O-Ring Material Offering Guide

www.parkerorings.com

ORD 5712
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O-Ring Material Offering Guide

For the latest information on Parker O-Ring Division products, visit www.parkerorings.com or contact 1-800-C-PARKER.

WARNING

Failure, improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury or property damage.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provides product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through his or her own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

OFFER OF SALE

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled “Offer of Sale.”

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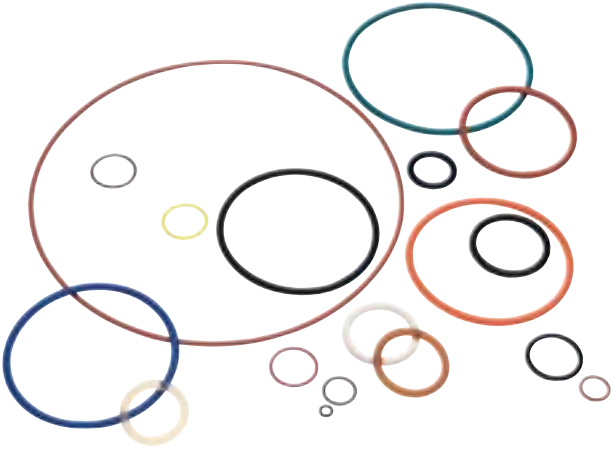
Table of Contents



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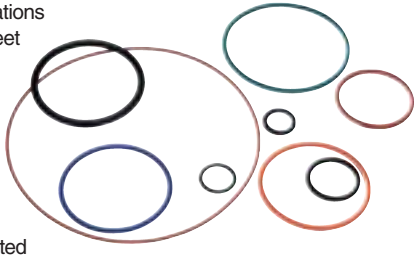
Engineers in every industry - from automotive to fluid power to semiconductor processing - choose o-rings made by Parker Hannifin to keep their equipment running safely and reliably. That's because Parker's O-Ring Division, a developer, manufacturer and supplier of precision-engineered o-rings for over 50 years, offers a unique combination of experience, innovation and support.

Quality Assurance

In the O-Ring Division's world-class facilities, skilled Parker technicians manufacture o-rings to exacting standards, closely monitoring each step of the process through a Controlled Batch Identification (CBI) program. From in-house mixing and tooling operations to the final non-contact inspection process, state-of-the art technology is employed to provide unparalleled material consistency and dimensional control. Quality registrations (AS 9000, ISO 9001, QS 9000 and VDA 6.1) are maintained to ensure superior product performance and process repeatability.

Research and Development

In its on-site research labs, Parker develops new o-ring material formulations and compounds to meet customers' needs. These materials are subjected to a broad range of mechanical, physical and environmental conditions, and their performance is evaluated through a comprehensive testing process.



Finite Element Analysis

Through the use of powerful computers and Finite Element Analysis (FEA) software specifically designed for elastomeric evaluation, Parker engineers can predict a seal's performance in a variety of media, temperatures and pressures before a single part is made. This eliminates the need for costly tooling, speeds the production process and ensures the selection of the right material and geometry for a customer's application. As an added benefit, FEA can also be used to predict service life.

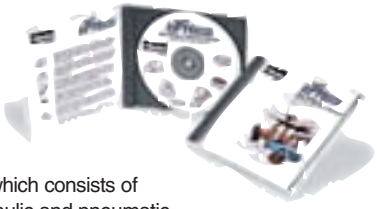
Literature

Since their initial release decades ago, the Parker O-Ring Handbook (ORD 5700) and the Precision O-Ring Handbook (5705E) (published in Europe in various languages) have become fixtures on the reference shelves of engineers and seal specifiers worldwide.

These books contain extensive information about the properties of basic sealing elastomers, as well as examples of typical o-ring applications, fundamentals of static and dynamic seal design and o-ring failure modes.

They also provide an overview of international sizes and standards, and contain compatibility data for fluids, gases and solids. Abridged versions of these books, available as ORD 5712 (US) and 5705 (Europe), provide engineers with fast access to information on standard sizes and materials.

Desktop Seal Design

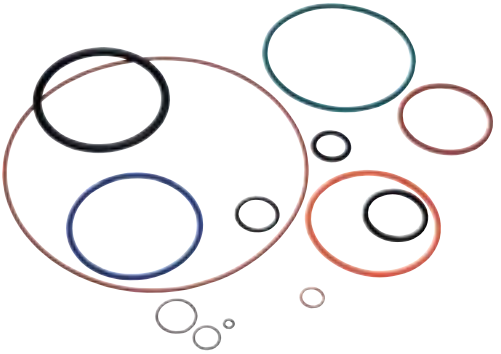


Parker's Total inPHorm™ software brings seal design and material specification right to the engineer's desktop. The software, which consists of modules for o-ring, hydraulic and pneumatic, static face and standard composite seal products (as well as EMI shielding and thermal management), uses a simple interface to guide users through the design of application-specific glands and seals. It automatically cross-references thousands of part numbers, and recommends materials based on the requirements of SAE, MIL and other standards. Total inPHorm also contains a complete array of online reference material, including test reports, technical bulletins and seal maintenance instructions. It is available on CD-ROM in English, German and French versions.

Online Tools

The Parker O-Ring Division's website at www.parkerorings.com offers many time-saving tools, including temperature and dimension converters, gland design recommendation charts, a troubleshooting utility and a pressure calculator. The site also features an interactive compatibility guide that recommends elastomeric compounds for use in hundreds of fluids - from Abietic Acid to Zirconium Nitrate.

Product Lines



O-Rings

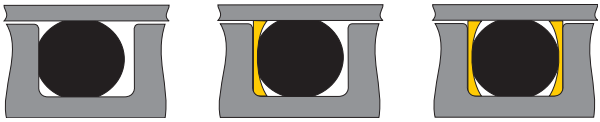
- Manufactured to US and international standards: AS 568B, ISO 3601, DIN 3771, JIS and metric. Custom sizes of almost any dimension.
- Miniature o-rings, large special o-rings, continuously molded and spliced cord.
- Perfluorinated (FFKM) o-rings, custom molded products and die-cuts. Broadest chemical resistance, highest purity and temperature resistance of any elastomeric family - up to 320°C/608°F.

ULTRA PAROFLUOR™

O-rings made with Parker's Parofluor ULTRA™ Series of advanced perfluorinated elastomers solve application problems within the critical environments of many industries.

Parbak® Back-up Rings

Prevent extrusion in high-pressure applications and help retain lubricant, extending o-ring life.



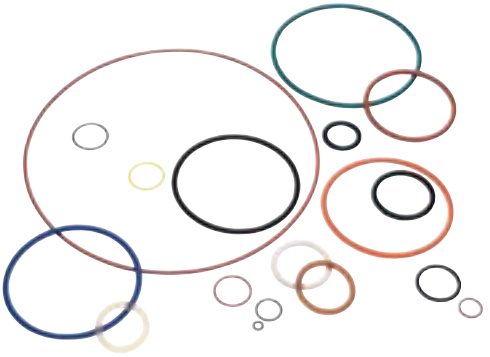
O-Ring Kits

With conveniently arranged o-rings for repair, assembly and workshop.

Accessories

Products to assist o-ring users include assembly greases and lubricants, sizing cones and extraction tools.

Material Offering



Compounds

O-rings can be molded in a wide range of compounds in hardnesses from 40 to 95 Shore A. These materials include:

- Acrylonitrile-Butadiene (NBR)
- Chloroprene (CR)
- Ethylene Propylene (EPDM)
- Fluorosilicone (FVMQ)
- Perfluoroelastomer (FFKM)
- Silicone (VMQ)
- Butyl (IIR)
- Ethylene Acrylic (AEM)
- Fluorocarbon (FKM)
- Hydrogenated Nitrile (HNBR)
- Polyacrylate (ACM)

Parker O-ring compounds are formulated to meet the most stringent industry standards, including NSF, Underwriters Laboratories (UL), Military (MIL-SPEC), Aerospace (AMS), NASA, FDA, USDA, USP, and many customer-specific requirements.

Wynn's Numbering System

Parker Hannifin acquired Wynn's International, parent company of Wynn's Precision and Goshen Rubber, in July 2000. As a result, some Wynn's products and materials were folded into the Parker O-Ring Division's offering.

The Wynn's compound numbering system is in the process of being phased out; the old number has been noted in parentheses (XXXXX) wherever applicable.

Parker O-Ring Compound Numbering Systems

Note: There are two types of nomenclature used to reference Parker O-Ring products. See tables below for description of these types.

TYPE I		
N	**0674**	**-70**
Polymer Code (Single Letter)	Sequence Number (four digits)	Durometer Indicator (two digits)

TYPE II			
A	**A**	**150**	**-70**
Polymer Code (Single Letter)	Special Property Description (Single Letter)	Sequence Number (three digits)	Durometer Indicator (two digits)

Polymer Code

A	Polyacrylate
B	Butyl
C	Neoprene (Chloroprene)
E	Ethylene Propylene
F	Parofluor ULTRA™
H	Hifluor™
K	HNBR
L	Fluorosilicone
N	Nitrile (Buna N) and HNBR
P	Polyurethane
S	Silicone
V	Fluorocarbon, Aflas®, Hifluor™, Parofluor™
Z	Exotic Polymers

Special Property Description

A	General Purpose
B	Low Compression Set
E	Ethylene Acrylate
F	Fuel Resistant or Fully Fluorinated
G	Higher Fluorine Content
J	NSF / FDA / WRAS Approvals
L	Internally Lubed
M	Mil/ AMS Specifications
P	Low Temperature Flexible or (AFLAS®)
W	Non-Black Compound
X	Carboxylated

Durometer Indicator (Hardness)

-40	40 ±5	Shore A Durometer
-45	45 ±5	Shore A Durometer
-50	50 ±5	Shore A Durometer
-55	55 ±5	Shore A Durometer
-60	60 ±5	Shore A Durometer
-65	65 ±5	Shore A Durometer
-70	70 ±5	Shore A Durometer
-75	75 ±5	Shore A Durometer
-80	80 ±5	Shore A Durometer
-85	85 ±5	Shore A Durometer
-90	90 ±5	Shore A Durometer
-95	95 ±5	Shore A Durometer

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
POLYACRYLATE (ACM) ACM (acrylic rubber) has good resistance to mineral oil, oxygen and ozone. The water compatibility and cold flexibility of ACM are considerably worse than those with NBR.			
A1111-70	Good Low Temp	-40 to 325	BLACK
AA150-70 (12307)	Engines & Transmissions	-5 to 350	BLACK
AA154-75 (12358)	Engines & Transmissions	-5 to 350	BLACK
ETHYLENE ACRYLATE (AEM) Ethylene acrylate is a mixed polymer of ethylene, methyl acrylate, and a small amount of carboxylated cure-site monomer. Developed as a lower-temperature version of Polyacrylate, but swells slightly more. Polymer is sold under the tradename VAMAC®.			
AE152-70 (12897)	Transmissions	-40 to 325	BLACK
AE153-75 (12917)	Transmissions, Internally Lubed	-40 to 325	BLACK
BUTYL RUBBER (IIR) Butyl rubber (isobutylene-isoprene rubber or IIR) has a very low permeability rate and good electrical properties, but poor short-term rebound.			
B0318-70	AMS 3238	-75 to 250	BLACK
B0612-70	Vacuum, General Purpose	-75 to 250	BLACK
B1167-80	Vacuum, General Purpose	-75 to 250	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
POLYCHLOROPRENE RUBBER (CR) Also known by the tradename Neoprene, polychloroprene was the first synthetic rubber and exhibits generally good ozone, aging, and chemical resistance. It has good mechanical properties over a wide temperature range.			
C0267-50	MIL-G-1149 Ty I Cl I AMS 3208, Low Temp.	-60 to 250	BLACK
C0518-60	General Purpose	-35 to 225	BLACK
C0557-70	Drive Belt	-35 to 250	BLACK
C0873-70	General Purpose	-35 to 225	BLACK
C0944-70	General Purpose	-35 to 250	RED
C1124-70	AMS-R-6855C Cl 2, Gr 70 AMS 3209, Low Temp.	-60 to 250	BLACK
C1276-70	Low Compression Set	-35 to 250	BLACK
CL172-70 (2347)	Internally Lubed	-35 to 225	BLACK
C1278-80	Low Compression Set	-35 to 250	BLACK
CB173-80 (2598)	Good Retained Resilience	-35 to 250	BLACK
ETHYLENE PROPYLENE RUBBER (EPM, EPR, EPDM) EPM (EPR) is a copolymer of ethylene and propylene. EPDM is a terpolymer of ethylene, propylene, and a diene third monomer used for cross-linking.			
E1100-50	General Purpose	-70 to 250	BLACK
EA454-50 (3575)	UL Listed	-70 to 250	BLACK
E1157-60	General Purpose	-70 to 250	BLACK
E1561-60	NSF 61, KTW, WRAS	-70 to 250	BLACK
EB151-60 (3806)	Good Low Temp	-70 to 250	BLACK
E0751-65	Drive Belt Applications	-70 to 250	BLACK
E0603-70	General Purpose	-70 to 250	BLACK
E0667-70	Auto Disc Brakes	-70 to 250	BLACK
E0803-70	General Purpose	-70 to 250	BLACK
E1022-70	Internally Lubed, Brakes	-70 to 250	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
EPM, EPR, EPDM - continued			
E1028-70	FDA	-70 to 250	BLACK
E1244-70	NSF 61, Internally Lubed	-70 to 250	BLACK
E1257-70	NSF 61, Chloramine Resistant	-70 to 250	BLACK
E1549-70	NSF 61, WRAS, KTW	-70 to 250	BLACK
E1570-70	NSF 61, Internally Lubed	-70 to 250	BLACK
E1571-70	NSF 61	-70 to 250	BLACK
E1583-70	NSF 61, Internally Lubed	-70 to 250	BLACK
E3609-70	NSF51, NSF 61, WRAS, KTW, FDA, USP Class VI	-70 to 250	BLACK
EB165-70 (3477)	Steam, High Temp Water	-70 to 250	BLACK
E0692-75	Steam, High Temp Water	-70 to 250	BLACK
E0740-75	Nuclear Applications	-70 to 250	BLACK
EJ150-75 (3077)	FDA, USP Class VI	-70 to 250	BLACK
EJ151-80 (3958)	NSF 61, WRAS, KTW	-70 to 250	BLACK
E0515-80	MIL-P-82744	-70 to 250	BLACK
E0540-80	General Purpose	-70 to 250	BLACK
E0893-80	General Purpose	-70 to 250	PURPLE
E1267-80	NAS 1613	-70 to 250	BLACK
E0652-90	General Purpose, Back-Up Rings	-60 to 250	BLACK
E0962-90	Excellent Steam to 500° F, ED Resistant	-60 to 250	BLACK

ETHYLENE PROPYLENE CAN TYPICALLY BE USED AT 300 - 400° F IN A COMPATIBLE FLUID. FOR SPECIFIC INFORMATION, CONSULT A PARKER APPLICATIONS ENGINEER.

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
FLUOROSILICONE (FVMQ)			
Fluorosilicone is a silicone polymer chain with fluorinated side-chains for improved oil and fuel resistance. The mechanical and physical properties are very similar to those of silicone.			
LM151-50 (11645)	General Pupose	-100 to 350	BLUE
LM152-60 (11646)	General Purpose	-100 to 350	BLUE
LM158-60	AMS-R-25988, TY 1, CL 1, GR 60, AMS 3325	-100 to 350	BLUE
L1223-60	AMS-R-25988, TY 1, CL I, Gr 60, AMS 3325	-100 to 350	BLUE
LM153-70 (11647)	General Purpose	-100 to 350	BLUE
LM159-70	AMS-R-25988,TY 1, CL 1, GR 70	-100 to 350	BLUE
L1120-70	AMS-R-25988, TY I, CL I, GR 70, UL listed	-100 to 350	BLUE
LM154-75 (11837)	General Purpose	-90 to 350	BLUE
L1077-75	AMS-R-25988, TY I,CL III,GR 75	-90 to 350	BLUE
LM155-80 (11648)	General Purpose	-90 to 350	BLUE
LM160-80	AMS-R-25988, TY 1, CL 1, GR 80	-90 to 350	BLUE
L1218-80	AMS-R-25988, TY I, CL I, GR 80	-90 to 350	BLUE
L1186-80	PTFE Loaded	-85 to 350	RUST
ACRYLONITRILE-BUTADIENE (NBR)			
Nitrile rubber (NBR) is the general term for acrylonitrile-butadiene terpolymer. The acrylonitrile content of nitrile sealing compounds varies considerably (18 to 50%). Polymers with higher ACN content exhibit less swell in gasoline and aromatic solvents, while lower ACN polymers exhibit better compression set and low temperature flexibility. Polymer is also called Buna-N.			
N0545-40	AMS 3201	-45 to 225	BLACK
NB100-40 (1454)	General Purpose	-45 to 225	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
NBR - continued			
N0299-50	AMS 3205, UL listed	-55 to 225	BLACK
NA192-50 (8305)	General Purpose	-55 to 225	BLACK
NL151-50 (8315)	Internally Lubed	-55 to 225	BLACK
N0406-60	AMS-R-6855 CL 1, CL 1, GR 60	-40 to 225	BLACK
N0525-60	AMS 3212, AMS 3220	-25 to 250	BLACK
N1219-60	NSF 51, FDA	-30 to 225	BLACK
NF162-65 (1106)	Fuel Resistant, UL Listed	-25 to 250	BLACK
N0506-65	AMS 7271	-70 to 180	BLACK
NX352-70 (7727)	Carboxylated	-25 to 250	BLACK
NJ253-70 (7077)	FDA	-35 to 212	BLACK
NF153-70 (7657)	Fuel Resistant, SAE 120R1 Class II	-35 to 180	BLACK
NA151-70 (8307)	General Purpose	-30 to 250	BLACK
NL153-70 (8317)	Internally Lubed	-30 to 250	BLACK
NA153-70 (8497)	Automotive Applications	-30 to 250	BLACK
47-071	AMS-R-7362	-60 to 180	BLACK
N0103-70	Low Temp.	-55 to 225	BLACK
N0287-70	Synthetic Lubricant Resistant, AMS 7272	-35 to 250	BLACK
N0497-70	Low Swell, SAE 120R1 CL II UL listed	-35 to 212	BLACK
N0602-70	General Purpose, AMS-P-5315, Low Temp	-70 to 180	BLACK
N0674-70	General Purpose MIL-G-21569, Cl I, UL listed	-30 to 250	BLACK
N0757-70	NSF 61, UL listed	-30 to 225	BLACK
N0818-70	Internally Lubed	-30 to 250	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
NBR - continued			
N0828-70	Internally Lubed, Low Set	-30 to 225	BLACK
N1069-70	FDA	-30 to 180	BLACK
N1220-70	NSF 51, FDA	-30 to 225	BLACK
N1470-70	General Purpose	-40 to 225	BLACK
N1499-70	General Purpose, UL	-30 to 250	BLACK
N1510-70	NSF 61	-30 to 225	BLACK
N1517-70	NSF 61	-30 to 225	BLACK
N1527-70	UL Listed	-30 to 225	BLACK
NW163-75 (40601)	Internally Lubed	-30 to 225	RUST
NM156-75 (7377)	Good Low Temp	-65 to 225/250	BLACK
N0304-75	MIL-P-25732	-65 to 225/250	BLACK
N0508-75	FDA, USDA	-30 to 180	BLACK
N0756-75	AMS-P-83461	-65 to 250/275	BLACK
N0951-75	High Temp, Low Compression Set	-25 to 275	BLACK
N1500-75	Low Swell, UL Listed, Fuel applications	-35 to 212	BLACK
N1565-75	UL Listed	-30 to 225	BLACK
N1591-75	UL Listed	-30 to 225	BLACK
NA155-80 (7538)	Abrasion Resistant	-25 to 250	BLACK
N0750-80	Carboxylated	-25 to 250	BLACK
N1090-85	"ELF" Pneumatic, Carboxylated	-25 to 225	BLACK
NB107-90 (1929)	Extrusion Resistant	-25 to 225	BLACK
N0300-90	Back Up Rings	-40 to 180	BLACK
N0507-90	AMS-P-5510, Low Temp	-65 to 180	BLACK
N0552-90	General Purpose	-30 to 250	BLACK
N0702-90	Low Compression Set	-30 to 275	BLACK
N1210-90	Low Comp Set, Ext. Res.	-30 to 275	BLACK
N1444-90	Parbaks only	-30 to 250	BLACK
N1490-90	General Purpose	-30 to 250	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
HYDROGENATED NITRILE (HNBR, HSN)			
Hydrogenated nitrile was developed as an air-resistant variant of nitrile rubber. In HNBR, the carbon-carbon double bonds in the main polymer chain are saturated with hydrogen atoms in a process called "hydrogenation" that improves the material's thermal stability and oxidation resistance.			
KB190-50 (21705)	Automotive Applications	-25 to 300/325	BLACK
KA170-55 (21105)	High Swell, UL Listed	-25 to 300/325	BLACK
KB181-60 (21926)	Diesel Applications	-25 to 300/325	BLACK
N1173-70	General Purpose	-25 to 300/325	BLACK
N1195-70	Refrigerants	-25 to 300/325	GREEN
N1206-70	Low Temperature	-40 to 300/325	GREEN
N1239-70	Refrigerants	-25 to 300/325	RED
KB153-70 (21337)	Automotive Applications	-25 to 300/325	BLACK
KW157-70 (21607)	Refrigerants	-25 to 300/325	GREEN
KB161-70 (21377)	High Temp Hydraulics	-25 to 300/325	BLACK
KA182-75 (21207)	High Swell, Auto Applications	-25 to 300/325	BLACK
KA174-75 (21107)	75 Duro, General Purpose	-25 to 300/325	BLACK
N1231-80	Explosive Decompression	-25 to 300/325	BLACK
KB162-80 (21378)	High Temp Hydraulics	-25 to 300/325	BLACK
KB163-90 (21379)	High Temp Hydraulics	-25 to 300/325	BLACK
POLYURETHANE (AU, EU)			
Polyurethane elastomers have excellent wear resistance, high tensile strength and high elasticity in comparison with any other elastomers. Permeability is good and comparable with butyl. Millable urethanes should not be confused with thermoplastic urethanes, which are generally harder, less flexible, and have slightly better wear resistance.			
P0642-70	Drive Belt Applications,	-40 to 180	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
SILICONE RUBBER (VMQ, PVMQ)			
Silicone elastomers have relatively low tensile strength, poor tear and wear resistance. Silicones also possess good insulating properties and tend to be physiologically neutral.			
S0469-40	AMS 3301	-75 to 400	RUST
S0802-40	FDA	-60 to 400	WHITE
SM150-40 (11354)	FDA	-60 to 400	RUST
S0595-50	AMS 3302	-70 to 400	RUST
S0899-50	ZZ-R-765 CL 1a,1b,2a,2b GR 50, AMS 3345	-103 to 400	RUST
SM151-50 (11355)	FDA, UL	-70 to 400	RUST
S1538-55	FDA, USP Class VI	-60 to 450	TRANS
S0317-60	FDA, USDA	-103 to 450	RUST
S0613-60	ZZ-R-765 Cl 2b, Gr 60, AMS 3303	-60 to 450	RUST
SM152-60 (11356)	AMS 3303, UL, FDA	-60 to 450	RUST
SB160-65 (11486)	Coolant Applications	-60 to 450	RUST
S0383-70	ZZ-R-765 Cl 1a, 1b, Gr 70, AMS 3337	-175 to 400	RUST
S0455-70	High Temperature	-65 to 450/500	RUST
S0604-70	ZZ-R-765 Cl 2a, 2b, Gr 70 AMS 3304, AMS 3357 MIL-G-21569	-65 to 450	RUST
S1138-70	FDA	-60 to 400	RUST
S1224-70	ZZ-R-765 Cl 2a, 2b, Gr 70 AMS 3304, AMS 3357 MIL-G-21569	-65 to 450	RUST
SM153-70 (11357)	UL Listed, FDA	-60 to 450	RUST
SB174-70 (11227)	General Purpose	-60 to 450	BLACK
SB161-70 (11707)	Low Compression Set	-60 to 450	RUST
S0355-75	AMS 7267, FDA, USDA	-60 to 450	RUST
S0614-80	ZZ-R-765 Cl 2a, 2b Gr 80, AMS 3305	-65 to 450	RUST

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
FLUOROCARBON (FKM, FPM) Fluorocarbon (FKM) has excellent resistance to high temperatures and a broad range of chemicals. Permeability and compression set are excellent.			
V0986-50	General Purpose	-15 to 400	BROWN
V0763-60	General Purpose	-15 to 400	BROWN
V0769-60	General Purpose	-15 to 400	BLACK
VA150-65 (19356)	General Purpose	-15 to 400	BLACK
V1262-65	Low Swell - Flex Fuel Blends UL listed	-15 to 400	BLACK
V0494-70	Acid Resistant	-15 to 400	BLACK
V0680-70	FDA, USDA, NSF 51	-15 to 400	RED
V0834-70	Acid Resistant, Steam	-15 to 400	BLACK
VW153-75 (16207)	General Purpose	-15 to 400	BROWN
VA203-75 (16737)	Extrusion Resistant, Diesel Fuel Injectors	-15 to 400	BLACK
VW173-75 (19457)	Automotive Applications	-15 to 400	GREEN
VB184-75 (19487)	Transmission Applications	-15 to 400	BLACK
VG183-75 (19657)	Low Temp./"GLT Type"	-40 to 400	BLACK
VB153-75 (19717)	Good Compression Set, Fuels	-15 to 400	BLACK
VG162-75 (19727)	Good Fuel Resistance	-15 to 400	BLACK
V0747-75	AMS-R-83248, TY I, CL I UL listed	-15 to 400	BLACK
V0835-75	AMS-R-83485, "GLT Type"	-40 to 400	BLACK
V0848-75	PTFE Loaded	-15 to 400	BLACK
V0884-75	General Purpose, UL listed	-15 to 400	BROWN
V1163-75	"GFLT Type", UL listed	-35 to 400	BLACK
V1164-75	Low Set, AMS 7276, AMS-R-83248, TY I, CL I	-15 to 400	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
FKM, FPM - continued			
V1226-75	Low Set, AMS 7276, UL listed AMS-R-83248, TY I, CL I	-15 to 400	BROWN
V1260-75	Very Chemically Resistant "Viton Extreme" Type	-15 to 400	BLACK
V1263-75	Low Swell - Flex Fuel Blends UL listed	-15 to 400	BLACK
V1436-75	General Purpose, UL Listed	-15 to 400	BLACK
V1475-75	General Purpose	-15 to 400	BLACK
V1476-75	General Purpose	-15 to 400	BROWN
VA151-75 (19357)	General Purpose, UL	-15 to 400	BLACK
VA163-80 (19318)	Internally Lubed	-15 to 400	BLACK
V0965-80	Low Swell, "GF Type"	-15 to 400	BLACK
V0709-90	AMS-R-83248, TY I, Cl II AMS 7259	-15 to 400	BLACK
V0894-90	General Purpose	-15 to 400	BROWN
V1264-90	Low Swell - Flex Fuel Blends, UL listed	-15 to 400	BLACK
V1411-90	General Purpose	-15 to 400	BLACK
V1412-90	General Purpose	-15 to 400	BROWN
VA153-90 (19359)	General purpose	-15 to 400	BLACK
VW155-90 (16129)	General Purpose	-15 to 400	GREEN
V1238-95	Extrusion Resistant Explosive Decompression	-15 to 400	BLACK
VA154-95 (16949)	Extrusion Resistant	-15 to 400	BLACK

Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE (Degrees° F)	COLOR
TETRAFLUOROETHYLENE - PROPYLENE (AFLAS™)			
This material is a copolymer of TFE and propylene. Its chemical resistance is excellent across a wide range of aggressive media. Polymer is sold under the tradename Aflas™.			
V1006-75	General Purpose	25 to 450	BLACK
VP101-80 (20018)	General Purpose	25 to 450	BLACK
VP102-80	Good Compression Set Resistance	15 to 450	BLACK
V1041-85	ED Resistant	15 to 450	BLACK
VP103-90 (20019)	Extrusion Resistant	25 to 450	BLACK
HIGH PERFORMANCE FLUOROELASTOMERS (Hifluor™)			
Hifluor is Parker's tradename for high performance fluoroelastomers – materials that "bridge the gap" between traditional fluorocarbon and perfluoroelastomer.			
HF351-65	FDA, USP Class VI, Low Outgassing	-15 to 400	TRANS
V3819-75	Chemically Resistant, Low Compression Set	-15 to 400	BLACK
V8534-90	Chemically Resistant, Extrusion Resistant	-15 to 400	BLACK

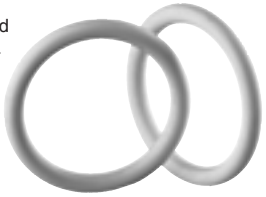
Note: Compound numbers in (XXXXX) are the obsolete Wynn's Precision compound numbering system.

Hifluor™ is a trademark of Parker Hannifin Corporation.

PAROFLUOR™ Series
Advanced Perfluorinated Elastomers

What is Parofluor™?

The Parofluor Series consists of advanced perfluorinated elastomers (FFKMs) developed and produced exclusively by Parker Hannifin. Parofluor materials exhibit outstanding retained resiliency as compared with other perfluorinated elastomers, because they're formulated specifically for use in the most demanding sealing applications.



COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE Degrees° F	COLOR
PERFLUOROELASTOMER (Parofluor) Perfluoroelastomer is a rubber version of PTFE. Available from Parker under the tradenames Parofluor™ and Parofluor ULTRA™.			
V1266-65	Plasma, Low Closure Force	5 to 572	WHITE
V8545-75	AMS 7257, High Temp., FDA	5 to 572	BLACK
V8562-75	Low Leachables, FDA	5 to 572	WHITE
V8581-90	Plasma, Low Outgassing	5 to 572	WHITE
V8588-90	Chemically Resistant, Extrusion & ED Resistant	5 to 536	BLACK

PAROFLUOR™ Series
Advanced Perfluorinated Elastomers

What is Parofluor ULTRA™

Parofluor ULTRA is the next generation of high performance perfluorinated elastomers within the Parofluor family. These materials offer ultra high temperature resistance up to 320°C (608°F), broad chemical resistance and ultra high purity.

ULTRA PAROFLUOR™

COMPOUND NO.	RECOMMENDED FOR	TEMP. RANGE Degrees° F	COLOR
PERFLUOROELASTOMER (Parofluor Ultra) Perfluoroelastomer is a rubber version of PTFE. Available from Parker under the tradenames Parofluor™ and Parofluor ULTRA™.			
FF354-65	Low Closure Force	5 to 600	WHITE
FF102-75	Acid Resistant	5 to 525	BLACK
FF200-75	Low Comp Set, AMS7257 FDA	5 to 608	BLACK
FF350-75	Plasma, High Purity, FDA USP Class VI	5 to 600	WHITE
FF352-75	General Purpose, Clean	5 to 600	WHITE
FF500-75	Broad Chemical Resistance, FDA	5 to 525	BLACK
FF202-90	Extrusion Resistant, Low Compression Set	5 to 608	BLACK

For the latest information on Parker Perfluorinated Elastomers, visit www.parofluor.com or contact 1-800-C-PARKER

Underwriters Laboratories Approved Services*

SERVICE	Fire Extinguishing Agents	Gasoline	Gasoline/Alcohol Blends*	Naptha or Kerosene	MPS Gas	MFG or Natural Gas	Diesel Fuel, Fuel Oil, Lubricating Oil	Heated Fuel Oil	Anhydrous Ammonia	LP-Gas	Laundry Detergents	Dishwashing Detergents	Suitable for use in UL 1081	Suitable for use in UL262 applications	Suitable for UL25 gasket applications	Dry Chemical, Carbon Dioxide, Water
CODE	A	B	C	D	E	F	G	H	I	J	L	M				
EA454-50 (3575)											■	■				
KA170-50 (21105)											■	■				
L1120-70		■	■	■		■	■	■		■						
N0299-50													■			
N0497-70		■	■	■		■	■			■						
N0674-70	■			■		■	■	■	■	■						■
N0757-70														■		
N1499-70	■			■		■	■			■						■
N1500-75		■	■	■		■	■			■						
N1591-75 (67357)		■	■	■		■	■			■					■	
NF162-65 (1106)		■	■	■		■	■	■		■						
N1565-75 (67027)	■	■	■	■	■	■	■			■						
N1527-70 (67147)				■		■	■		■	■						
SM151-50 (11355)											■	■				
SM152-60 (11356)											■	■				
SM153-70 (11357)											■	■				
V0747-75		■		■		■	■	■		■						
VA151-75 (19357)		■		■		■	■	■		■						
V0884-75		■	■	■			■									
V1163-75		■	■	■		■	■			■						
V1226-75		■	■	■			■									
V1262-65		■	■	■			■									
V1263-75		■	■	■			■									
V1264-90		■	■	■			■									
V1436-75		■		■		■	■	■		■						

* Contact factory for additional information regarding specific ratios of alcohol (methyl and/or ethyl) and gasoline.

FDA, USDA, NSF 51, USP Approved Compounds

The Food and Drug Administration (FDA) has established a list of rubber compounding ingredients which tests have indicated are neither toxic nor carcinogenic. Rubber compounds produced entirely from those ingredients and which also pass the FDA extraction tests are said to "meet the FDA requirements." The FDA does not approve rubber compounds. It is the responsibility of the manufacturer to compound food grade materials from the FDA list of ingredients and establish whether they pass the necessary extraction requirements. Similar standards are established by the United States Department of Agriculture (USDA).

Additional requirements have been imposed upon seal manufacturers regarding food and beverage service. Parker has developed several materials that are certified to NSF 51, Food and Beverage Standard. In critical medical applications, seals often must be made from an even "cleaner" list of ingredients. The U.S. Pharmacopoeia (USP) Class VI outlines requirements for system toxicity and intracutaneous toxicity for these "cleaner" compounds. The USP Class VI compounds must be made from ingredients with clear histories of biocompatibility that meet tighter requirements for leachates.

Typical applications for our FDA, NSF 51, USDA materials are disposable medical devices, surgical instruments and medical fluid dispensing components, as well as a wide variety of food and beverage handling equipment. The type of approval/certification required generally rests with the end customer's regulatory expectations for the specific application.

PARKER COMPOUND	POLYMER	HARD-NESS	COLOR	SERVICE
E1028-70	EPDM	70	Black	FDA
E1549-70 (63447)	EPDM	70	Black	NSF 51
E1583-70 (63017)	EPDM	70	Black	NSF 51
E3609-70	EPDM	70	Black	NSF 51, FDA, USP Class VI
EJ150-75 (3077)	EPDM	75	Black	FDA, USP Class VI
FF200-75	FFKM	75	Black	FDA
FF350-75	FFKM	75	White	FDA, USP Class VI
FF500-75	FFKM	75	Black	FDA
V8545-75	FFKM	75	Black	FDA
V8562-75	FFKM	75	White	FDA
HF351-65	FKM	65	Translucent	FDA, USP Class VI
V0680-70	FKM	70	Red	NSF 51, FDA, USDA
N1219-60	NBR	60	Black	NSF 51, FDA
N1069-70	NBR	70	Black	FDA
N1220-70	NBR	70	Black	NSF 51, FDA
NJ253-70 (7077)	NBR	70	Black	FDA
N0508-75	NBR	75	Black	FDA, USDA
S0802-40	VMQ	40	White	FDA
SM151-50 (11355)	VMQ	50	Rust	FDA
S1538-55	VMQ	55	Translucent	FDA, USP Class VI
SM152-60 (11356)	VMQ	60	Rust	FDA
S0317-60	VMQ	60	Rust	FDA, USDA
S1138-70	VMQ	70	Rust	FDA
SM153-70 (11357)	VMQ	70	Rust	FDA
S0355-75	VMQ	75	Rust	FDA, USDA

NSF 61 Approved Compounds

NSF 61 - Drinking Water System Components - is the nationally recognized health effects standard for all devices, components and materials which contact drinking water. Parker's O-Ring Division has developed several materials that are certified to NSF 61. Many of these materials are approved for use in the United Kingdom (WRAS), and Germany (KTW) as well as North America.

NSF International - is an industry regulating agency that was established in 1944. Recognized by ANSI (American National Standards Institute), NSF maintains qualification standards and criteria for a wide range of products, including potable water components and delivery systems.

PARKER COMPOUND	POLYMER	HARD-NESS	WATER CONTACT TEMP	SERVICE
E1583-70 (63017)	EPDM	70	Commercial Hot **	NSF 61 Internally lubricated, ideal for high volume applications
E1561-60 (63446)	EPDM	60	Commercial Hot **	NSF 61, WRAS, KTW, ideal for high volume applications
E1549-70 (63447)	EPDM	70	Commercial Hot **	NSF 61, WRAS, KTW, excellent compression set resistance, ideal for high volume applications
E1570-70	EPDM	70	Commercial Hot **	NSF 61 Internally lubricated
E1571-70	EPDM	70	Commercial Hot **	NSF 61
E1244-70	EPDM	70	Commercial Hot **	NSF 61 Internally lubricated
E1257-70	EPDM	70	Commercial Hot **	NSF 61 Chloramine Resistant
E3609-70	EPDM	70	Commercial Hot **	NSF 61, WRAS, KTW, excellent compression set resistance
EJ151-80 (3958)	EPDM	80	Commercial Hot **	NSF 61, WRAS, KTW
N1517-70	Nitrile	70	Commercial Hot **	NSF 61
N1510-70 (67997)	Nitrile	70	Commercial Hot **	NSF 61
N0757-70	Nitrile	70	Cold Water***	NSF 61

* NSF 61 listed materials given a commercial hot water rating are also certified for cold water
** Commercial Hot = Tested at 82° C (180° F) (Commercial Hot)
*** Cold Water = Tested at 23° C (73.4° F)

Aerospace Materials

AMS(1) and NAS(2) Rubber Specification Descriptions

RUBBER SPECS	PARKER COMPOUND	DUROMETER	DESCRIPTION TITLE
AMS3201	N0545-40	35-45	Dry Heat Resistance
AMS3205	N0299-50	45-55	Low Temperature Resistance
AMS3208	C0267-50	45-55	Weather Resistant, Chloroprene Type
AMS3209	C1124-70	65-75	Weather Resistant, Chloroprene Type
AMS3212	N0525-60	55-65	Aromatic Fuel Resistant
AMS3220	N0525-60	55-65	General Purpose, Fluid Resistant
AMS3238	B0318-70	65-75	Phosphate-Ester Resistant, Butyl Type
AMS3301	S0469-40	35-45	Silicone, General Purpose
AMS3302	S0595-50	45-55	Silicone, General Purpose
AMS3303	S0613-60	55-65	Silicone, General Purpose
AMS3304	S1224-70 S0604-70	65-75	Silicone, General Purpose
AMS3305	S0614-80	75-85	Silicone, General Purpose
AMS3325	L1223-60	55-65	Fluorosilicone Rubber, Fuel and Oil Resistant
AMS3337	S0383-70	65-75	Silicone, Extreme Low Temperature Resistant
AMS3345	S0899-50	45-55	Silicone Rubber
AMS3357	S1224-70 S0604-70	65-75	Silicone Rubber, Lubricating Oil, Compression Set Resistant
AMS7257	V8545-75, FF200-75	70-80	Sealing Rings, Perfluorocarbon, High Temperature Resistant
AMS7259	V0709-90	85-95	High Temp, Fluid Resistant, Very Low Compression Set FKM
AMS7267	S0355-75	70-80	Silicone, Heat Resistant, Low Compression Set
AMS7271	N0506-65	60-70	Fuel and Low Temperature Resistant

(1) Aerospace Material Specification issued by the Society of Automotive Engineers, Inc.
(2) National Aerospace Standard issued by Aerospace Industries Association of America, Inc.

AMS(1) and NAS(2) Rubber Specification Descriptions

RUBBER SPECS	PARKER COMPOUND	DUROMETER	DESCRIPTION TITLE
AMS7272	N0287-70	65-75	Synthetic Lubricant Resistant
AMS7276	V1164-75 V1226-75	70-80	High Temp. Fluid Resistant, Very Low Compression Set FKM
NAS1613	E1267-80	75-85	Packing, O-ring, Phosphate Ester Resistant
AMS-P-5315	N0602-70	65-75	Packing O-ring, Hydrocarbon Fuel Resistant
AMS-P-5510	N0507-90	85-95	Gasket, Straight Thread Tube Fitting Boss
AMS-R-6855	N0406-60, C1124-70	55-75	Synthetic Rubber Sheets, Strips, Molded or Extruded Shapes, Synthetic Oil Resistant
AMS-R-7362	47-071	65-75	Rubber, Sheet, Molded and Extruded Shapes, Synthetic Oil Resistant
AMS-P-25732	N0304-75	70-80	Packing, Preformed, Petroleum Hydraulic Fluid Resistant, Limited Performance
AMS-R-25988	L1223-60, L1120-70, L1218-80, L1077-75 LM158-60 LM159-70 LM160-80	55-85	Rubber, Fluorosilicone Elastomer, Oil and Fuel Resistant
AMS-R-83248	V1164-75, V1226-75, V0747-75 V0709-90	70-95	Rubber, Fluorocarbon Elastomer, High Temperature Fluid and Compression Set Resistant
AMS-P-83461	N0756-75	70-80	Packings, Preformed, Petroleum Hydraulic Fluid Resistant, Improved Performance
AMS-R-83485	V0835-75	70-80	Rubber, Fluorocarbon Elastomer, Improved Performance at Low Temperatures

(1) Aerospace Material Specification issued by the Society of Automotive Engineers, Inc.
(2) National Aerospace Standard issued by Aerospace Industries Association of America, Inc.

Military Rubber Specifications

Note: In compliance with the Federal Acquisition Streamlining Act (FASA), most of these specifications are being revised to AMS specifications. For the most current information, contact the O-Ring Division.

RUBBER SPECS	PARKER COMPOUND	DESCRIPTION
ZZ-R-765E		Rubber, Silicone
Class	**Grade**	**Temperature Range(1)**
1a. 1b. 2a. 2b.	50	S0899-50 - 103 to 437°F (-75 to 225°C) Low and High Temperature Resistant, Low Compression Set
1a. 1b	70	S0383-70 - 103 to 437°F (-75 to 225°C) Low Temperature Resistant, Low Compression Set
2a. 2b	80	S0614-80 - 80 to 437°F (-62 to 225°C) High Temperature Resistant, Low Compression Set
2a. 2b	70	S1224-70 - S0604-70 80 to 437°F (-62 to 225°C) High Temperature Resistant, Low Compression Set
MIL-G-1149C - Type I Class 1		Gasket Materials, Synthetic Rubber, 50 and 65 Durometer Hardness (-20 to 212°F) (-29 to 100°C) (1) C0267-50
MIL-R-3533B - Type I Grade B		Rubber, Synthetic; Sheet, Strip and Molded (-20 to 158°F) (-29 to 70°C) (1) N0602-70
MIL-P-5315B -		Packing, O-ring, Hydrocarbon Fuel Resistant (Jet Fuels) (Military O-ring series MS29512 and MS29513) N0602-70 (-65 to 160°F) (-54 to 71°C)
MIL-P-5510C -		Gasket, Straight Thread Tube Fitting Boss (MIL-H-5606 Petroleum Based Hydraulic Fluid) N0507-90 (-45 to 160°F) (-43 to 71°C)(1) (Military O-ring series MS28778)
MIL-R-6855D -		Synthetic Rubber Sheets, Strips, Molded or Extruded Shapes (-65 to 212°F) (-54 to 100°C)(1)
Class 1	Grade 60	N0406-60 Fuel and Petroleum Oil Resistant
Class 2 Type B	Grade 70	C1124-70 Petroleum Oil, Weather and Ozone Resistant

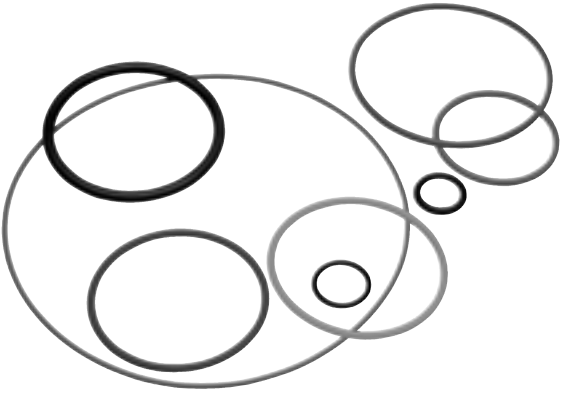
(1) These temperatures are limits for particular tests required by the specifications, but they do not necessarily represent operating temperature limits.

Parker Hannifin Corporation • O-Ring Division
2360 Palumbo Drive, PO Box 11751, Lexington, KY 40512-1751
Phone: (859) 269-2351 • Fax: (859) 335-5128
www.parkerorings.com

RUBBER SPECS	PARKER COMPOUND	DESCRIPTION
MIL-R-7362D -		Rubber, Sheet, Molded and Extruded Shapes, Synthetic Oil Resistant (AMS3021)
Types I, II	47-071	Synthetic, Di-Ester Base Lubricant (-65 to 275°F) (-54 to 135°C)(1) (Military O-ring series MS29561 and WAS617)
MIL-G-21569B -		Gaskets, Cylinder Liner Seal, Synthetic
Class I	N0674-70	(Room temperature to 194°F) (RT to 90°C)
Class II	S0604-70	
MIL-P-25732C -		Packing, Preformed, Petroleum Hydraulic Fluid Resistant (MIL-H-5606)
	N0304-75	Petroleum Base Hydraulic Fluid (-65 to 275°F) (-54 to 135°C)(1) (Military O-ring series MS28775)
MIL-R-25988 -		Rubber Fluorosilicone Elastomer, Oil and Fuel Resistant (MIL-H-5606 Petroleum Base) Hydraulic Fluid, Fuel, Air (-90 to 350°F) (-68 to 176°C)(1)
Type 1, Class 1, Grade 60/3	L1223-60, LM158-60	
Type 1, Class 1, Grade 70/1	L1120-70, LM159-70	
Type 1, Class 1, Grade 80/4	L1218-80, LM160-80	
Type 1, Class 3, Grade 75/2	L1077-75	
MIL-P-82744 -		Packing, Preformed, Otto Fuel Compatible (-65 to 250°F) (-54 to 121°C)
	E0515-80	
MIL-R-83248C, Type I -		Rubber, Fluorocarbon Elastomer, High Temperature Fluid and Compression Set Resistant (-15 to 400°F) (-5 to 105°C)
Class I	V0747-75, V1164-75, V1226-7	
Class 2	V0709-90	
MIL-R-83485	Grade 80 V0835-75	Rubber, fluorocarbon Elastomer, Improved performance @ low Temp
MIL-P-83461B -		Packings, Preformed, Petroleum Hydraulic Fluid Resistant, Improved Performance
	N0756-75	(-65 to 275°F) (-54 to 135°C)(1)

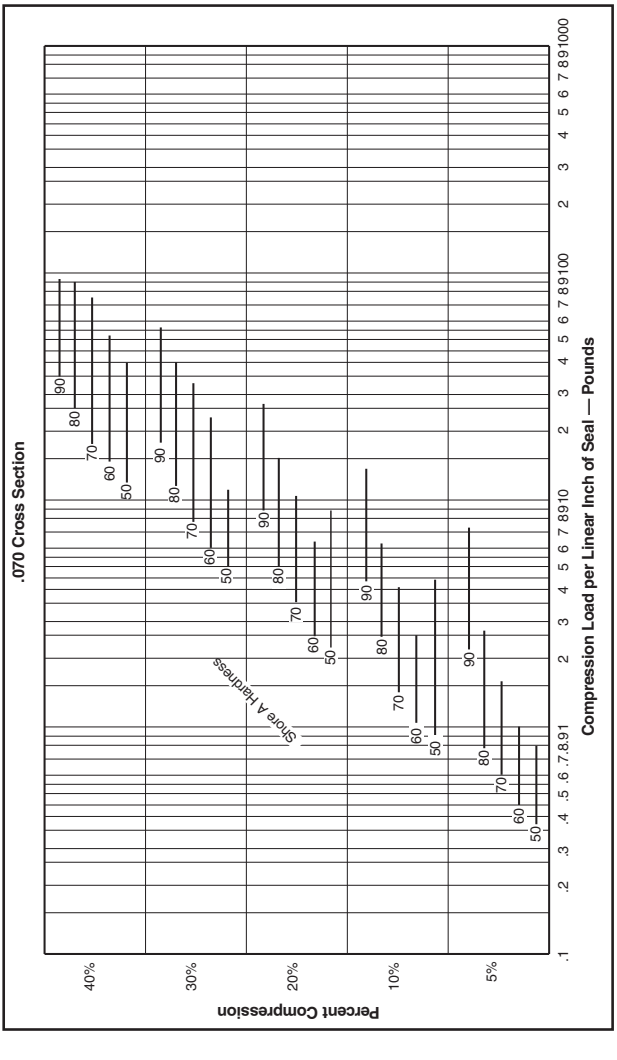
(1) These temperatures are limits for particular tests required by the specifications, but they do not necessarily represent operating temperature limits.

Engineering Tools



The following charts are included to facilitate engineering analysis. Additional information is available in the Parker Handbook (ORD 5700) or online at www.parkerorings.com

Compressive Load Charts



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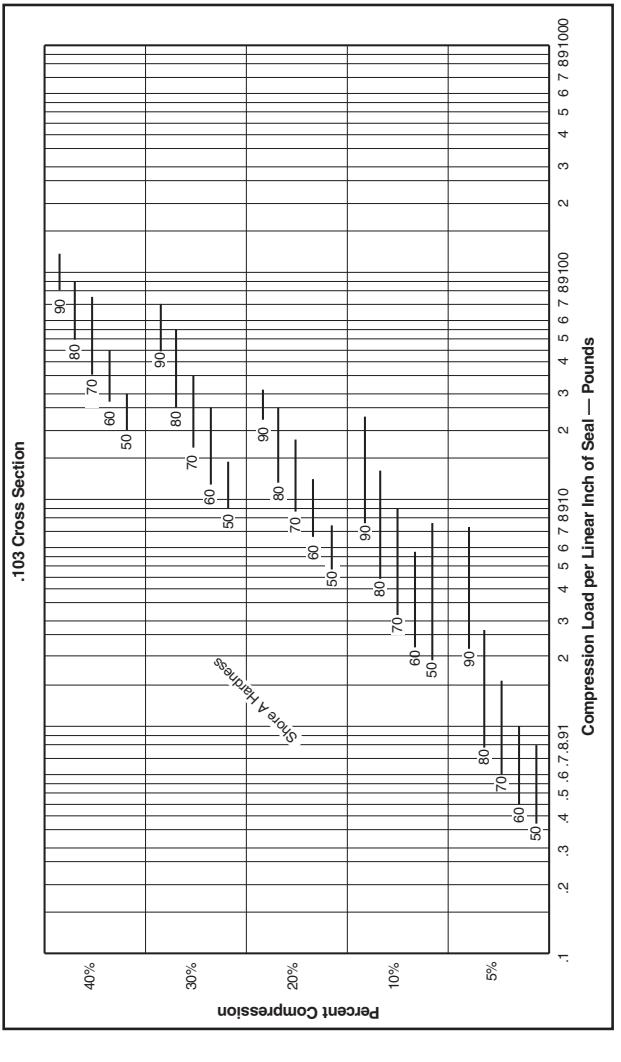
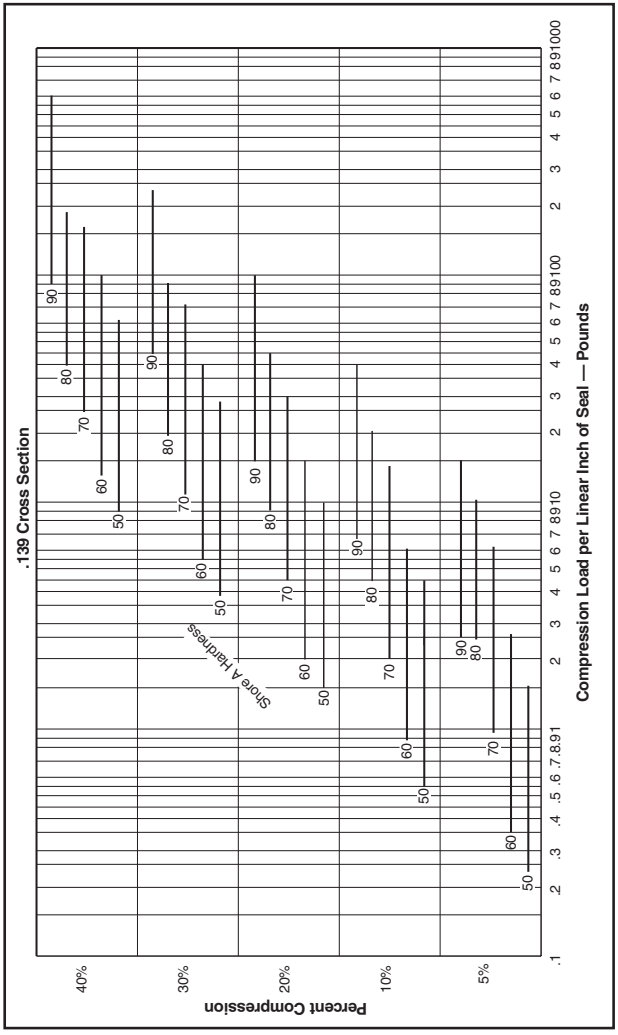
www.parkerorings.com

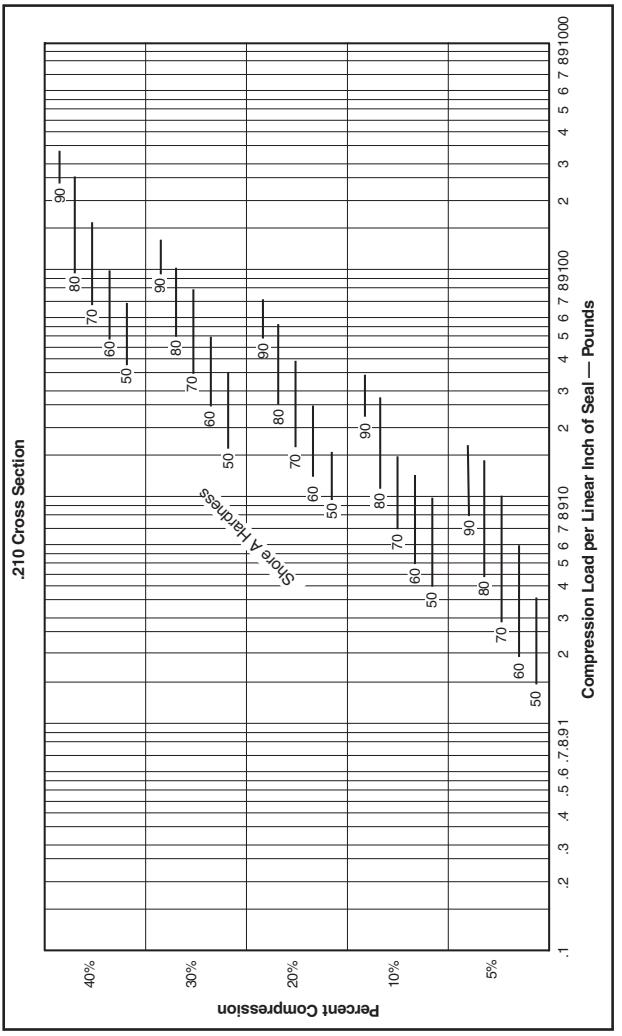
Compressive Load Charts - Continued



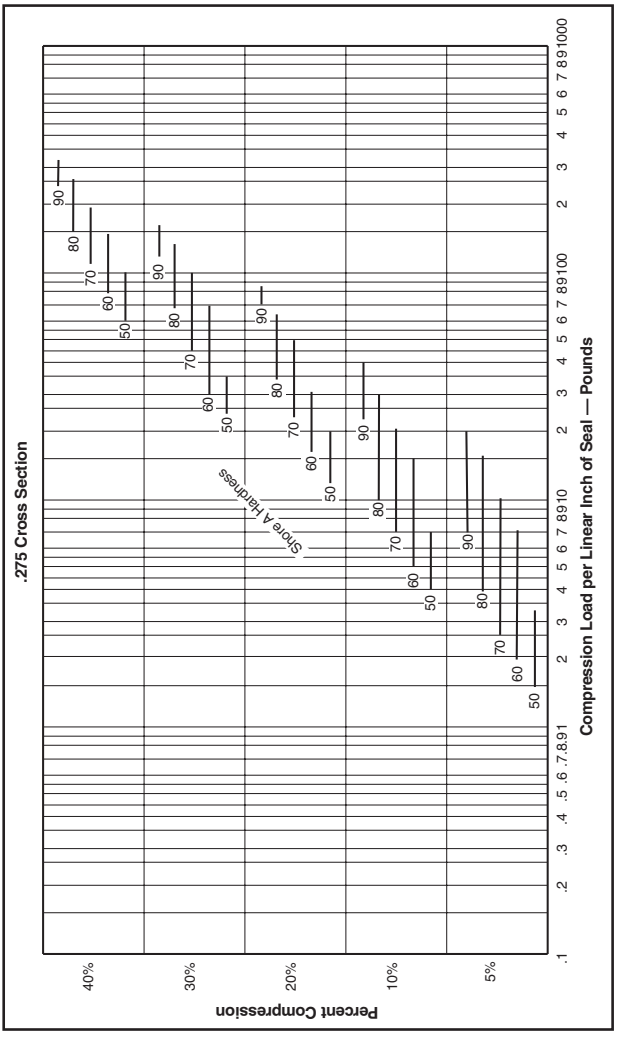
Compressive Load Charts - Continued



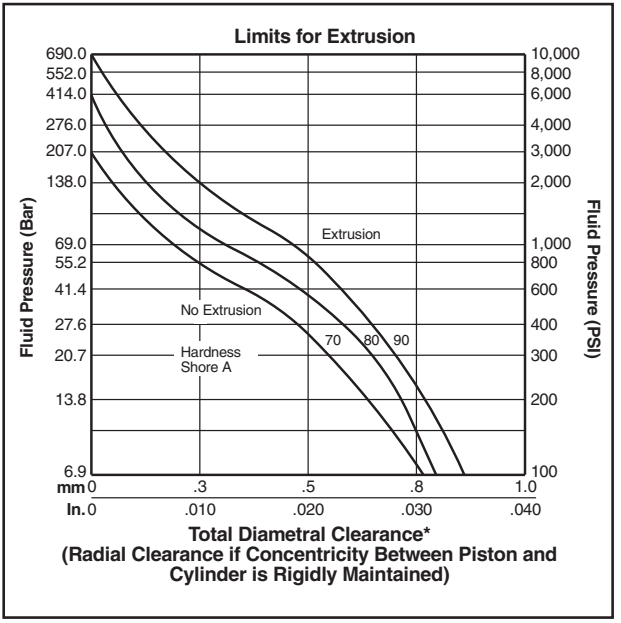
Compressive Load Charts - Continued



Compressive Load Charts - Continued



Extrusion



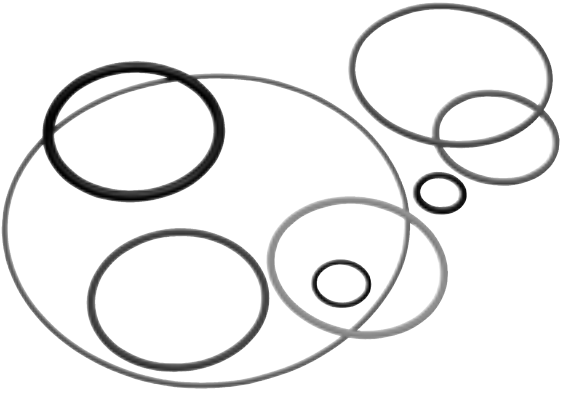
* Reduce the clearance shown by 60% when using silicone or fluorosilicone elastomers.

Basis for Curves

1. 100,000 pressure cycles at the rate of 60 per minute from zero to the indicated pressure.
2. Maximum temperature (i.e., test temperature) 71°C (160°F).
3. No back-up rings.
4. Total diametral clearance must include cylinder expansion due to pressure.
5. Apply a reasonable safety factor in practical applications to allow for excessively sharp edges and other imperfections and for higher temperatures.

Engineering Design Notes

Gland Designs



The following charts are included to facilitate engineering analysis. Additional information is available in the Parker Handbook (ORD 5700) or online at www.parkerorings.com

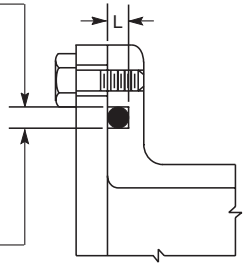
Parker offers o-rings for use in static as well as dynamic sealing applications. Static seals are those where the mating parts of the gland do not have movement relative to each other. These seals include face, radial, dovetail. Examples of these seals and the corresponding design charts are found on pages 38-43. Dynamic seals include reciprocating, floating pneumatic, oscillating, and rotary applications. Dynamic seals are defined by one of the gland parts having movement relative to the other part. Gland design recommendations for a reciprocating seal are provided on pages 44 and 45.

For further design assistance and recommendations, access our Total inPHorm Seal Design software, or contact a Parker O-Ring Applications Engineer.

O-Ring Face Seal Glands

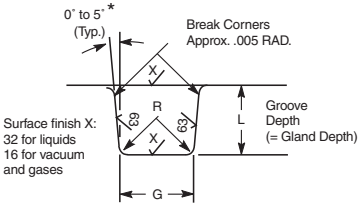
For Internal Pressure
(outward pressure direction)
dimension the groove by its
outside diameter (H_O) and width:

(H_O) = Mean O.D. of O-ring
Tolerance = Minus 1% of Mean
O.D., but not more than
-.060



For External Pressure
(inward pressure direction)
dimension the groove by its
inside diameter (H_I) and width:

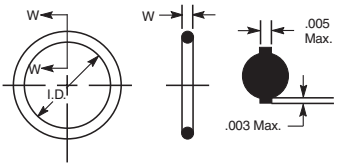
(H_I) = Mean I.D. of O-ring
Tolerance = Plus 1% of Mean
I.D., but not more than
+.060



Surface finish X:
32 for liquids
16 for vacuum
and gases

Gland Detail
Finishes are RMS values

Section W-W



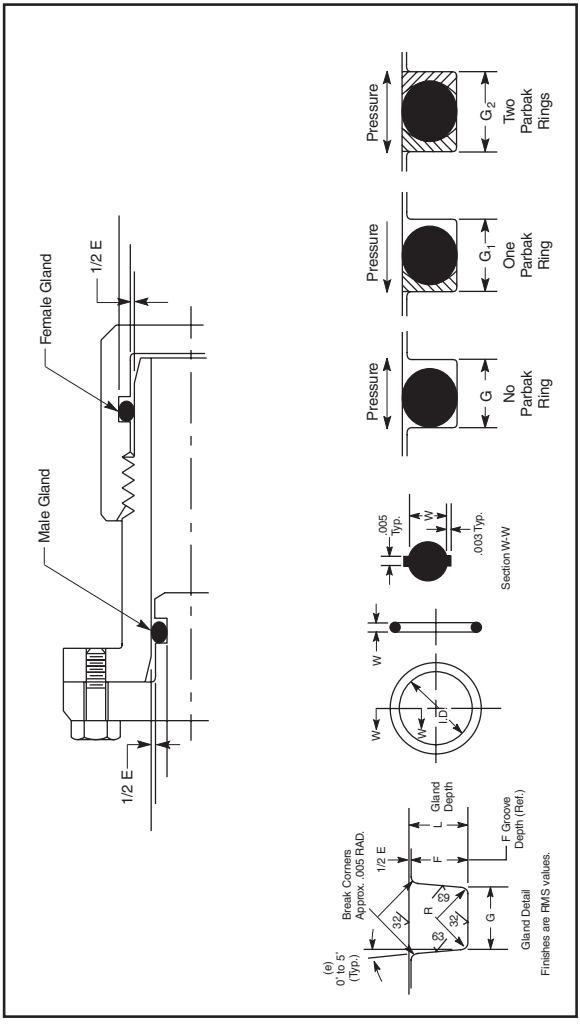
* Mean OD = ID + (2X Cross Section)

O-Ring Face Seal Glands

These dimensions are intended primarily for face type o-ring seals and low temperature applications.

O-Ring Size Parker No. 2-Size AS568B	W Cross Section		L	Squeeze		G Groove Width		R
	Nominal	Actual	Gland Depth	Actual	%	Liquids	Vacuum and Gases	Groove Radius
004 through 050	1/16	.070 ±.003	.050 to .054	.013 to .023	19 to 32	.101 to .107	.084 to .089	.005 to .015
102 through 178	3/32	.103 ±.003	.074 to .080	.020 to .032	20 to 30	.136 to .142	.120 to .125	.005 to .015
201 through 284	1/8	.139 ±.004	.101 to .107	.028 to .042	20 to 30	.177 to .187	.158 to .164	.010 to .025
309 through 395	3/16	.210 ±.005	.152 to .162	.043 to .063	21 to 30	.270 to .290	.239 to .244	.020 to .035
425 through 475	1/4	.275 ±.006	.201 to .211	.058 to .080	21 to 29	.342 to .362	.309 to .314	.020 to .035
Special	3/8	.375 ±.007	.276 to .286	.082 to .108	22 to 28	.475 to .485	.419 to .424	.030 to .045
Special	1/2	.500 ±.008	.370 to .380	.112 to .138	22 to 27	.638 to .645	.560 to .565	.030 to .045

Industrial O-Ring Static Seal Glands



Industrial O-Ring Static Seal Glands

O-Ring 2-Size	W Cross-Section		L Gland	Squeeze		E (a) Diametral	G - Groove Width No Parbak	1 Parbak	2 Parbak	R Groove	Max. Eccen-
AS568B-	Nomin.	Actual	Depth	Actual	%	Clearance	Ring (G)	Ring (G1)	Rings (G2)	Radius	tricity (b)
004 through 050	1/16	.070 ±.003	.050 to .052	.015 to .023	22 to 32	.002 to .005	.093 to .098	.138 to .143	.205 to .210	.005 to .015	.002
102 through 178	3/32	.103 ±.003	.081 to .083	.017 to .025	17 to 24	.002 to .005	.140 to .145	.171 to .176	.238 to .243	.005 to .015	.002
201 through 284	1/8	.139 ±.004	.111 to .113	.022 to .032	16 to 23	.003 to .006	.187 to .192	.208 to .213	.275 to .280	.010 to .025	.003
309 through 395	3/16	.210 ±.005	.170 to .173	.032 to .045	15 to 21	.003 to .006	.281 to .286	.311 to .316	.410 to .415	.020 to .035	.004
425 through 475	1/4	.275 ±.006	.226 to .229	.040 to .055	15 to 20	.004 to .007	.375 to .380	.408 to .413	.538 to .543	.020 to .035	.005

(a) Clearance (extrusion gap) must be held to a minimum consistent with design requirements for temperature range variation.

(b) Total indicator reading between groove and adjacent bearing surface.

(c) Reduce maximum diametral clearance 50% when using silicone or fluorosilicone o-rings.

(d) For ease of assembly, when Parbaks are used, gland depth may be increased up to 5%.

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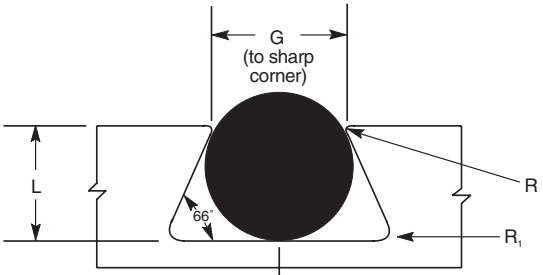
O-Ring Dovetail Grooves



It is often necessary to provide some mechanical means for holding an o-ring in a face seal groove during assembly and maintenance of equipment. An undercut or dovetail groove has proven beneficial in many applications to keep the o-ring in place. This is an expensive groove to machine, however, and thus should be used only when absolutely necessary.

It should be noted that although this method has been used successfully, it is not generally recommended. The inherent characteristics of the groove design limit the amount of void area. Normally acceptable tolerance extremes, wide service temperature ranges and fluid media that cause high swell of the elastomer are conditions that cannot be tolerated in this type of groove design.

NOTE: Parker offers dovetail cutters for various sizes. For more information, contact a Parker O-Ring Applications Engineer.

O-Ring Dovetail Grooves

Radius "R" is CRITICAL. Insufficient radius will potentially cause damage to the o-ring during installation, while excessive radius may contribute to extrusion.

O-Ring Size AS568B-	W Cross Section		L Gland Depth	Squeeze %	G Gland Width (To sharp corner)	R	R1
	Nominal	Actual					
004 through 050	1/16	.070 ±.003	.050 to .052	27	.055 to .059	.005	1/64
102 through 178	3/32	.103 ±.003	.081 to .083	21	.083 to .087	.010	1/64
201 through 284	1/8	.139 ±.004	.111 to .113	20	.113 to .117	.010	1/32
309 through 395	3/16	.210 ±.005	.171 to .173	18	.171 to .175	.015	1/32
425 through 475	1/4	.275 ±.006	.231 to .234	16	.231 to .235	.015	1/16
Special	3/8	.375 ±.007	.315 to .319	16	.315 to .319	.020	3/32

NOTE: These design recommendations assume metal-to-metal contact. In special applications, (in the semiconductor industry, for example) deviation from these recommendations may be necessary. When designing with Parofluor™ elastomers, one should take into consideration that perfluorinated elastomers may require more squeeze than an FKM material to obtain optimum sealing performance. To increase squeeze, modifications of the design recommendations shown above are necessary.

Industrial Reciprocating O-Ring Packing Glands

Industrial Reciprocating O-Ring Packing Glands

O-Ring 2-Size	W Cross-Section		L Gland	Squeeze		E (a) Diametral	G - Groove Width No Parbak	1 Parbak	2 Parbak	R Groove	Max. Eccen-
AS568B-	Nomin.	Actual	Depth	Actual	%	Clearance	Ring (G)	Ring (G1)	Rings (G2)	Radius	tricity (b)
006 through 012	1/16	.070 ±.003	.055 to .057	.010 to .018	15 to 25	.002 to .005	.093 to .098	.138 to .143	.205 to .210	.005 to .015	.002
104 through 116	3/32	.103 ±.003	.088 to .090	.010 to .018	10 to 17	.002 to .005	.140 to .145	.171 to .176	.238 to .243	.005 to .015	.002
201 through 222	1/8	.139 ±.004	.121 to .123	.012 to .022	9 to 16	.003 to .006	.187 to .192	.208 to .213	.275 to .280	.010 to .025	.003
309 through 349	3/16	.210 ±.005	.185 to .188	.017 to .030	8 to 14	.003 to .006	.281 to .286	.311 to .316	.410 to .415	.020 to .035	.004
425 through 460	1/4	.275 ±.006	.237 to .240	.029 to .044	11 to 16	.004 to .007	.375 to .380	.408 to .413	.538 to .543	.020 to .035	.005

(a) Clearance (extrusion gap) must be held to a minimum consistent with design requirements for temperature range variation.

(b) Total indicator reading between groove and adjacent bearing surface.

(c) O-rings not listed are not recommended for reciprocating applications.

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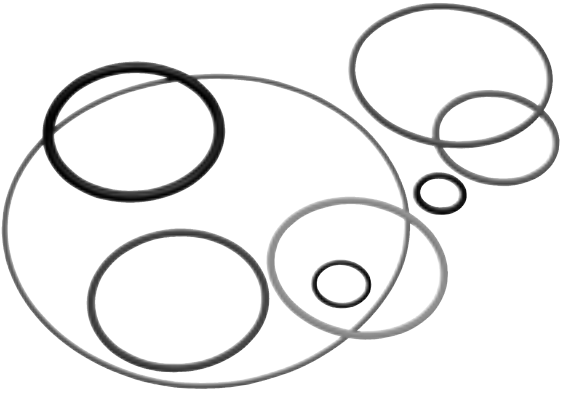
Gland Design Notes

Sizing Charts



The following charts provide dimensions for standard shrinkage materials only. These correspond to AS568B dimensions. O-rings manufactured from compounds with different shrinkage rates will provide slightly different dimensions and tolerances when standard tooling is used. Custom tooling may be necessary for some compounds in order to meet AS568B dimensions and tolerances. For further information contact a Parker O-Ring Applications Engineer.

2-0XX Sizes: cross-section width = .070 ± .003 in (1,78 ± 0,08 mm)									
Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-001*	.029	.004	0,74	0,10	2-026	1.239	.011	31,47	0,28
2-002*	.042	.004	1,07	0,10	2-027	1.301	.011	33,05	0,28
2-003*	.056	.004	1,42	0,10	2-028	1.364	.013	34,65	0,33
2-004	.070	.005	1,78	0,13	2-029	1.489	.013	37,82	0,33
2-005	.101	.005	2,57	0,13	2-030	1.614	.013	41,00	0,33
2-006	.114	.005	2,90	0,13	2-031	1.739	.015	44,17	0,38
2-007	.145	.005	3,68	0,13	2-032	1.864	.015	47,35	0,38
2-008	.176	.005	4,47	0,13	2-033	1.989	.018	50,52	0,46
2-009	.208	.005	5,28	0,13	2-034	2.114	.018	53,70	0,46
2-010	.239	.005	6,07	0,13	2-035	2.239	.018	56,87	0,46
2-011	.301	.005	7,65	0,13	2-036	2.364	.018	60,05	0,46
2-012	.364	.005	9,25	0,13	2-037	2.489	.018	63,22	0,46
2-013	.426	.005	10,82	0,13	2-038	2.614	.020	66,40	0,51
2-014	.489	.005	12,42	0,13	2-039	2.739	.020	69,57	0,51
2-015	.551	.007	14,00	0,18	2-040	2.864	.020	72,75	0,51
2-016	.614	.009	15,60	0,23	2-041	2.989	.024	75,92	0,61
2-017	.676	.009	17,17	0,23	2-042	3.239	.024	82,27	0,61
2-018	.739	.009	18,77	0,23	2-043	3.489	.024	88,62	0,61
2-019	.801	.009	20,35	0,23	2-044	3.739	.027	94,97	0,69
2-020	.864	.009	21,95	0,23	2-045	3.989	.027	101,32	0,69
2-021	.926	.009	23,52	0,23	2-046	4.239	.030	107,67	0,76
2-022	.989	.010	25,12	0,25	2-047	4.489	.030	114,02	0,76
2-023	1.051	.010	26,70	0,25	2-048	4.739	.030	120,37	0,76
2-024	1.114	.010	28,30	0,25	2-049	4.989	.037	126,72	0,94
2-025	1.176	.011	29,87	0,28	2-050	5.239	.037	133,07	0,94

(a) The rubber compound must be added when ordering by the 2-size number (i.e., N0674 2-007).

(b) This chart provides dimensions for standard (AN) shrinkage materials ONLY. These correspond to AS568B dimensions. O-rings manufactured out of compounds with different shrinkage rates (other than AN) will produce slightly different dimensions and tolerances. For more information on shrinkage rates, see Parker O-Ring Handbook (ORD 5700).

* Please note: for 2-001 cross-section width = .040 in (1,02 mm)
for 2-002 cross-section width = .050 in (1,27 mm)
for 2-003 cross-section width = .060 in (1,52 mm)

2-1XX Sizes: cross-section width = .103 ± .003 in (2,62 ± 0,08 mm)

Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-102	.049	.005	1,24	0,13	2-141	2.300	.020	58,42	0,51
2-103	.081	.005	2,06	0,13	2-142	2.362	.020	59,99	0,51
2-104	.112	.005	2,84	0,13	2-143	2.425	.020	61,60	0,51
2-105	.143	.005	3,63	0,13	2-144	2.487	.020	63,17	0,51
2-106	.174	.005	4,42	0,13	2-145	2.550	.020	64,77	0,51
2-107	.206	.005	5,23	0,13	2-146	2.612	.020	66,34	0,51
2-108	.237	.005	6,02	0,13	2-147	2.675	.022	67,95	0,56
2-109	.299	.005	7,59	0,13	2-148	2.737	.022	69,52	0,56
2-110	.362	.005	9,19	0,13	2-149	2.800	.022	71,12	0,56
2-111	.424	.005	10,77	0,13	2-150	2.862	.022	72,69	0,56
2-112	.487	.005	12,37	0,13	2-151	2.987	.024	75,87	0,61
2-113	.549	.007	13,94	0,18	2-152	3.237	.024	82,22	0,61
2-114	.612	.009	15,54	0,23	2-153	3.487	.024	88,57	0,61
2-115	.674	.009	17,12	0,23	2-154	3.737	.028	94,92	0,71
2-116	.737	.009	18,72	0,23	2-155	3.987	.028	101,27	0,71
2-117	.799	.010	20,30	0,25	2-156	4.237	.030	107,62	0,76
2-118	.862	.010	21,89	0,25	2-157	4.487	.030	113,97	0,76
2-119	.924	.010	23,47	0,25	2-158	4.737	.030	120,32	0,76
2-120	.987	.010	25,07	0,25	2-159	4.987	.035	126,67	0,89
2-121	1.049	.010	26,64	0,25	2-160	5.237	.035	133,02	0,89
2-122	1.112	.010	28,24	0,25	2-161	5.487	.035	139,37	0,89
2-123	1.174	.012	29,82	0,30	2-162	5.737	.035	145,72	0,89
2-124	1.237	.012	31,42	0,30	2-163	5.987	.035	152,07	0,89
2-125	1.299	.012	32,99	0,30	2-164	6.237	.040	158,42	1,02
2-126	1.362	.012	34,59	0,30	2-165	6.487	.040	164,77	1,02
2-127	1.424	.012	36,17	0,30	2-166	6.737	.040	171,12	1,02
2-128	1.487	.012	37,77	0,30	2-167	6.987	.040	177,47	1,02
2-129	1.549	.015	39,34	0,38	2-168	7.237	.045	183,82	1,14
2-130	1.612	.015	40,94	0,38	2-169	7.487	.045	190,17	1,14
2-131	1.674	.015	42,52	0,38	2-170	7.737	.045	196,52	1,14
2-132	1,737	.015	44,12	0,38	2-171	7.987	.045	202,87	1,14
2-133	1,799	.015	45,69	0,38	2-172	8.237	.050	209,22	1,27
2-134	1.862	.015	47,29	0,38	2-173	8.487	.050	215,57	1,27
2-135	1.925	.017	48,90	0,43	2-174	8.737	.050	221,92	1,27
2-136	1.987	.017	50,47	0,43	2-175	8.987	.050	228,27	1,27
2-137	2.050	.017	52,07	0,43	2-176	9.237	.055	234,62	1,40
2-138	2.112	.017	53,64	0,43	2-177	9.487	.055	240,97	1,40
2-139	2.175	.017	55,25	0,43	2-178	9.737	.055	247,32	1,40
2-140	2.237	.017	56,82	0,43					

2-2XX Sizes: cross-section width = .139 ± .004 in (3,53 ± 0,10 mm)									
Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-201	.171	.055	4,34	0,13	2-236	3.234	.024	82,14	0,61
2-202	.234	.005	5,94	0,13	2-237	3.359	.024	85,32	0,61
2-203	.296	.005	7,52	0,13	2-238	3.484	.024	88,49	0,61
2-204	.359	.005	9,12	0,13	2-239	3.609	.028	91,67	0,71
2-205	.421	.005	10,69	0,13	2-240	3.734	.028	94,84	0,71
2-206	.484	.005	12,29	0,13	2-241	3.859	.028	98,02	0,71
2-207	.546	.007	13,87	0,18	2-242	3.984	.028	101,19	0,71
2-208	.609	.009	15,47	0,23	2-243	4.109	.028	104,37	0,71
2-209	.671	.010	17,04	0,23	2-244	4.234	.030	107,54	0,76
2-210	.734	.010	18,64	0,25	2-245	4.359	.030	110,72	0,76
2-211	.796	.010	20,22	0,25	2-246	4.484	.030	113,89	0,76
2-212	.859	.010	21,82	0,25	2-247	4.609	.030	117,07	0,76
2-213	.921	.010	23,39	0,25	2-248	4.734	.030	120,24	0,76
2-214	.984	.010	24,99	0,25	2-249	4.859	.035	23,42	0,89
2-215	1.046	.010	26,5	0,25	2-250	4.984	.035	126,59	0,89
2-216	1.109	.012	28,17	0,30	2-251	5.109	.035	129,77	0,89
2-217	1.171	.012	29,74	0,30	2-252	5.234	.035	132,94	0,89
2-218	1.234	.012	31,34	0,30	2-253	5.359	.035	136,12	0,89
2-219	1.296	.012	32,92	0,30	2-254	5.484	.035	139,29	0,89
2-220	1.359	.012	34,52	0,30	2-255	5.609	.035	142,47	0,89
2-221	1.421	.012	36,09	0,30	2-256	5.734	.035	145,64	0,89
2-222	1.484	.015	37,69	0,38	2-257	5.859	.035	148,82	0,89
2-223	1.609	.015	40,87	0,38	2-258	5.984	.035	151,99	0,89
2-224	1.734	.015	44,04	0,38	2-259	6.234	.040	158,34	1,02
2-225	1.859	.018	47,22	0,46	2-260	6.484	.040	164,69	1,02
2-226	1.984	.018	50,39	0,46	2-261	6.734	.040	171,04	1,02
2-227	2.109	.018	53,57	0,46	2-262	6.984	.040	177,39	1,02
2-228	2.234	.020	56,74	0,51	2-263	7.234	.045	183,74	1,14
2-229	2.359	.020	59,92	0,51	2-264	7.484	.045	190,09	1,14
2-230	2.484	.020	63,09	0,51	2-265	7.734	.045	196,44	1,14
2-231	2.609	.020	66,27	0,51	2-266	7.984	.045	202,79	1,14
2-232	2.734	.024	69,44	0,6	2-267	8.234	.050	209,14	1,27
2-233	2.859	.024	72,62	0,61	2-268	8.484	.050	215,49	1,27
2-234	2.984	.024	75,79	0,61	2-269	8.734	.050	221,84	1,27
2-235	3.109	.024	78,97	0,61	2-270	8.984	.050	228,19	1,27

2-2XX Sizes: cross-section width = .139 ± .004 in (3,53 ± 0,10 mm)									
Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-271	9.234	.055	234,54	1,40	2-278	11.984	.065	304,39	1,65
2-272	9.484	.055	240,89	1,40	2-279	12.984	.065	329,79	1,65
2-273	9.734	.055	247,24	1,40	2-280	13.984	.065	355,19	1,65
2-274	9.984	.055	253,59	1,40	2-281	14.984	.065	380,59	1,65
2-275	10.484	.055	266,29	1,40	2-282	15.955	.075	405,26	1,91
2-276	10.984	.065	278,99	1,65	2-283	16.955	.080	430,66	2,03
2-277	11.484	.065	291,69	1,65	2-284	17.955	.085	456,06	2,16

2-3XX Sizes: cross-section width = .210 ± .005 in (5,33 ± 0,13 mm)

Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-309	.412	.005	10,46	0,13	2-344	3.850	.028	97,79	0,71
2-310	.475	.005	12,07	0,13	2-345	3.975	.028	100,97	0,71
2-311	.537	.007	13,64	0,18	2-346	4.100	.028	104,14	0,71
2-312	.600	.009	15,24	0,23	2-347	4.225	.030	107,32	0,76
2-313	.662	.009	16,81	0,23	2-348	4.350	.030	110,49	0,76
2-314	.725	.010	18,42	0,25	2-349	4.475	.030	113,67	0,76
2-315	.787	.010	19,99	0,25	2-350	4.600	.030	116,84	0,76
2-316	.850	.010	21,59	0,25	2-351	4.725	.030	120,02	0,76
2-317	.912	.010	23,16	0,25	2-352	4.850	.030	123,19	0,76
2-318	.975	.010	24,77	0,25	2-353	4.975	.037	126,37	0,94
2-319	1.037	.010	26,34	0,25	2-354	5.100	.037	129,54	0,94
2-320	1.100	.012	27,94	0,30	2-355	5.225	.037	132,72	0,94
2-321	1.162	.012	29,51	0,30	2-356	5.350	.037	135,89	0,94
2-322	1.225	.012	31,12	0,3	2-357	5.475	.037	139,07	0,94
2-323	1.287	.012	32,69	0,30	2-358	5.600	.037	142,24	0,94
2-324	1.350	.012	34,29	0,30	2-359	5.725	.037	145,42	0,94
2-325	1.475	.015	37,47	0,38	2-360	5.850	.037	148,59	0,94
2-326	1.600	.015	40,64	0,38	2-361	5.975	.037	151,77	0,94
2-327	1.725	.015	43,82	0,38	2-362	6.225	.040	158,12	1,02
2-328	1.850	.015	46,99	0,38	2-363	6.475	.040	164,47	1,02
2-329	1.975	.018	50,17	0,46	2-364	6.725	.040	170,82	1,02
2-330	2.100	.018	53,34	0,46	2-365	6.975	.040	177,17	1,02
2-331	2.225	.018	56,52	0,46	2-366	7.225	.045	183,52	1,14
2-332	2.350	.018	59,69	0,46	2-367	7.475	.045	189,87	1,14
2-333	2.475	.020	62,87	0,51	2-368	7.725	.045	196,22	1,14
2-334	2.600	.020	66,04	0,51	2-369	7.975	.045	202,57	1,14
2-335	2.725	.020	69,22	0,51	2-370	8.225	.050	208,92	1,27
2-336	2.850	.020	72,39	0,51	2-371	8.475	.050	215,27	1,27
2-337	2.975	.024	75,57	0,61	2-372	8.725	.050	221,62	1,27
2-338	3.100	.024	78,74	0,61	2-373	8.975	.050	227,97	1,27
2-339	3.225	.024	81,92	0,6	2-374	9.225	.055	234,32	1,40
2-340	3.350	.024	85,09	0,61	2-375	9.475	.055	240,67	1,40
2-341	3.475	.024	88,27	0,61	2-376	9.725	.055	247,02	1,40
2-342	3.600	.028	91,44	0,71	2-377	9.975	.055	253,37	1,40
2-343	3.725	.028	94,62	0,71	2-378	10.475	.060	266,07	1,52

2-3XX Sizes: cross-section width = .210 ± .005 in (5,33 ± 0,13 mm)

Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-379	10.975	.060	278,77	1,52	2-388	18.955	.090	481,41	2,29
2-380	11.475	.065	291,47	1,65	2-389	19.955	.095	506,81	2,41
2-381	11.975	.065	304,17	1,65	2-390	20.955	.095	532,21	2,41
2-382	12.975	.065	329,57	1,65	2-391	21.955	.100	557,61	2,54
2-383	13.975	.070	354,97	1,78	2-392	22.940	.105	582,68	2,67
2-384	14.975	.070	380,37	1,78	2-393	23.940	.110	608,08	2,79
2-385	15.955	.075	405,26	1,91	2-394	24.940	.115	633,48	2,92
2-386	16.955	.080	430,66	2,03	2-395	25.940	.120	658,88	3,05
2-387	17.955	.085	456,06	2,16					

2-4XX Sizes: cross-section width = .275 ± .006 in (6,99 ± 0,15 mm)									
Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm	Parker No.	Inside dia. in.	Tol. ± in.	Inside dia. mm	Tol. ± mm
2-425	4.475	.033	113,67	0,84	2-451	10.975	.060	278,77	1,52
2-426	4.600	.033	116,84	0,84	2-452	11.475	.060	291,47	1,52
2-427	4.725	.033	120,02	0,84	2-453	11.975	.060	304,17	1,52
2-428	4.850	.033	123,19	0,84	2-454	12.475	.060	316,87	1,52
2-429	4.975	.037	126,37	0,94	2-455	12.975	.060	329,57	1,52
2-430	5.100	.037	129,54	0,94	2-456	13.475	.070	342,27	1,78
2-431	5.225	.037	132,72	0,94	2-457	13.975	.070	354,97	1,78
2-432	5.350	.037	135,89	0,94	2-458	14.475	.070	367,67	1,78
2-433	5.475	.037	139,07	0,94	2-459	14.975	.070	380,37	1,78
2-434	5.600	.037	142,24	0,94	2-460	15.475	.070	393,07	1,78
2-435	5.725	.037	145,42	0,94	2-461	15.955	.075	405,26	1,91
2-436	5.850	.037	148,59	0,94	2-462	16.455	.075	417,96	1,91
2-437	5.975	.037	151,77	0,94	2-463	16.955	.080	430,66	2,03
2-438	6.225	.040	158,12	1,02	2-464	17.455	.085	443,36	2,16
2-439	6.475	.040	164,47	1,02	2-465	17.955	.085	456,06	2,16
2-440	6.725	.040	170,82	1,02	2-466	18.455	.085	468,76	2,16
2-441	6.975	.040	177,17	1,02	2-467	18.955	.090	481,46	2,29
2-442	7.225	.045	183,52	1,14	2-468	19.455	.090	494,16	2,29
2-443	7.475	.045	189,87	1,14	2-469	19.955	.095	506,86	2,41
2-444	7.725	.045	196,22	1,14	2-470	20.955	.095	532,26	2,41
2-445	7.975	.045	202,57	1,14	2-471	21.955	.100	557,66	2,54
2-446	8.475	.055	215,27	1,40	2-472	22.940	.105	582,68	2,67
2-447	8.975	.055	227,97	1,40	2-473	23.940	.110	608,08	2,79
2-448	9.475	.055	240,67	1,40	2-474	24.940	.115	633,48	2,92
2-449	9.975	.055	253,37	1,40	2-475	25.940	.120	658,88	3,05
2-450	10.475	.060	266,07	1,52					

The following charts provide dimensions for standard shrinkage materials only. These correspond to AS568B dimensions. O-rings manufactured from compounds with different shrinkage rates will provide slightly different dimensions and tolerances when standard tooling is used. Custom tooling may be necessary for some compounds in order to meet AS568B dimensions and tolerances. Contact a Parker O-Ring Applications Engineer with any questions.

3-9XX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
3-901	.185	.005	.056	.003	4,70	0,13	1,42	0,08
3-902	.239	.005	.064	.003	6,07	0,13	1,63	0,08
3-903	.301	.005	.064	.003	7,65	0,13	1,63	0,08
3-904	.351	.005	.072	.003	8,92	0,13	1,83	0,08
3-905	.414	.005	.072	.003	10,52	0,13	1,83	0,08
3-906	.468	.005	.078	.003	11,89	0,13	1,98	0,08
3-907	.530	.007	.082	.003	13,46	0,18	2,08	0,08
3-908	.644	.009	.087	.003	16,36	0,23	2,21	0,08
3-909	.706	.009	.097	.003	17,93	0,23	2,46	0,08
3-910	.755	.009	.097	.003	19,18	0,23	2,46	0,08
3-911	.863	.009	.116	.004	21,92	0,23	2,95	0,10
3-912	.924	.009	.116	.004	23,47	0,23	2,95	0,10
3-913	.986	.010	.116	.004	25,04	0,26	2,95	0,10
3-914	1.047	.010	.116	.004	26,59	0,26	2,95	0,10
3-916	1.171	.010	.116	.004	29,74	0,26	2,95	0,10
3-918	1.355	.012	.116	.004	34,42	0,30	2,95	0,10
3-920	1.475	.014	.118	.004	37,47	0,36	3,00	0,10
3-924	1.720	.014	.118	.004	43,69	0,36	3,00	1,10
3-928	2.090	.018	.118	.004	53,09	0,46	3,00	0,10
3-932	2.337	.018	.118	.004	59,36	0,46	3,00	0,10

(a) The rubber compound must be added when ordering by the 3-size number (i.e., N0552 3-910).
(b) Material with unusual shrinkage during molding will give slightly different dimensions.

O-Rings for Metric Tube Fittings (ISO 6149) (Similar to SAE J2244)

Parker O-Ring Division is tooled in these sizes for Nitrile and Fluorocarbon rubber only. Contact the division for availability.

Port Thread	O-Ring Name	Parker Part No.	ID mm	Tol. ± mm	W mm	Tol. ± mm
M8x1	M8 ISO O-Ring	0024-0063	6,10	0,13	1,60	0,08
M10x1	M10 ISO O-Ring	0031-9063	8,10	0,13	1,60	0,08
M12x1.5	M12 ISO O-Ring	0036-6087	9,30	0,13	2,20	0,08
M14x1.5	M14 ISO O-Ring	0044-5087	11,30	0,13	2,20	0,08
M16x1.5	M16 ISO O-Ring	0052-4087	13,30	0,15	2,20	0,08
M18x1.5	M18 ISO O-Ring	0060-2087	15,30	0,18	2,20	0,08
M22x1.5	M22 ISO O-Ring	0076-0087	19,30	0,20	2,20	0,08
M27x2	M27 ISO O-Ring	0092-9114	23,60	0,23	2,90	0,10
M33x2	M33 ISO O-Ring	0116-5114	29,60	0,30	2,90	0,10
M42x2	M42 ISO O-Ring	0152-0114	38,60	0,36	2,90	0,10
M48x2	M48 ISO O-Ring	0175-6114	44,60	0,41	2,90	0,10
M60x2	M60 ISO O-Ring	0222-8114	56,60	0,46	2,90	0,10

Parker Series 5-XXX O-Ring Sizes

The following 5-XXX sizes are o-rings of non-standard dimensions for which Parker tooling was available as of April 1, 2004. This tooling will be maintained while volume demand continues. A mold scrapped as defective will not be replaced unless demand justifies the expense. Please note 5-XXX tooling does not exist for Parofluor Family compounds.

Note: These molds are cut to allow for standard "AN" shrinkage and in materials having standard shrinkage they will normally produce rings to the dimensions listed. Materials with other than standard shrinkage will give different dimensions and tolerances. Please consult the factory or your local Parker Distributor for the availability of special sizes not included in this list.

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-118	0.059	0.004	0.040	0.003	1.50	0.10	1.02	0.08
5-187	0.070	0.005	0.036	0.003	1.78	0.13	0.91	0.08
5-051	0.070	0.005	0.040	0.003	1.78	0.13	1.02	0.08
5-101	0.100	0.005	0.038	0.003	2.54	0.13	0.97	0.08
5-578	0.102	0.005	0.074	0.003	2.59	0.13	1.88	0.08
5-632	0.110	0.005	0.040	0.003	2.79	0.13	1.02	0.08
5-102	0.116	0.005	0.038	0.003	2.95	0.13	0.97	0.08
5-178	0.120	0.005	0.040	0.003	3.05	0.13	1.02	0.08
5-683	0.122	0.005	0.063	0.003	3.10	0.13	1.60	0.08
5-646	0.126	0.005	0.040	0.003	3.20	0.13	1.02	0.08
5-103	0.128	0.005	0.050	0.003	3.25	0.13	1.27	0.08
5-190	0.132	0.005	0.070	0.003	3.35	0.13	1.78	0.08
5-579	0.133	0.005	0.074	0.003	3.39	0.13	1.88	0.08
5-669	0.146	0.005	0.040	0.003	3.71	0.13	1.02	0.08
5-148	0.154	0.005	0.038	0.003	3.91	0.13	0.97	0.08
5-105	0.154	0.005	0.050	0.003	3.91	0.13	1.27	0.08
5-106	0.154	0.005	0.066	0.003	3.91	0.13	1.68	0.08
5-580	0.165	0.005	0.074	0.003	4.19	0.13	1.88	0.08
5-193	0.176	0.005	0.040	0.003	4.47	0.13	1.02	0.08
5-108	0.176	0.005	0.050	0.003	4.47	0.13	1.27	0.08
5-124	0.176	0.005	0.056	0.003	4.47	0.13	1.42	0.08
5-107	0.176	0.005	0.066	0.003	4.47	0.13	1.68	0.08
5-125	0.180	0.005	0.040	0.003	4.57	0.13	1.02	0.08
5-581	0.192	0.005	0.074	0.003	4.88	0.13	1.88	0.08
5-685	0.208	0.005	0.094	0.003	5.28	0.13	2.39	0.08
5-582	0.224	0.005	0.074	0.003	5.69	0.13	1.88	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-194	0.228	0.005	0.040	0.003	5.79	0.13	1.02	0.08
5-638	0.233	0.005	0.076	0.003	5.92	0.13	1.93	0.08
5-179	0.239	0.005	0.040	0.003	6.07	0.13	1.02	0.08
5-151	0.239	0.005	0.051	0.003	6.07	0.13	1.30	0.08
5-127	0.239	0.005	0.074	0.003	6.07	0.13	1.88	0.08
5-1002	0.239	0.005	0.174	0.005	6.07	0.13	4.42	0.13
5-197	0.242	0.005	0.040	0.003	6.15	0.13	1.02	0.08
5-180	0.248	0.005	0.048	0.003	6.30	0.13	1.22	0.08
5-686	0.248	0.005	0.094	0.003	6.30	0.13	2.39	0.08
5-583	0.251	0.005	0.074	0.003	6.38	0.13	1.88	0.08
5-052	0.270	0.005	0.070	0.003	6.86	0.13	1.78	0.08
5-202	0.278	0.005	0.046	0.003	7.06	0.13	1.17	0.08
5-698	0.283	0.005	0.040	0.003	7.19	0.13	1.02	0.08
5-584	0.283	0.005	0.074	0.003	7.19	0.13	1.88	0.08
5-687	0.287	0.005	0.094	0.003	7.29	0.13	2.39	0.08
5-1004	0.290	0.005	0.045	0.003	7.39	0.13	1.14	0.08
5-056	0.301	0.005	0.038	0.003	7.65	0.13	0.97	0.08
5-710	0.301	0.005	0.054	0.003	7.65	0.13	1.37	0.08
5-673	0.305	0.005	0.074	0.003	7.75	0.13	1.88	0.08
5-204	0.312	0.005	0.036	0.003	7.92	0.13	0.91	0.08
5-205	0.312	0.005	0.092	0.003	7.92	0.13	2.34	0.08
5-160	0.312	0.005	0.103	0.003	7.92	0.13	2.62	0.08
5-712	0.313	0.005	0.051	0.003	7.95	0.13	1.30	0.08
5-585	0.314	0.005	0.074	0.003	7.98	0.13	1.88	0.08
5-664	0.320	0.005	0.070	0.003	8.13	0.13	1.78	0.08
5-1006	0.322	0.005	0.070	0.003	8.18	0.13	1.78	0.08
5-206	0.326	0.005	0.103	0.003	8.28	0.13	2.62	0.08
5-1007	0.330	0.005	0.050	0.003	8.38	0.13	1.27	0.08
5-133	0.332	0.005	0.031	0.003	8.43	0.13	0.79	0.08
5-612	0.344	0.005	0.070	0.003	8.74	0.13	1.78	0.08
5-586	0.350	0.005	0.074	0.003	8.89	0.13	1.88	0.08
5-587	0.350	0.005	0.106	0.004	8.89	0.13	2.69	0.10
5-018	0.352	0.005	0.113	0.004	8.94	0.13	2.87	0.10
5-699	0.353	0.005	0.094	0.003	8.97	0.13	2.39	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-700	0.354	0.005	0.118	0.004	8.99	0.13	3.00	0.10
5-716	0.362	0.005	0.118	0.004	9.19	0.13	3.00	0.10
5-057	0.364	0.005	0.045	0.003	9.25	0.13	1.14	0.08
5-209	0.370	0.005	0.040	0.003	9.40	0.13	1.02	0.08
5-211	0.375	0.005	0.187	0.005	9.53	0.13	4.75	0.13
5-212	0.384	0.005	0.070	0.003	9.75	0.13	1.78	0.08
5-614	0.391	0.005	0.103	0.003	9.93	0.13	2.62	0.08
5-718	0.395	0.005	0.040	0.003	10.03	0.13	1.02	0.08
5-134	0.410	0.005	0.031	0.003	10.41	0.13	0.79	0.08
5-588	0.413	0.005	0.106	0.004	10.49	0.13	2.69	0.10
5-002	0.416	0.005	0.059	0.003	10.57	0.13	1.50	0.08
5-215	0.418	0.005	0.094	0.003	10.62	0.13	2.39	0.08
5-218	0.425	0.005	0.025	0.003	10.80	0.13	0.64	0.08
5-682	0.426	0.005	0.040	0.003	10.82	0.13	1.02	0.08
5-058	0.426	0.005	0.050	0.003	10.82	0.13	1.27	0.08
5-613	0.437	0.005	0.070	0.003	11.10	0.13	1.78	0.08
5-1011	0.447	0.005	0.103	0.003	11.35	0.13	2.62	0.08
5-222	0.455	0.005	0.128	0.004	11.56	0.13	3.25	0.10
5-223	0.458	0.005	0.053	0.003	11.63	0.13	1.35	0.08
5-225	0.469	0.006	0.094	0.003	11.91	0.15	2.39	0.08
5-615	0.469	0.006	0.103	0.003	11.91	0.15	2.62	0.15
5-725	0.470	0.006	0.270	0.006	11.94	0.15	6.86	0.15
5-652	0.473	0.006	0.071	0.003	12.01	0.15	1.80	0.08
5-726	0.484	0.006	0.056	0.003	12.29	0.15	1.42	0.08
5-566	0.489	0.006	0.055	0.003	12.42	0.15	1.40	0.08
5-230	0.500	0.006	0.125	0.004	12.70	0.15	3.18	0.10
5-231	0.501	0.006	0.062	0.003	12.73	0.15	1.57	0.08
5-675	0.508	0.006	0.049	0.003	12.90	0.15	1.24	0.08
5-616	0.516	0.006	0.103	0.003	13.11	0.15	2.62	0.08
5-1014	0.525	0.007	0.071	0.003	13.34	0.18	1.80	0.08
5-135	0.526	0.007	0.031	0.003	13.36	0.18	0.79	0.08
5-590	0.535	0.007	0.106	0.004	13.59	0.18	2.69	0.10
5-001	0.547	0.007	0.051	0.003	13.89	0.18	1.30	0.08
5-162	0.554	0.007	0.070	0.003	14.07	0.18	1.78	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-239	0.570	0.007	0.106	0.004	14.48	0.18	2.69	0.10
5-156	0.575	0.007	0.060	0.003	14.61	0.18	1.52	0.08
5-563	0.583	0.007	0.040	0.003	14.81	0.18	1.02	0.08
5-735	0.583	0.007	0.103	0.003	14.81	0.18	2.62	0.08
5-736	0.590	0.007	0.070	0.003	14.99	0.18	1.78	0.08
5-591	0.594	0.007	0.106	0.004	15.09	0.18	2.69	0.10
5-609	0.600	0.007	0.094	0.003	15.24	0.18	2.39	0.08
5-242	0.600	0.007	0.105	0.004	15.24	0.18	2.67	0.10
5-021	0.603	0.007	0.125	0.004	15.32	0.18	3.18	0.10
5-243	0.604	0.007	0.103	0.003	15.34	0.18	2.62	0.08
5-676	0.610	0.007	0.058	0.003	15.49	0.18	1.47	0.08
5-247	0.623	0.007	0.125	0.004	15.82	0.18	3.18	0.10
5-248	0.625	0.007	0.050	0.003	15.88	0.18	1.27	0.08
5-617	0.625	0.007	0.103	0.003	15.88	0.18	2.62	0.08
5-250	0.627	0.007	0.062	0.003	15.93	0.18	1.57	0.08
5-251	0.631	0.007	0.062	0.003	16.03	0.18	1.57	0.08
5-005	0.640	0.007	0.080	0.003	16.26	0.18	2.03	0.08
5-136	0.643	0.007	0.031	0.003	16.33	0.18	0.79	0.08
5-643	0.650	0.007	0.045	0.003	16.51	0.18	1.14	0.08
5-252	0.652	0.007	0.070	0.003	16.56	0.18	1.78	0.08
5-254	0.660	0.007	0.064	0.003	16.76	0.18	1.63	0.08
5-743	0.660	0.007	0.141	0.004	16.76	0.18	3.58	0.10
5-592	0.665	0.007	0.106	0.004	16.89	0.18	2.69	0.10
5-256	0.707	0.008	0.103	0.003	17.96	0.20	2.62	0.08
5-594	0.720	0.008	0.141	0.004	18.29	0.20	3.58	0.10
5-257	0.722	0.008	0.113	0.004	18.34	0.20	2.87	0.10
5-593	0.724	0.008	0.106	0.004	18.39	0.20	2.69	0.10
5-181	0.725	0.008	0.040	0.003	18.42	0.20	1.02	0.08
5-964	0.744	0.008	0.109	0.004	18.90	0.20	2.77	0.10
5-263	0.750	0.008	0.061	0.003	19.05	0.20	1.55	0.08
5-264	0.752	0.008	0.070	0.003	19.10	0.20	1.78	0.08
5-266	0.766	0.008	0.080	0.003	19.46	0.20	2.03	0.08
5-137	0.775	0.008	0.031	0.003	19.69	0.20	0.79	0.08
5-595	0.779	0.008	0.141	0.004	19.79	0.20	3.58	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-006	0.796	0.008	0.080	0.003	20.22	0.20	2.03	0.08
5-751	0.820	0.009	0.150	0.005	20.83	0.23	3.81	0.13
5-003	0.836	0.009	0.059	0.003	21.23	0.23	1.50	0.08
5-596	0.838	0.009	0.141	0.004	21.29	0.23	3.58	0.10
5-708	0.850	0.009	0.045	0.003	21.59	0.23	1.14	0.08
5-753	0.857	0.009	0.123	0.004	21.77	0.23	3.12	0.10
5-049	0.871	0.009	0.140	0.004	22.12	0.23	3.56	0.10
5-273	0.879	0.009	0.040	0.003	22.33	0.23	1.02	0.08
5-022	0.890	0.009	0.125	0.004	22.61	0.23	3.18	0.10
5-138	0.898	0.009	0.031	0.003	22.81	0.23	0.79	0.08
5-597	0.905	0.009	0.141	0.004	22.99	0.23	3.58	0.10
5-598	0.968	0.010	0.141	0.004	24.59	0.25	3.58	0.10
5-278	0.979	0.010	0.103	0.003	24.87	0.25	2.62	0.08
5-139	0.987	0.010	0.031	0.003	25.07	0.25	0.79	0.08
5-709	1.000	0.010	0.055	0.003	25.40	0.25	1.40	0.08
5-677	1.004	0.010	0.081	0.003	25.50	0.25	2.06	0.08
5-279	1.004	0.010	0.218	0.005	25.50	0.25	5.54	0.13
5-761	1.010	0.010	0.062	0.003	25.65	0.25	1.57	0.08
5-618	1.016	0.010	0.139	0.004	25.81	0.25	3.53	0.10
5-599	1.031	0.010	0.141	0.004	26.19	0.25	3.58	0.10
5-004	1.070	0.010	0.065	0.003	27.18	0.25	1.65	0.08
5-763	1.080	0.010	0.050	0.003	27.43	0.25	1.27	0.08
5-600	1.094	0.010	0.141	0.004	27.79	0.25	3.58	0.10
5-140	1.112	0.010	0.031	0.003	28.24	0.25	0.79	0.08
5-601	1.153	0.012	0.141	0.004	29.29	0.30	3.58	0.10
5-291	1.186	0.012	0.070	0.003	30.12	0.30	1.78	0.08
5-1028	1.190	0.012	0.250	0.006	30.23	0.30	6.35	0.15
5-602	1.212	0.012	0.141	0.004	30.78	0.30	3.58	0.10
5-294	1.213	0.012	0.149	0.004	30.81	0.30	3.78	0.10
5-295	1.225	0.012	0.275	0.006	31.12	0.30	6.99	0.15
5-141	1.226	0.012	0.031	0.003	31.14	0.30	0.79	0.08
5-296	1.229	0.012	0.070	0.003	31.22	0.30	1.78	0.08
5-297	1.230	0.012	0.197	0.005	31.24	0.30	5.00	0.13
5-301	1.259	0.012	0.092	0.003	31.98	0.30	2.34	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-603	1.279	0.012	0.141	0.004	32.49	0.30	3.58	0.10
5-157	1.338	0.012	0.092	0.003	33.99	0.30	2.34	0.08
5-604	1.342	0.012	0.141	0.004	34.09	0.30	3.58	0.10
5-605	1.401	0.014	0.141	0.004	35.59	0.36	3.58	0.10
5-780	1.412	0.014	0.073	0.003	35.86	0.36	1.85	0.08
5-008	1.421	0.014	0.080	0.003	36.09	0.36	2.03	0.08
5-670	1.437	0.014	0.070	0.003	36.40	0.36	1.78	0.08
5-142	1.450	0.014	0.047	0.003	36.83	0.36	1.19	0.08
5-312	1.454	0.014	0.105	0.004	36.93	0.36	2.67	0.10
5-657	1.465	0.014	0.103	0.003	37.21	0.36	2.62	0.08
5-606	1.468	0.014	0.141	0.004	37.29	0.36	3.58	0.10
5-980	1.475	0.014	0.275	0.006	37.47	0.36	6.99	0.15
5-024	1.515	0.015	0.125	0.004	38.48	0.38	3.18	0.10
5-320	1.540	0.015	0.070	0.003	39.12	0.38	1.78	0.08
5-158	1.550	0.015	0.092	0.003	39.37	0.38	2.34	0.08
5-009	1.553	0.015	0.080	0.003	39.45	0.38	2.03	0.08
5-321	1.559	0.015	0.139	0.004	39.60	0.38	3.53	0.10
5-788	1.591	0.015	0.071	0.003	40.41	0.38	1.80	0.08
5-034	1.599	0.015	0.139	0.004	40.61	0.38	3.53	0.10
5-327	1.640	0.015	0.139	0.004	41.66	0.38	3.53	0.10
5-143	1.670	0.015	0.047	0.003	42.42	0.38	1.19	0.08
5-329	1.670	0.015	0.070	0.003	42.42	0.38	1.78	0.08
5-1018	1.671	0.015	0.139	0.004	42.44	0.38	3.53	0.10
5-330	1.674	0.015	0.210	0.005	42.52	0.38	5.33	0.13
5-671	1.680	0.015	0.080	0.003	42.67	0.38	2.03	0.08
5-025	1.765	0.016	0.125	0.004	44.83	0.41	3.18	0.10
5-035	1.786	0.016	0.139	0.004	45.36	0.41	3.53	0.10
5-1023	1.788	0.016	0.070	0.003	45.42	0.41	1.78	0.08
5-335	1.802	0.016	0.062	0.003	45.77	0.41	1.57	0.08
5-794	1.812	0.016	0.070	0.003	46.02	0.41	1.78	0.08
5-1042	1.817	0.016	0.257	0.006	46.15	0.41	6.53	0.15
5-795	1.850	0.016	0.070	0.003	46.99	0.41	1.78	0.08
5-981	1.850	0.016	0.275	0.006	46.99	0.41	6.99	0.15
5-011	1.860	0.016	0.080	0.003	47.24	0.41	2.03	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-337	1.873	0.016	0.062	0.003	47.57	0.41	1.57	0.08
5-1043	1.882	0.017	0.118	0.004	47.80	0.43	3.00	0.10
5-144	1.891	0.017	0.047	0.003	48.03	0.43	1.19	0.08
5-796	1.913	0.017	0.070	0.003	48.59	0.43	1.78	0.08
5-338	1.925	0.017	0.210	0.005	48.90	0.43	5.33	0.13
5-701	1.937	0.017	0.139	0.004	49.20	0.43	3.53	0.10
5-342	1.980	0.017	0.038	0.003	50.29	0.43	0.97	0.08
5-343	2.000	0.018	0.075	0.003	50.80	0.46	1.91	0.08
5-655	2.020	0.018	0.070	0.003	51.31	0.46	1.78	0.08
5-037	2.036	0.018	0.139	0.004	51.71	0.46	3.53	0.10
5-346	2.046	0.018	0.139	0.004	51.97	0.46	3.53	0.10
5-642	2.051	0.018	0.070	0.003	52.10	0.46	1.78	0.08
5-1044	2.060	0.018	0.139	0.004	52.32	0.46	3.53	0.10
5-027	2.140	0.018	0.125	0.004	54.36	0.46	3.18	0.10
5-1046	2.140	0.018	0.315	0.010	54.36	0.46	8.00	0.25
5-145	2.141	0.018	0.047	0.003	54.38	0.46	1.19	0.08
5-347	2.163	0.018	0.062	0.003	54.94	0.46	1.57	0.08
5-348	2.172	0.018	0.070	0.003	55.17	0.46	1.78	0.08
5-800	2.225	0.018	0.275	0.006	56.52	0.46	6.99	0.15
5-1047	2.281	0.020	0.093	0.003	57.94	0.51	2.36	0.08
5-015	2.296	0.020	0.080	0.003	58.32	0.51	2.03	0.08
5-702	2.312	0.020	0.139	0.004	58.72	0.51	3.53	0.10
5-039	2.411	0.020	0.139	0.004	61.24	0.51	3.53	0.10
5-354	2.471	0.020	0.070	0.003	62.76	0.51	1.78	0.08
5-355	2.524	0.020	0.103	0.003	64.11	0.51	2.62	0.08
5-805	2.535	0.020	0.070	0.003	64.39	0.51	1.78	0.08
5-703	2.563	0.020	0.139	0.004	65.10	0.51	3.53	0.10
5-358	2.576	0.020	0.082	0.003	65.43	0.51	2.08	0.08
5-361	2.671	0.022	0.139	0.004	67.84	0.56	3.53	0.10
5-159	2.683	0.022	0.115	0.004	68.15	0.56	2.92	0.10
5-982	2.725	0.022	0.275	0.006	69.22	0.56	6.99	0.15
5-807	2.782	0.022	0.103	0.003	70.66	0.56	2.62	0.08
5-704	2.812	0.022	0.139	0.004	71.42	0.56	3.53	0.10
5-042	2.846	0.022	0.139	0.004	72.29	0.56	3.53	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-697	2.878	0.022	0.080	0.003	73.10	0.56	2.03	0.08
5-367	2.924	0.022	0.103	0.003	74.27	0.56	2.62	0.08
5-705	2.937	0.022	0.139	0.004	74.60	0.56	3.53	0.10
5-983	2.975	0.024	0.275	0.006	75.57	0.61	6.99	0.15
5-368	3.020	0.024	0.103	0.003	76.71	0.61	2.62	0.08
5-044	3.036	0.024	0.139	0.004	77.11	0.61	3.53	0.10
5-369	3.037	0.024	0.103	0.003	77.14	0.61	2.62	0.08
5-810	3.041	0.024	0.062	0.003	77.24	0.61	1.57	0.08
5-811	3.060	0.024	0.112	0.004	77.72	0.61	2.84	0.10
5-1052	3.080	0.024	0.111	0.004	78.23	0.61	2.82	0.10
5-374	3.112	0.024	0.070	0.003	79.04	0.61	1.78	0.08
5-557	3.125	0.024	0.103	0.003	79.38	0.61	2.62	0.08
5-813	3.130	0.024	0.100	0.003	79.50	0.61	2.54	0.08
5-815	3.156	0.024	0.060	0.003	80.16	0.61	1.52	0.08
5-045	3.161	0.024	0.139	0.004	80.29	0.61	3.53	0.10
5-816	3.162	0.024	0.070	0.003	80.31	0.61	1.78	0.08
5-819	3.210	0.024	0.103	0.003	81.53	0.61	2.62	0.08
5-984	3.225	0.024	0.275	0.006	81.92	0.61	6.99	0.15
5-821	3.300	0.026	0.070	0.003	83.82	0.66	1.78	0.08
5-825	3.350	0.026	0.275	0.006	85.09	0.66	6.99	0.15
5-1053	3.354	0.026	0.070	0.003	85.19	0.66	1.78	0.08
5-380	3.363	0.026	0.155	0.005	85.42	0.66	3.94	0.13
5-979	3.443	0.026	0.275	0.006	87.45	0.66	6.99	0.15
5-381	3.475	0.026	0.275	0.006	88.27	0.66	6.99	0.15
5-985	3.600	0.026	0.275	0.006	91.44	0.66	6.99	0.15
5-031	3.640	0.028	0.125	0.004	92.46	0.71	3.18	0.10
5-828	3.661	0.028	0.090	0.003	92.99	0.71	2.29	0.08
5-986	3.725	0.028	0.275	0.006	94.62	0.71	6.99	0.15
5-390	3.957	0.028	0.147	0.004	100.51	0.71	3.73	0.10
5-987	3.975	0.028	0.275	0.006	100.97	0.71	6.99	0.15
5-831	4.020	0.030	0.147	0.004	102.11	0.76	3.73	0.10
5-1054	4.080	0.030	0.209	0.005	103.63	0.76	5.31	0.13
5-833	4.085	0.030	0.103	0.003	103.76	0.76	2.62	0.08
5-394	4.096	0.030	0.070	0.003	104.04	0.76	1.78	0.08

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-988	4.100	0.030	0.275	0.006	104.14	0.76	6.99	0.15
5-395	4.117	0.030	0.070	0.003	104.57	0.76	1.78	0.08
5-396	4.171	0.030	0.070	0.003	105.94	0.76	1.78	0.08
5-989	4.225	0.030	0.275	0.006	107.32	0.76	6.99	0.15
5-060	4.390	0.030	0.044	0.003	111.51	0.76	1.12	0.08
5-836	4.427	0.030	0.140	0.004	112.45	0.76	3.56	0.10
5-401	4.531	0.030	0.070	0.003	115.09	0.76	1.78	0.08
5-1060	4.609	0.033	0.150	0.004	117.07	0.84	3.81	0.10
5-840	4.630	0.033	0.139	0.004	117.60	0.84	3.53	0.10
5-842	4.664	0.035	0.122	0.004	118.47	0.89	3.10	0.10
5-844	4.682	0.035	0.140	0.004	118.92	0.89	3.56	0.10
5-402	4.750	0.035	0.188	0.005	120.65	0.89	4.78	0.13
5-848	4.875	0.035	0.060	0.003	123.83	0.89	1.52	0.08
5-850	4.925	0.035	0.260	0.006	125.10	0.89	6.60	0.15
5-403	4.930	0.035	0.103	0.003	125.22	0.89	2.62	0.08
5-851	4.984	0.035	0.147	0.004	126.59	0.89	3.73	0.10
5-852	5.030	0.035	0.210	0.005	127.76	0.89	5.33	0.13
5-853	5.057	0.035	0.233	0.006	128.45	0.89	5.92	0.15
5-559	5.236	0.035	0.214	0.005	133.00	0.89	5.44	0.13
5-407	5.249	0.035	0.123	0.004	133.32	0.89	3.12	0.10
5-408	5.265	0.035	0.139	0.004	133.73	0.89	3.53	0.10
5-410	5.340	0.035	0.070	0.003	135.64	0.89	1.78	0.08
5-412	5.414	0.035	0.103	0.003	137.52	0.89	2.62	0.08
5-855	5.444	0.035	0.124	0.004	138.28	0.89	3.15	0.10
5-856	5.465	0.035	0.070	0.003	138.81	0.89	1.78	0.08
5-413	5.475	0.035	0.164	0.005	139.07	0.89	4.17	0.13
5-414	5.487	0.035	0.062	0.003	139.37	0.89	1.57	0.08
5-858	5.500	0.035	0.168	0.005	139.70	0.89	4.27	0.13
5-416	5.553	0.035	0.120	0.004	141.05	0.89	3.05	0.10
5-062	5.604	0.040	0.070	0.003	142.34	1.02	1.78	0.08
5-417	5.616	0.040	0.127	0.004	142.65	1.02	3.23	0.10
5-063	5.750	0.040	0.070	0.003	146.05	1.02	1.78	0.08
5-862	5.789	0.040	0.252	0.006	147.04	1.02	6.40	0.15
5-863	5.815	0.040	0.140	0.004	147.70	1.02	3.56	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-421	5.882	0.040	0.110	0.004	149.40	1.02	2.79	0.10
5-573	5.968	0.040	0.070	0.003	151.59	1.02	1.78	0.08
5-567	5.985	0.040	0.070	0.003	152.02	1.02	1.78	0.08
5-1041	6.023	0.040	0.103	0.003	152.98	1.02	2.62	0.08
5-064	6.350	0.040	0.275	0.006	161.29	1.02	6.99	0.15
5-428	6.361	0.040	0.108	0.004	161.57	1.02	2.74	0.10
5-430	6.482	0.040	0.170	0.005	164.64	1.02	4.32	0.13
5-666	6.520	0.040	0.070	0.003	165.61	1.02	1.78	0.08
5-869	6.609	0.045	0.139	0.004	167.87	1.14	3.53	0.10
5-434	7.108	0.045	0.275	0.006	180.54	1.14	6.99	0.15
5-696	7.110	0.045	0.103	0.003	180.59	1.14	2.62	0.08
5-691	7.139	0.045	0.072	0.003	181.33	1.14	1.83	0.08
5-873	7.230	0.045	0.070	0.003	183.64	1.14	1.78	0.08
5-975	7.425	0.045	0.260	0.006	188.60	1.14	6.60	0.15
5-875	7.580	0.050	0.210	0.005	192.53	1.27	5.33	0.13
5-438	7.613	0.050	0.070	0.003	193.37	1.27	1.78	0.08
5-439	7.640	0.050	0.125	0.004	194.06	1.27	3.18	0.10
5-876	7.674	0.050	0.210	0.005	194.92	1.27	5.33	0.13
5-877	7.802	0.050	0.104	0.003	198.17	1.27	2.64	0.08
5-442	8.015	0.050	0.187	0.005	203.58	1.27	4.75	0.13
5-445	8.277	0.050	0.275	0.006	210.24	1.27	6.99	0.15
5-880	8.350	0.050	0.275	0.006	212.09	1.27	6.99	0.15
5-575	8.875	0.055	0.070	0.003	225.42	1.40	1.78	0.08
5-450	9.071	0.055	0.062	0.003	230.40	1.40	1.57	0.08
5-882	9.162	0.055	0.210	0.005	232.72	1.40	5.33	0.13
5-635	9.370	0.055	0.103	0.003	238.00	1.40	2.62	0.08
5-883	9.820	0.060	0.103	0.003	249.43	1.52	2.62	0.08
5-884	9.984	0.060	0.070	0.003	253.59	1.52	1.78	0.08
5-885	10.171	0.060	0.139	0.004	258.34	1.52	3.53	0.10
5-886	10.178	0.060	0.112	0.004	258.52	1.52	2.84	0.10
5-457	10.232	0.060	0.139	0.004	259.89	1.52	3.53	0.10
5-458	10.340	0.060	0.139	0.004	262.64	1.52	3.53	0.10
5-887	10.343	0.060	0.275	0.006	262.71	1.52	6.99	0.15
5-165	10.359	0.060	0.139	0.004	263.12	1.52	3.53	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-889	10.372	0.060	0.104	0.003	263.45	1.52	2.64	0.08
5-976	10.425	0.060	0.260	0.006	264.80	1.52	6.60	0.15
5-890	10.606	0.060	0.103	0.003	269.39	1.52	2.62	0.08
5-623	10.630	0.060	0.139	0.004	270.00	1.52	3.53	0.10
5-464	10.656	0.060	0.070	0.003	270.66	1.52	1.78	0.08
5-891	10.734	0.060	0.139	0.004	272.64	1.52	3.53	0.10
5-466	10.749	0.060	0.210	0.005	273.03	1.52	5.33	0.10
5-469	10.883	0.060	0.103	0.003	276.43	1.52	2.62	0.08
5-471	10.995	0.060	0.149	0.004	279.27	1.52	3.78	0.10
5-894	10.996	0.060	0.103	0.003	279.30	1.52	2.62	0.10
5-474	11.331	0.060	0.275	0.006	287.81	1.52	6.99	0.15
5-898	11.335	0.060	0.103	0.003	287.91	1.52	2.62	0.08
5-476	11.562	0.070	0.275	0.006	293.67	1.78	6.99	0.15
5-069	11.750	0.070	0.139	0.004	298.45	1.78	3.53	0.10
5-900	12.000	0.070	0.187	0.005	304.80	1.78	4.75	0.13
5-480	12.017	0.070	0.285	0.006	305.23	1.78	7.24	0.15
5-482	12.109	0.070	0.139	0.004	307.57	1.78	3.53	0.10
5-164	12.160	0.070	0.210	0.005	308.86	1.78	5.33	0.13
5-901	12.234	0.070	0.139	0.004	310.74	1.78	3.53	0.10
5-485	12.260	0.070	0.139	0.004	311.40	1.78	3.53	0.10
5-486	12.299	0.070	0.137	0.004	312.39	1.78	3.48	0.10
5-902	12.360	0.070	0.210	0.005	313.94	1.78	5.33	0.13
5-487	12.380	0.070	0.139	0.004	314.45	1.78	3.53	0.10
5-488	12.463	0.070	0.103	0.003	316.56	1.78	2.62	0.08
5-569	12.475	0.070	0.139	0.004	316.87	1.78	3.53	0.10
5-905	12.623	0.070	0.140	0.004	320.62	1.78	3.56	0.10
5-906	12.705	0.070	0.070	0.003	322.71	1.78	1.78	0.08
5-907	12.725	0.070	0.275	0.006	323.22	1.78	6.99	0.15
5-908	12.840	0.070	0.139	0.004	326.14	1.78	3.53	0.10
5-611	12.900	0.070	0.159	0.005	327.66	1.78	4.04	0.13
5-619	12.915	0.070	0.139	0.004	328.04	1.78	3.53	0.10
5-492	13.248	0.070	0.139	0.004	336.50	1.78	3.53	0.10
5-070	13.270	0.070	0.139	0.004	337.06	1.78	3.53	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-910	13.375	0.070	0.210	0.005	339.73	1.78	5.33	0.13
5-071	13.410	0.070	0.139	0.004	340.61	1.78	3.53	0.10
5-072	13.460	0.070	0.210	0.005	341.88	1.78	5.33	0.13
5-493	13.490	0.070	0.139	0.004	342.65	1.78	3.53	0.10
5-494	13.541	0.070	0.210	0.005	343.94	1.78	5.33	0.13
5-495	13.601	0.070	0.139	0.004	345.47	1.78	3.53	0.10
5-496	13.616	0.070	0.141	0.004	345.85	1.78	3.58	0.10
5-498	13.650	0.070	0.139	0.004	346.71	1.78	3.53	0.10
5-500	13.718	0.070	0.275	0.006	348.44	1.78	6.99	0.15
5-912	13.734	0.070	0.139	0.004	348.84	1.78	3.53	0.10
5-1097	13.750	0.070	0.103	0.003	349.25	1.78	2.62	0.08
5-073	13.820	0.080	0.139	0.004	351.03	2.03	3.53	0.10
5-502	14.088	0.080	0.210	0.005	357.84	2.03	5.33	0.13
5-624	14.111	0.080	0.139	0.004	358.42	2.03	3.53	0.10
5-074	14.234	0.080	0.139	0.004	361.54	2.03	3.53	0.10
5-916	14.369	0.080	0.278	0.006	364.97	2.03	7.06	0.15
5-504	14.430	0.080	0.139	0.004	366.52	2.03	3.53	0.10
5-626	14.470	0.080	0.087	0.003	367.54	2.03	2.21	0.08
5-505	14.470	0.080	0.139	0.004	367.54	2.03	3.53	0.10
5-506	14.570	0.080	0.141	0.004	370.08	2.03	3.58	0.10
5-507	14.600	0.080	0.210	0.005	370.84	2.03	5.33	0.13
5-508	14.674	0.080	0.139	0.004	372.72	2.03	3.53	0.10
5-166	14.722	0.080	0.139	0.004	373.94	2.03	3.53	0.10
5-920	14.780	0.080	0.175	0.005	375.41	2.03	4.45	0.13
5-921	14.795	0.080	0.071	0.003	375.79	2.03	1.80	0.08
5-922	14.990	0.080	0.104	0.003	380.75	2.03	2.64	0.08
5-512	15.171	0.080	0.139	0.004	385.34	2.03	3.53	0.10
5-076	15.260	0.080	0.210	0.005	387.60	2.03	5.33	0.13
5-077	15.300	0.080	0.139	0.004	388.62	2.03	3.53	0.10
5-924	15.410	0.080	0.210	0.005	391.41	2.03	5.33	0.13
5-925	15.465	0.080	0.188	0.005	392.81	2.03	4.78	0.13
5-079	15.540	0.080	0.139	0.004	394.72	2.03	3.53	0.10
5-515	15.548	0.080	0.210	0.005	394.92	2.03	5.33	0.13
5-516	15.740	0.080	0.139	0.004	399.80	2.03	3.53	0.10

5-XXX Sizes

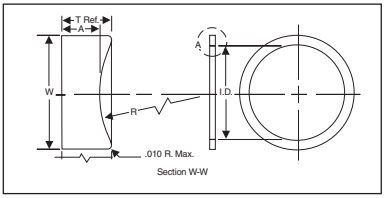
Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-517	15.750	0.080	0.275	0.006	400.05	2.03	6.99	0.15
5-518	16.031	0.080	0.256	0.006	407.19	2.03	6.50	0.15
5-571	16.234	0.090	0.139	0.004	412.34	2.29	3.53	0.10
5-930	16.285	0.090	0.250	0.006	413.64	2.29	6.35	0.15
5-520	16.435	0.090	0.139	0.004	417.45	2.29	3.53	0.10
5-522	16.507	0.090	0.225	0.006	419.28	2.29	5.72	0.15
5-080	16.575	0.090	0.187	0.005	421.01	2.29	4.75	0.13
5-524	16.640	0.090	0.210	0.005	422.66	2.29	5.33	0.13
5-622	16.750	0.090	0.275	0.006	425.45	2.29	6.99	0.15
5-525	16.765	0.090	0.125	0.004	425.83	2.29	3.18	0.10
5-935	17.100	0.090	0.275	0.006	434.34	2.29	6.99	0.15
5-526	17.250	0.090	0.187	0.005	438.15	2.29	4.75	0.13
5-082	17.250	0.090	0.240	0.006	438.15	2.29	6.10	0.15
5-528	17.268	0.090	0.242	0.006	438.61	2.29	6.15	0.15
5-937	17.390	0.090	0.139	0.004	441.71	2.29	3.53	0.10
5-529	17.455	0.090	0.139	0.004	443.36	2.29	3.53	0.10
5-1100	17.500	0.090	0.139	0.004	444.50	2.29	3.53	0.10
5-939	17.870	0.090	0.210	0.005	453.90	2.29	5.33	0.13
5-083	17.910	0.090	0.139	0.004	454.91	2.29	3.53	0.10
5-084	18.062	0.090	0.281	0.006	458.77	2.29	7.16	0.15
5-533	18.169	0.090	0.096	0.003	461.49	2.29	2.44	0.08
5-1102	18.265	0.090	0.210	0.005	463.93	2.29	5.33	0.13
5-085	18.350	0.090	0.210	0.005	466.09	2.29	5.33	0.13
5-534	18.405	0.090	0.210	0.005	467.49	2.29	5.33	0.13
5-1104	18.500	0.090	0.188	0.005	469.90	2.29	4.78	0.13
5-1105	18.635	0.090	0.139	0.004	473.33	2.29	3.53	0.10
5-943	18.870	0.100	0.275	0.006	479.30	2.54	6.99	0.15
5-944	18.880	0.100	0.139	0.004	479.55	2.54	3.53	0.10
5-947	19.380	0.100	0.139	0.004	492.25	2.54	3.53	0.10
5-540	19.437	0.100	0.375	0.007	493.70	2.54	9.52	0.18
5-541	19.500	0.100	0.250	0.006	495.30	2.54	6.35	0.15
5-086	19.580	0.100	0.210	0.005	497.33	2.54	5.33	0.13
5-948	19.725	0.100	0.210	0.005	501.02	2.54	5.33	0.13
5-950	19.960	0.100	0.139	0.004	506.98	2.54	3.53	0.10

5-XXX Sizes

Parker No.	ID In.	Tol. ± In.	Width In.	Tol. ± In.	ID mm	Tol. ± mm	Width mm	Tol. ± mm
5-1019	20.180	0.100	0.125	0.004	512.57	2.54	3.18	0.10
5-1010	20.609	0.100	0.139	0.004	523.47	2.54	3.53	0.10
5-088	21.180	0.100	0.147	0.004	537.97	2.54	3.73	0.10
5-547	21.564	0.100	0.139	0.004	547.73	2.54	3.53	0.10
5-953	22.360	0.100	0.132	0.004	567.94	2.54	3.35	0.10
5-089	23.406	0.120	0.281	0.006	594.51	3.05	7.14	0.15
5-551	23.540	0.120	0.139	0.004	597.92	3.05	3.53	0.10
5-090	23.576	0.120	0.139	0.004	598.83	3.05	3.53	0.10
5-552	23.612	0.120	0.275	0.006	599.74	3.05	6.99	0.15
5-167	23.780	0.120	0.375	0.007	604.01	3.05	9.52	0.18
5-168	24.875	0.120	0.250	0.006	631.82	3.05	6.35	0.15
5-169	25.153	0.120	0.214	0.005	638.89	3.05	5.44	0.13
5-091	25.474	0.120	0.139	0.004	647.04	3.05	3.53	0.10
5-170	25.500	0.120	0.275	0.006	647.70	3.05	6.99	0.15
5-171	26.125	0.120	0.275	0.006	663.58	3.05	6.99	0.15
5-173	26.188	0.120	0.210	0.005	665.18	3.05	5.33	0.13
5-631	26.408	0.120	0.139	0.004	670.76	3.05	3.53	0.10
5-172	27.485	0.120	0.275	0.006	698.12	3.05	6.99	0.15
5-092	27.625	0.120	0.275	0.006	701.68	3.05	6.99	0.15
5-955	28.801	0.140	0.275	0.006	731.55	3.56	6.99	0.15

Parker Series 8-XXX O-Ring Compounds Sizes

Developed primarily for service in petroleum based hydraulic fluids at -40°C to 121°C (-40°F to 250°F), Parker's standard Parbak N0300-90 and N1444-90 compounds provide the maximum benefits in back-up ring service. Compounds for use in other fluids and for temperatures up to 204°C (400°F) are available on request. Parbaks will stretch up to 50%, and are quickly and easily installed. Advantages of the contour design are obtained regardless of how Parbaks are installed — they may be installed with the concave face in either direction, toward or away from the o-ring.



8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	T (Ref.)	A In.	Tol. ±	W In.	Tol. ±
004	.096	.005	.087	.049	.045	.003	.053	.003
005	.127							
006	.140							
007	.171							
008	.202							
009	.234							
010	.265							
011	.327							
012	.390							
013	.455	.005						
014	.518	.007						
015	.580	.009						
016	.643							
017	.705							
018	.768							
019	.830							
020	.893							
021	.955	.009						
022	1.018	.010						
023	1.080	.010						
024	1.143	.010						

Notes:
1. Parbak sizes are designed to correspond with the Parker 2-xxx, 3-xxx and AS568B series o-ring with which they are used.
2. Complete call-out consists of the digit 8, the dash number for the size wanted and the rubber material.
   Example: N0300 8-009.

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
025	1.205	.011						
026	1.268	.011						
027	1.330	.011						
028	1.393	.013						
029	1.518	.013						
030	1.643	.013						
031	1.768	.015						
032	1.893	.015						
033	2.018	.018						
034	2.143							
035	2.268							
036	2.393							
037	2.518	.018						
038	2.643	.200						
039	2.768	.200						
040	2.893	.200	.087	.049	.045	.003	.053	.003
041	3.018	.240	.087	.049	.045	.003	.053	.003
042	3.268	.024						
043	3.518	.024						
044	3.768	.027						
045	4.018	.027						
046	4.268	.030						
047	4.518	.030						
048	4.768	.030						
049	5.018	.037						
050	5.268	.037	.087	.049			.053	
102	.077	.005	.129	.053			.086	
103	.109							
104	.140							
105	.171							
106	.202							
107	.234							
108	.265							
109	.327							
110	.390							
111	.452							
112	.515	.005						
113	.577	.007						
114	.640	.009						
115	.702	.009						

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
116	.765	.009						
117	.831	.100						
118	.893							
119	.956							
120	1.018							
121	1.081							
122	1.143	.010						
123	1.206	.012						
124	1.268							
125	1.331							
126	1.393							
127	1.456							
128	1.518	.012	.129	.053	.045	.003	.086	.003
129	1.581	.015	.129	.053	.045	.003	.086	.003
130	1.643							
131	1.706							
132	1.768							
133	1.831							
134	1.893	.015						
135	1.956	.017						
136	2.018							
137	2.081							
138	2.143							
139	2.206							
140	2.268	.017						
141	2.331	.020						
142	2.393							
143	2.456							
144	2.518							
145	2.581							
146	2.643	.020						
147	2.706	.022						
148	2.768	.022						
149	2.831	.022						
150	2.893	.022						
151	3.018	.024						
152	3.268	.024						
153	3.518	.024						
154	3.768	.028						
155	4.018	.028						
156	4.268	.030						

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
157	4.518	.030						
158	4.768	.030						
159	5.018	.035						
160	5.268	.035						
161	5.518	.035						
162	5.768	.035						
163	6.018	.035						
164	6.268	.040						
165	6.518	.040						
166	6.768	.040						
167	7.018	.040						
168	7.268	.045						
169	7.518	.045						
170	7.768	.045						
171	8.018	.045						
172	8.268	.050						
173	8.518	.050						
174	8.768	.050						
175	9.018	.050						
176	9.268	.055						
177	9.518	.055						
178	9.768	.055	.129	.053	.045		.086	.003
201	.202	.005	.174	.050	.040		.118	.004
202	.265							
203	.327							
204	.390							
205	.455	.005	.174	.050	.040	.003	.118	.004
206	.518	.005	.174	.050	.040	.003	.118	.004
207	.580	.007						
208	.643	.009						
209	.705	.009						
210	.766	.010						
211	.828							
212	.891							
213	.953							
214	1.016	.010						
215	1.078	.010						
216	1.141	.012						
217	1.203							
218	1.266							

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8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
219	1.334	.012	↑	↑	↑	↑	↑	↑
220	1.397	.012						
221	1.459	.012						
222	1.522	.015						
223	1.647	.015						
224	1.772	.015						
225	1.897	.018						
226	2.022	.018						
227	2.147	.018						
228	2.272	.020						
229	2.397	.020						
230	2.522	.020						
231	2.631	.020						
232	2.756	.024						
233	2.881	↕						
234	3.006							
235	3.131							
236	3.256							
237	3.381							
238	3.506	.024						
239	3.631	.028						
240	3.756	↕						
241	3.881							
242	4.006							
243	4.131	.028						
244	4.256	.030						
245	4.381	↕						
246	4.506							
247	4.631							
248	4.768	.030						
249	4.893	.035						
250	5.018	↑						
251	5.143							
252	5.268							
253	5.393							
254	5.518							
255	5.643							
256	5.768							
257	5.893	↓						
258	6.018	.035	↓	↓	↓	↓	↓	↓
259	6.268	.040						

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
260	6.518	.040	.174	.050	.040	.003	.118	.004
261	6.768	.040	.174	.050	.040	.003	.118	.004
262	7.018	.040	.174	.050	.040	.003	.118	.004
263	7.268	.045	↑	↑	↑	↑	↑	↑
264	7.518	.045	↑	↑	↑	↑	↑	↑
265	7.768	.045	↑	↑	↑	↑	↑	↑
266	8.018	.045	↑	↑	↑	↑	↑	↑
267	8.268	.050	↑	↑	↑	↑	↑	↑
268	8.518	.050	↑	↑	↑	↑	↑	↑
269	8.768	.050	↑	↑	↑	↑	↑	↑
270	9.018	.050	↑	↑	↑	↑	↑	↑
271	9.268	.055	↑	↑	↑	↑	↑	↑
272	9.518	.055	↑	↑	↑	↑	↑	↑
273	9.768	.055	↑	↑	↑	↑	↑	↑
274	10.018	.055	↑	↑	↑	↑	↑	↑
275	10.518	.055	↑	↑	↑	↑	↑	↑
276	11.018	.065	↑	↑	↑	↑	↑	↑
277	11.518	↑	↑	↑	↑	↑	↑	↑
278	12.018	↑	↑	↑	↑	↑	↑	↑
279	13.018	↑	↑	↑	↑	↑	↑	↑
280	14.018	↑	↑	↑	↑	↑	↑	↑
281	15.018	.065	↓	↓	↓	↓	↓	↓
282	15.989	.075	↓	↓	↓	↓	↓	↓
283	16.989	.080	↓	↓	↓	↓	↓	↓
284	17.989	.085	.174	.050	.040	.003	.118	.004
309	.450	.005	.262	.076	.060	.004	.183	.005
310	.513	.005	↑	↑	↑	↑	↑	↑
311	.575	.007	↑	↑	↑	↑	↑	↑
312	.638	.009	↑	↑	↑	↑	↑	↑
313	.700	.009	↑	↑	↑	↑	↑	↑
314	.763	.010	↑	↑	↑	↑	↑	↑
315	.825	↑	↑	↑	↑	↑	↑	↑
316	.888	↑	↑	↑	↑	↑	↑	↑
317	.950	↑	↑	↑	↑	↑	↑	↑
318	1.013	↑	↑	↑	↑	↑	↑	↑
319	1.075	.010	↑	↑	↑	↑	↑	↑
320	1.138	.012	↑	↑	↑	↑	↑	↑
321	1.200	.012	↑	↑	↑	↑	↑	↑
322	1.263	.012	↑	↑	↑	↑	↑	↑
323	1.316	.012	↓	↓	↓	↓	↓	↓

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8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
324	1.388	.012						
325	1.513	.015						
326	1.638	.015						
327	1.763	.015						
328	1.888	.015						
329	2.013	.018						
330	2.138	.018						
331	2.268	.018						
332	2.393	.018						
333	2.518	.020						
334	2.643	.020						
335	2.768	.020						
336	2.893	.020						
337	3.018	.024						
338	3.143	.024						
339	3.273	.024						
340	3.398	.024	.262	.076	.060	.004	.183	.005
341	3.523	.024	.262	.076	.060	.004	.183	.005
342	3.648	.028						
343	3.773							
344	3.898							
345	4.028							
346	4.153	.028						
347	4.278	.030						
348	4.403							
349	4.528							
350	4.653							
351	4.778							
352	4.903	.030						
353	5.028	.037						
354	5.153	.037						
355	5.278	.037						
356	5.403	.037						
357	5.528							
358	5.653							
359	5.778							
360	5.903							
361	6.028	.037						
362	6.278	.040						
363	6.528	.040						
364	6.778	.040						

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
365	7.028	.040						
366	7.278	.045						
367	7.528	.045						
368	7.778	.045						
369	8.028	.045						
370	8.278	.050						
371	8.528	.050						
372	8.778	.050						
373	9.028	.050						
374	9.278	.055						
375	9.528	.055						
376	9.778	.055						
377	10.028	.055						
378	10.528	.060						
379	11.028	.060						
380	11.528	.065						
381	12.028	.065						
382	13.028	.065						
383	14.028	.070						
384	15.028	.070						
385	16.008	.075						
386	17.008	.080						
387	18.008	.085						
388	19.006	.090						
389	20.006	.095						
390	21.006	.095						
391	22.006	.100						
392	22.993	.105						
393	23.993	.110						
394	24.993	.115						
395	25.993	.120	.262	.076	.060	.004	.183	.005
425	4.551	.033	.344	.117	.096	.005	.236	.006
426	4.676	.033						
427	4.801	.033						
428	4.926	.033						
429	5.051	.037						
430	5.176							
431	5.301							
432	5.426							
433	5.551							

8-XXX Sizes

Parker No.	ID In.	Tol. ±	R ±.010	Tol. Ref.	A In.	Tol. ±	Width In.	Tol. ±
434	5.676	.037						
435	5.801	.037						
436	5.926	.037						
437	6.051	.037						
438	6.274	.040						
439	6.524	.040						
440	6.774	.040						
441	7.024	.040						
442	7.274	.045						
443	7.524	.045						
444	7.774	.045						
445	8.024	.045						
446	8.524	.055						
447	9.024	.055						
448	9.524	.055						
449	10.024	.055						
450	10.524	.060	.344	.117	.096	.005	.236	.006
451	11.024	.060	.344	.117	.096	.005	.236	.006
452	11.524							
453	12.024							
454	12.524							
455	13.024	.060						
456	13.524	.070						
457	14.024							
458	14.524							
459	15.024							
460	15.524	.070						
461	16.004	.075						
462	16.504	.075						
463	17.004	.080						
464	17.504	.085						
465	18.004	.085						
466	18.504	.085						
467	19.004	.090						
468	19.504	.090						
469	20.004	.095						
470	21.004	.095						
471	22.004	.100						
472	23.004	.105						
473	24.004	.110						
474	25.004	.115						
475	26.004	.120	.344	.117	.096	.005	.236	.006

General Notes

General Notes

Serving Industry Worldwide

Around the corner or around the globe, Parker's O-Ring Division is there to provide engineered solutions to tough sealing problems.

The division's North American headquarters, located in Lexington KY, is the hub of an established worldwide network of 12 o-ring manufacturing locations and over 200 distributor and service center locations in nine countries.

This network - and the global sales and engineering support it provides - means that customers can always get quality products when and where they need them. It also means that sound advice from Parker sealing experts is never far away.

Parker O-Ring Division's manufacturing facilities span four continents and nine countries. Some of these facilities include:

Sao Paulo (Brazil)

Orillia, ONT (Canada)

Shanghai (China)

Pleidelsheim (Germany)

Adro (Italy)

Matamoros (Mexico)

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