

Hydraulic Seal Groove Measurement & Cross-Reference Worksheet

TYS Seals

1. Application / Contact

Company / Contact:

Equipment / Cylinder Model:

Original Brand / Part No.:

Required Quantity / Annual Usage:

2. Seal Function

☐ Rod seal ☐ Piston seal ☐ Buffer seal ☐ Wiper ☐ Wear/guide ring

3. Groove Measurements (mm)

Dimension	Measured Value	Instrument	Tolerance / Note
d - Rod / Piston Diameter			
D - Groove / Gland Diameter			
L - Groove Width			
S - Radial Groove Depth			
Extrusion Clearance			
Corner Radius			
Lead-in Chamfer			
Surface Finish			

Rod-seal reference formula:

$$S = (D - d) / 2$$

Use as a dimensional reference only. Final profile selection must also check width, clearance, material and pressure.

4. Operating Conditions

Working Pressure / Peak Pressure:

Hydraulic Fluid / Media:

Temperature Range:

Sliding Speed / Duty Cycle:

Contamination / Outdoor Exposure:

Photo & Cross-Reference Checklist

5. Attach These Photos

- ☐ Old seal - front/profile view
- ☐ Seal marking / packaging
- ☐ Metal groove
- ☐ Rod / piston surface
- ☐ Overall cylinder / equipment nameplate

6. Replacement Decision

- ☐ Known part number -> identify family -> verify groove and duty
- ☐ No part number -> measure metal groove -> identify function -> compare profile
- ☐ Repeated failure -> inspect hardware and failure mode before copying material
- ☐ Non-standard / obsolete groove -> evaluate a custom machined replacement
- ☐ High annual volume -> sample test -> approve repeatable second-source specification

Send this completed worksheet with your seal photos.

TYS can evaluate the closest standard profile direction or a custom seal based on the measured groove, seal function, pressure, fluid, temperature and quantity.

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7. Supplier Review / Approval Notes
