

O-Ring Kits & Assortments

AS568, metric, and material-specific O-ring kits for maintenance shops, field service, and OEM assembly lines.

Overview

An O-ring kit represents one of the most cost-effective investments a maintenance organization can make to minimize unplanned equipment downtime. Industry studies consistently demonstrate that a single unplanned production shutdown caused by a failed seal costs substantially more than an entire year's inventory of O-ring kits. When the correct replacement seal is already available on the shelf, maintenance teams can execute repairs in minutes rather than hours or days, eliminating procurement lead times, expediting fees, and lost production revenue.

The engineering rationale behind O-ring kits extends beyond simple convenience. Modern industrial facilities operate diverse equipment fleets manufactured across multiple decades and sourced from different global regions. This diversity creates a complex maintenance challenge: a typical hydraulic maintenance shop may encounter AS568 standard sizes on North American equipment, ISO 3601 metric sizes on European machinery, and JIS B 2401 sizes on Japanese imports. An appropriately configured O-ring kit consolidates the most frequently required sizes into a single, organized storage system, reducing the cognitive load on maintenance technicians and eliminating the time wasted searching for correct replacements across multiple inventory bins.

O-ring kit design follows established engineering principles of consumption analysis and inventory optimization. The ideal kit contains the 20% of sizes that account for 80% of replacement events—the classic Pareto distribution that governs most maintenance consumable patterns. Our standard AS568 assortment kits are compiled from analysis of millions of maintenance records across automotive, industrial hydraulic, and general manufacturing sectors, ensuring that the size distribution matches real-world failure frequencies rather than arbitrary dimensional increments. For organizations with more specialized equipment, custom kits can be engineered directly from bill-of-materials (BOM) data or historical consumption records, eliminating obsolete inventory while ensuring complete coverage.

Material selection within O-ring kits is governed by fluid compatibility and operating environment requirements. Nitrile butadiene rubber (NBR) remains the default material for general industrial kits because it offers excellent resistance to petroleum-based hydraulic oils, mineral greases, and standard fuels at the lowest cost point. However, modern maintenance operations increasingly require multi-material kits that address the diverse fluid environments encountered in contemporary facilities—fluorocarbon (FKM) for high-temperature zones and aggressive synthetic fluids, ethylene propylene diene monomer (EPDM) for water, steam, and phosphate ester hydraulic fluids, and silicone (VMQ) for food-grade and extreme-temperature applications. Mixed-material kits organized with color-coded compartments or material-specific labelling enable technicians to select the correct compound without consulting complex compatibility charts.

The physical organization and packaging of O-ring kits directly impacts their utility in industrial environments. Compartment cases with hinged lids and individually labeled compartments provide the most common storage format, allowing technicians to visually locate the required size in seconds. Critical to shop-floor durability, our compartment labels are printed directly on oil-resistant polymer stock rather than applied as adhesive stickers, which degrade rapidly in the solvent-laden atmosphere of typical maintenance workshops. For facilities implementing CMMS (Computerized Maintenance Management Systems) or ERP barcode scanning workflows, custom labelling with internal part numbers, QR codes, and material identifiers enables direct system integration without relabeling.

Quality assurance for O-ring kits encompasses both material certification and dimensional verification. All compounds are manufactured to ASTM D2000 or SAE AMS specifications with full lot traceability. Each kit includes a packing list documenting size, material, durometer, compound designation, and piece count per compartment. For regulated industries including food processing, pharmaceutical manufacturing, and aerospace, additional documentation is available including certificates of conformance (CoC), material data sheets (MDS/TDS), FDA compliance certificates, and lot-specific traceability records. Our ISO 9001 certified quality management system governs kit assembly,

inspection, and packaging processes to ensure that every seal delivered meets specification.

Custom kit development follows a structured engineering workflow. We begin with a consumption analysis-typically a 12-month historical replacement record grouped by size, material, and frequency. Sizes replaced more than twice annually are included as standard stock items; sizes with lower frequency may be included as reduced-quantity buffer stock or excluded to optimize inventory value. The resulting BOM is then configured with appropriate buffer quantities per size (typically 3-6 months of coverage), organized into compartment cases or bag sets, and labeled per customer specifications. For OEM assembly lines, kits can be configured with exact production-line quantities and sequenced in order of assembly operation to support lean manufacturing workflows.

Advantages

s of thousands of dollars in lost production. A well-configured kit ensures that the correct replacement is available within minutes, reducing mean time to repair (MTTR) by distributors with limited inventory, and administrative overhead for urgent purchase order processing. A single kit investment of \$200-\$500 can prevent \$1,000-\$3,000 in e occurs when maintenance departments stock every possible size 'just in case.' Custom kits extend this optimization further by analyzing an organization's actual 12-month l-material kits with color-coded compartments, printed material identifiers, and compound-specific labels make the correct selection intuitive for maintenance technicians. compound designation, and piece count per compartment. On request, we provide certificates of conformance (CoC), material data sheets (MDS/TDS), FDA compliance es, we provide kit standardization across multiple plants with consistent size distributions, unified labelling systems, and consolidated procurement through master purcha

Kit Types

dash sizes in NBR 70 Shore A, organised in a rugged plastic case. Covers the O-ring sizes used in the majority of hydraulic cylinders, pneumatic systems, and pumps n AS568 sizes do not match. Metric kits are increasingly specified by global OEMs standardising on ISO 3601 Grade N tolerances. petroleum service), FKM (high temperature and aggressive chemicals), EPDM (water and steam), and VMQ (food and low-temperature). All compounds ISO 9001 certified ng, and documentation. Eliminates obsolete inventory from standard assortments-companies using custom kits typically reduce seal spend 20-30% versus buying standa

Popular Configs

Name	Contents
Hydraulic Maintenance Kit	382 pieces, 30 AS568 sizes, NBR 70 Shore A, black
High-Temperature Kit	205 pieces, 24 AS568 sizes, FKM 75 Shore A, brown
Food & Beverage Kit	270 pieces, 30 AS568 sizes, FDA VMQ and EPDM, translucent/white
Metric Service Kit	407 pieces, 32 ISO 3601 sizes, NBR 70 Shore A, black
Pool & Spa EPDM Kit	EPDM 70 Shore A, metric 12 x 2 through 60 x 3 mm - pump lids, filter valves, chlorinators
Pressure Washer Service Kit	NBR 90 Shore A pump head seals plus EPDM hose fittings - commercial unit sizes
Consumer & Appliance Kit	FDA VMQ, NSF EPDM and NBR 90A - metric 6 x 1.5 through 19 x 2.5 mm for cookers, bottles, CO■ and home appliances

Packaging

	Description
ment Cases	Durable plastic cases with hinged lids and individual compartments. Size labels are printed, not stickers, to resist oil and solvent exposure in workshop enviro
ole Bags	Each size is packed in a zip-seal polyethylene bag with printed size, material, durometer, and lot number for traceability.
labelling	Add your company logo, internal part numbers, barcodes, QR codes, or colour-coded material identifiers. Supports direct integration with CMMS and ERP s

FAQ

What is the most popular O-ring kit?

The 382-piece NBR AS568 assortment is the most widely used kit for general hydraulic and pneumatic maintenance. It covers 30 of the most commonly specified AS568 dash sizes in NBR 70 Shore A-the standard compound for petroleum oil, pneumatic air, and general industrial service. This single kit handles the majority of maintenance needs on hydraulic cylinders, pneumatic actuators, and pump systems made to North American dimensions.

Can I order a kit with multiple materials?

Yes. We build mixed-material kits-for example, NBR for oil service, EPDM for water, and FKM for high-temperature zones-all in one organised case with colour-coded compartments or material-labelled bags. Mixed-material kits are popular for maintenance shops servicing diverse equipment where a single-material assortment leaves gaps.

Do you offer metric O-ring kits?

Yes. Our metric kits are organised to ISO 3601 / DIN 3771 dimensions and are popular for servicing European and Asian machinery. The standard 407-piece metric service kit covers 32 ISO 3601 sizes from 3 x 1.5 mm to 50 x 5 mm in NBR 70 Shore A. FKM and EPDM metric kits are also available.

Can the kits be labelled with our part numbers?

Yes. For custom kits, we print your internal part numbers, descriptions, barcodes, and QR codes directly on compartment labels or bag headers. Labels are printed on oil-resistant stock-not standard paper stickers. This supports direct CMMS/ERP barcode scanning on the shop floor without re-labelling. MOQ for custom-labelled standard kits is typically 10 sets.

What is the MOQ for a custom O-ring kit?

Custom kit MOQ is typically 50-100 sets for fully bespoke assortments (custom sizes, custom quantities, custom materials). For simple custom labelling applied to a standard kit configuration, MOQ can be as low as 10 sets. Sample kits (1-2 sets) are available for evaluation before committing to production quantities.

How do I determine which sizes to include in a custom kit?

The most reliable approach is a 12-month consumption analysis from your maintenance records or CMMS. Pull every O-ring replaced in the past year, group by size and material, and rank by frequency. Include any size that was replaced more than twice per year. For new equipment without history, request the OEM's seal kit BOM-this lists every O-ring in the machine with quantities. We can build your custom kit directly from the BOM with appropriate buffer quantities per size.

What documentation comes with O-ring kits?

Standard kits include a packing list with size, material, durometer, compound designation, and piece count per compartment. On request, we provide: certificate of conformance (CoC) confirming compound specification; material data sheets (MDS/TDS); FDA compliance certificates for food-grade compounds; and lot-specific traceability records. For regulated industries (pharmaceutical, food, aerospace), specify documentation requirements at order time.

What is the shelf life of O-rings in a kit?

Properly stored O-rings have a shelf life of 5-10 years depending on material. NBR and EPDM: 7 years from manufacture date when stored at 15-25 C, away from ozone sources (motors, fluorescent lights), UV, and humidity above 65% RH. FKM and VMQ: 10+ years under the same conditions. FFKM: effectively unlimited. Store kits in sealed bags inside the compartment case, in a climate-controlled storeroom away from electrical equipment. ISO 2230 provides the full material-specific storage standard.

How do custom kits reduce overall seal spend compared to standard assortments?

Standard assortment kits inevitably include sizes that your specific equipment never uses-inventory that sits unused until the kit is eventually discarded. A custom kit contains only the sizes and materials required for your actual equipment fleet, eliminating obsolete inventory. Our analysis shows that organizations switching from standard

assortments to custom kits typically reduce annual seal spend by 20-30% because every piece in the kit has a defined application. Additionally, custom kits reduce waste from incorrect material substitutions (installing an available but incompatible material because the correct one is not in the standard kit), which is a hidden cost driver in many maintenance operations.

Can kits be configured for specific regulatory requirements such as FDA, aerospace, or automotive?

Yes. We configure kits for regulated industries with full material certification and traceability documentation. For FDA applications, kits contain only compounds with FDA 21 CFR 177.2600 compliance, with material certificates confirming food-grade status. For aerospace, we supply kits containing AMS-specified compounds with full lot traceability and certificates of conformance. For automotive IATF 16949 facilities, kits are assembled under controlled conditions with documented material certifications and PPAP-level documentation available on request. Specify your regulatory framework when requesting a custom kit quotation, and our engineering team will ensure full compliance with your industry's quality standards.