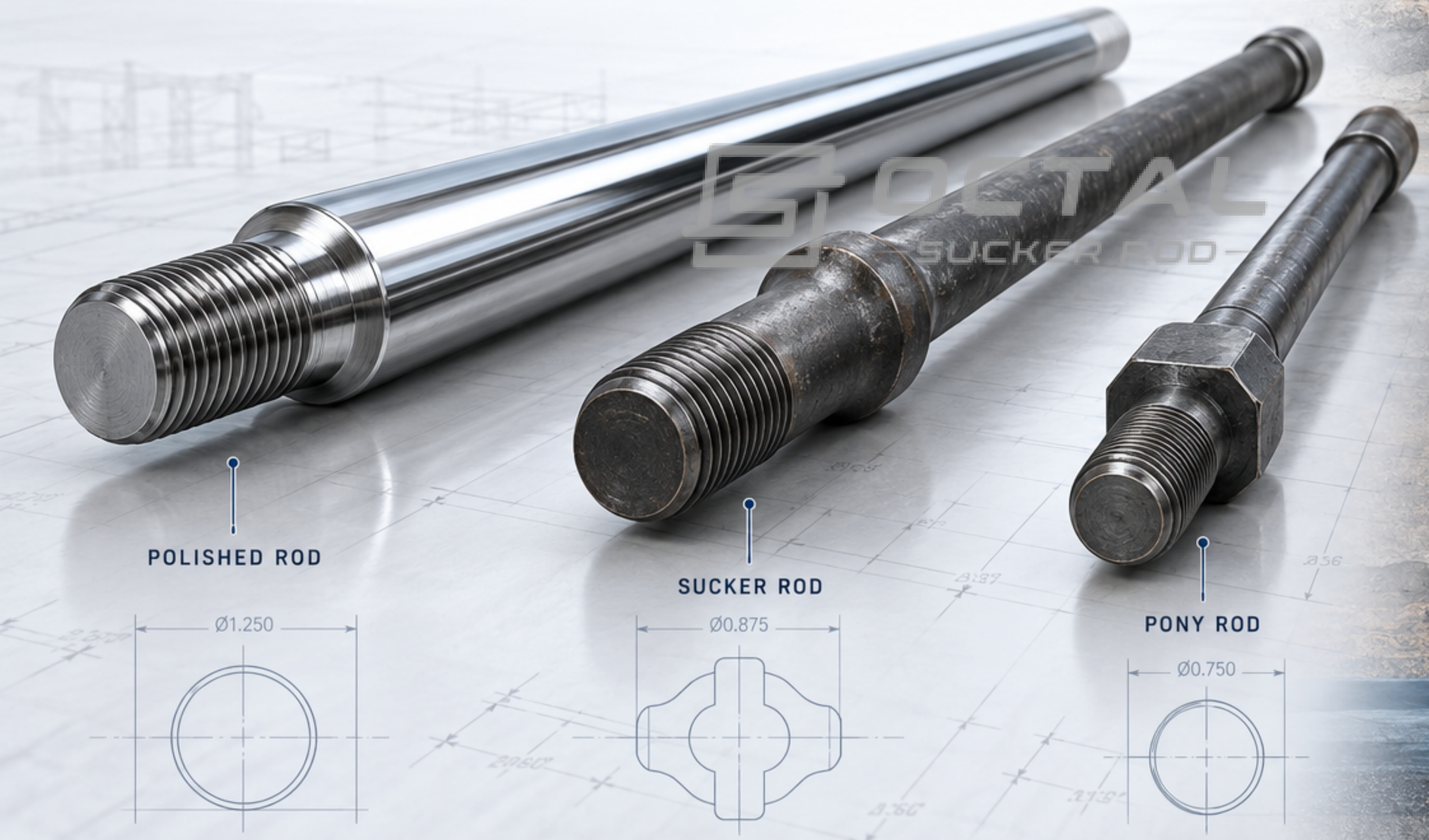
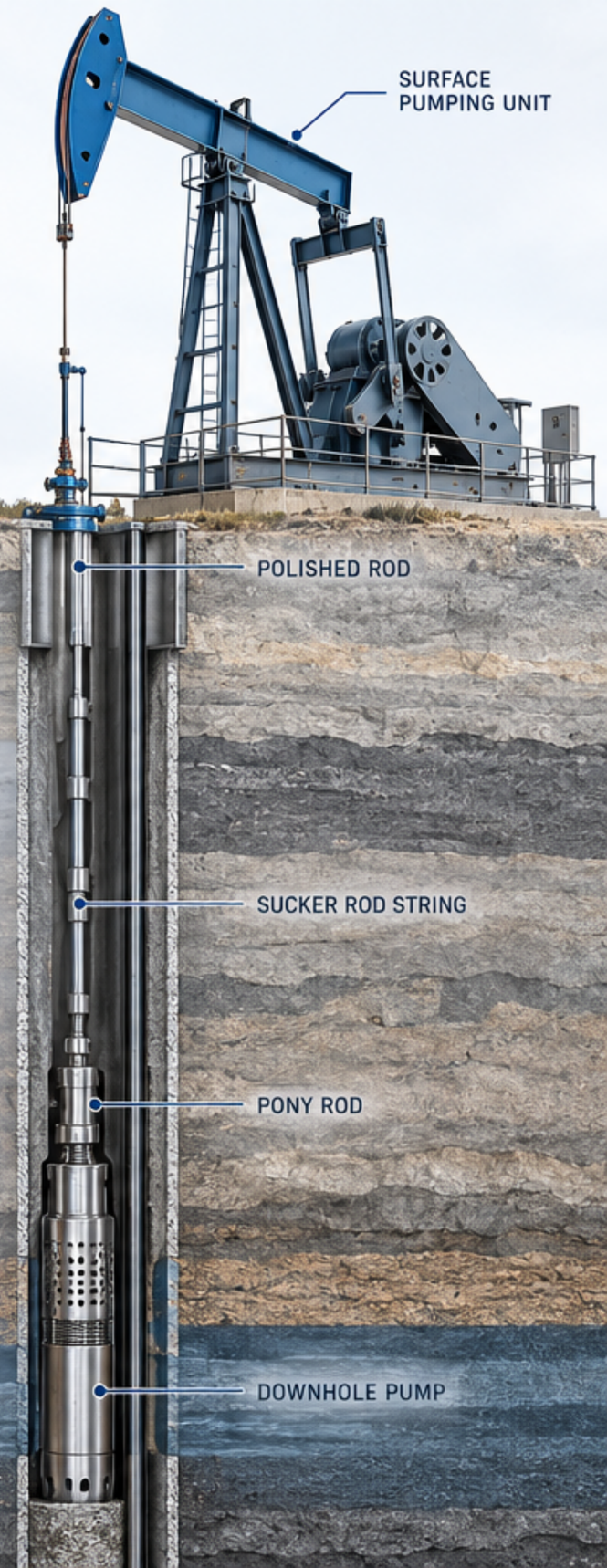
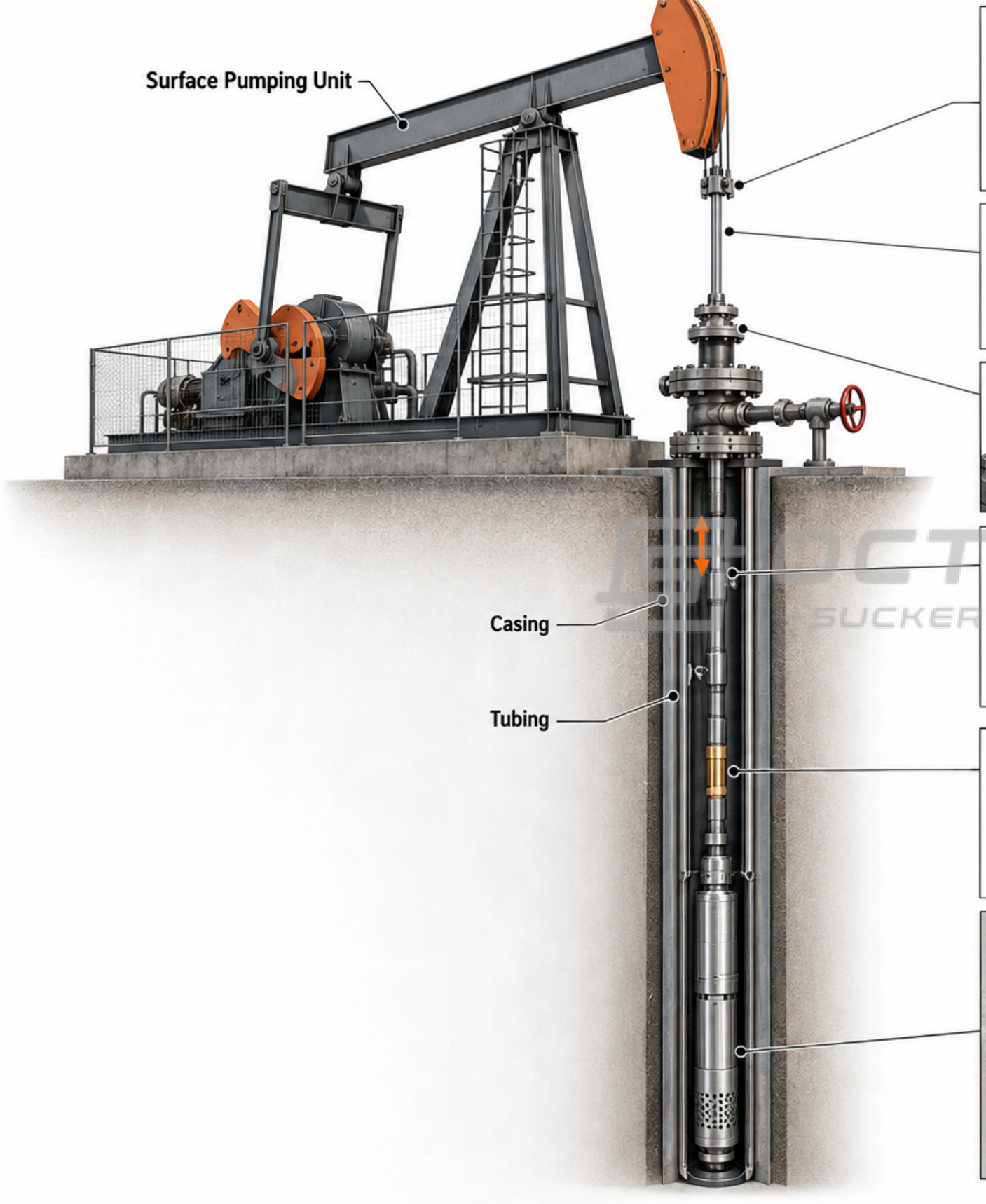
Sucker Rod, Polished Rod and Pony Rod —

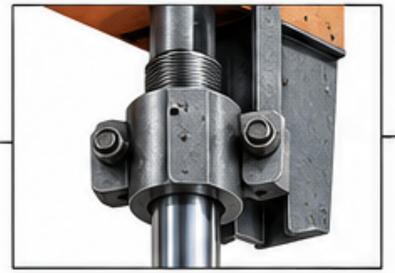
System Position, Dimensions and Selection Guide

Rod-Lift Component Identification for Engineering and Procurement

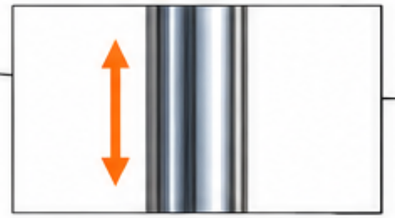








Polished Rod Clamp



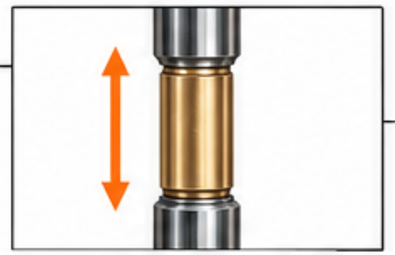
Polished Rod
load transfer + sealing surface



Stuffing Box



Sucker Rod String
main cyclic load path



Pony Rod
short make-up length



Downhole Rod Pump

SUCKER ROD

Common Lengths:
25 ft / 30 ft

Published Body Diameters:
5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4 in

Published Minimum Yield Examples:
about 60–115 ksi depending on grade



PONY ROD

Published Example Lengths:
2, 4, 6, 8, 10 ft

Body Diameter and Grade:
typically follow the corresponding sucker-rod family



POLISHED ROD

Common OD Examples:
1-1/8, 1-1/4, 1-1/2, 1-3/4 in

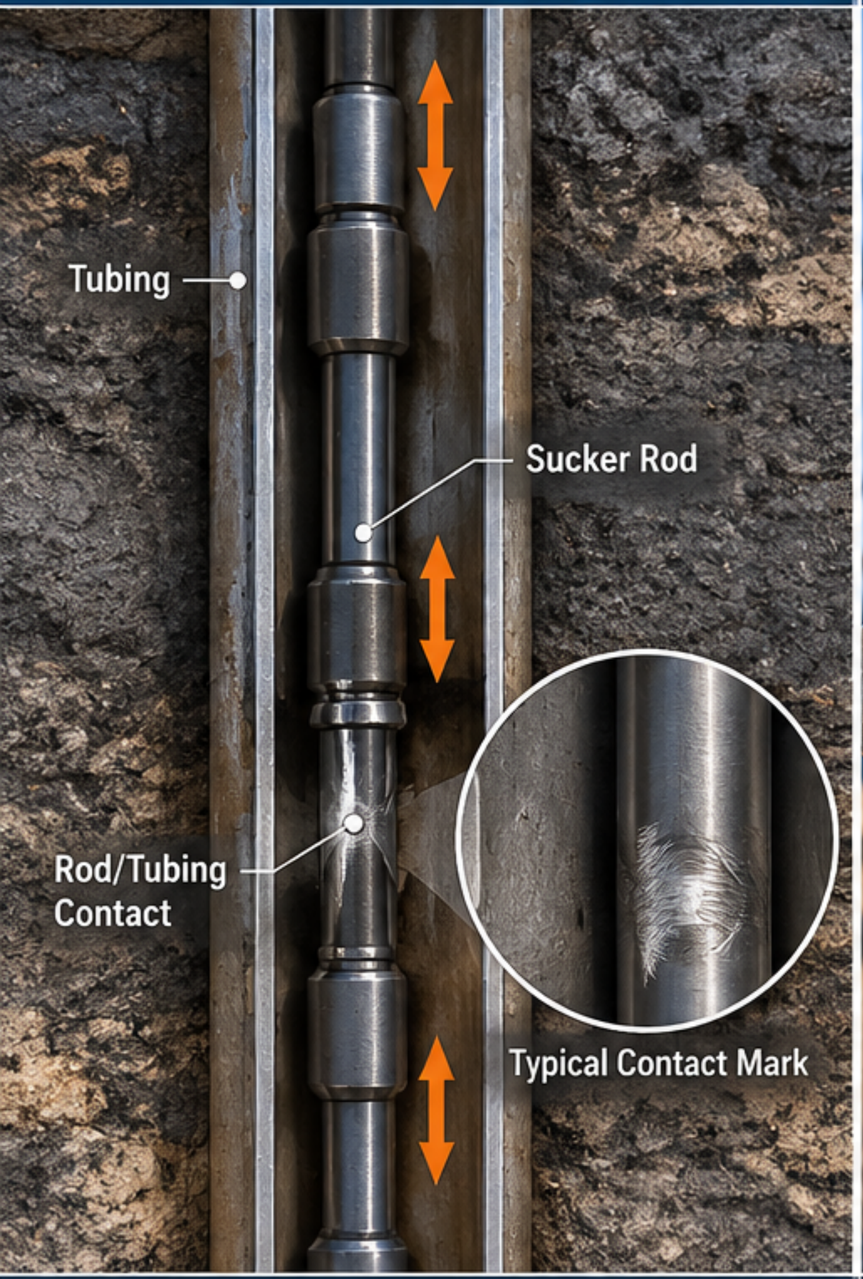
Length and Strength:
system-specific / material-specific



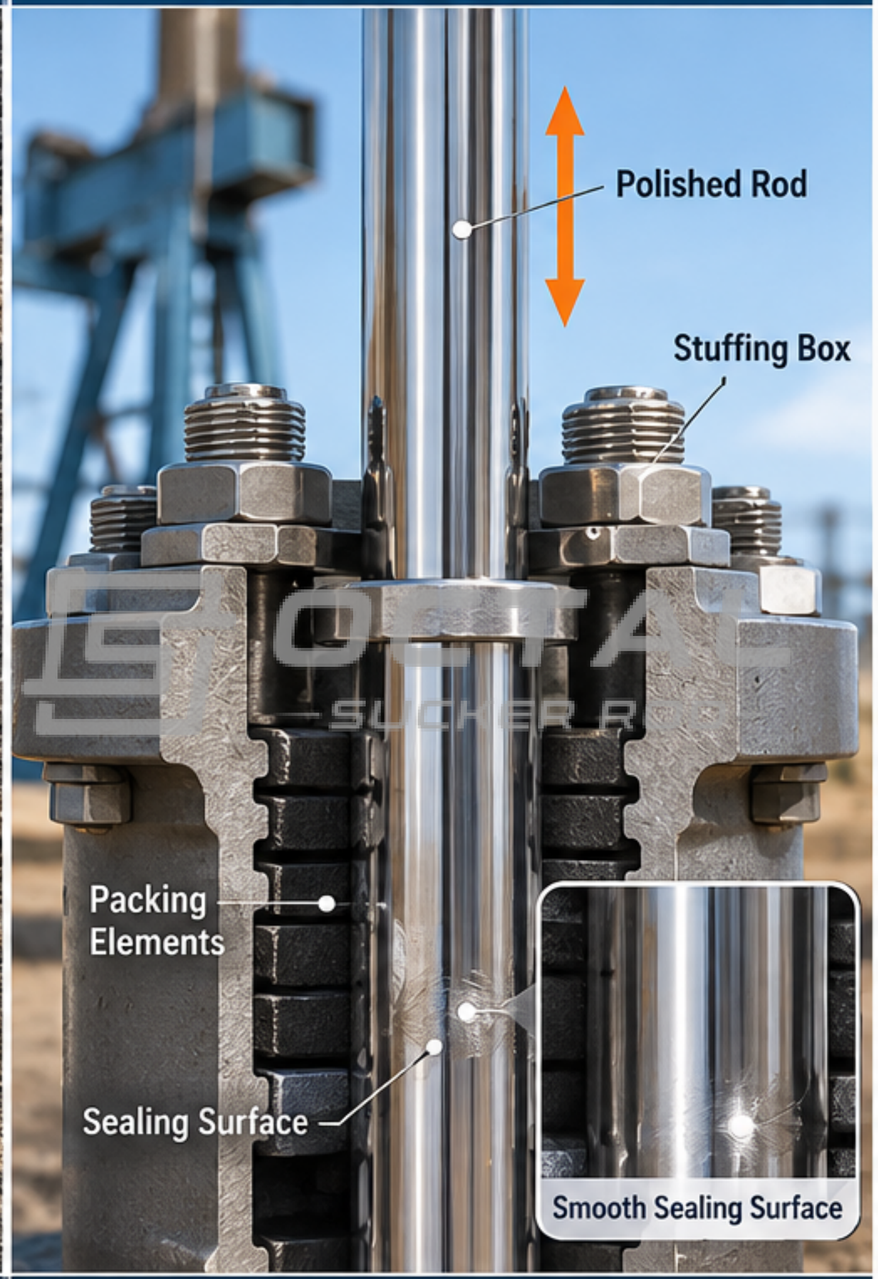
	Sucker Rod	Pony Rod	Polished Rod
Typical Length	25 ft / 30 ft	2, 4, 6, 8, 10 ft	System-specific / material-specific
Diameter / OD	5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4 in	Typically follow the corresponding sucker-rod family	1-1/8, 1-1/4, 1-1/2, 1-3/4 in
Strength Basis	About 60–115 ksi depending on grade	Typically follow the corresponding sucker-rod family	System-specific / material-specific

Verify actual grade, manufacturer data and current project requirements.

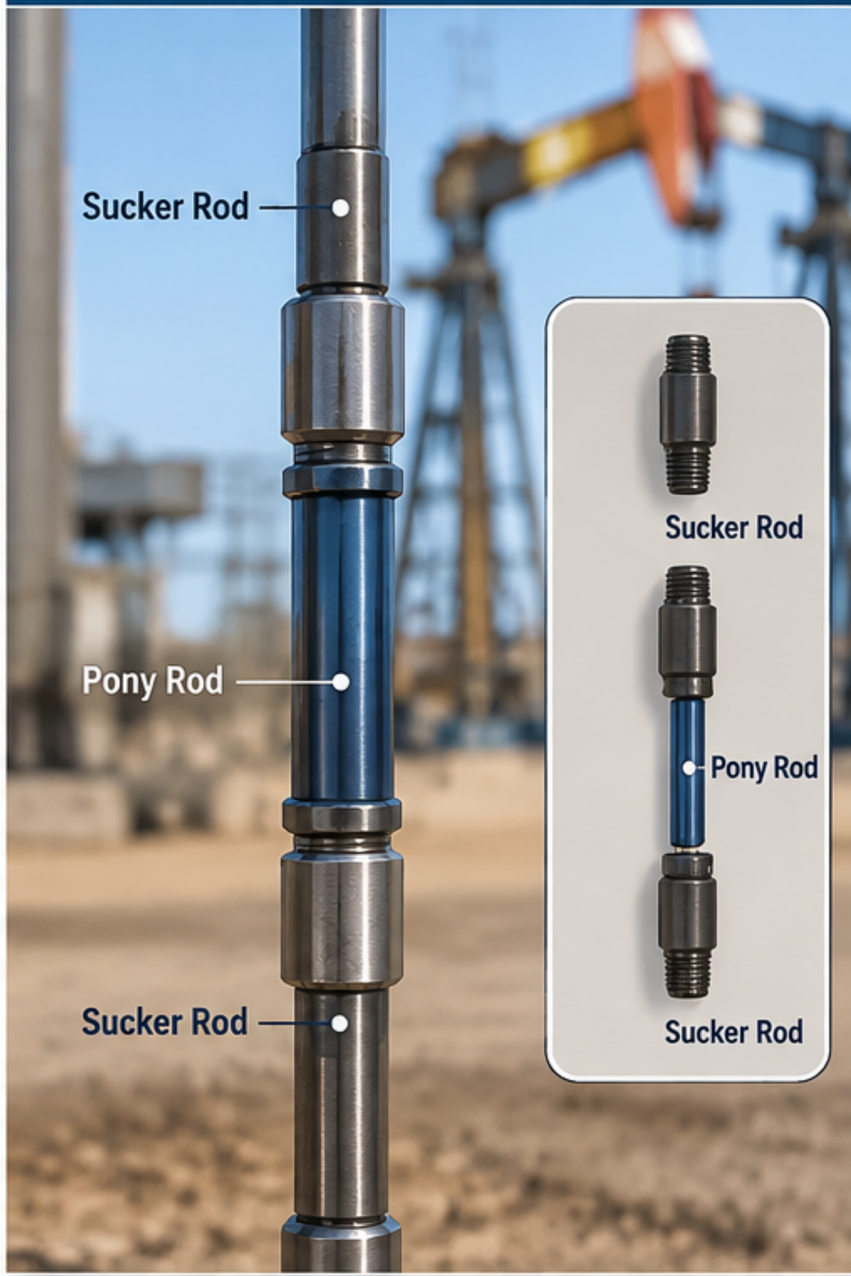
Sucker Rod
Load Transfer in the Well



Polished Rod
Surface Load Transfer and Sealing



Pony Rod
Short Section for Length Adjustment



Load / Fatigue
Carries cyclic axial load through the well.

Sealing Interface
Transfers surface load while providing the moving sealing surface at the wellhead.

Length Adjustment
Used as a short make-up section within the sucker rod string.

Which Rod Do You Need?

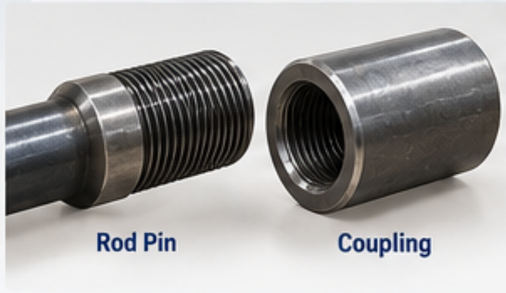
1 Main load-carrying rod string?
Used for most of the rod string between surface unit and downhole pump.

2 Surface-end rod through stuffing box?
Works at the wellhead and provides the moving sealing surface.

3 Short remaining make-up length?
Used when full-length rods cannot provide the required assembled length.

Sucker Rod
Main Load-Transmitting Rod String





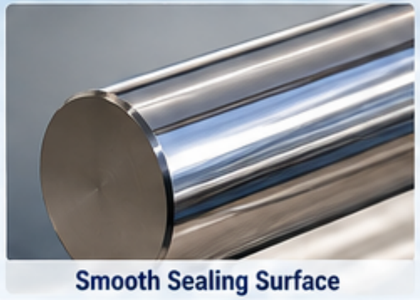


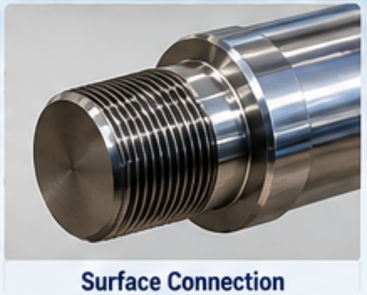
Key Selection Checks

Diameter	Common sizes: 5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4 in
Grade	API 11B grades (e.g. C, D, K, etc.)
Load Condition	Cyclic tensile load, well depth, deviation
Service Environment	Corrosion, rod/tubing contact, temperature
Connection	Pin/thread type and coupling compatibility
Length	Commonly 25 ft or 30 ft

Polished Rod
Surface-End Rod with Sealing Function




Smooth Sealing Surface


Surface Connection

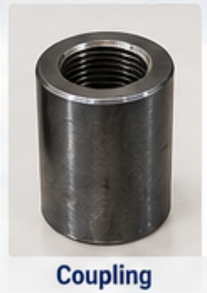
Key Selection Checks

Working OD	Common sizes: 1-1/8, 1-1/4, 1-1/2, 1-3/4 in (system dependent)
Length	Selected according to pumping-unit stroke and wellhead geometry
Straightness	Must meet straightness requirement
Surface Condition	Smooth surface, free from scoring or pitting
Material / Coating	Carbon steel or alloy steel, coating if required
Stuffing Box Compatibility	Match the wellhead and stuffing box design

Pony Rod
Short Make-up Section




Rod Pin


Coupling



Key Selection Checks

Required Length	Common lengths: 2, 4, 6, 8, 10 ft (other lengths may be available)
Body Diameter	Usually same range as corresponding sucker-rod family
Grade	Follow the mechanical-property requirements of the rod string
Connection	Pin/thread and coupling must match surrounding rods
Service Condition	Same load path as adjacent sucker rods
Application	Used for final make-up length adjustment

Verify actual grade, manufacturer data and current project requirements.

Ordering Data for Rod-Lift Components

SUCKER ROD | POLISHED ROD | PONY ROD



RFQ CHECKLIST

PLEASE SPECIFY YOUR REQUIREMENTS

01	**Product Type** Select rod-lift component type.	☐ Sucker Rod ☐ Polished Rod ☐ Pony Rod
02	**Installation Position** Where the component is used in the rod string.	☐ Surface (Polished Rod) ☐ Intermediate (Sucker Rod) ☐ Near Pump (Pony Rod)
03	**Diameter** Nominal diameter (in or mm).	_____ in / mm
04	**Grade/Material** API grade or equivalent material.	☐ C ☐ K ☐ D ☐ Other (please specify): _____
05	**Length** Overall length (ft or m).	_____ ft / m
06	**Pin/Thread** Thread type and specification.	☐ API (e.g., API 11B) ☐ Class _____ ☐ Other (please specify): _____
07	**Coupling** Type and specification.	☐ Standard Coupling ☐ Special Coupling ☐ Other (please specify): _____
08	**Surface Requirement for Polished Rod** Surface finish and coating (if any).	☐ **Standard** (e.g., Ra ≤ 0.2–0.4 µm) ☐ Chrome Plated (specify thickness): _____ µm ☐ Other (please specify): _____
09	**API 11B Requirement** Conformance and latest edition.	☐ Yes (specify edition): _____ ☐ No / Other (please specify): _____
10	**Inspection/Traceability** Testing and documentation.	☐ Standard (mill test report) ☐ Full traceability (heat No., lot No., etc.) ☐ Other (please specify): _____
11	**Marking/Packing** Identification and packaging.	☐ Standard ☐ Custom (please specify): _____

TECHNICAL NOTE | API 11B provides the technical framework; the purchase specification must define the actual rod configuration.