

O-Ring Guide

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



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Parker's safety programme

Warning - user responsibility

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalogue and in any materials provided by Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and responsibly foreseeable uses of the components or systems.

Range of application

Our seals may only be used within the application parameters stated in our documents as regards compatibility with contact media, pressures, temperatures and time of storage. Application or use outside of the specified application parameters as well as the selection of different compounds by mistake may result in damage to life, the environment and/or equipment and facilities. The information contained in our publications is based on know-how developed over decades of experience in the manufacturing and application of seals. Despite this experience, unknown factors arising out of the practical application of seals may considerably affect the overall applicability of this information in such a way that the recommendations provided herein are not to be considered generally binding.

The data for operating pressure, operating temperature, and surface speed stated in the columns represent maximum values and are interrelated. Under extreme working conditions it is recommended not to use all maximum values simultaneously.

For special requirements (pressure, temperature, speed, etc.) please contact our consultancy service, so that suitable materials and/or designs can be recommended.

Compatibility of seals and operating media / cleaning agents

Due to the great diversity of operational parameters affecting fluidic devices and their impact on seals, it is absolutely imperative that manufacturers of these devices approve seals for functional and operational suitability under field conditions.

Furthermore, in view of the consistent increase of newly available media used as hydraulic oils, lubricants, and cleaning agents, special attention is invited to the aspect of compatibility with sealing elastomers currently in use.

Additives contained in base media in order to enhance certain functional characteristics may affect compatibility characteristics of sealing materials.

For this reason, it is imperative that any product equipped with our seals be



tested for compatibility with operational media or cleaning agents approved or specified by you either at your plant or by means of field tests prior to any field use

We kindly ask you to comply with this notice since, as a manufacturer of seals, we are not in a position, as a matter of principle, to perform simulations of any and all conditions present in the final application nor of knowing the composition of the operational media and cleaning agents used.

Design modifications

We reserve the right to make design modifications without prior notification.

Prototypes and samples

Prototypes and samples are produced from experimental moulds. The subsequent series production may differ in terms of production techniques from the prototype production unless specific agreement to the contrary was reached beforehand.

Delivery and services

The delivery guarantee (availability of moulds) for individual dimensions of our range of products is limited to a period of 7 years.

Damaged moulds, including standard items, can only be replaced in case of sufficient demand. Most of the dimensions stated in this catalogue are normally (but not as a matter of course) available ex stock.

For the production of smaller quantities, special compounds, and in case of special production procedures, we reserve the right of charging a prorated share of set-up costs.

All deliveries and services are subject to our terms.

Quality systems

Our manufacturing sites are certified according to ISO 9001 and/or ISO/TS 16949

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Validity

This edition supersedes all prior documents.



Sealing technology by Parker-Prädifa

The Engineered Materials Group of the Parker Hannifin Corporation is a world-wide leader in the development, production and sale of sealing systems, vibration dampers, EMI shielding systems and thermally conductive materials.

Quality assurance

In the O-ring division's world-class facilities, skilled Parker technicians manufacture O-rings to exacting standards. 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 are maintained to ensure superior product performance and process repeatability.

Research and development

Based on decades of experience in a wide range of markets Parker develops tailored sealing solutions for virtually any application. Parker's sealing experts can draw on an extensive network of R+D laboratories around the globe. State-of-the-art materials, high-end manufacturing technology and designs that are perfectly tailored to the specific application result in products and solutions that have one aim in mind: the full satisfaction of our customers and partners.

Computer simulation

Parker-Prädifa uses the Finite Elements Method to develop and optimise sealing systems. Particularly elastomer materials with their non-linear properties

cannot be described strictly by using standard software. Therefore, Parker-Prädifa has developed proprietary mathematical models to describe the complex material properties and special measuring methods to capture the relevant material parameters.

Computer simulation allows experts to detect weak areas as early as in the concept phase and

to optimise materials or geometries. This saves development time and costs.



Literature

The Parker O-Ring Handbook has been a standard reference work used by seal designers for decades. It contains comprehensive information about the properties of the most important sealing elastomers, typical O-ring application examples, examples of statically acting seal designs plus descriptions of conditions that may lead to O-Ring failure. In addition, the handbook contains an overview of international dimensions and standards as well as media compatibility data for fluids, gases and solids.



Materials

Tailored materials require tailored compounding processes. Therefore, Parker produces its rubber mixtures and polymerises its thermoplastic materials

in-house. The portfolio of materials developed and produced by Parker ranges from compounds for extremely low temperatures down to -60 °C (silicones) to very high temperatures up to +320 °C (Parofluor®). Parker offers the appropriate compound for the specific application requirements including excellent resistance against aggressive chemicals. With excellent extrusion and abrasion resistance Parker's pro-



prietary polyurethane line is suitable for an extremely extensive application range and continually new uses.

Product lines

Parker manufactures O-rings and special moulded parts for automotive engineering, the chemical and bio-chemical industries, fluid power, refrigeration and air conditioning technology, the petroleum sector, aerospace, the semiconductor industry and many other industrial sectors.



O-rings

O-rings are manufactured according to metric and imperial international standards such as AS-568B, DIN ISO 3601 and JIS. Custom sizes of almost any dimension are possible such as miniature O-rings and special O-rings with large dimensions.

O-ring kits

The handy carrying case with O-rings is ideally suited for repairs, assembly jobs and workshops, and finally puts an end to the search for the right O-ring.

Parker offers it in various versions: with O-rings in selected imperial and metric standard dimensions and appropriate materials or with customised content. Compact, well arranged and always within reach, the kit provides the appropriate materials for quick use.



Accessories

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



Parbak® Back-up rings







Parbak® Back-up rings prevent extrusion in high-pressure applications, help to maintain the lubricant film and thus prolong the service life of O-rings. The Parbak® numbers correspond to the size designations of the 2-xxx series of the Parker O-rings they are installed with (e.g. 8-211, N 300-90 fits O-ring 2-211, N 674-70).

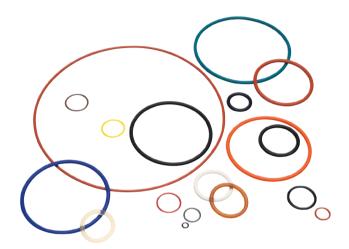
ParCoat® Coating

O-rings with ParCoat® coatings can be assembled with low exertion of force using automatic equipment. The rings will not stick together during the feeder process. Prior to installation they can be elongated by over 150 % without causing the anti-friction coating to burst or crack.

Benefits

- · Clearly reduced frictional forces
- · No damage to seals during installation or assembly
- Faster, more cost-efficient assembly process
- · Improves interfacial seal tightness, especially for sealing against gases
- Seals will not stick together in automatic feeding processes
- No soiling or contamination
- Translucent ParCoat® treated O-rings insures no risk of mix-ups as basic elastomer compound colour remains visible
- Elongation capacity above 150 %, depending on type
- Suitable for nearly all standard elastomer types (for LSR not all coatings applicable)
- · In different colours available

Parker O-ring compounds are formulated to meet the most stringent industry standards, including FDA, USP, KTW, DVGW, BAM, WRAS (WRC), NSF, Underwriters Laboratories (UL), Aerospace (AMS) and many customer-specific requirements.



Compounds

O-rings can be molded in a wide range of compounds in hardnesses from 40 to 90 Shore A. These materials include:

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.

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.

Nitrile butadiene rubber (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 Ruga-N

Hydrogenated nitrile butadiene rubber (HNBR)

Hydrogenated NBR 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.

Ethylene propylene rubber (EPDM)

EPDM is a terpolymer of ethylene, propylene, and a diene third monomer used for cross-linking.

Silicone rubber (VMQ)

Silicone elastomers have relatively low tensile strength, poor tear and wear resistance. Silicones also possess good insulating properties and tend to be physiologically neutral.

• 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 ofsilicone.

• Liquid silicone rubber (LSR)

Liquid Silicone Rubber (LSR) offer great advantage producing efficient high quantity silicone parts. Flash less production gives opportunities for difficult molded shapes. I.E. for fastidious medical or automotive applications.



Fluorocarbon (FKM)

Fluorocarbon (FKM) has excellent resistance to high temperatures and a broad range of chemicals. Permeability and compression set are excellent.

• HiFluor® (FKM)

As a high-performance fluoroelastomer, HiFluor® offers chemical stability comparable to perfluoro elastomers (FFKM) in nearly all media.

Particularly in polar solvents, HiFluor® exhibits major advantages over conventional FKM polymers.

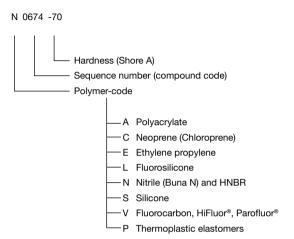
HiFluor® offers a wide range of application solutions in all industrial sectors. From conventional O-rings in standard (imperial and metric) dimensions through to diaphragms and moulded engineering parts according to customers' drawings, the compound can be processed in rubber-metal composites as well.

Parofluor® (FFKM)

The Parofluor® range consists of advanced perfluorinated elastomers (FFKMs) exclusively developed and produced by Parker Hannifin. They are carried under the trade names of Parofluor® and Parofluor Quantum®. Compared with other perfluorinated elastomers Parofluor® compounds offer outstanding retained resiliency as they have been developed specifically for extremely challenging sealing applications.

Parker O-ring compound numbering system

Parker O-ring compounds are described by the following system.



Compound tables

Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Polyacrylate rubber (ACM)

A8845-70 70^{±5} black -20 +150

Polychloroprene rubber (CR)

C0557-70	70 ^{±5}	black	-40		 often used in refrigerant (e.g. R134a or R22) good aging and salt water resistance
C0944-70	70 ^{±5}	red	-40	+100	

Ethylene propylene rubber (EPDM)

E0529-60	60±5	DIACK	-50	+150	
E0540-80 ¹⁾	80±5	black	-50	+150	standard compound good compression set hot water air to 150 °C steam to 200 °C dilute acids fire-resistant hydraulic fluids with phosphate ester base brake fluids with non-mineral oil base
E3609-70	70±5	black	-50	+150	standard compound FDA-compliant (EC) No. 1935/2004 USP Class VI not suitable for use with milk and nutritional oil
E3678-80	80±5	violet	-50	+150	
E3804-90	90±5	black	-50	+150	Parbak® compound



¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.

Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Ethylene propylene rubber (EPDM)

E8556-70	70±5	black	-50	+150	 for industrial cooling water applications improved ageing resistance
E8743-70	70±5	black	-50	+150	• FDA-compliant • (EC) No. 1935/2004 • for food industry • ADI-free
E8780-80	80±5	black	-50	+150	standard for drinking water applications approvals: W 270, EN 681-1, W 534, KTW FDA-compliant (not suitable for use with milk and nutritional oil) (EC) No. 1935/2004
E8790-70	70±5	black	-50	+150	• standard for drinking water applications

- approvals: KTW, WRAS, W 270, EN 681-1, W 534, KIWA
- FDA-compliant (not suitable for use with milk and nutritional oil)
- (EC) No. 1935/2004

Nitrile butadiene rubber (NBR)

N0525-60	60±5	black	-35	100	
N0552-90 ¹⁾	90±5	black	-30	100	
N0674-70 ¹⁾	70±5	black	-35	100	standard compound resistance to mineral oil and mineral oil products, animal and vegetable oils generally suited for hydraulic and pneumatic systems compatible with hydraulic oil, water glycol (HFC fluids) and oil in water emulsions (HFA fluids)
N3505-50	50±5	black	-35	100	• improved ozone and weather-proof resistance
N3575-75	75 ^{±5}	black	-50	100	• low temperature with improved oil resistance
N3578-80	80±5	hlack	-40	100	

¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.



Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Hydrogenated nitrile butadiene rubber (HNBR)

N3510-85	85±5	black	-35	+150	
N3512-90	90±5	black	-35	+150	
N3554-75	75 ^{±5}	light green	-35	+150	
N3573-75	75 ^{±5}	black	-35	+150	
N3723-80	80±5	black	-35	+150	
N3813-70	70±5	black	-40	+150	• for low temperatures
N3831-70	70 ^{±5}	black	-35	+150	• suitable for AdBlue ^{® 2)} to ca. 80 °C
N3837-85	85±5	green	-35	+150	
N8505-70	70±5	green	-35	+150	• suitable for biodiesel (RME) applications up to 80 °C
N8680-90	90±5	black	-40	+150	• for low temperatures
N8888-70	70±5	yellow	-35	+150	for gas- and water applicationapproval for EN 549, EN 681-1

Thermoplastic elastomers (Ultrathan®)

i nermopiastic elastomers (Ultrathan®)							
P4300	92±5	yellow	-30	+110	excellent high-temperature behaviour excellent dynamic behaviour		
P5000	94±5	dark green	-20	+100	very good hydrolysis resistanceFDA-compliant		
P5001	94±5	brown	-35	+100	• good hydrolysis resistance		
P5007	82±5	green, transp.	-35	+80	• standard compound		
P5008	94±5	green	-35	+100	• standard compound		
P5009	94±5	grey	-45	+95	• for low temperatures		
P5012	90±5	red	-38	+100	good hydrolysis resistance		

¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.



²⁾ registered trademark of VDA

O-ring material offering

Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Thermoplastic elastomers (Ultrathan®)

P5029	94±5	nature	-20	+100	very good hydrolysis resistanceFDA-compliant
P5070	83±5	green	-35	+85	• good hydrolysis resistance
P5075	80±5	ochre	-45	+80	• for low temperatures
P6000	95±5	charcoal- grey	-35	+110	very high mechanical strengthextrusion resistance
P6030	93±5	orange	-35	+105	high mechanical strengthextrusion resistance

Silicone rubber (VMQ)

S0595-50	50±5	red	-55	+200	
S0604-70	70±5	red	-55	+200	standard compound hot air to 210 °C water to 100 °C only suitable as static seal
S0613-60	60±5	red	-55	+200	
S0614-80	80±5	red	-55	+200	

Liquid silicone rubber (LSR)

	,								
S3693-50	50±5	reddish brown	-50	+200					
S3695-60	60±5	reddish brown	-50	+200					
S3697-40	40±5	reddish brown	-50	+200					
S3698-70	70±5	reddish brown	-50	+200					



¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.

Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Fluorosilicone (FVMQ)

L0677-70	70±5	blue	-60	+170	for high temperatures good low-temperature resistance mostly fitted where fuel and oil resistance is important predominant in aircraft
L0806-80	80±5	blue	-60	+170	\bullet approvals for military and aerospace applications
L3355-70	70 ^{±5}	yellow	-60	+170	• used in automotive fuel couplings
L8559-70	70±5	blue	-60	+170	
L8585-80	80±5	blue	-60	+170	approvals for aerospace applications

L8585-80	80±5	blue	-60	+170	approvals for aerospace applications
Fluoroca	arbon	(FKM)			
V0709-90	90±5	black	-25	+200	
V0747-75 ¹⁾	75±5	black	-25	+200	standard compound for high temperatures hot oil aromatic solvents wide chemical resistance fire-resistant fluids with phosphate ester and chlorinated hydrocarbon base copolymer
V0763-60	60±5	brown	-25	+200	• copolymer
V0884-75	75±5	brown	-25	+200	• copolymer
V0894-90	90±5	brown	-25	+200	• copolymer
V3642-75	75±5	black	-25	+200	• terpolymer
V3670-70	70±5	green	-25	+200	• copolymer
V3681-80	80±5	green	-25	+200	• copolymer
V3736-75	75±5	black	-28	+200	• terpolymer • improved low temperature resistance

¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.



ness

Colour

Compound Hard-

code

V8750-70

70±5

black

	[Shore A]		stati [°C]	_	
Fluoroca	arbon	(FKM)			
V3738-75	75±5	black	-20	+200	• improved medium compatibility
V8592-75	75±5	blue	-40	+200	• for low temperatures
V8703-75	75±5	black	-30	+200	• improved low temperature resistance • suitable for biodiesel (RME) applications
V8722-75	75±5	black	-25	+200	FDA-compliant(EC) No. 1935/2004ADI-free

Tempera-

ture range

Properties / Applications

• improved resistance against water glycol

· improved medium compatibility and me-

					food industry
V8802-80	80±5	blue	-40	+200	• for low temperatures
V8877-75	75±5	blue	-50	+200	• highly improved low temperature resistance
V8989-80	83±5	black	-40	+200	for low temperatures

and acids

(EC) No. 1935/2004

chanical properties

-25 +200 • FDA-compliant

High performance fluoroelastomer (HiFluor®)

V3819-75	75±5	black	-25	+250	improved resistance against water glycol and acids excellent availability in Parker standard dimensions
V8534-90	90±5	black	-25	+250	improved resistance to explosive decom- pression and gap extrusion off-shore and petrochemical applications
V8730-70	70±5	white	-25	+250	food industry FDA-compliant (EC) No. 1935/2004 particularly suitable for use with high processing temperatures and aggressive media

¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.



Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

High performance fluoroelastomer (HiFluor®)

V3852-65	65 ^{±5}	black	-25	+250	 preferably used for moulded functional components and membranes / diaphragms
V8558-75	75±5	green	-25	+260	coloured version
V8879-75	75±5	black	-15	+230	very good chemical resistancevery good varnish stability

Perfluoro elastomer (Parofluor®)

	0.0.		/		/
V3734-70	70±5	black	-25	+240	for low temperaturesfor aerospace
V8545-75	75±5	black	-15	+300	 best compound for hot water and steam applications AMS 7257
V8562-75	75±5	white	-15	+300	• for high temperature-plasma-applications • dry applications in semiconductor industries
V8588-90	90±5	black	-15	+260	ED resistantNorsok M-710
V8920-75	75±5	black	-15	+260	good resistance in hot water for wet processes in semiconductor applications
V8921-75	75±5	white	-15	+260	pure compound for sterile and pharmaceuti- cal technology for oxidising media
V8930-75	75 ^{±5}	black	-15	+325	for high temperatures not recommendedfor hot aliphatic amine and water steam
V8931-75	75±5	black	-15	+310	for high temperaturesfor hot aliphatic amine and water steam
V8950-75	75±5	black	-15	+240	FDA-compliant (EC) No. 1935/2004 ADI-free for food industry, pharmacy and biotechnology

¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.



O-ring material offering

Compound code	Hard- ness	Colour	Tempera- ture range static	Properties / Applications
	[Shore A]		[°C]	

Perfluoro elastomer (Parofluor®)

V8951-70	70±5	white	-15	+240	FDA-compliant (EC) No. 1935/2004 ADI-free USP Class VI for pharmacy, biotechnology and medical technology
FF400-80	80±5	black	-40	+275	 for low temperatures

- · oil and gas
- chemical industries
- ED resistant

Perfluoro elastomer (Parofluor Quantum®)

			(-		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
V8787-75	75 ^{±5}	black	-20	+230	• optimized paint, varnish and solvent stability
V8844-75	75±5	nature	-20	+230	• optimized paint, varnish and solvent stability
V8910-75	80+8	black	-20	+220	• improved chemical resistance • ADI-free
V8911-75	75+8 -5	white	-20	+220	• improved chemical resistance



¹⁾ bold printed compounds are 2-xxx standard and available ex-stock.

Range of application

Underwriters laboratories approved services

	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
Compound code	A	В	C	D	E	F	G	Н	ı	J
N0674-70	•			•		•	•	•	•	•
V0747-75		•		•		•	•	•		•
V0884-75		•	•	•			•			

Compounds for gas supply and appliances

The following Parker Hannifin compounds are approved by the German Association for Gas and Water (DVGW) for the applications listed:

Parker compound	Polymer	Colour	Standard
V0747-75	FKM	black	DIN EN 549
N0552-90	NBR	black	DIN EN 549
N0674-70	NBR	black	DIN EN 549, VP 406
N3506-70	NBR	black	DIN EN 549
N3578-80	NBR	black	DIN EN 549
N3829-70	NBR	black	DIN EN 549
N8902-85	NBR	black	-
N8888-70	HNBR	yellow	DIN EN 549, VP 406, VP 614
S3698-70	VMQ	red	DIN EN 549
V0884-75	FKM	brown	DIN EN 549

Compounds for the food and pharmaceutical industry

Seals coming into contact with products in food, beverage and pharmaceutical production must be resistant to "CIP" (Cleaning in Place) and "SIP" (Sterilisation in Place) processes. The silicone materials are suitable for use in food applications with respect to their physiological properties because they are inert as well as odourless and tasteless. In addition to chemical and thermal resistance, the sealing compounds have to meet various national, European and international regulations.

In Germany, **The Federal Institute for Risk Assessment (BfR)** issues recommendations for ingredients, additives, residues, contaminations and



O-ring material offering

permissible migration levels (migration or leaching) in foodstuffs and animal feed.

3-A Sanitary Standards Inc. (3-A SSI) is an independent organisation dedicated to advancing hygienic equipment design for the U.S. food, beverage and pharmaceutical industries.

Important regulations:

- Annex I, Article 3 of European Regulation (EC) No. 1935/2004
- Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- The USP (United States Pharmacopiea) Class VI protocol certifies the biological compatibility with living organisms and thus the harmlessness of sealing materials to health. The most important test protocols are USP Class VI, Part 88 and USP Class VI, part 87 acc. to ISO 10993-1.

Parker has developed formulations which are **ADI-free** (free from Animal **Derived Ingredients)** because such ingredients may cause BSE (bovine spongiform encephalopathy).

Parker compound	Polymer	Colour	Standard
E3609-70	EPDM	black	FDA1, (EC) No. 1935/2004, USP Class VI
E8743-70	EPDM	black	FDA, (EC) No. 1935/2004, BfR, ADI-free
E8780-80	EPDM	black	FDA11, (EC) No. 1935/2004, BfR
E8790-70	EPDM	black	FDA ¹⁾ , (EC) No. 1935/2004, BfR
P5000	TPU	green	FDA
P5029	TPU	nature	FDA
S3693-50	LSR	reddish brown	FDA, (EC) No. 1935/2004, BfR
S3695-60	LSR	reddish brown	FDA, (EC) No. 1935/2004, BfR
S3697-40	LSR	reddish brown	FDA, (EC) No. 1935/2004, BfR
S3698-70	LSR	reddish brown	FDA, (EC) No. 1935/2004, BfR
V0747-75	FKM	black	ADI-free
V8722-75	FKM	black	FDA, (EC) No. 1935/2004
V8750-70	FKM	black	FDA, (EC) No. 1935/2004
HiFluor® V8522-75	FKM	white	ADI-free
HiFluor® V8730-70	FKM	white	FDA, (EC) No. 1935/2004
Parofluor® V8742-70	FFKM	white	ADI-free
Parofluor® V8950-75	FFKM	black	FDA, (EC) No. 1935/2004, ADI-free
Parofluor® V8951-70	FFKM	white	FDA, (EC) No. 1935/2004, ADI-free, USP Class VI

¹⁾ Not suitable for use with milk and nutritional oil



KTW approved compounds

Sealing compounds for use in drinking water and heating applications are subject to a large number of approval regulations designed to ensure their harmlessness from the stage of water extraction, treatment and transport through to the consumer's tap. Worldwide, almost all countries have issued their own drinking water regulations including specific tests and lists of approved ingredients. The regulations are complemented by physical and microbiological examinations.

KTW:

KTW is the nationally recognized standard for all devices, components and materials which contact drinking water. In addition to Germany (KTW), Great Britain (WRAS), the USA (NSF61), France (ACS) and the Netherlands (KIWA) have published their own regulations for these applications.

Parker's O-Ring Division has developed several materials that are certified to KTW.

Parker Compound	Polymer	Water- contact- temperature	Colour	Standard
E1549-70	EPDM	85°C	black	WRAS
		82°C		NSF 61
E8780-80	EPDM	90°C	black	W270, KTW
		-		EN 681-1, W 534
E8790-70	EPDM	90°C	black	KTW, W270
		85°C		WRAS
		90°C		KIWA
		-		EN 681-1, W 534
N8888-70	HNBR	-	yellow	EN 681-1, EN 549

Aerospace materials

The aerospace industry demands the most from elastomeric compounds. Special materials often must be developed to meet specification requirements. Additionally many special requirements must be met during the production of finished parts, not least to meet safety, technical and quality requirements.

AMS¹⁾ and NAS²⁾ rubber specification descriptions

Specifications	Parker compound	Hardness (Shore A)	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 LM152-60	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. and 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

²⁾ National Aerospace Standard issued by Aerospace Industries Association of America, Inc.



¹⁾ Aerospace Material Specification issued by the Society of Automotive Engineers, Inc.

Specifications	Parker compound	Hardness (Shore A)	Description title
AMS7272	N0287-70	65 - 75	synthetic lubricant resistant
AMS7276	V1164-75 V1226-75 V0747-75	70 - 80	high temperature fluid resistant, very low compression set, FKM
NAS1613	E1267-80	75 - 85	packing, 0-ring, phosphate ester resistant
AMS-P-5315	N0602-70	65 - 75	packing, 0-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, moulded or 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 LM152-60 LM153-70 LM154-75 LM155-80	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	packing, preformed, petroleum hydraulic fluid resistant, improved performance
AMS-R-83485	V0835-75	70 - 80	rubber, fluorocarbon elastomer, improved performance at low temperatures

²⁾ National Aerospace Standard issued by Aerospace Industries Association of America, Inc.



¹⁾ Aerospace Material Specification issued by the Society of Automotive Engineers, Inc.

Specifications

Airbus Nord-Sud Aviation (NSA)

Specification	Parker compound	Description
NSA 5512	Special	bonded seal
NSA 8200	L8585-80	sizes 3-xxx
NSA 8201	E1267-80	sizes 3-xxx
NSA 8202	C3645-80	sizes 3-xxx
NSA 8203	L8585-80	sizes 2-xxx
NSA 8204	E1267-80	sizes 2-xxx; NAS 1613; colour code
NSA 8205	C3645-80	sizes 2-xxx
NSA 8206	S0604-70	sizes 2-xxx
NSA 8207	S0604-70	sizes 3-xxx
NSA 8213	E1267-80	square ring
NSA 8216	E1267-80	square ring
NSA 8218	E1267-80	square ring
NSA 8671	W5036	square ring; PTFE

Norme Française (NF), (french standard)

Specification	Parker compound	Category	
NF L17-241	E1267-80	41B8	
NF L17-160	V0709-90	6009	
NF L17-164	V0747-75	64C8	
NF L17-261	L8585-80	61D8	
NF L17-261	L1218-80	61D8	
NF I 17-250-4	\$0604-70	FN 2261	

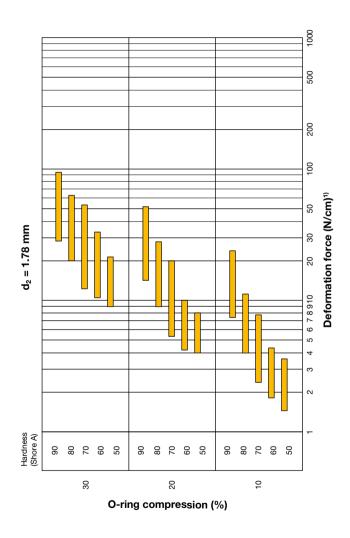
Compound-Datasheet (WL)

Specification	Parker compound
5.5440	C0365-45
5.5502	S0595-50
5.5600	E0529-65
5.5601	N0406-60
5.5602	N0239-60
5.5603	S0613-60
5.5612	N0406-60
5.5627	N0261-65
5.5629	N0525-60
5.5655	N0406-60
5.5688	L3747-60
5.5701	V0747-75
5.5702	N0674-70
5.5703	S0604-70
5.5704	V3670-70
5.5707	B3688-70
5.5709	C0557-70
5.5710	L0677-70/L8559-70
5.5801	N3578-80
5.5802	E0540-80
5.5804	V0747-75
5.5808	V0709-90
5.5810	N0552-90
5.5813	L0806-80
5.5814	S0614-80
5.5829	N0755-80
5.5855	N3518-80

The following charts are included to facilitate engineering analysis. Additional information is available in the Parker O-Ring Handbook.

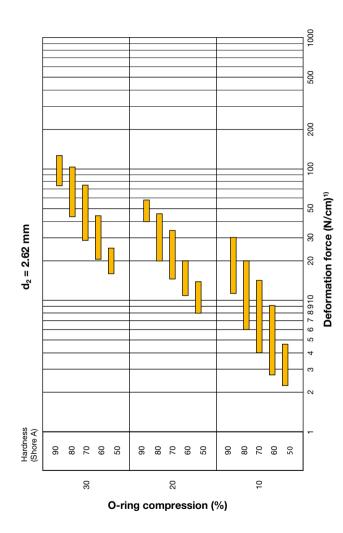
Deformation force

The force necessary to deform an O-ring cross-section by a given amount (in per cent) depends on the compound modulus. As it is relative to seal geometry, it is given for different O-ring cross-sections. As a user will typically only know the dimensions and hardness, the following diagrams show the relationship between hardness, compression and cross-section. The information refers to all elastomers, which is why the deformation forces are given for each hardness class. The forces required to deform elastomers during assembly of flanges, for example, can be obtained from the diagrams, and forces which affect seals on less resilient plastic parts can also be estimated.



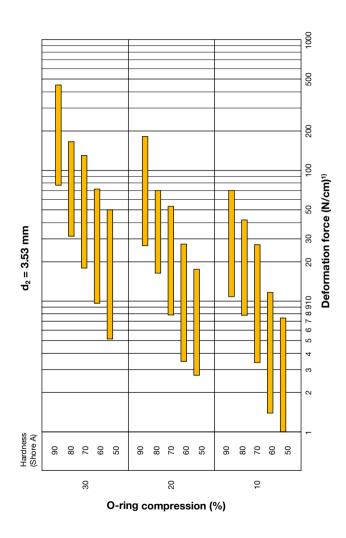
¹⁾ Length in cm of O-ring circumference





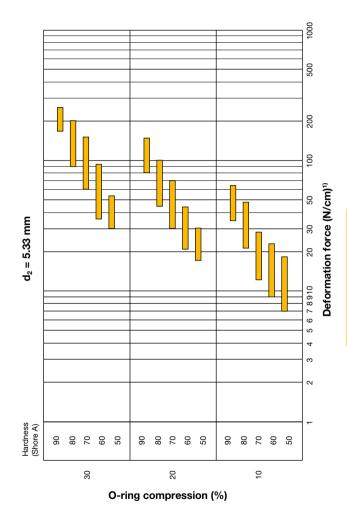
1) Length in cm of O-ring circumference





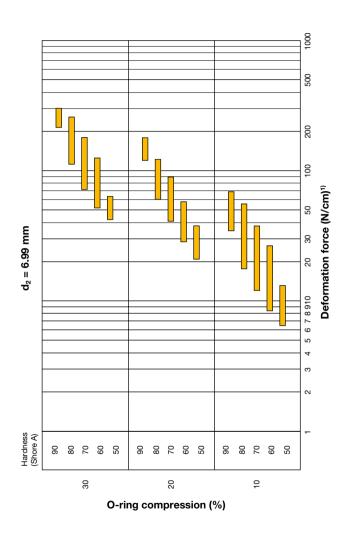
1) Length in cm of O-ring circumference





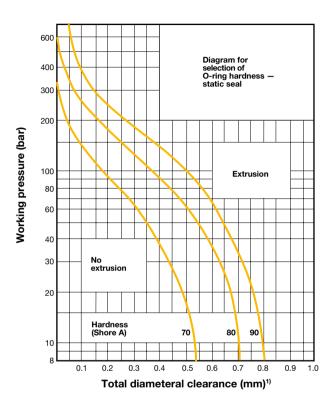
1) Length in cm of O-ring circumference





1) Length in cm of O-ring circumference





Basis for curves

- 100,000 pressure cycles at the rate of 60 per minute from zero to the indicated pressure
- Maximum temperature (i.e., test temperature) 70 °C
- · No back-up rings
- Total diametral clearance must include cylinder expansion due to pressure.
- Apply a reasonable safety factor in practical applications to allow for excessively sharp edges and other imperfections and for higher temperatures.

¹⁾ Reduce the clearance shown by 60 % when using silicone or fluorosilicone elastomers.



The following charts are included to facilitate engineering analysis. Additional information is available in the Parker O-Ring Handbook.

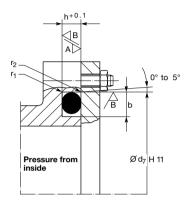
Parker offers O-rings for use in static as well as dynamic sealing applications. Static seals are those where the mating parts of the gland do not have movement relative to each other. These seals include face, radial, dovetail. Examples of these seals and the corresponding design charts are found on the following pages. 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 also in this chapter.

For further design assistance and recommendations contact a Parker O-ring applications engineer.

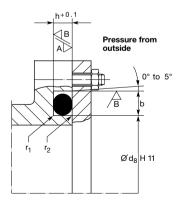
Static seal - axial

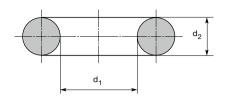
The O-ring is deformed in the axial direction. Under pressure the O-ring is subjected to a relative movement, it is important to note the pressure direction.

 If pressure acts from inside, then the O-rings outside diameter should be in contact with the gland outside diameter (optimally compressed between 1 and 3 % of circumference).



• If pressure acts from outside, then the O-rings inside diameter should be in contact with the internal diameter of the gland (up to 6 % stretched).





Rectangular gland dimensions - axial deformation1)

\mathbf{d}_{2}	h+0.1	b ^{+0.2}	r,	r ₂
1.50	1.10	1.9	0.2 - 0.4	0.2 - 0.4
1.78	1.30	2.4	0.2 - 0.4	0.2 - 0.4
2.00	1.50	2.6	0.2 - 0.4	0.2 - 0.4
2.50	2.00	3.2	0.2 - 0.4	0.2 - 0.4
2.62	2.10	3.6	0.2 - 0.4	0.2 - 0.4
3.00	2.30	3.9	0.4 - 0.8	0.2 - 0.4
3.53	2.80	4.8	0.4 - 0.8	0.2 - 0.4
4.00	3.25	5.2	0.4 - 0.8	0.2 - 0.4
5.00	4.00	6.5	0.4 - 0.8	0.2 - 0.4
5.33	4.35	7.2	0.4 - 0.8	0.2 - 0.4
6.00	5.00	7.8	0.4 - 0.8	0.2 - 0.4
6.99	5.75	9.6	0.8 - 1.2	0.2 - 0.4
8.00	6.80	10.4	0.8 - 1.2	0.2 - 0.4
9.00	7.70	11.7	0.8 - 1.2	0.2 - 0.4
10.00	8.70	13.0	0.8 - 1.2	0.2 - 0.4
12.00	10.60	15.6	0.8 - 1.2	0.2 - 0.4

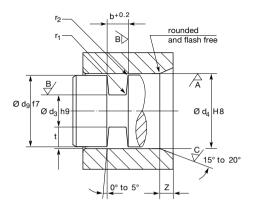
Surface roughness - static seal

Surface	Pressure	Surface roughne load area $t_p > 50$ R_a	
A Contact area	non-pulsating	1.6	6.3
A Contact area	pulsating	0.8	6.3
B Gland diameter and sides	non-pulsating	3.2	12.5
B Gland diameter and sides	pulsating	1.6	6.3

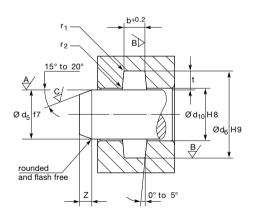
¹⁾The ISO/DIN recommendations are preferred and are shown here in heavy print.



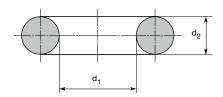
Static seal - radial



Gland in inside element



Gland in outside element



Gland dimensions - radial deformation

d ₂	t ¹)	b +0.2	Z	r ₁	r ₂
1.50	1.10	1.9	1.5	0.2 - 0.4	0.1 - 0.3
1.78	1.40	2.4	1.5	0.2 - 0.4	0.1 - 0.3
2.00	1.50	2.6	1.5	0.2 - 0.4	0.1 - 0.3
2.50	2.00	3.2	1.5	0.2 - 0.4	0.1 - 0.3
2.62	2.20	3.6	1.5	0.2 - 0.4	0.1 - 0.3
3.00	2.30	3.9	2.0	0.4 - 0.8	0.1 - 0.3
3.53	2.90	4.8	2.0	0.4 - 0.8	0.1 - 0.3
4.00	3.25	5.2	2.0	0.4 - 0.8	0.1 - 0.3
5.00	4.10	6.5	3.0	0.4 - 0.8	0.1 - 0.3
5.33	4.50	7.2	3.0	0.4 - 0.8	0.1 - 0.3
6.00	5.00	7.8	3.0	0.4 - 0.8	0.1 - 0.3
6.99	5.90	9.6	3.6	0.8 - 1.2	0.1 - 0.3
8.00	6.80	10.4	4.0	0.8 - 1.2	0.1 - 0.3
9.00	7.70	11.7	4.5	0.8 - 1.2	0.1 - 0.3
10.00	8.70	13.0	4.5	0.8 - 1.2	0.1 - 0.3
12.00	10.60	15.6	4.5	0.8 - 1.2	0.1 - 0.3

Surface finish roughness - static seal

Surface	Pressure	Surface roughness in μ m, load area $t_p > 50 \%$	
		R _a "	R _{max.}
A Contact area	non-pulsating	1.6	6.3
A Contact area	pulsating	0.8	3.2
B Gland diameter and sides	non-pulsating	3.2	12.5
B Gland diameter and sides	pulsating	1.6	6.3
C Surface finish of leading edg	3.2	12.5	

¹⁾ The tolerances are taken from d₃h9 + d₄H8 or d₅f7+d₆H9.

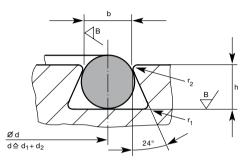
The ISO/DIN recommendations are preferred and are shown in heavy print.



Static seal - dovetail groove

The dovetail groove form is used when it is necessary to hold an O-ring in position; e.g. during surface work, on opening and closing of tooling, where otherwise the O-ring would fall out of the gland.

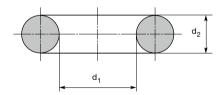
The machining of the gland is difficult and expensive.



Dovetail gland

d = gland mean diameter

- The gland width is measured before edges are deburred
- The radius r₂ is so selected that the O-ring is not damaged on assembly and so that the O-ring can not be trapped in the gap under high pressure.



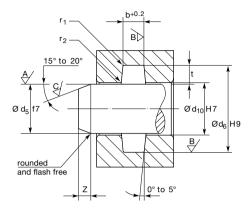
Dovetail gland dimensions¹⁾

d ₂	h	b	r ₂	r,
1.78	1.25+0.05	1.40+0.1	0,1 - 0,3	0,4 - 0,6
2.62	2.05+0.05	2.10+0.1	0,1 - 0,3	0,6 - 0,8
3.53	2.80+0.05	2.85+0.1	0,1 - 0,3	0,8 - 1,0
5.33	4.55+0.08	4.35+0.1	0,1 - 0,3	1,0 - 1,3
6.99	5 85+0.08	5 85 ^{+0.1}	01-03	13-16

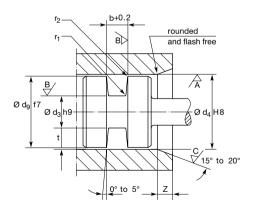
Surface roughness

Surface	Pressure	Surface roughness in μm , load area $t_p > 50 \%$ R_a $R_{max.}$	
A Contact area	non-pulsating	1.6	6.3
A Contact area	pulsating	0.8	3.2
B Gland diameter and sides	non-pulsating	3.2	12.5
B Gland diameter and sides	pulsating	1.6	6.3

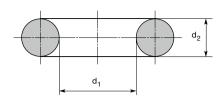
Dynamic seal - hydraulic



Rod seal - hydraulic



Piston seal - hydraulic



Gland dimensions - hydraulic2)

d ₂	t 1)	b +0.2	z	r,	r ₂
1.50	1.30	1.9	1.5	0,2 - 0,4	0,1 - 0,3
1.78	1.45	2.4	1.5	0,2 - 0,4	0,1 - 0,3
2.00	1.70	2.6	1.5	0,2 - 0,4	0,1 - 0,3
2.50	2.10	3.3	1.5	0,2 - 0,4	0,1 - 0,3
2.62	2.20	3.6	1.5	0,2 - 0,4	0,1 - 0,3
3.00	2.60	3.9	1.8	0,4 - 0,8	0,1 - 0,3
3.53	3.05	4.8	1.8	0,4 - 0,8	0,1 - 0,3
4.00	3.50	5.3	1.8	0,4 - 0,8	0,1 - 0,3
5.00	4.45	6.7	2.7	0,4 - 0,8	0,1 - 0,3
5.33	4.65	7.1	2.7	0,4 - 0,8	0,1 - 0,3
6.00	5.40	8.0	3.6	0,4 - 0,8	0,1 - 0,3
6.99	6.20	9.5	3.6	0,4 - 0,8	0,1 - 0,3

Surface-finish roughness - hydraulic

Surface	Surface roughne load area $t_p > 50$ R_a	rface roughness in µm, id area t _p > 50 % R _{max.}		
A Contact area	0.4	1.6		
B Gland diameter and sides	1.6	6.3		
C Surface finish of leading edge chamfer	3.2	12.5		

Additional information to gland dimensions for O-rings with anti-extrusion rings, the surface-finishroughness and the gland dimensions of the pneumatic application is available in the Parker O-Ring Handbook.



¹⁾ The tolerances is a combination of d₃h9 + d₄H8 or d₅f7+d₆H9.

²⁾ The ISO/DIN recommendations are preferred and are shown here in heavy print.

The following tables 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.

Characteristics of the 2-xxx series

The 2-xxx series from Parker offers the following advantages.

- ex-stock in following compounds: N0674-70 (NBR 70 Shore A) N0552-90 (NBR 90 Shore A) E0540-80 (EPDM 80 Shore A) V0747-75 (FKM 75 Shore A)
- For each 2-xxx series O-ring we can offer a Parker Parbak® back-up ring to fit. This is particularly important where large clearance gaps and/or high pressures exist (see chapter Parbak® back-up ring).
- O-rings of the 2-xxx series correspond to the standard ISO 3601.

2-0xx sizes, inner diameter d_o = 1.78 mm

Ød

(mm)

114.02

120.37

126.72

133.07

Cross-

sect. d_a

1.78

1.78

1.78

1.78

2-UXX S	izes, inn	ier diame	eter a ₂ =
Parker	Ø d	Cross-	Parker
No.	(mm)	sect. d ₂	No.
2-0011)	0.74	1.02	2-047
2-0021)	1.07	1.27	2-048
2-0031)	1.42	1.52	2-049
2-004	1.78	1.78	2-050
2-005	2.57	1.78	
2-006	2.90	1.78	
2-007	3.68	1.78	
2-008	4.47	1.78	
2-009	5.28	1.78	
2-010	6.07	1.78	
2-011	7.65	1.78	
2-012	9.25	1.78	
2-013	10.82	1.78	
2-014	12.42	1.78	
2-015	14.00	1.78	
2-016	15.60	1.78	
2-017	17.17	1.78	
2-018	18.77	1.78	
2-019	20.35	1.78	
2-020	21.95	1.78	
2-021	23.52	1.78	
2-022	25.12	1.78	
2-023	26.70	1.78	
2-024	28.30	1.78	
2-025	29.87	1.78	
2-026	31.47	1.78	
2-027	33.05	1.78	
2-028	34.65	1.78	
2-029	37.82	1.78	
2-030	41.00	1.78	
2-031	44.17	1.78	
2-032	47.35	1.78	
2-033	50.52	1.78	
2-034	53.70	1.78	
2-035	56.87	1.78	
2-036	60.05	1.78	
2-037	63.22	1.78	
2-038	66.40	1.78	
2-039	69.57	1.78	
2-040	72.75	1.78	
2-041	75.92	1.78	
2-041	82.27	1.78	
2-042	88.62	1.78	
2-043	94.97	1.78	
2-044	101.32	1.78	
2-045	107.67	1.78	
2-040	101.01	1.70	

¹⁾ Please note for these sizes the different inner diameter.



2-1xx sizes, inner diameter d_2 = 2.62 mm

	-		2		
Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
2-102	1.24	2.62	2-148	69.52	2.62
2-103	2.06	2.62	2-149	71.12	2.62
2-104	2.84	2.62	2-150	72.69	2.62
2-105	3.63	2.62	2-151	75.87	2.62
2-106	4.42	2.62	2-152	82.22	2.62
2-107	5.23	2.62	2-153	88.57	2.62
2-108	6.02	2.62	2-154	94.92	2.62
2-109	7.59	2.62	2-155	101.27	2.62
2-110	9.19	2.62	2-156	107.62	2.62
2-111	10.77	2.62	2-157	113.97	2.62
2-112	12.37	2.62	2-158	120.32	2.62
2-113	13.94	2.62	2-159	126.67	2.62
2-114	15.54	2.62	2-160	133.02	2.62
2-115	17.12	2.62	2-161	139.37	2.62
2-116	18.72	2.62	2-162	145.72	2.62
2-117	20.29	2.62	2-163	152.07	2.62
2-118	21.89	2.62	2-164	158.42	2.62
2-119	23.47	2.62	2-165	164.77	2.62
2-120	25.07	2.62	2-166	171.12	2.62
2-121	26.64	2.62	2-167	177.47	2.62
2-122	28.24	2.62	2-168	183.82	2.62
2-123	29.82	2.62	2-169	190.17	2.62
2-124	31.42	2.62	2-170	196.52	2.62
2-125	32.99	2.62	2-171	202.87	2.62
2-126	34.59	2.62	2-172	209.22	2.62
2-127	36.17	2.62	2-173	215.57	2.62
2-128	37.77	2.62	2-174	221.92	2.62
2-129	39.34	2.62	2-175	228.27	2.62
2-130	40.94	2.62	2-176	234.62	2.62
2-131	42.52	2.62	2-177	240.97	2.62
2-132	44.12	2.62	2-178	247.32	2.62
2-133	45.69	2.62			
2-134	47.29	2.62			
2-135	48.90	2.62			
2-136	50.47	2.62			
2-137	52.07	2.62			
2-138	53.64	2.62			
2-139	55.25	2.62			
2-140	56.82	2.62			
2-141	58.42	2.62			
2-142	59.99	2.62			
2-143	61.60	2.62			
2-144	63.17	2.62			
2-145	64.77	2.62			
2-146	66.34	2.62			
2-140	67.95	2.62			
2-141	01.33	2.02			

2-2xx sizes, inner diameter $d_2 = 3.53 \text{ mm}$

Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d	No.	(mm)	sect. d
2-201	4.34	3.53	2-247	117.07	3.53
2-202	5.94	3.53	2-248	120.24	3.53
2-203	7.52	3.53	2-249	123.42	3.53
2-204	9.12	3.53	2-250	126.59	3.53
2-205	10.69	3.53	2-251	129.77	3.53
2-206	12.29	3.53	2-252	132.94	3.53
2-207	13.87	3.53	2-253	136.12	3.53
2-208	15.47	3.53	2-254	139.29	3.53
2-209	17.04	3.53	2-255	142.47	3.53
2-210	18.64	3.53	2-256	145.64	3.53
2-211	20.22	3.53	2-257	148.52	3.53
2-212	21.82	3.53	2-258	151.99	3.53
2-213	23.39	3.53	2-259	158.34	3.53
2-214	24.99	3.53	2-260	164.69	3.53
2-215	26.57	3.53	2-261	171.04	3.53
2-216	28.17	3.53	2-262	177.39	3.53
2-217	29.74	3.53	2-263	183.74	3.53
2-218	31.34	3.53	2-264	190.09	3.53
2-219	32.92	3.53	2-265	196.44	3.53
2-220	34.52	3.53	2-266	202.79	3.53
2-221	36.09	3.53	2-267	209.14	3.53
2-222	37.69	3.53	2-268	215.49	3.53
2-223	40.87	3.53	2-269	221.84	3.53
2-224	44.04	3.53	2-270	228.19	3.53
2-225	47.22	3.53	2-271	234.54	3.53
2-226	50.39	3.53	2-272	240.89	3.53
2-227	53.57	3.53	2-273	247.24	3.53
2-228	56.74	3.53	2-274	253.59	3.53
2-229	59.92	3.53	2-275	266.29	3.53
2-230	63.09	3.53	2-276	278.99	3.53
2-231	66.27	3.53	2-277	291.69	3.53
2-232	69.44	3.53	2-278	304.39	3.53
2-233	72.62	3.53	2-279	329.79	3.53
2-234	75.79	3.53	2-280	355.19	3.53
2-235	78.97	3.53	2-281	380.59	3.53
2-236	82.14	3.53	2-282	405.26	3.53
2-237	85.32	3.53	2-283	430.66	3.53
2-238	88.49	3.53	2-284	456.06	3.53
2-239	91.67	3.53			
2-240	94.84	3.53			
2-241	98.02	3.53			
2-242	101.19	3.53			
2-243	104.37	3.53			
2-244	107.54	3.53			
2-245	110.72	3.53			
2-246	113.89	3.53			

2-3xx sizes, inner diameter $d_2 = 5.33$ mm

Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d,
2-309	10.46	5.33	2-355	132.72	5.33
2-310	12.07	5.33	2-356	135.89	5.33
2-311	13.64	5.33	2-357	139.07	5.33
2-312	15.24	5.33	2-358	142.24	5.33
2-313	16.81	5.33	2-359	145.42	5.33
2-314	18.42	5.33	2-360	148.59	5.33
2-315	19.99	5.33	2-361	151.77	5.33
2-316	21.59	5.33	2-362	158.12	5.33
2-317	23.16	5.33	2-363	164.47	5.33
2-318	24.77	5.33	2-364	170.82	5.33
2-319	26.34	5.33	2-365	177.17	5.33
2-320	27.94	5.33	2-366	183.52	5.33
2-321	29.51	5.33	2-367	189.87	5.33
2-322	31.12	5.33	2-368	196.22	5.33
2-323	32.69	5.33	2-369	202.57	5.33
2-324	34.29	5.33	2-370	208.92	5.33
2-325	37.47	5.33	2-371	215.27	5.33
2-326	40.64	5.33	2-372	221.62	5.33
2-327	43.82	5.33	2-373	227.97	5.33
2-328	46.99	5.33	2-374	234.34	5.33
2-329	50.17	5.33	2-375	240.67	5.33
2-330	53.34	5.33	2-376	247.02	5.33
2-331	56.52	5.33	2-377	253.37	5.33
2-332	59.69	5.33	2-378	266.07	5.33
2-333	62.87	5.33	2-379	278.77	5.33
2-334	66.04	5.33	2-380	291.47	3.53
2-335	69.22	5.33	2-381	304.17	5.33
2-336	72.39	5.33	2-382	329.57	5.33
2-337	75.57	5.33	2-383	354.97	5.33
2-338	78.74	5.33	2-384	380.37	5.33
2-339	81.92	5.33	2-385	405.26	5.33
2-340	85.09	5.33	2-386	430.66	5.33
2-341	88.27	5.33	2-387	456.06	5.33
2-342	91.44	5.33	2-388	481.41	5.33
2-343	94.62	5.33	2-389	506.81	5.33
2-344	97.79	5.33	2-390	532.21	5.33
2-345	100.97	5.33	2-391	557.61	5.33
2-346	104.14	5.33	2-392	582.68	5.33
2-347	107.32	5.33	2-393	608.08	5.33
2-348	110.49	5.33	2-394	633.48	5.33
2-349	113.67	5.33	2-395	658.88	5.33
2-350	116.84	5.33			
2-351	120.02	5.33			
2-352	123.19	5.33			
2-353	126.37	5.33			
2-354	129.54	5.33			

2-4xx sizes, inner diameter $d_2 = 6.99 \text{ mm}$

Parker

2-471

2-472

2-473

2-474 633.48

2-475 658.88

No.

Ød

(mm)

557.66

582.68

608.08

Cross-

sect. d.

6.99

6.99

6.99

6.99

6.99

2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-444 202.57 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-458 367.67 6.99 2-459 380.37 6.99	Dankan	cc,	0
2-425 113.67 6.99 2-426 116.84 6.99 2-427 120.02 6.99 2-428 123.19 6.99 2-428 123.19 6.99 2-430 129.54 6.99 2-431 132.72 6.99 2-433 139.07 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-444 202.57 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-445 202.57 6.99 2-445 316.87 6.99 2-450 360.77 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-426 116.84 6.99 2-427 120.02 6.99 2-428 123.19 6.99 2-429 126.37 6.99 2-430 129.54 6.99 2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-440 27.97 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-466 481.46 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99		. ,	
2-427 120.02 6.99 2-428 123.19 6.99 2-429 126.37 6.99 2-430 129.54 6.99 2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-449 253.37 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-451 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-466 468.76 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-428 123.19 6.99 2-429 126.37 6.99 2-430 129.54 6.99 2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-464 443.36 6.99 2-466 66.96 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-429 126.37 6.99 2-430 129.54 6.99 2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-430 129.54 6.99 2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-445 202.57 6.99 2-445 316.87 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-431 132.72 6.99 2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 127.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-451 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 481.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-432 135.89 6.99 2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-451 405.26 6.99 2-462 417.96 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-433 139.07 6.99 2-434 142.24 6.99 2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-464 443.36 6.99 2-466 68.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99			
2-434 142.24 6.99 2-435 145.42 6.99 2-435 145.42 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-438 158.12 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-444 202.57 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-435 145.42 6.99 2-436 148.59 6.99 2-437 151.77 6.99 2-438 158.12 6.99 2-439 164.47 6.99 2-440 170.82 6.99 2-441 177.17 6.99 2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
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2-442 183.52 6.99 2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-448 240.67 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-440	170.82	6.99
2-443 189.87 6.99 2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99	2-441	177.17	6.99
2-444 196.22 6.99 2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-448 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-442	183.52	6.99
2-445 202.57 6.99 2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-455 342.27 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-468 494.16 6.99	2-443	189.87	6.99
2-446 215.27 6.99 2-447 227.97 6.99 2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-444	196.22	6.99
2-447 227.97 6.99 2-448 240.67 6.99 2-448 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-453 329.57 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-450 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-445	202.57	6.99
2-448 240.67 6.99 2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-459 380.37 6.99 2-460 405.26 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-464 443.36 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-446	215.27	6.99
2-449 253.37 6.99 2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-447	227.97	6.99
2-450 266.07 6.99 2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-453 304.17 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-448	240.67	6.99
2-451 278.77 6.99 2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-449	253.37	6.99
2-452 291.47 6.99 2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-450	266.07	6.99
2-453 304.17 6.99 2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-451	278.77	6.99
2-454 316.87 6.99 2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-452	291.47	6.99
2-455 329.57 6.99 2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-453	304.17	6.99
2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-454	316.87	6.99
2-456 342.27 6.99 2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-455		
2-457 354.97 6.99 2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-456	342.27	6.99
2-458 367.67 6.99 2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-457		
2-459 380.37 6.99 2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-458		
2-460 393.07 6.99 2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-459		
2-461 405.26 6.99 2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99	2-460		
2-462 417.96 6.99 2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-463 430.66 6.99 2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-464 443.36 6.99 2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-465 456.06 6.99 2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-466 468.76 6.99 2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-467 481.46 6.99 2-468 494.16 6.99 2-469 506.86 6.99			
2-468 494.16 6.99 2-469 506.86 6.99			
2-469 506.86 6.99			
2-470 332.20 0.99			
	2-4/0	332.20	0.99

Parker	Ød	Cross-
No.	(mm)	sect. d ₂
3-902	6.07	1.63
3-903	7.65	1.63
3-904	8.92	1.83
3-905	10.52	1.83
3-906	11.89	1.98
3-907	13.46	2.08
3-908	16.36	2.21
3-910	19.18	2.46
3-911	21.92	2.95
3-912	23.47	2.95
3-913	25.04	2.95
3-914	26.59	2.95
3-916	29.74	2.95
3-918	34.42	2.95
3-920	37.47	3.00
3-928	53.09	3.00
3-932	59.36	3.00

¹⁾ For SAE J 514 APR 80 threaded connectors, SAE J 475 (ISO R 725) screw threads



Doulcon	ر م	Cross	Doulcon	W 4	Cuana
Parker No.	Ø d (mm)	Cross- sect. d ₂	Parker No.	Ø d (mm)	Cross- sect. d
5-035	45.36	3.53	5-605	35.60	3.60
5-037	51.71	3.53	5-606	37.30	3.60
5-051	1.78	1.02	5-612	8.74	1.78
5-052	6.86	1.78	5-613	11.10	1.78
5-092	701.68	6.99	5-614	9.93	2.62
5-108	4.47	1.27	5-615	11.91	2.62
5-157	33.99	2.34	5-616	13.11	2.62
5-190	3.35	1.78	5-617	15.88	2.62
5-212	9.75	1.78	5-618	25.81	3.53
5-239	14.48	2.69	5-643	16.51	1.14
5-243	15.34	2.62	5-664	8.13	1.78
5-256	17.96	2.62	5-670	36.50	1.78
5-321	39.60	3.53	5-673	7.75	1.88
5-330	42.52	5.33	5-676	15.49	1.47
5-332	42.85	3.53	5-683	3.10	1.60
5-361	67.84	3.53	5-686	6.30	2.39
5-381	88.27	6.99	5-690	17.30	2.40
5-434	180.54	6.99	5-701	49.20	3.53
5-445	210.24	6.99	5-701	58.74	3.53
5-488	316.56	2.62	5-702	65.09	3.53
5-525	425.83	3.18	5-703	71.44	3.53
5-578	2.60	1.90	5-704	74.61	3.53
			5-703	9.19	3.00
5-579	3.40 4.20	1.90 1.90	5-805	64.39	1.78
5-580			5-816	80.31	1.78
5-581	4.90	1.90		118.72	
5-582	5.70	1.90	5-843		2.62
5-583	6.40	1.90	5-850	125.09	6.60
5-584	7.20	1.90	5-976	264.79	6.60
5-585	8.00	1.88			
5-586	8.90				
5-587	8.90	2.70			
5-588	10.50	2.70			
5-589	12.10	2.70			
5-590	13.59	2.69			
5-591	15.10	2.70			
5-592	16.90	2.70			
5-593	18.40	2.70			
5-594	18.30	3.60			
5-595	19.80	3.60			
5-596	21.30	3.60			
5-597	23.00	3.60			
5-598	24.60	3.60			
5-599	26.20	3.60			
5-600	27.80	3.60			
5-601	29.30	3.60			
5-602	30.80	3.60			
5-603	32.50	3.60			
5-604	34.10	3.60			

Sizing charts

Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-001	6.00	2.00	6-053	12.00	1.50	6-112	53.00	6.50
6-002	8.00	2.00	6-054	45.00	2.00	6-113	53.00	5.00
6-003	10.00	2.00	6-055	50.00	2.50	6-114	60.00	5.00
6-005	15.00	2.00	6-056	30.00	3.00	6-115	125.00	8.00
6-006	16.70	1.45	6-058	12.30	2.40	6-116	10.00	1.00
6-007	18.00	3.15	6-059	135.00	3.23	6-118	15.00	1.50
6-008	21.00	2.00	6-060	135.00	3.43	6-119	19.50	1.50
6-009	47.50	4.00	6-061	146.00	3.23	6-120	9.00	1.80
6-010	9.00	1.50	6-063	5.35	1.50	6-121	81.00	3.00
6-011	7.00	1.50	6-065	12.00	2.00	6-122	186.44	6.99
6-012	9.30	2.40	6-066	23.00	2.50	6-123	118.50	3.00
6-013	89.50	3.00	6-067	14.00	2.50	6-124	12.00	3.00
6-015	42.00	1.50	6-069	5.00	1.50	6-125	18.00	4.00
6-016	13.00	2.50	6-070	8.30	2.40	6-126	25.30	1.60
6-017	20.00	2.50	6-072	15.00	3.20	6-128	15.00	5.00
6-018	3.00	1.00	6-074	8.00	1.50	6-129	13.23	1.78
6-019	4.00	1.10	6-075	13.00	2.00	6-130	20.00	3.00
6-020	2.70	1.50	6-076	18.00	2.00	6-132	18.00	2.50
6-021	3.50	1.20	6-078	20.00	1.50	6-133	4.70	1.90
6-022	24.00	2.00	6-079	6.00	5.00	6-134	7.50	2.50
6-023	27.30	2.40	6-080	7.00	3.00	6-135	14.30	2.40
6-025	101.00	3.00	6-082	45.00	1.50	6-136	33.00	2.00
6-026	137.00	3.00	6-083	10.00	1.50	6-137	100.00	5.00
6-027	40.00	2.00	6-084	11.00	1.50	6-138	2.50	1.30
6-028	7.00	2.50	6-085	15.00	1.80	6-139	22.00	2.00
6-030	73.00	3.00	6-086	11.00	2.00	6-140	28.00	2.00
6-031	70.00	3.00	6-087	18.00	1.50	6-141	55.00	2.00
6-032	118.00	2.00	6-088	22.00	1.50	6-142	30.70	2.00
6-033	13.00	1.50	6-089	21.00	3.50	6-143	14.00	1.50
6-034	29.50	1.50	6-090	14.00	2.00	6-146	16.00	2.00
6-035	4.00	1.50	6-091	7.50	1.50	6-147	27.00	3.00
6-036	22.00	2.50	6-092	24.80	1.50	6-148	177.00	2.00
6-037	30.00	3.15	6-094	106.00	3.00	6-149	205.00	2.00
6-038	6.00	1.50	6-095	132.00	3.00	6-150	227.00	2.00
6-039	19.00	2.50	6-096	13.50	2.75	6-151	63.00	4.00
6-040	15.00	1.60	6-097	31.00	4.50	6-152	210.00	5.00
6-041	17.90	1.25	6-099	20.00	1.30	6-153	320.00	5.33
6-042	16.00	3.00	6-100	91.00	3.00	6-154	36.30	1.78
6-043	15.00	3.00	6-101	28.00	1.50	6-155	48.00	3.00
6-044	17.00	2.00	6-102	40.60	4.00	6-156	30.00	2.50
6-045	72.00	3.00	6-103	161.00	3.00	6-157	98.00	3.00
6-046	38.00	2.00	6-104	4.00	2.00	6-158	437.00	3.00
6-047	35.00	2.00	6-105	10.00	2.50	6-159	46.02	3.53
6-048	30.00	2.00	6-106	15.00	2.50	6-160	13.75	2.80
6-049	27.00	2.00	6-107	60.00	4.10	6-161	9.00	2.50
6-050	24.20	3.00	6-108	79.60	3.20	6-162	7.30	2.70
6-051	50.00	2.00	6-109	58.00	4.00	6-163	13.10	1.60
6-052	7.10	1.60	6-110	5.00	2.00	6-164	420.00	5.00

Davless	0 d	0	Daulian	6 4	0	Davless	6 4	0
Parker No.	Ø d (mm)	Cross-	Parker No.	Ø d (mm)	Cross- sect. d _a	Parker No.	Ø d (mm)	Cross-
6-165	420.00	sect. d ₂ 3.50	6-236	689.00	10.00	6-290	30.30	sect. d ₂ 2.40
6-166	3.90	1.80	6-237	786.00	10.00	6-291	37.00	2.50
6-167	2.50	1.20	6-238	285.00	12.00	6-292	40.00	3.00
6-168	2.50	1.70	6-239	1029.00	10.00	6-293	47.20	5.70
6-170	159.00	4.00	6-240	1075.00	10.00	6-294	74.20	5.70
6-173	422.00	2.00	6-241	291.00	6.00	6-295	19.00	0.80
6-174	100.00	2.50	6-242	63.00	2.50	6-296	27.71	1.02
6-175	273.05	3.53	6-243	67.00	1.50	6-297	16.58	1.50
6-176	577.85	6.99	6-245	1154.00	10.00	6-298	23.60	1.02
6-177	18.30	2.40	6-247	624.00	6.99	6-299	191.00	1.78
6-178	74.00	2.00	6-248	783.00	6.99	6-300	19.80	2.40
6-179	533.40	3.18	6-249	910.00	6.99	6-301	677.00	7.00
6-180	28.00	2.20	6-250	936.00	6.99	6-302	955.00	12.60
6-183	219.00	5.30	6-251	3.70	1.90	6-303	763.01	6.99
6-184	83.80	2.62	6-252	231.50	6.00	6-304	887.00	6.99
6-189	25.50	2.00	6-253	106.80	2.66	6-305	736.00	3.53
6-190	840.00	12.00	6-254	218.00	12.00	6-306	2.20	1.60
6-192	8.10	1.60	6-255	126.00	5.00	6-307	3.33	1.02
6-193	44.35	3.00	6-256	480.06	10.00	6-308	18.50	1.50
6-194	49.50	3.00	6-257	93.39	1.47	6-309	87.30	2.00
6-195	79.50	3.00	6-260	506.00	2.62	6-311	7.00	2.00
6-198	12.50	2.00	6-261	504.00	6.99	6-313	16.50	2.70
6-202	514.00	8.00	6-262	532.00	7.00	6-314	31.02	3.00
6-203	367.00	3.50	6-263	22.70	1.50	6-316	67.00	2.50
6-204	381.00	5.00	6-265	619.50	8.00	6-317	7.80	3.60
6-205	39.20	3.00	6-266	693.50	10.10	6-318	151.70	5.60
6-206	15.30	2.40	6-267	734.00	6.99	6-320	608.00	10.00
6-207	13.00	3.50	6-268	827.00	7.00	6-321	700.00	10.00
6-208	26.70	2.50	6-269	950.50	12.06	6-322	810.00	10.00
6-209	398.00	8.00	6-270	1046.00	7.00	6-323	45.00	2.50
6-212	20.34	4.25	6-271	1103.00	10.00	6-324	31.00	2.50
6-214	4.50	1.50	6-272	69.24	3.40	6-328	500.00	3.53
6-215	425.00	6.00	6-273	196.00	12.00	6-329	36.00	2.50
6-216	90.00	3.00	6-274	115.00	3.00	6-330	850.00	10.00
6-218	10.60	2.00	6-275	20.30	2.40	6-331	431.80	7.10
6-221	38.00	5.00	6-276	88.00	3.00	6-332	1011.00	5.33
6-222	150.00	5.40	6-277	8.79	1.14	6-333	1042.00	5.33
6-223	15.80	2.40	6-278	622.00	8.00	6-334	960.00	5.33
6-224	138.00	6.00	6-279	810.00	7.10	6-335	914.00	5.33
6-226	200.00	6.00	6-280	1016.00	7.10	6-336	262.00	5.33
6-227	42.00	3.00	6-281	241.00	7.00	6-337	41.40	2.62
6-228					11.00			2.40
	740.00	10.00	6-282	171.00		6-338	5.60	
6-229	837.00	10.00	6-283	330.00	6.00	6-339	94.50	3.00
6-230	882.00	10.00	6-285	21.70	0.73	6-340	14.60	2.40
6-232	984.00	10.00	6-286	21.82	1.00	6-341	137.30	8.00
6-233	602.00	8.00	6-287	22.89	1.00	6-342	204.00	8.00
6-234	283.00	12.00	6-288	24.32	1.00	6-343	21.50	1.78
6-235	637.00	10.00	6-289	25.79	1.00	6-344	6.20	1.50

No. (mm) sect. d, No. (mm) sect. d, 6-345 8.20 1.50 6-411 60.00 2.50 6-466 188.00 4.00 6-346 9.40 2.10 6-413 100.00 4.00 6-468 3.50 1.50 6-347 11.40 2.10 6-413 100.00 4.00 6-468 3.50 1.50 6-348 13.40 2.10 6-415 800.00 5.30 6-467 9.00 2.00 6-350 19.40 2.10 6-416 65.00 5.30 6-471 11.30 2.40 6-355 19.40 2.10 6-416 65.00 5.30 6-471 11.30 2.40 6-355 23.70 2.80 6-417 760.00 5.00 6-472 33.30 2.40 6-355 23.70 2.80 6-418 1.85 1.50 6-473 13.60 2.50 6-353 38.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-354 46.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-356 22.10 1.60 6-422 607.00 4.00 6-476 17.00 1.50 6-366 3.30 2.40 6-425 18.00 3.00 6-483 74.00 3.00 6-366 19.00 2.00 6-423 46.87 2.62 6-480 6.60 1.50 6-366 3.30 2.40 6-425 18.00 3.00 6-485 225.00 5.00 6-364 11.89 1.78 6-428 4.00 2.50 6-487 2.50 5.00 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-370 48.00 2.00 6-431 44.00 2.00 6-492 174.00 3.00 6-372 720.00 6.99 6-433 38.00 2.50 6-493 22.00 1.39 6-373 9.53 1.60 6-434 51.50 1.50 6-496 151.00 3.00 6-375 10.25 1.40 6-435 48.40 4.85 6-495 190.00 3.00 6-388 594.51 7.14 6-440 6.80 2.00 6-502 220.00 3.00 6-388 1071.00 1.40 6-445 25.00 2.00 6-491 150.00 3.00 6-388 174.00 3.00 6-445 8.20 4.00 2.00 6-491 150.00 3.00 6-388 1071.00 1.40 6-445 25.00 2.00 6-503 19.30 2.00 6-388 174.00 3.00 6-445 8.20 3.00 6-503 19.30 2.00 6-388 174.00 3.00 6-445 8.20 3.00 6-503 19.30 2.00 6-388 1071.00 1.40 6-445 8.20 9.50 6-500 6.500 8.00 0.00 6-388 1071.00 1.50 6-445 8.20 9.50	Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
6-345 8.20 1.50 6-411 60.00 2.50 6-466 188.00 4.00 6-347 11.40 2.10 6-413 100.00 4.00 6-468 3.50 1.50 6-347 11.40 2.10 6-413 100.00 4.00 6-468 3.50 1.50 6-348 13.40 2.10 6-414 41.75 2.60 6-469 330.00 8.00 6-348 13.40 2.10 6-415 800.00 5.33 6-470 9.00 2.00 6-350 19.40 2.10 6-416 65.00 5.30 6-471 11.30 2.40 6-351 23.70 2.80 6-417 760.00 5.00 6-472 33.30 2.40 6-352 29.70 2.80 6-418 1.85 1.50 6-473 13.60 2.50 6-353 38.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-356 22.10 1.60 6-422 607.00 4.00 6-476 17.00 1.50 6-366 13.30 2.40 6-422 607.00 4.00 6-476 17.00 1.50 6-366 13.30 2.40 6-423 46.87 2.62 6-480 6.60 1.50 6-363 865.00 12.00 6-423 46.87 2.62 6-480 6.60 1.50 6-364 1.98 0.84 6-427 57.00 3.00 6-485 225.00 5.00 6-364 1.98 0.84 6-427 57.00 3.00 6-485 225.00 5.00 6-364 1.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-367 17.81 1.02 6-430 21.20 2.40 6-489 21.00 6.00 6-369 1.50 1.00 6-370 48.00 2.00 6-432 48.40 2.50 6-491 13.50 1.10 6-370 48.00 2.00 6-432 48.40 2.50 6-491 3.50 1.10 6-370 48.00 2.00 6-432 48.40 1.50 6-491 13.50 1.10 6-371 10.25 1.40 6-436 24.00 12.00 6-494 13.50 1.10 6-370 48.00 2.00 6-432 48.40 1.50 6-491 13.50 1.10 6-371 10.25 1.40 6-436 24.00 1.00 6-491 13.50 1.10 6-370 48.00 2.00 6-432 7.50 2.00 6-492 174.00 3.00 6-373 9.53 1.60 6-434 45.150 1.50 6-494 162.50 3.53 6-374 6.30 1.60 6-435 48.40 4.85 6-495 190.00 3.00 6-387 2.50 5.00 6-438 12.00 1.00 6-499 18.60 2.00 6-381 647.70 6.99 6-441 3.00 1.00 6-499 18.60 2.00 6-381 647.70 6.99 6-441 3.00 1.50 6-500 6-500 6.00 2.00 6-381 647.70 6.99 6-444 19.00 1.00 6-505 270.00 3.00 6-382 20.20 3.00 6-442 25.00 2.00 6-503 849.00 7.00 6-393 190.00 3.00 6-447 58.00 1.00 6-449 10.00 3.00 6-381 647.70 6.99 6-446 192.00 5.70 6-501 65.00 2.00 6-393 10.00 6.99 6-446 192.00 5.70 6-501 65.00 2.00 6-393 10.00 6.99 6-446 192.00 5.70 6-501 315.00 6.00 6-393 10.00 6.99 6-446 192.00 5.70 6-501 315.00 6.00 6-393 10.00 6.99 6-446 192.00 5.70 6-501 315.00 6.00 6-402 3.50 1.25 6-458 40.00 12.00 6-515 335.00 3.00 6-402 3.50 1.25 6-458 4									
6-346 9.40 2.10 6-412 238.00 5.00 6-467 528.00 8.00 6-347 11.40 2.10 6-413 100.00 4.00 6-468 3.50 1.50 6-348 13.40 2.10 6-414 41.75 2.60 6-468 330.00 8.00 6-348 15.40 2.10 6-415 800.00 5.33 6-470 9.00 2.00 6-350 19.40 2.10 6-416 65.00 5.30 6-471 11.30 2.40 6-351 23.70 2.80 6-418 1.85 1.50 6-473 313.60 2.50 6-352 29.70 2.80 6-418 1.85 1.50 6-473 313.60 2.50 6-353 38.70 2.80 6-420 4.00 2.20 6-474 63.00 4.50 6-355 446.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-356 22.10 1.60 6-422 607.00 4.00 6-476 17.00 1.50 6-366 19.00 2.00 6-423 46.87 2.62 6-480 6.60 1.50 6-361 3.30 2.40 6-425 18.00 3.00 6-483 74.00 3.00 6-363 865.00 12.00 6-426 25.00 4.00 6-485 225.00 5.00 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-367 17.81 1.02 6-430 21.20 2.40 6-489 21.00 6.00 6-377 48.00 2.00 6-432 7.50 2.00 6-492 174.00 3.00 6-377 48.00 2.00 6-432 7.50 2.00 6-492 174.00 3.00 6-377 48.00 2.00 6-432 7.50 2.00 6-492 174.00 3.00 6-377 3.95 1.60 6-434 51.50 1.50 6-494 162.50 3.53 6-374 6.30 1.60 6-435 48.40 4.85 6-495 190.00 3.00 6-375 10.25 1.40 6-436 48.40 4.85 6-495 190.00 3.00 6-377 48.00 2.00 6-435 48.40 4.85 6-495 190.00 3.00 6-377 35.00 5.30 6-437 8.00 1.00 6-431 6-430 1.00 6-491 3.50 1.10 6-387 138.00 2.10 6-435 48.40 4.85 6-495 190.00 3.00 6-382 20.20 3.00 6-442 25.00 1.00 6-498 9.00 2.00 6-381 647.70 6.99 6-441 3.00 1.00 6-499 18.60 2.00 6-381 647.70 6.99 6-441 3.00 1.00 6-498 9.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-500 66.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-500 66.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-500 66.00 2.00 6-383 16.00 6-402 3.00 6-445 192.00 3.00 6-503 193.00 2.00 6-381 647.70 6.99 6-446 94.00 2.00 6-503 849.00 7.00 6-399 99.00 6.99 6-445 82.00 2.00 6-500 819.00 7.00 6-399 99.00 6.99 6-445 82.00 2.00 6-500 819.00 7.00 6-399 99.00 6.99 6-445 82.00 2.00 6-500 819.00 7.00 6-399 99.00 6.99 6-445 82.00 2.00 6-500 819.00 7.00 6-399 99.00 6.99 6-445 82.00 2.00 6-500 819.00 7.00 6-514 25.00 3.00 6-402 3.5									
6-347 11.40 2.10 6-413 100.00 4.00 6-468 35.0 1.50 6-348 13.40 2.10 6-415 800.00 5.33 6-470 9.00 2.00 6-350 19.40 2.10 6-416 65.00 5.30 6-471 11.30 2.40 6-351 23.70 2.80 6-417 760.00 5.00 6-472 33.30 2.40 6-352 29.70 2.80 6-418 1.85 1.50 6-473 13.60 2.50 6-353 38.70 2.80 6-418 1.85 1.50 6-473 13.60 2.50 6-353 38.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-354 46.70 2.80 6-421 112.00 3.00 6-475 10.30 2.40 6-356 22.10 1.60 6-422 607.00 4.00 6-476 17.00 1.50 6-360 19.00 2.00 6-423 46.87 2.62 6-480 6.60 1.50 6-361 3.30 2.40 6-425 18.00 3.00 6-485 225.00 5.00 6-363 865.00 12.00 6-426 25.00 4.00 6-485 225.00 5.00 6-363 865.00 12.00 6-426 25.00 4.00 6-486 7.80 4.60 6-366 11.89 1.78 6-427 57.00 3.00 6-486 7.80 4.60 6-366 11.89 1.78 6-428 4.00 2.50 6-487 2.90 1.02 6-369 1.50 1.00 6-431 44.00 2.00 6-491 3.50 1.10 6-370 48.00 2.00 6-432 7.50 2.00 6-492 174.00 3.00 6-372 720.00 6.99 6-433 38.00 2.50 6-493 22.00 1.30 6-373 9.53 1.60 6-434 51.50 1.50 6-494 162.50 3.53 6-374 6.30 1.60 6-434 51.50 1.50 6-494 162.50 3.53 6-375 10.25 1.40 6-436 240.00 12.00 6-497 27.50 1.50 6-388 12.00 5.00 6-438 12.00 1.00 6-439 12.00 6.00 6-372 70.00 6.99 6-433 38.00 2.50 6-493 12.00 1.00 6-375 10.25 1.40 6-436 240.00 12.00 6-497 27.50 1.50 6-386 15.00 5.00 6-437 8.00 1.00 6-497 27.50 1.50 6-381 647.70 6.99 6-441 3.00 1.50 6-501 150.00 3.00 6-381 647.70 6.99 6-441 3.00 1.50 6-501 150.00 3.00 6-381 647.70 6.99 6-441 3.00 1.50 6-501 150.00 2.00 6-381 647.70 6.99 6-441 3.00 1.50 6-503 19.30 2.40 6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-398 13.00 0.40 6-443 24.00 6.00 6-503 19.30 2.40 6-399 18.00 0.00 6-444 159.20 5.70 6-504 120.00 3.00 6-398 12.00 6-446 12.50 6-445 82.00 4.00 6-503 19.30 2.40 6-399 18.00 0.00 6-447 58.00 5.00 6-447 58.00 0.00 6-503 19.30 2.40 6-399 9.00 6.99 6-446 9.00 2.00 6-508 849.00 7.00 6-398 9.00 6.99 6-446 9.00 2.00 6-508 849.00 7.00 6-402 3.50 1.60 6-455 82.00 0.00 6-501 130.00 3.00 6-402 3.50 1.60 6-455 82.00 0.00 6-511 140.00 3.00 6-402 3.50 1.50 6-455									
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6-377 35.00 5.30 6-438 12.00 1.00 6-498 90.00 2.00 6-379 138.00 2.10 6-439 16.00 1.00 6-499 18.60 2.00 6-380 594.51 7.14 6-440 6.80 2.00 6-500 66.00 2.00 6-381 647.70 6.99 6-441 3.00 1.50 6-501 65.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-502 220.00 3.00 6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-392<		10.25		6-436	240.00		6-496		3.00
6-377 35.00 5.30 6-438 12.00 1.00 6-498 90.00 2.00 6-379 138.00 2.10 6-439 16.00 1.00 6-499 18.60 2.00 6-380 594.51 7.14 6-440 6.80 2.00 6-500 66.00 2.00 6-381 647.70 6.99 6-441 3.00 1.50 6-501 65.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-502 220.00 3.00 6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-392<									
6-379 138.00 2.10 6-439 16.00 1.00 6-499 18.60 2.00 6-380 594.51 7.14 6-440 6.80 2.00 6-500 66.00 2.00 6-381 647.70 6.99 6-441 3.00 1.50 6-501 65.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-502 220.00 3.00 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-392 99.00 6.99 6-447 58.00 2.00 6-509 819.00 7.00 6-393 </td <td></td> <td>35.00</td> <td>5.30</td> <td>6-438</td> <td>12.00</td> <td>1.00</td> <td>6-498</td> <td></td> <td></td>		35.00	5.30	6-438	12.00	1.00	6-498		
6-381 647.70 6.99 6-441 3.00 1.50 6-501 65.00 2.00 6-382 20.20 3.00 6-442 25.00 2.00 6-502 220.00 3.00 6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-508 849.00 7.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 <t< td=""><td>6-379</td><td>138.00</td><td>2.10</td><td>6-439</td><td>16.00</td><td>1.00</td><td>6-499</td><td>18.60</td><td>2.00</td></t<>	6-379	138.00	2.10	6-439	16.00	1.00	6-499	18.60	2.00
6-382 20.20 3.00 6-442 25.00 2.00 6-502 220.00 3.00 6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 <td< td=""><td>6-380</td><td>594.51</td><td>7.14</td><td>6-440</td><td>6.80</td><td>2.00</td><td>6-500</td><td>66.00</td><td>2.00</td></td<>	6-380	594.51	7.14	6-440	6.80	2.00	6-500	66.00	2.00
6-385 1071.00 14.40 6-443 24.00 6.00 6-503 19.30 2.40 6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-390 8.00 3.00 6-447 58.00 2.00 6-509 819.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00	6-381	647.70	6.99	6-441	3.00	1.50	6-501	65.00	2.00
6-387 25.80 3.30 6-444 159.20 5.70 6-504 120.00 3.00 6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-390 8.00 3.00 6-447 58.00 2.00 6-509 819.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-397 14.50 1.60 6-453 24.00 4.00 6-514 250.00 3.00 6-	6-382	20.20	3.00	6-442	25.00	2.00	6-502	220.00	3.00
6-388 17.40 2.50 6-445 82.00 4.00 6-505 270.00 3.00 6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-390 8.00 3.00 6-447 58.00 2.00 6-509 819.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-4	6-385	1071.00	14.40	6-443	24.00	6.00	6-503	19.30	2.40
6-389 723.90 6.99 6-446 94.00 2.00 6-508 849.00 7.00 6-390 8.00 3.00 6-447 58.00 2.00 6-509 819.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.00 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-452 85.20 9.25 6-513 82.00 2.00 6-397 14.50 1.60 6-454 30.00 4.00 6-514 250.00 3.00 6-401 4.50 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401	6-387	25.80	3.30	6-444	159.20	5.70	6-504	120.00	3.00
6-390 8.00 3.00 6-447 58.00 2.00 6-509 819.00 7.00 6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402	6-388	17.40	2.50	6-445	82.00	4.00	6-505	270.00	3.00
6-392 99.00 6.99 6-448 119.20 5.70 6-510 315.00 6.00 6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-453 24.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-4	6-389	723.90	6.99	6-446	94.00	2.00	6-508	849.00	7.00
6-393 1060.00 10.00 6-449 41.00 3.00 6-511 140.00 3.00 6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 520.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 84.00 3.00 6-518 355.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404	6-390	8.00	3.00	6-447	58.00	2.00	6-509	819.00	7.00
6-394 514.00 8.00 6-451 129.20 5.70 6-512 144.00 3.70 6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-516 230.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 <td>6-392</td> <td>99.00</td> <td>6.99</td> <td>6-448</td> <td>119.20</td> <td>5.70</td> <td>6-510</td> <td>315.00</td> <td>6.00</td>	6-392	99.00	6.99	6-448	119.20	5.70	6-510	315.00	6.00
6-395 9.35 1.60 6-452 85.20 9.25 6-513 82.00 2.00 6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 <td>6-393</td> <td>1060.00</td> <td>10.00</td> <td>6-449</td> <td>41.00</td> <td>3.00</td> <td>6-511</td> <td>140.00</td> <td>3.00</td>	6-393	1060.00	10.00	6-449	41.00	3.00	6-511	140.00	3.00
6-396 18.20 3.00 6-453 24.00 4.00 6-514 250.00 3.00 6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-394	514.00	8.00	6-451	129.20	5.70	6-512	144.00	3.70
6-397 14.50 1.60 6-454 30.00 4.00 6-515 134.00 3.00 6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-395	9.35	1.60	6-452	85.20	9.25	6-513	82.00	2.00
6-400 27.00 1.50 6-455 62.00 2.50 6-516 230.00 3.00 6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-396	18.20	3.00	6-453	24.00	4.00	6-514	250.00	3.00
6-401 4.50 1.00 6-456 84.00 3.00 6-517 335.00 3.00 6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-397	14.50	1.60	6-454	30.00	4.00	6-515	134.00	3.00
6-402 3.50 1.25 6-458 400.00 12.00 6-518 355.00 3.00 6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-400	27.00	1.50	6-455	62.00	2.50	6-516	230.00	3.00
6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-401	4.50	1.00	6-456	84.00	3.00	6-517	335.00	3.00
6-404 19.00 5.00 6-459 37.36 2.60 6-520 8.00 2.20 6-405 93.50 9.50 6-460 996.00 7.00 6-521 716.00 8.00 6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-402	3.50	1.25	6-458	400.00	12.00	6-518	355.00	3.00
6-407 242.00 6.00 6-461 213.68 7.14 6-523 65.00 3.00 6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-404	19.00	5.00	6-459		2.60	6-520	8.00	2.20
6-408 0.80 1.60 6-462 558.00 10.00 6-524 17.00 1.10	6-405	93.50	9.50	6-460	996.00	7.00	6-521	716.00	8.00
	6-407	242.00	6.00	6-461	213.68	7.14	6-523	65.00	3.00
0.400 0.40.00 40.00 0.404 70.00 4.50 0.505 11.00 0.50	6-408	0.80	1.60	6-462	558.00	10.00	6-524	17.00	1.10
6-409 940.00 10.00 6-464 /6.00 4.50 6-525 41.28 3.53	6-409	940.00	10.00	6-464	76.00	4.50	6-525	41.28	3.53



Doulson	Ø 4	Cross	Douleon	W 4	Cunna	Doulean	0.4	Cuana
Parker No.	Ø d (mm)	Cross- sect. d ₂	Parker No.	Ø d (mm)	Cross- sect. d ₂	Parker No.	Ø d (mm)	Cross- sect. d ₂
6-527	974.00	7.00	6-580	118.31	3.53	6-636	64.00	3.00
6-528	16.00	1.50	6-581	6.50	1.50	6-638	281.00	5.00
6-529	524.00	10.00	6-582	95.50	3.53	6-640	97.00	1.50
6-530	455.00	8.00	6-583	5.00	1.20	6-642	40.00	1.50
6-531	710.00	5.33	6-584	13.00	1.00	6-641	70.00	1.50
6-532	10.00	2.20	6-585	34.40	3.10	6-643	57.00	1.50
6-534	1004.00	8.00	6-586	39.40	3.10	6-644	638.89	5.44
6-535	680.00	5.00	6-587	74.40	3.10	6-645	665.00	5.00
6-536	635.00	5.00	6-588	84.40	3.10	6-646	32.00	2.70
6-538	2.40	1.90	6-589	105.00	2.00	6-647	617.00	7.00
6-539	70.00	4.50	6-592	8.00	1.25	6-648	820.00	7.00
6-540	33.00	2.50	6-593	19.20	3.00	6-649	798.00	7.00
6-541	41.00	2.50	6-594	42.00	2.50	6-650	853.00	7.00
6-542	44.20	2.50	6-595	24.00	2.50	6-651	9.00	4.00
6-543	6.00	1.00	6-596	65.00	4.50	6-652	6.00	5.20
6-544	24.00	1.50	6-597	875.00	8.00	6-653	664.00	5.00
6-545	35.00	4.50	6-598	375.00	5.34	6-654	28.00	2.50
6-546	205.00	3.00	6-600	209.20	5.70	6-655	174.20	5.70
6-547								
6-548	197.00 5.70	3.00	6-601	100.00	2.00	6-656	26.00 7.00	2.00
		3.20	6-602		10.00	6-657		1.00
6-549	3.00	1.20	6-603	50.00	4.00	6-659	67.00	3.00
6-550	12.50	1.10	6-604	240.00	3.00	6-660	27.00	5.00
6-551	10.80	1.50	6-605	10.00	3.00	6-661	7.50	1.25
6-552	70.00	2.00	6-606	35.00	2.50	6-662	12.00	3.80
6-553	304.80	1.78	6-607	315.00	4.00	6-663	30.00	4.65
6-554	17.40	2.10	6-608	94.20	5.70	6-665	60.00	3.00
6-555	37.00	5.00	6-609	36.00	2.20	6-666	24.00	1.00
6-556	52.00	3.00	6-610	9.00	1.20	6-667	770.00	10.00
6-557	18.60	3.50	6-611	25.00	1.50	6-668	708.00	10.00
6-558	87.20	2.50	6-612	125.00	3.00	6-669	450.00	10.00
6-559	137.00	14.00	6-613	4.00	1.00	6-670	550.00	10.00
6-560	59.70	7.00	6-614	190.00	5.00	6-671	245.00	10.00
6-561	88.30	7.00	6-615	3.00	2.00	6-672	364.00	10.00
6-562	16.00	2.50	6-618	234.32	1.78	6-673	48.20	1.78
6-564	8.00	2.50	6-619	20.00	2.00	6-674	120.00	1.50
6-566	40.00	2.50	6-621	535.46	7.24	6-676	84.00	2.50
6-568	56.00	2.00	6-622	34.00	2.80	6-677	11.50	1.00
6-569	80.00	2.00	6-623	149.20	5.70	6-678	36.00	2.00
6-570	215.00	6.00	6-626	580.00	8.00	6-682	375.00	10.00
6-571	10.15	1.40	6-627	10.10	1.00	6-683	15.00	1.00
6-572	6.50	2.00	6-628	19.30	3.65	6-684	3.20	1.02
6-573	19.00	1.50	6-629	210.00	3.00	6-686	3.20	1.60
6-574	86.84	5.33	6-630	51.00	3.00	6-687	21.50	1.50
6-575	39.00	2.00	6-631	179.00	3.00	6-688	133.35	5.33
6-576	160.00	3.00	6-632	16.00	1.25	6-689	150.00	3.00
6-577	130.00	6.00	6-633	61.00	4.50	6-690	546.00	7.00
6-578	445.00	8.00	6-634	71.00	4.50	6-692	8.50	1.50
6-579	87.00	3.00	6-635	236.00	7.00	6-693	130.00	2.50

Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-694	36.00	2.10	6-752	34.65	2.60	6-810	54.50	2.65
6-698	140.00	2.00	6-753	39.50	2.60	6-812	133.50	12.00
6-699	62.00	3.00	6-754	76.00	2.50	6-813	341.00	14.00
6-700	96.00	2.00	6-755	18.00	5.00	6-814	164.20	5.84
6-701	695.00	6.99	6-756	148.00	10.00	6-815	109.20	5.84
6-702	707.00	6.99	6-757	73.00	4.00	6-816	670.00	10.00
6-703	55.30	2.00	6-758	19.75	2.50	6-817	590.00	10.00
6-704	180.00	3.00	6-759	43.25	2.60	6-818	160.00	4.00
6-705	14.00	3.00	6-760	31.95	2.60	6-819	54.00	3.00
6-706	189.20	5.70	6-762	107.31	6.99	6-820	79.00	1.50
6-707	865.00	8.40	6-764	59.60	5.85	6-821	83.00	1.00
6-708	929.00	6.00	6-766	31.70	3.50	6-822	85.00	1.50
6-709	565.00	7.00	6-767	109.40	3.10	6-823	10.00	2.65
6-710	7.50	1.00	6-768	119.60	5.70	6-824	69.00	3.00
6-711	388.00	5.00	6-769	114.40	3.10	6-825	27.00	3.20
6-713	6.00	1.25	6-772	44.70	3.50	6-826	78.00	3.50
6-714	1.80	1.00	6-773	155.00	10.00	6-827	470.00	10.00
6-715	8.80	1.00	6-774	12.00	2.50	6-831	590.00	3.50
6-716	320.00	6.00	6-775	515.00	10.00	6-832	96.00	9.00
6-717	11.00	2.50	6-777	10.60	1.80	6-833	137.00	4.00
6-718	258.40	1.60	6-779	19.00	2.65	6-834	484.86	3.53
6-719	57.00	2.50	6-780	21.20	2.65	6-835	449.50	6.99
6-720	93.00	2.00	6-781	28.00	2.65	6-836	543.50	6.99
6-722	128.00	2.00	6-782	38.70	2.65	6-837	109.20	5.70
6-723	380.00	4.00	6-783	45.00	2.65	6-838	32.00	4.00
6-724	102.00	3.00	6-784	32.50	3.55	6-839	10.10	1.78
6-725	16.56	1.78	6-785	56.00	3.55	6-840	282.37	3.53
6-726	45.00	5.00	6-786	67.00	3.55	6-841	175.00	10.00
6-728	26.00	1.00	6-787	71.00	3.55	6-842	255.00	4.00
6-729	78.00	3.00	6-788	80.00	3.55	6-844	135.00	4.00
6-730	13.00	3.00	6-790	80.00	1.80	6-845	42.50	1.80
6-731	18.00	1.30	6-791	50.00	4.50	6-846	234.20	7.00
6-733	85.00	2.00	6-792	61.00	5.00	6-848	18.14	1.78
6-734	430.00	12.00	6-793	20.00	1.80	6-849	4.80	0.75
6-736	3.17	1.02	6-794	28.00	1.80	6-850	32.00	2.50
6-737	13.89	1.30	6-797	2.00	1.00	6-851	61.00	2.00
6-738	5.33	1.02	6-798	19.00	1.80	6-853	85.00	4.00
6-739	56.00	4.50	6-799	468.00	6.00	6-854	298.00	2.62
6-740	109.00	3.00	6-800	500.00	8.00	6-855	6.30	1.80
6-741	428.00	5.70	6-801	21.20	3.55	6-856	7.50	1.80
6-742	614.00	7.00	6-802	33.50	2.65	6-857	16.00	1.80
6-743	93.00	3.00	6-803	30.00	3.55	6-861	5.80	0.75
6-745	25.30	2.40	6-804	92.50	3.55	6-862	180.00	10.00
6-746	169.20	5.70	6-805	77.00	2.00	6-863	95.00	4.00
6-748	5.70	1.05	6-806	105.00	3.50	6-865	201.00	4.00
6-749	26.00	2.50	6-807	370.00	5.50	6-866	9.30	1.50
6-750	45.90	1.50	6-808	20.00	3.55	6-867	89.20	5.70
6-751	5.30	2.40	6-809	43.70	1.80	6-868	195.00	3.50



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-869	32.00	2.00	6-924	900.00	10.00	6-974	17.00	3.50
6-871	260.00	5.00	6-925	2.06	0.66	6-975	44.83	2.67
6-872	150.00	4.00	6-927	380.00	8.00	6-976	10.50	1.50
6-873	112.00	4.00	6-928	11.50	1.50	6-977	28.00	3.00
6-874	95.00	5.00	6-929	13.30	2.40	6-978	78.00	2.50
6-875	41.60	2.40	6-930	477.00	10.50	6-979	72.00	2.50
6-876	16.50	1.00	6-931	10.00	6.50	6-980	36.00	1.50
6-877	22.00	4.00	6-932	150.00	2.00	6-982	114.00	3.00
6-878	245.00	3.00	6-933	6.40	1.30	6-983	164.20	5.70
6-879	54.00	4.00	6-934	401.71	3.53	6-984	2965.00	7.00
6-880	2.30	1.30	6-935	307.57	3.53	6-985	56.00	3.00
6-881	37.00	3.00	6-936	272.64	3.53	6-986	635.00	9.00
6-882	45.00	1.00	6-937	7.00	2.35	6-988	270.00	5.33
6-883	60.00	1.20	6-938	409.00	6.99	6-990	69.00	2.50
6-884	68.00	3.00	6-939	434.00	6.99	6-991	86.00	2.62
6-885	80.50	4.00	6-940	15.30	2.20	6-992	79.30	2.62
6-887	172.00	3.00	6-941	68.00	5.00	6-993	35.00	3.20
6-889	174.30	3.50	6-942	23.60	2.90	6-994	4.00	3.00
6-890	870.00	8.00	6-943	748.50	7.00	6-995	105.00	4.00
6-891	16.00	2.65	6-944	46.00	4.00	6-996	43.00	3.00
6-892	400.00	5.00	6-945	11.50	2.50	6-997	45.00	3.00
6-893	52.20	5.70	6-946	17.00	3.00	6-998	19.00	3.00
6-894	27.00	2.50	6-947	325.00	5.33	6-999	23.00	2.00
6-895	359.20	13.80	6-948	274.00	5.33	6-1000	29.00	3.00
6-896	257.20	14.00	6-949	223.00	5.33	6-1001	75.00	4.00
6-897	380.00	6.00	6-950	5.50	2.00	6-1002	78.00	5.00
6-898	429.00	6.00	6-951	526.00	6.99	6-1003	120.00	6.00
6-899	70.00	5.00	6-952	9.50	1.00	6-1004	172.00	6.00
6-900	83.00	3.00	6-953	11.00	3.00	6-1005	114.20	5.70
6-902	130.00	5.00	6-954	214.63	2.18	6-1007	187.10	8.40
6-903	110.00	3.00	6-955	5.00	1.75	6-1008	463.00	7.00
6-904	13.00	1.30	6-956	7.10	2.00	6-1010	249.30	5.70
6-905	28.00	1.00	6-957	25.60	1.93	6-1012	84.30	5.70
6-907	6.80	1.80	6-958	20.00	4.00	6-1013	72.00	4.00
6-909	449.00	12.00	6-959	7.00	1.20	6-1014	85.00	3.00
6-910	10.00	2.62	6-960	5.61	1.68	6-1015	132.00	4.00
6-911	165.00	2.00	6-961	122.00	3.00	6-1016	87.20	5.70
6-912	49.20	3.00	6-963	93.00	4.00	6-1017	613.92	6.99
6-913	27.20	3.00	6-964	50.00	3.00	6-1018	289.42	5.87
6-914	34.00	3.00	6-965	10.40	1.00	6-1019	2.35	1.00
6-915	110.00	5.00	6-966	2.50	1.00	6-1019	46.00	3.00
6-916	25.00	2.50	6-967	245.00	10.85	6-1021	16.00	4.00
6-917	296.00	6.00	6-968	5.50	1.50	6-1022	6.75	1.78
6-918	234.10	8.40	6-969	25.00	3.00	6-1022	40.00	5.00
6-919	515.90	6.00	6-970	37.00	1.50	6-1023	53.00	3.50
6-920	195.50	12.00	6-971	2.80	1.90	6-1024	38.00	3.50
6-921	76.00	3.00	6-971	40.82	2.59	6-1025	5.00	1.00
6-922	7.00	1.40	6-973	3.50	0.80	6-1027	24.00	3.00
0-322	7.00	1.40	0-313	5.50	0.00	0-1027	24.00	3.00

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Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d,	No.	(mm)	sect. d,	No.	(mm)	sect. d,
6-1028	185.00	5.00	6-1076	120.00	4.00	6-1125	311.00	10.00
6-1029	94.00	4.00	6-1077	81.00	4.00	6-1126	329.00	10.00
6-1030	248.00	5.00	6-1078	23.00	1.50	6-1127	580.50	3.53
6-1031	28.00	5.00	6-1079	750.00	5.00	6-1128	460.00	5.34
6-1032	7.70	2.00	6-1080	485.00	5.00	6-1129	335.00	7.00
6-1033	2.80	1.60	6-1081	160.00	5.00	6-1130	840.50	7.00
6-1034	61.00	4.00	6-1082	26.00	3.00	6-1131	835.50	7.00
6-1035	5.00	2.50	6-1083	22.00	3.00	6-1132	250.00	8.00
6-1036	4.60	2.00	6-1084	130.00	4.00	6-1133	9.52	1.78
6-1037	65.00	5.00	6-1085	135.00	5.00	6-1134	84.00	3.50
6-1038	39.00	3.00	6-1086	22.30	2.40	6-1135	345.00	5.00
6-1039	16.30	2.40	6-1087	36.20	3.00	6-1136	140.00	5.00
6-1040	18.00	2.20	6-1088	180.00	4.00	6-1137	57.00	4.00
6-1041	47.00	2.50	6-1089	99.20	5.70	6-1138	33.00	3.00
6-1042	261.00	6.00	6-1090	336.00	7.00	6-1139	200.00	5.00
6-1043	338.00	6.00	6-1091	20.00	5.00	6-1140	36.00	3.00
6-1044	190.00	4.00	6-1092	38.00	3.00	6-1141	47.00	2.00
6-1045	162.00	2.50	6-1093	142.00	6.00	6-1142	360.00	4.00
6-1046	145.00	5.00	6-1094	63.00	6.00	6-1143	124.00	4.00
6-1047	34.00	1.00	6-1095	94.00	3.00	6-1144	41.00	1.50
6-1048	218.00	5.80	6-1096	129.00	4.00	6-1145	56.00	4.00
6-1049	14.00	1.10	6-1097	170.00	4.00	6-1146	31.50	3.15
6-1050	218.00	6.00	6-1098	179.20	5.70	6-1147	150.00	6.00
6-1051	142.00	4.00	6-1099	15.00	4.00	6-1148	39.40	2.10
6-1052	88.00	4.00	6-1100	35.00	1.50	6-1149	6.50	1.20
6-1053	65.00	4.00	6-1101	360.00	7.50	6-1150	34.40	2.10
6-1054	44.00	3.00	6-1102	5.69	1.14	6-1151	115.00	2.00
6-1055	103.00	5.00	6-1103	90.00	7.00	6-1152	79.20	5.70
6-1056	93.00	5.00	6-1105	116.50	1.78	6-1153	206.00	7.00
6-1057	80.00	4.00	6-1106	108.00	8.00	6-1154	136.00	4.00
6-1058	185.00	3.00	6-1107	152.00	8.00	6-1155	245.00	5.00
6-1059	47.00	4.00	6-1108	180.52	5.33	6-1156	890.00	5.00
6-1060	43.00	4.00	6-1109	17.20	3.00	6-1157	615.00	5.00
6-1061	92.00	4.00	6-1110	180.00	6.00	6-1158	520.00	5.00
6-1062	95.00	4.50	6-1111	88.00	8.00	6-1160	695.00	5.00
6-1063	220.00	5.00	6-1112	23.00	3.00	6-1162	63.00	3.50
6-1064	22.20	3.00	6-1113	90.00	2.50	6-1163	102.00	4.00
6-1065	55.00	3.00	6-1114	40.00	6.00	6-1164	114.00	5.00
6-1066	1960.00	10.85	6-1115	22.00	1.30	6-1165	88.00	6.00
6-1067	2072.00	10.00	6-1116	35.00	3.00	6-1166	35.00	4.00
6-1068	175.00	6.00	6-1117	62.00	6.00	6-1167	248.00	7.00
6-1069	77.10	2.62	6-1118	210.00	4.00	6-1168	300.00	6.00
6-1070	49.20	5.70	6-1119	180.00	8.00	6-1169	115.00	5.00
6-1071	755.00	5.00	6-1120	3.00	2.70	6-1170	515.00	5.00
6-1072	465.00	5.00	6-1121	185.00	6.00	6-1171	315.00	5.00
6-1073	128.00	5.00	6-1122	9.00	3.00	6-1172	320.62	3.53
6-1074	105.00	5.00	6-1123	64.20	5.70	6-1173	764.00	6.99
6-1075	75.00	3.00	6-1124	35.15	3.15	6-1174	85.00	6.00



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-1175	104.50	3.00	6-1225	222.00	7.00	6-1274	54.00	2.00
6-1176	46.00	2.00	6-1226	50.00	5.00	6-1275	11.60	2.20
6-1177	172.00	4.00	6-1227	252.00	4.00	6-1276	19.00	1.00
6-1178	45.00	4.00	6-1228	8.50	2.00	6-1277	135.00	3.00
6-1179	90.00	4.00	6-1229	564.30	6.99	6-1278	299.50	5.00
6-1180	120.00	5.00	6-1230	10.80	1.90	6-1279	273.60	5.00
6-1181	80.00	5.00	6-1231	260.00	4.00	6-1280	180.00	5.00
6-1182	112.00	7.00	6-1232	26.00	1.50	6-1281	125.00	2.50
6-1183	7.50	2.10	6-1233	145.00	4.00	6-1282	238.00	10.00
6-1185	52.50	1.80	6-1234	52.00	2.50	6-1283	195.00	5.00
6-1186	55.00	4.00	6-1235	336.00	5.33	6-1286	8.65	2.80
6-1188	37.00	2.00	6-1236	11.00	1.00	6-1287	4.00	1.80
6-1189	43.00	2.00	6-1237	100.00	8.00	6-1288	14.00	1.00
6-1190	266.00	4.00	6-1238	194.00	14.00	6-1289	24.50	3.15
6-1191	290.00	5.00	6-1239	238.00	14.00	6-1290	170.00	5.00
6-1192	55.00	3.50	6-1240	285.00	14.10	6-1291	4.50	2.25
6-1193	66.00	3.00	6-1241	385.00	14.20	6-1292	160.00	6.00
6-1194	70.00	4.00	6-1242	415.00	14.20	6-1293	230.00	8.00
6-1195	45.00	4.50	6-1243	480.00	14.00	6-1294	155.00	3.00
6-1196	48.00	4.00	6-1244	585.00	14.00	6-1295	150.00	5.00
6-1197	34.00	2.00	6-1245	735.00	15.00	6-1296	130.00	3.00
6-1198	13.30	1.20	6-1246	853.00	20.00	6-1297	9.50	2.00
6-1199	125.00	4.00	6-1247	1.56	1.00	6-1298	17.86	2.62
6-1200	104.00	5.30	6-1248	46.00	5.00	6-1299	540.00	5.00
6-1201	260.00	8.00	6-1249	7.30	3.40	6-1300	579.00	5.00
6-1202	13.30	3.00	6-1250	225.00	3.00	6-1301	602.00	5.00
6-1203	30.00	2.15	6-1251	6.36	0.72	6-1302	216.00	4.00
6-1204	24.69	1.78	6-1252	21.00	4.00	6-1303	99.00	3.00
6-1205	362.00	5.00	6-1253	49.00	2.00	6-1304	1840.00	5.00
6-1206	9.50	2.50	6-1254	368.00	6.00	6-1305	100.00	3.00
6-1207	142.00	12.00	6-1255	343.00	6.00	6-1306	97.00	5.00
6-1208	10.90	1.20	6-1256	440.00	4.00	6-1307	200.00	4.00
6-1209	62.00	3.53	6-1257	37.50	4.00	6-1308	640.00	6.00
6-1210	320.00	3.00	6-1258	330.00	5.00	6-1309	740.00	6.00
6-1211	228.00	3.00	6-1259	26.00	4.00	6-1310	300.00	10.00
6-1212	70.00	8.00	6-1260	192.00	4.00	6-1311	21.00	3.00
6-1213	1005.00	15.00	6-1261	62.00	4.00	6-1312	6.00	1.52
6-1214	90.00	5.00	6-1262	632.00	6.00	6-1313	11.50	2.00
6-1215	780.00	7.00	6-1263	246.00	4.00	6-1314	9.50	1.78
6-1216	10.00	1.60	6-1264	2.20	1.00	6-1315	22.00	2.10
6-1217	131.50	4.00	6-1265	90.00	4.80	6-1316	80.00	3.50
6-1218	340.00	4.00	6-1266	7.30	2.40	6-1317	53.80	4.00
6-1219	480.00	4.00	6-1268	6.30	2.40	6-1318	155.00	4.00
6-1219	610.00	4.00	6-1269	1.50	0.60	6-1319	42.00	4.00
6-1221	500.00	5.00	6-1269	80.00	3.00	6-1319	107.00	8.00
6-1222	770.00	7.00	6-1271	56.70	3.00	6-1321	7.10	3.60
6-1223	860.00	3.00	6-1271	68.00	4.00	6-1321	116.00	3.00
6-1224	42.00	5.00	6-1273	66.00	5.00	6-1323	11.60	1.20

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Parker No.	Ø d	Cross-	Parker No.	Ø d	Cross-	Parker No.	Ø d	Cross-
6-1324	(mm) 155.00	sect. d ₂	6-1374	(mm) 395.00	sect. d ₂	6-1426	(mm)	sect. d ₂
		5.00			12.00		238.00	6.00
6-1325	1865.00	5.00	6-1375	21.20	1.80	6-1427	120.00	10.00
6-1326	410.00	6.00	6-1376	11.20	1.80	6-1428	185.00	4.00
6-1327	6.00	2.50	6-1377	65.00	2.65	6-1429	91.00	2.00
6-1328	383.60	5.00	6-1378	28.20	1.00	6-1430	19.35	1.00
6-1329	134.00	8.00	6-1379	12.50	1.80	6-1431	23.00	4.00
6-1330	12.00	10.60	6-1380	68.00	3.50	6-1434	5.00	1.60
6-1331	272.00	8.00	6-1381	105.00	3.00	6-1435	440.00	4.30
6-1332	32.00	3.00	6-1384	240.66	7.40	6-1436	131.00	5.30
6-1333	51.94	3.53	6-1385	5.60	1.80	6-1437	50.00	3.50
6-1334	340.00	10.00	6-1386	11.00	3.40	6-1438	54.70	3.53
6-1335	412.00	8.00	6-1387	390.00	4.00	6-1439	61.70	4.50
6-1336	167.50	3.50	6-1388	256.00	4.00	6-1443	675.00	5.30
6-1337	11.10	1.82	6-1389	38.00	1.50	6-1444	490.00	5.00
6-1338	23.80	2.40	6-1390	155.00	3.53	6-1445	85.00	5.00
6-1339	13.70	2.50	6-1391	192.00	8.00	6-1446	21.30	2.30
6-1340	15.50	2.60	6-1392	354.96	6.09	6-1447	27.00	2.70
6-1341	17.20	1.82	6-1393	14.70	3.50	6-1448	55.00	5.00
6-1342	14.00	1.82	6-1394	5.15	1.80	6-1449	10.00	8.00
6-1343	48.20	3.00	6-1395	100.00	6.00	6-1450	198.00	4.00
6-1345	14.00	1.60	6-1396	15.08	2.62	6-1451	235.00	4.00
6-1346	240.00	5.00	6-1398	15.00	3.50	6-1452	92.00	3.00
6-1347	53.00	2.00	6-1399	42.00	4.50	6-1453	195.00	6.00
6-1348	73.00	7.00	6-1400	7.00	2.75	6-1454	11.50	2.30
6-1349	44.30	5.70	6-1401	31.00	2.00	6-1456	24.60	3.40
6-1350	104.30	5.70	6-1402	165.00	4.00	6-1457	86.00	4.00
6-1351	309.30	5.70	6-1403	265.00	5.00	6-1458	320.00	6.50
6-1352	419.30	5.70	6-1404	325.00	5.00	6-1460	10.20	1.50
6-1353	21.00	1.00	6-1405	4.05	1.77	6-1461	31.57	1.98
6-1354	58.00	3.00	6-1406	85.00	6.99	6-1462	70.00	2.50
6-1356	175.00	5.00	6-1407	9.50	1.80	6-1463	19.50	3.50
6-1357	75.00	2.50	6-1408	331.50	6.00	6-1464	14.50	3.00
6-1358	0.90	0.53	6-1409	534.00	8.00	6-1465	20.50	2.00
6-1359	304.80	3.18	6-1410	1.00	0.63	6-1466	12.00	1.30
6-1360	236.00	6.00	6-1411	33.00	3.50	6-1467	77.50	2.62
6-1361	12.10	1.60	6-1413	43.00	5.50	6-1468	11.75	1.55
6-1362	39.20	5.70	6-1414	35.00	5.00	6-1469	12.00	1.40
6-1363	3.90	2.40	6-1415	97.00	4.00	6-1470	21.00	1.50
6-1364	17.50	4.00	6-1416	8.10	2.00	6-1471	6.00	1.80
6-1365	17.00	4.00	6-1417	77.00	2.50	6-1472	82.00	3.00
6-1366	30.00	5.00	6-1418	661.00	14.00	6-1473	128.00	3.00
6-1367	110.00	2.50	6-1419	62.00	1.50	6-1474	30.00	2.25
6-1368	60.00	4.50	6-1420	500.00	6.00	6-1475	78.00	2.00
6-1369	76.00	2.00	6-1421	115.00	6.00	6-1476	275.00	5.00
6-1370	300.00	8.00	6-1422	7.65	2.00	6-1477	285.00	5.00
6-1371	310.00	5.00	6-1423	29.00	2.50	6-1478	31.00	1.50
6-1372	65.00	1.80	6-1424	297.00	4.00	6-1480	17.70	1.78
6-1373	20.00	2.65	6-1425	220.00	7.00	6-1481	8.56	1.07



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-1482	39.00	5.00	6-1541	15.50	1.50	6-1610	17.64	2.00
6-1483	47.00	5.50	6-1543	18.80	1.90	6-1611	23.47	2.40
6-1484	13.00	1.58	6-1545	24.50	1.00	6-1612	164.00	2.00
6-1485	11.80	2.65	6-1546	328.00	6.99	6-1613	27.00	1.40
6-1486	42.00	1.00	6-1547	39.00	2.5	6-1614	33.00	5.00
6-1487	9.20	2.70	6-1555	14.00	2.20	6-1615	0.83	1.63
6-1488	5.00	1.90	6-1556	32.00	1.50	6-1625	154.60	1.78
6-1489	50.20	3.00	6-1558	7.00	1.47	6-1627	30.00	1.00
6-1490	20.50	3.00	6-1559	136.00	3.00	6-1628	73.00	2.00
6-1491	10.10	1.60	6-1560	221.00	1.78	6-1629	88.00	5.00
6-1493	16.50	2.00	6-1562	8.00	1.60	6-1630	122.00	6.00
6-1494	15.70	2.50	6-1563	198.00	8.00	6-1631	34.00	2.50
6-1495	1.45	1.75	6-1564	240.00	8.00	6-1632	145.00	2.50
6-1497	40.00	4.00	6-1565	205.00	5.00	6-1633	47.00	3.00
6-1498	11.50	1.80	6-1566	12.00	1.20	6-1634	32.50	3.00
6-1499	9.60	2.00	6-1567	12.50	1.50	6-1635	11.80	1.80
6-1500	7.52	3.51	6-1568	3.80	1.90	6-1636	13.00	1.80
6-1501	5.46	0.89	6-1570	7.50	3.00	6-1637	9.55	1.75
6-1502	9.78	1.27	6-1571	13.50	1.50	6-1638	20.95	2.62
6-1503	12.83	1.27	6-1573	86.50	4.00	6-1639	351.21	4.00
6-1505	10.78	2.62	6-1575	11.50	1.78	6-1640	10.00	4.00
6-1506	1.42	1.58	6-1576	14.00	1.30	6-1641	546.00	2.62
6-1507	92.20	2.62	6-1577	736.60	5.00	6-1642	7.60	2.10
6-1508	88.50	6.50	6-1578	31.00	4.00	6-1643	54.00	3.15
6-1510	11.10	2.15	6-1579	16.50	1.50	6-1644	110.00	3.50
6-1511	9.50	2.15	6-1580	110.00	1.50	6-1645	3.40	1.50
6-1513	54.00	1.50	6-1581	6.07	1.30	6-1648	10.00	1.25
6-1516	11.00	1.60	6-1582	250.00	10.00	6-1650	35.50	4.00
6-1517	29.10	1.60	6-1583	350.00	10.00	6-1651	112.00	2.50
6-1518	10.00	1.20	6-1584	430.00	16.00	6-1652	36.00	5.00
6-1520	44.35	2.58	6-1585	59.20	5.70	6-1654	224.00	6.00
6-1521	450.00	2.62	6-1586	18.00	10.00	6-1655	26.50	4.00
6-1522	255.00	5.00	6-1587	52.00	1.00	6-1656	9.86	1.78
6-1523	7.10	1.37	6-1588	65.00	1.00	6-1657	53.50	2.00
6-1524	16.30	1.40	6-1589	38.00	1.00	6-1658	14.40	2.00
6-1525	11.10	1.60	6-1590	21.50	1.00	6-1659	171.45	3.20
6-1528	621.00	8.50	6-1591	129.00	1.50	6-1660	115.00	5.33
6-1529	165.00	5.00	6-1592	142.90	3.20	6-1661	64.00	4.00
6-1530	9.10	1.60	6-1593	165.10	3.20	6-1662	77.50	2.00
6-1531	9.10	1.65	6-1594	152.40	3.20	6-1663	294.00	3.00
6-1532	3.50	1.35	6-1599	28.30	3.10	6-1664	1.33	1.61
6-1533	28.00	4.00	6-1600	35.40	3.25	6-1665	94.00	5.70
6-1534	245.00	7.00	6-1601	42.40	4.25	6-1666	58.00	3.75
6-1536	11.30	2.20	6-1602	54.40	4.25	6-1667	278.99	2.62
6-1537	14.20	1.90	6-1605	156.00	4.00	6-1668	246.00	3.00
6-1538	7.60	1.90	6-1607	67.00	4.00	6-1671	110.00	6.00
6-1539	8.55	1.75	6-1608	538.00	6.00	6-1672	93.40	2.57
6-1540	27.50	2.00	6-1609	74.60	3.53	6-1673	95.00	3.00

Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-1674	455.00	6.00	6-1748	16.00	1.90	6-1827	13.30	2.80
6-1675	79.50	2.65	6-1749	9.96	1.53	6-1828	14.60	2.10
6-1676	24.50	4.00	6-1751	6.10	1.60	6-1832	19.84	0.79
6-1677	3.80	1.50	6-1752	4.30	1.30	6-1833	7.40	2.62
6-1678	571.00	8.00	6-1753	460.00	6.99	6-1834	11.20	2.62
6-1679	223.00	2.65	6-1765	17.00	1.93	6-1836	362.00	4.00
6-1680	147.60	2.65	6-1767	230.00	4.80	6-1837	515.00	5.33
6-1684	50.30	2.50	6-1768	24.50	5.50	6-1838	532.18	5.33
6-1694	4.30	2.40	6-1769	31.50	7.00	6-1839	34.00	4.00
6-1695	55.00	1.20	6-1770	15.50	4.00	6-1840	745.00	10.00
6-1696	145.00	2.88	6-1771	74.50	3.00	6-1841	618.50	2.00
6-1698	29.00	2.00	6-1772	19.50	4.00	6-1842	367.89	2.66
6-1699	9.80	1.50	6-1773	153.50	3.20	6-1843	455.00	5.33
6-1700	17.00	2.50	6-1774	148.60	3.20	6-1844	595.00	5.33
6-1701	2.50	1.60	6-1775	131.10	3.20	6-1845	2324.00	6.99
6-1702	160.00	5.30	6-1776	86.00	3.20	6-1846	2350.00	6.99
6-1703	56.50	5.30	6-1777	90.80	3.50	6-1847	736.00	7.00
6-1704	69.20	5.30	6-1778	70.00	3.50	6-1848	190.00	1.78
6-1705	88.40	5.30	6-1779	87.60	3.00	6-1849	205.00	1.78
6-1706	180.00	5.30	6-1780	33.00	1.50	6-1851	425.33	5.33
6-1707	320.00	3.53	6-1781	95.00	1.50	6-1854	48.00	1.00
6-1708	98.00	2.50	6-1782	90.00	1.50	6-1855	9.70	5.33
6-1709	55.00	2.50	6-1783	135.00	1.50	6-1856	11.82	2.62
6-1710	23.30	1.60	6-1784	329.57	4.80	6-1857	14.90	2.70
6-1711	37.50	1.80	6-1785	8.73	1.78	6-1858	602.00	7.00
6-1715	83.00	4.00	6-1786	365.00	5.30	6-1859	640.00	7.00
6-1716	635.00	10.00	6-1795	359.53	5.33	6-1860	259.20	3.53
6-1717	12.30	1.90	6-1797	67.39	2.26	6-1861	245.00	3.53
6-1718	11.00	1.90	6-1803	151.39	2.57	6-1862	27.50	1.00
6-1719	22.60	1.78	6-1804	83.77	1.78	6-1863	6.00	1.20
6-1720	104.20	5.70	6-1805	35.96	2.32	6-1864	59.50	5.00
6-1721	51.10	1.60	6-1806	20.20	1.81	6-1865	164.33	2.62
6-1722	21.10	1.60	6-1807	136.53	1.78	6-1866	206.00	5.70
6-1723	43.70	3.55	6-1808	35.95	1.78	6-1867	215.00	5.00
6-1724	44.96	2.57	6-1809	14.23	1.60	6-1868	270.00	6.00
6-1725	208.00	4.00	6-1810	4.32	0.92	6-1869	19.50	2.66
6-1726	60.00	2.00	6-1813	14.47	3.53	6-1873	11.50	3.00
6-1727	230.00	4.50	6-1814	2.95	0.97	6-1875	21.50	1.60
6-1728	5.50	0.80	6-1815	163.07	1.63	6-1876	67.00	2.80
6-1729	28.68	2.40	6-1816	183.00	1.78	6-1877	11.00	2.30
6-1731	22.00	1.00	6-1817	14.20	3.00	6-1879	8.15	1.83
6-1735	0.70	0.50	6-1818	21.20	3.60	6-1880	313.00	5.33
6-1740	70.50	3.20	6-1819	17.20	4.00	6-1881	340.00	5.33
6-1742	690.00	8.00	6-1822	13.00	2.62	6-1883	2.00	1.50
6-1743	5.60	1.90	6-1823	522.00	10.00	6-1885	22.00	2.30
6-1744	4.80	1.30	6-1824	623.08	5.33	6-1886	7.10	1.84
6-1745	7.60	2.62	6-1825	13.30	1.80	6-1888	355.00	8.00
6-1747	15.30	1.50	6-1826	114.55	2.57	6-1889	74.90	1.78
			-					



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂	No.	(mm)	sect. d ₂
6-1890	34.00	1.10	6-1951	764.00	7.00	6-2040	26.00	3.50
6-1892	5.96	1.70	6-1952	555.00	3.00	6-2041	4.45	3.53
6-1893	9.11	2.00	6-1953	589.00	3.00	6-2042	801.00	4.00
6-1895	239.20	3.53	6-1956	786.00	4.00	6-2043	14.00	5.00
6-1896	226.20	3.53	6-1957	522.00	4.00	6-2044	18.00	3.50
6-1897	45.00	6.00	6-1958	372.00	4.00	6-2045	63.00	3.00
6-1903	43.00	3.50	6-1959	645.00	4.00	6-2046	130.00	5.80
6-1904	90.00	5.50	6-1960	645.00	3.53	6-2047	34.50	2.65
6-1905	100.00	5.50	6-1961	17.30	2.20	6-2051	212.00	5.30
6-1906	30.00	3.50	6-1962	128.00	4.00	6-2052	48.00	2.30
6-1907	45.00	3.50	6-1963	587.00	7.00	6-2053	6.00	2.10
6-1908	68.00	5.50	6-1964	560.00	7.00	6-2054	36.60	2.90
6-1909	72.00	5.50	6-1966	69.00	4.50	6-2055	20.80	2.00
6-1910	95.00	5.50	6-1967	13.00	1.20	6-2064	121.00	8.00
6-1911	23.00	2.62	6-1969	1.10	0.25	6-2065	510.00	3.00
6-1912	40.00	3.50	6-1974	66.00	1.50	6-2066	820.00	3.00
6-1913	47.00	5.00	6-1975	19.30	2.20	6-2067	750.00	3.00
6-1914	53.00	4.00	6-1977	8.50	3.00	6-2068	17.10	1.60
6-1915	28.00	3.50	6-1978	11.80	3.00	6-2069	12.30	3.50
6-1916	75.00	4.50	6-1979	484.00	8.40	6-2070	14.60	2.95
6-1917	70.00	5.50	6-1980	36.00	4.00	6-2071	11.00	3.50
6-1918	349.00	5.33	6-1981	50.00	1.50	6-2073	492.00	3.53
6-1919	27.00	2.80	6-1982	3.20	1.78	6-2074	48.00	2.10
6-1920	32.00	3.50	6-1985	58.00	2.50	6-2075	74.50	4.00
6-1922	11.30	4.75	6-1990	125.00	3.50	6-2077	70.00	7.00
6-1923	14.20	2.00	6-1991	52.39	3.53	6-2078	3.50	1.00
6-1924	3.30	1.78	6-1993	250.00	4.00	6-2079	68.00	2.50
6-1925	4.09	1.78	6-1994	16.82	5.33	6-2080	300.00	5.00
6-1926	35.00	3.50	6-2000	135.50	6.00	6-2081	29.20	5.05
6-1927	65.00	5.50	6-2005	276.00	2.62	6-2082	22.40	2.50
6-1928	75.00	5.50	6-2008	45.30	1.93	6-2083	41.50	2.00
6-1929	168.40	6.00	6-2009	855.00	10.00	6-2084	188.14	1.78
6-1930	23.40	4.00	6-2012	74.00	2.50	6-2087	18.00	1.80
6-1931	49.50	5.00	6-2013	335.00	5.00	6-2088	42.00	2.00
6-1932	197.00	6.00	6-2015	470.00	4.50	6-2090	45.69	1.78
6-1933	133.00	3.00	6-2018	43.00	5.00	6-2093	8.00	2.65
6-1934	469.00	5.33	6-2019	58.00	3.55	6-2094	15.22	1.78
6-1936	13.30	2.20	6-2020	38.00	4.00	6-2096	74.90	2.00
6-1937	428.00	5.00	6-2021	148.00	2.50	6-2097	3.10	1.20
6-1939	5.70	2.62	6-2022	150.00	2.50	6-2098	193.70	7.00
6-1942	126.30	5.33	6-2023	598.00	7.00	6-2099	1.90	2.80
6-1943	818.00	12.00	6-2032	6.40	2.62	6-2100	12.00	5.00
6-1944	777.00	12.00	6-2033	78.00	1.50	6-2101	11.56	1.78
6-1945	224.00	7.00	6-2034	10.24	1.83	6-2102	16.40	1.78
6-1947	334.00	2.62	6-2036	109.50	5.33	6-2104	74.00	4.50
6-1948	230.00	5.00	6-2037	297.80	6.99	6-2105	34.00	1.50
6-1949	137.50	3.30	6-2038	16.00	3.50	6-2107	123.00	3.00
6-1950	77.80	1.50	6-2039	22.22	2.62	6-2108	89.00	1.90

Parker	Ød	Cross-
No.	(mm)	sect. d ₂
6-2109	312.90	1.78
6-2111	310.00	2.62
6-2112	14.60	1.50
6-2113	49.88	1.78
6-2114	285.00	6.00
6-2117	54.00	4.50
6-2118	60.40	3.00
6-2119	42.50	3.53
6-2120	69.60	5.00
6-2121	104.00	5.00
6-2122	84.50	3.00
6-2123	4.45	3.00
6-2124	1020.00	5.70
6-2125	165.30	1.78
6-2127	7.77	3.77
6-2128	9.75	1.50
6-2129	150.00	5.30
6-2130	32.00	1.78
6-2131	169.98	3.56
6-2132	63.10	3.53
6-2133	36.00	1.78
6-2134	300.00	4.00
6-2135	14.10	2.40
6-2137	27.60	2.40
6-2138	3.50	0.90
6-2139	23.80	1.50
6-2140	295.00	6.00
6-2143	53.00	3.55
6-2145	235.00	6.00
6-2146	260.00	6.00
6-2147	29.20	5.00
6-2148	29.20	4.95
6-2149	143.00	1.45
6-2150	22.00	6.00

Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-1735	0.70	0.50	6-2097	3.10	1.20	6-1036	4.60	2.00
2-001	0.74	1.02	5-683	3.10	1.60	6-133	4.70	1.90
6-408	0.80	1.60	6-736	3.17	1.02	6-849	4.80	0.75
6-1615	0.83	1.63	6-684	3.20	1.02	6-1744	4.80	1.30
6-1358	0.90	0.53	6-686	3.20	1.60	5-581	4.90	1.90
6-1410	1.00	0.63	6-1982	3.20	1.78	6-1026	5.00	1.00
2-002	1.07	1.27	6-1924	3.30	1.78	6-583	5.00	1.20
6-1969	1.10	0.25	6-361	3.30	2.40	6-069	5.00	1.50
2-102	1.24	2.62	6-307	3.33	1.02	6-1434	5.00	1.60
6-1664	1.33	1.61	5-190	3.35	1.78	6-955	5.00	1.75
2-003	1.42	1.52	6-1645	3.40	1.50	6-1488	5.00	1.90
6-1506	1.42	1.58	5-579	3.40	1.90	6-110	5.00	2.00
6-1495	1.45	1.75	6-973	3.50	0.80	6-1035	5.00	2.50
6-1269	1.50	0.60	6-2138	3.50	0.90	6-1394	5.15	1.80
6-369	1.50	1.00	6-2078	3.50	1.00	2-107	5.23	2.62
6-1247	1.56	1.00	6-491	3.50	1.10	2-009	5.28	1.78
5-051	1.78	1.02	6-021	3.50	1.20	6-751	5.30	2.40
2-004	1.78	1.78	6-402	3.50	1.25	6-738	5.33	1.02
6-714	1.80	1.00	6-1532	3.50	1.35	6-063	5.35	1.50
6-418	1.85	1.50	6-468	3.50	1.50	6-1501	5.46	0.89
6-2099	1.90	2.80	2-105	3.63	2.62	6-1728	5.50	0.80
6-364	1.98	0.84	2-007	3.68	1.78	6-968	5.50	1.50
6-797	2.00	1.00	6-251	3.70	1.90	6-950	5.50	2.00
6-1883	2.00	1.50	6-1677	3.80	1.50	6-1385	5.60	1.80
6-925	2.06	0.66	6-1568	3.80	1.90	6-1743	5.60	1.90
2-103	2.06	2.62	6-166	3.90	1.80	6-338	5.60	2.40
6-1264	2.20	1.00	6-1363	3.90	2.40	6-960	5.61	1.68
6-306	2.20	1.60	6-613	4.00	1.00	6-1102	5.69	1.14
6-880	2.30	1.30	6-019	4.00	1.10	6-748	5.70	1.05
6-1019	2.35	1.00	6-035	4.00	1.50	5-582	5.70	1.90
6-538	2.40	1.90	6-1287	4.00	1.80	6-1939	5.70	2.62
6-966	2.50	1.00	6-104	4.00	2.00	6-548	5.70	3.20
6-167	2.50	1.20	6-420	4.00	2.20	6-861	5.80	0.75
6-138	2.50	1.30	6-428	4.00	2.50	2-202	5.94	3.53
6-1701	2.50	1.60	6-994	4.00	3.00	6-1892	5.96	1.70
6-168	2.50	1.70	6-1405	4.05	1.77	6-543	6.00	1.00
2-005	2.57	1.78	6-1925	4.09	1.78	6-1863	6.00	1.20
5-578	2.60	1.90	5-580	4.20	1.90	6-713	6.00	1.25
6-020	2.70	1.50	6-1752	4.30	1.30	6-038	6.00	1.50
6-1033	2.80	1.60	6-1694	4.30	2.40	6-1312	6.00	1.52
6-971	2.80	1.90	6-1810	4.32	0.92	6-1471	6.00	1.80
2-104	2.84	2.62	2-201	4.34	3.53	6-001	6.00	2.00
6-487	2.90	1.02	2-106	4.42	2.62	6-2053	6.00	2.10
2-006	2.90	1.78	6-2123	4.45	3.00	6-1327	6.00	2.50
6-1814	2.95	0.97	6-2041	4.45	3.53	6-079	6.00	5.00
6-018	3.00	1.00	5-108	4.47	1.27	6-652	6.00	5.20
6-549	3.00	1.20	2-008	4.47	1.78	2-108	6.02	2.62
6-441	3.00	1.50	6-401	4.50	1.00	6-1581	6.07	1.30
6-615	3.00	2.00	6-214	4.50	1.50	3-902	6.07	1.63
6-1120	3.00	2.70	6-1291	4.50	2.25	2-010	6.07	1.78

For articles printed in bold, fitting Parker Parbak® back-up rings are available from stock.



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-1751	6.10	1.60	6-1642	7.60	2.10	2-110	9.19	2.62
6-344	6.20	1.50	6-1745	7.60	2.62	5-716	9.19	3.00
6-374	6.30	1.60	3-903	7.65	1.63	6-1487	9.20	2.70
6-855	6.30	1.80	2-011	7.65	1.78	2-012	9.25	1.78
5-686	6.30	2.39	6-1422	7.65	2.00	6-866	9.30	1.50
6-1268	6.30	2.40	6-1032	7.70	2.00	6-012	9.30	2.40
6-1251	6.36	0.72	5-673	7.75	1.88	6-395	9.35	1.60
6-933	6.40	1.30	6-2127	7.77	3.77	6-346	9.40	2.10
5-583	6.40	1.90	6-317	7.80	3.60	6-952	9.50	1.00
6-2032	6.40	2.62	6-486	7.80	4.60	6-1314	9.50	1.78
6-1149	6.50	1.20	6-437	8.00	1.00	6-1407	9.50	1.80
6-581	6.50	1.50	6-592	8.00	1.25	6-1297	9.50	2.00
6-572	6.50	2.00	6-074	8.00	1.50	6-1511	9.50	2.15
6-480	6.60	1.50	6-1562	8.00	1.60	6-1206	9.50	2.50
6-1022	6.75	1.78	5-585	8.00	1.88	6-1133	9.52	1.78
6-907	6.80	1.80	6-002	8.00	2.00	6-373	9.53	1.60
6-440	6.80	2.00	6-520	8.00	2.20	6-1637	9.55	1.75
5-052	6.86	1.78	6-564	8.00	2.50	6-1499	9.60	2.00
6-657	7.00	1.00	6-2093	8.00	2.65	5-212	9.75	1.78
6-959	7.00	1.20	6-390	8.00	3.00	6-1855	9.70	5.33
6-922	7.00	1.40	6-192	8.10	1.60	6-2128	9.75	1.50
6-1558	7.00	1.47	6-1416	8.10	2.00	6-1502	9.78	1.27
6-011	7.00	1.50	5-664	8.13	1.78	6-1699	9.80	1.50
6-311	7.00	2.00	6-1879	8.15	1.83	6-1656	9.86	1.78
6-937	7.00	2.35	6-345	8.20	1.50	5-614	9.93	2.62
6-028	7.00	2.50	6-070	8.30	2.40	6-1749	9.96	1.53
6-1400	7.00	2.75	6-692	8.50	1.50	6-116	10.00	1.00
6-080	7.00	3.00	6-1228	8.50	2.00	6-1518	10.00	1.20
6-1523	7.10	1.37	6-1977	8.50	3.00	6-1648	10.00	1.25
6-052	7.10	1.60	6-1539	8.55	1.75	6-083	10.00	1.50
6-1886	7.10	1.84	6-1481	8.56	1.07	6-1216	10.00	1.60
6-956	7.10	2.00	6-1286	8.65	2.80	6-003	10.00	2.00
6-1321	7.10	3.60	6-1785	8.73	1.78	6-532	10.00	2.20
5-584	7.20	1.90	5-612	8.74	1.78	6-105	10.00	2.50
6-1266	7.30	2.40	6-277	8.79	1.14	6-910	10.00	2.62
6-162 6-1249	7.30 7.30	2.70 3.40	6-715 5-586	8.80	1.00 1.90	6-823 6-605	10.00	2.65 3.00
6-1833	7.40	2.62	5-587	8.90 8.90	2.70	6-1640	10.00	4.00
6-710	7.40	1.00	3-904	8.92	1.83	6-931	10.00	6.50
6-661	7.50	1.00	6-610	9.00	1.03	6-1449	10.00	8.00
6-091	7.50	1.50	6-010	9.00	1.50	6-627	10.10	1.00
	7.50	1.80	6-120	9.00	1.80	6-1491	10.10	
6-856	7.50			9.00			10.10	1.60 1.78
6-432 6-1183	7.50	2.00	6-470 6-161	9.00	2.00	6-839 6-571	10.10	1.78
6-134	7.50	2.10						
6-1570	7.50	3.00	6-1122 6-651	9.00	3.00 4.00	6-1460 6-2034	10.20 10.24	1.50 1.83
6-1500	7.50	3.51	6-1530	9.00	1.60	6-375	10.24	1.40
2-203	7.52 7.52	3.51	6-1531	9.10	1.65	6-475	10.25	2.40
2-203	7.52	2.62						
	7.60	1.90	6-1893 2-204	9.11 9.12	2.00 3.53	6-965 2-309	10.40	1.00 5.33
6-1538	7.00	1.90	2-204	9.12	3.33	2-309	10.46	5.33

For articles printed in bold, fitting Parker Parbak® back-up rings are available from stock.



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-976	10.50	1.50	5-615	11.91	2.62	5-590	13.59	2.69
5-588	10.50	2.70	6-438	12.00	1.00	6-473	13.60	2.50
3-905	10.52	1.83	6-1566	12.00	1.20	2-311	13.64	5.33
6-777	10.60	1.80	6-1466	12.00	1.30	6-1339	13.70	2.50
6-218	10.60	2.00	6-1469	12.00	1.40	6-160	13.75	2.80
2-205	10.69	3.53	6-053	12.00	1.50	2-207	13.87	3.53
2-111	10.77	2.62	6-065	12.00	2.00	6-737	13.89	1.30
6-1505	10.78	2.62	6-774	12.00	2.50	2-113	13.94	2.62
6-551	10.80	1.50	6-124	12.00	3.00	6-1288	14.00	1.00
6-1230	10.80	1.90	6-662	12.00	3.80	6-1049	14.00	1.10 1.30
2-013	10.82 10.90	1.78 1.20	6-2100 6-1330	12.00 12.00	5.00	6-1576 6-143	14.00 14.00	1.50
6-1208 6-1236	11.00	1.20	2-310	12.00	10.60 5.33	6-1345	14.00	1.60
6-084	11.00	1.50	6-1361	12.07	1.60	2-015	14.00	1.78
6-1516	11.00	1.60	5-589	12.10	2.70	6-1342	14.00	1.82
6-1718	11.00	1.90	2-206	12.10	3.53	6-090	14.00	2.00
6-086	11.00	2.00	6-1717	12.30	1.90	6-1555	14.00	2.20
6-1877	11.00	2.30	6-058	12.30	2.40	6-067	14.00	2.50
6-717	11.00	2.50	6-2069	12.30	3.50	6-705	14.00	3.00
6-953	11.00	3.00	2-112	12.37	2.62	6-2043	14.00	5.00
6-1386	11.00	3.40	2-014	12.42	1.78	6-2135	14.10	2.40
6-2071	11.00	3.50	6-550	12.50	1.10	6-1537	14.20	1.90
6-1525	11.10	1.60	6-1567	12.50	1.50	6-1923	14.20	2.00
5-613	11.10	1.78	6-1379	12.50	1.80	6-1817	14.20	3.00
6-1337	11.10	1.82	6-198	12.50	2.00	6-1809	14.23	1.60
6-1510	11.10	2.15	6-1503	12.83	1.27	6-135	14.30	2.40
6-1376	11.20	1.80	6-584	13.00	1.00	6-1658	14.40	2.00
6-1834	11.20	2.62	6-904	13.00	1.30	5-239	14.48	2.69
6-1536	11.30	2.20	6-033	13.00	1.50	6-1813	14.47	3.53
6-471	11.30	2.40	6-1484	13.00	1.58	6-397	14.50	1.60
6-1922	11.30	4.75	6-1636	13.00	1.80	6-1464	14.50	3.00
6-347	11.40	2.10	6-075	13.00	2.00	6-2112	14.60	1.50
6-677	11.50	1.00	6-016	13.00	2.50	6-1828	14.60	2.10
6-928	11.50	1.50	6-1967	13.00	1.20	6-340	14.60	2.40
6-1575	11.50	1.78	6-1822	13.00	2.62	6-2070	14.60	2.95
6-1498	11.50	1.80	6-730	13.00	3.00	6-1393	14.70	3.50
6-1313	11.50	2.00	6-207	13.00	3.50	6-1857	14.90	2.70
6-1454	11.50	2.30	6-163	13.10	1.60	6-683	15.00	1.00
6-945	11.50	2.50	5-616	13.11	2.62	6-118	15.00	1.50
6-1873	11.50	3.00	6-129	13.23	1.78	6-040	15.00	1.60
6-2101	11.56	1.78	6-1198	13.30	1.20	6-085	15.00	1.80
6-1323	11.60	1.20	6-1825	13.30	1.80	6-005	15.00	2.00
6-1275 6-1468	11.60 11.75	2.20 1.55	6-1936 6-929	13.30 13.30	2.20	6-106 6-043	15.00	2.50 3.00
							15.00	
6-1635 6-1485	11.80 11.80	1.80 2.65	6-1827 6-1202	13.30 13.30	2.80 3.00	6-072 6-1398	15.00 15.00	3.20 3.50
6-1485	11.80	3.00	6-348	13.40	2.10	6-1099	15.00	4.00
6-1856	11.80	2.62	3-907	13.40	2.10	6-1099	15.00	5.00
6-366	11.82	1.78	6-1571	13.40	1.50	6-1396	15.00	2.62
3-906	11.89	1.78	6-096	13.50	2.75	5-591	15.00	2.70
0-200	11.09	1.50	0-030	13.30	2.13	1-021	13.10	2.10

For articles printed in bold, fitting Parker Parbak® back-up rings are available from stock.



		_						_
Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-2094	15.22	1.78	6-1365	17.00	4.00	6-779	19.00	2.65
2-312	15.24	5.33	2-209	17.04	3.53	6-998	19.00	3.00
6-1747	15.30	1.50	6-2068	17.10	1.60	6-404	19.00	5.00
6-940	15.30	2.20	2-115	17.12	2.62	3-910	19.18	2.46
6-206	15.30	2.40	2-017	17.17	1.78	6-593	19.20	3.00
5-243	15.34	2.62	6-1341	17.20	1.82	6-1975	19.30	2.20
6-349	15.40	2.10	6-1109	17.20	3.00	6-503	19.30	2.40
2-208	15.47	3.53	6-1819	17.20	4.00	6-628	19.30	3.65
5-676	15.49	1.47	6-1961	17.30	2.20	6-1430	19.35	1.00
6-1541	15.50	1.50	5-690	17.30	2.40	6-350	19.40	2.10
6-1340	15.50	2.60	6-554	17.40	2.10	6-119	19.50	1.50
6-1770	15.50	4.00	6-388	17.40	2.50	6-1869	19.50	2.66
2-114	15.54	2.62	6-1364	17.50	4.00	6-1463	19.50	3.50
2-016	15.60	1.78	6-1610	17.64	2.00	6-1772	19.50	4.00
6-1494	15.70	2.50	6-1480	17.70	1.78	6-758	19.75	2.50
6-223	15.80	2.40	6-367	17.81	1.02	6-300	19.80	2.40
5-617	15.88	2.62	6-1298	17.86	2.62	5-595	19.80	3.60
6-439	16.00	1.00	6-041	17.90	1.25	6-1832	19.84	0.79
6-632	16.00	1.25	5-256	17.96	2.62	2-315	19.99	5.33
6-528	16.00	1.50	6-731	18.00	1.30	6-099	20.00	1.30
6-857	16.00	1.80	6-087	18.00	1.50	6-078	20.00	1.50
6-1748	16.00	1.90	6-2087	18.00	1.80	6-793	20.00	1.80
6-146	16.00	2.00	6-076	18.00	2.00	6-619	20.00	2.00
6-562	16.00	2.50	6-1040	18.00	2.20	6-017	20.00	2.50
6-891	16.00	2.65	6-132	18.00	2.50	6-1373	20.00	2.65
6-042	16.00	3.00	6-425	18.00	3.00	6-130	20.00	3.00
6-2038	16.00	3.50	6-007	18.00	3.15	6-808	20.00	3.55
6-1021	16.00	4.00	6-2044	18.00	3.50	6-958	20.00	4.00
6-1524	16.30	1.40	6-125	18.00	4.00	6-1091	20.00	5.00
6-1039	16.30	2.40	6-755	18.00	5.00	6-1806	20.20	1.81
3-908	16.36	2.21	6-1586	18.00	10.00	6-382	20.20	3.00
6-2102	16.40	1.78	6-848	18.14	1.78	2-211	20.22	3.53
6-876	16.50	1.00	6-396	18.20	3.00	2-117	20.29	2.62
6-1579	16.50	1.50	6-177	18.30	2.40	6-275	20.30	2.40
6-1493	16.50	2.00	5-594	18.30	3.60	6-212	20.34	4.25
6-313	16.50	2.70	5-593	18.40	2.70	2-019	20.35	1.78
5-643	16.51	1.14	2-314	18.42	5.33	6-1465	20.50	2.00
6-725	16.56	1.78	6-308	18.50	1.50	6-1490	20.50	3.00
6-297	16.58	1.50	6-499	18.60	2.00	6-2055	20.80	2.00
6-006	16.70	1.45	6-557	18.60	3.50	6-1638	20.95	2.62
2-313	16.81	5.33	2-210	18.64	3.53	6-1353	21.00	1.00
6-1994	16.82	5.33	2-116	18.72	2.62	6-1470	21.00	1.50
5-592	16.90	2.70	2-018	18.77	1.78	6-008	21.00	2.00
6-524	17.00	1.10	6-1543	18.80	1.90	6-1311	21.00	3.00
6-476	17.00	1.50	6-295	19.00	0.80	6-089	21.00	3.50
6-1765	17.00	1.93	6-1276	19.00	1.00	6-1252	21.00	4.00
6-044	17.00	2.00	6-573	19.00	1.50	6-489	21.00	6.00
6-1700	17.00	2.50	6-798	19.00	1.80	6-1722	21.10	1.60
6-946	17.00	3.00	6-360	19.00	2.00	6-1375	21.20	1.80
6-974	17.00	3.50	6-039	19.00	2.50	6-430	21.20	2.40



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d	No.	mm	sect. d	No.	mm	sect. d
		2			2			2
6-780	21.20	2.65	6-298	23.60	1.02	2-215	26.57	3.53
6-801	21.20	3.55	6-942	23.60	2.90	3-914	26.59	2.95
6-1818	21.20	3.60	6-351	23.70	2.80	2-121	26.64	2.62
6-1446 5-596	21.30 21.30	2.30 3.60	6-2139 6-1338	23.80 23.80	1.50 2.40	2-023 6-208	26.70 26.70	1.78 2.50
6-1590	21.50	1.00	6-666	24.00	1.00	6-1613	27.00	1.40
6-687	21.50	1.50	6-544	24.00	1.50	6-400	27.00	1.50
6-1875	21.50	1.60	6-022	24.00	2.00	6-049	27.00	2.00
6-343	21.50	1.78	6-595	24.00	2.50	6-894	27.00	2.50
2-316	21.59	5.33	6-1027	24.00	3.00	6-1447	27.00	2.70
6-285	21.70	0.73	6-453	24.00	4.00	6-1919	27.00	2.80
6-286	21.70	1.00	6-443	24.00	6.00	6-147	27.00	3.00
2-212	21.82	3.53	6-050	24.00	3.00	6-825	27.00	3.20
2-118	21.89	2.62	6-288	24.20	1.00	6-660	27.00	5.00
3-911	21.92	2.95	6-1545	24.52	1.00	6-913	27.20	3.00
2-020	21.95	1.78	6-1289	24.50	3.15	6-023	27.30	2.40
6-1731	22.00	1.00	6-1676	24.50	4.00	6-1862	27.50	1.00
6-1115	22.00	1.30	6-1768	24.50	5.50	6-497	27.50	1.50
6-493	22.00	1.39	6-1456	24.60	3.40	6-1540	27.50	2.00
6-088	22.00	1.50	5-598	24.60	3.60	6-2137	27.60	2.40
6-139	22.00	2.00	6-1204	24.69	1.78	6-296	27.71	1.02
6-1315	22.00	2.10	2-318	24.77	5.33	5-600	27.80	3.60
6-1885	22.00	2.30	6-092	24.80	1.50	2-320	27.94	5.33
6-036	22.00	2.50	2-214	24.99	3.53	6-905	28.00	1.00
6-1083	22.00	3.00	6-611	25.00	1.50	6-101	28.00	1.50
6-877	22.00	4.00	6-442	25.00	2.00	6-794	28.00	1.80
6-2150	22.00	6.00	6-916	25.00	2.50	6-140	28.00	2.00
6-356	22.10	1.60	6-969	25.00	3.00	6-180	28.00	2.20
6-1064	22.20	3.00	6-426	25.00	4.00	6-654	28.00	2.50
6-2039	22.22	2.62	6-376	25.00	5.00	6-781	28.00	2.65
6-1086	22.30	2.40	3-913	25.04	2.95	6-977	28.00	3.00
6-2082	22.40	2.50	2-120	25.07	2.62	6-1915	28.00	3.50
6-1719	22.60	1.78	2-022	25.12	1.78	6-1533	28.00	4.00
6-263	22.70	1.50	6-126	25.30	1.60	6-1031	28.00	5.00
6-287	22.89	1.00	6-745	25.30	2.40	2-216	28.17	3.53
6-1078	23.00	1.50	6-189	25.50	2.00	6-1378	28.20	1.00
6-999	23.00	2.00	6-957	25.60	1.93	2-122	28.24	2.62
6-066	23.00	2.50	6-289	25.79	1.00	2-024	28.30	1.78
6-1911	23.00	2.62	6-387	25.80	3.30	6-1599	28.30	3.10
6-1112	23.00	3.00	5-618	25.81	3.53	6-1729	28.68	2.40
5-597	23.00	3.60	6-728	26.00	1.00	6-1698	29.00	2.00
6-1431	23.00	4.00	6-1232	26.00	1.50	6-1423	29.00	2.50
2-317	23.16	5.33	6-656	26.00	2.00	6-1000	29.00	3.00
6-1710	23.30	1.60	6-749	26.00	2.50	6-1517	29.10	1.60
2-213	23.39	3.53	6-1082	26.00	3.00	6-2148	29.20	4.95
6-1930	23.40	4.00	6-2040	26.00	3.50	6-2147	29.20	5.00
6-1611	23.47	2.40	6-1259	26.00	4.00	6-2081	29.20	5.05
2-119	23.47	2.62	5-599	26.20	3.60	5-601	29.30	3.60
3-912	23.47	2.95	2-319	26.34	5.33	6-034	29.50	1.50
2-021	23.52	1.78	6-1655	26.50	4.00	2-321	29.51	5.33



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-352	29.70	2.80	6-136	33.00	2.00	6-1980	36.00	4.00
3-916	29.74	2.95	6-540	33.00	2.50	6-1652	36.00	5.00
2-217	29.74	3.53	6-1138	33.00	3.00	2-221	36.09	3.53
2-123	29.82	2.62	6-1411	33.00	3.50	2-127	36.17	2.62
2-025	29.87	1.78	6-1614	33.00	5.00	6-1087	36.20	3.00
6-1627	30.00	1.00	2-027	33.05	1.78	6-154	36.30	1.78
6-048	30.00	2.00	6-472	33.30	2.40	5-670	36.50	1.78
6-1203	30.00	2.15	6-802	33.50	2.65	6-2054	36.60	2.90
6-1474	30.00	2.25	5-157	33.99	2.34	6-970	37.00	1.50
6-156	30.00	2.50	6-1047	34.00	1.00	6-1188	37.00	2.00
6-056	30.00	3.00	6-1890	34.00	1.10	6-291	37.00	2.50
6-037	30.00	3.15	6-2105	34.00	1.50	6-881	37.00	3.00
6-1906	30.00	3.50	6-1197	34.00	2.00	6-555	37.00	5.00
6-803	30.00	3.55	6-1631	34.00	2.50	5-606	37.30	3.60
6-454	30.00	4.00	6-622	34.00	2.80	6-459	37.36	2.60
6-663	30.00	4.65	6-914	34.00	3.00	3-920	37.47	3.00
6-1366	30.00	5.00	6-1839	34.00	4.00	2-325	37.47	5.33
6-290	30.30	2.40	5-604	34.10	3.60	6-1711	37.50	1.80
6-142	30.70	2.00	2-324	34.29	5.33	6-1257	37.50	4.00
5-602	30.80	3.60	6-1150	34.40	2.10	2-222	37.69	3.53
6-1478	31.00	1.50	6-585	34.40	3.10	2-128	37.77	2.62
6-1401	31.00	2.00	3-918	34.42	2.95	2-029	37.82	1.78
6-324	31.00	2.50	6-2047	34.50	2.65	6-1589	38.00	1.00
6-1578	31.00	4.00	2-220	34.52	3.53	6-1389	38.00	1.50
6-097	31.00	4.50	2-126	34.59	2.62	6-046	38.00	2.00
6-314	31.02	3.00	2-028	34.65	1.78	6-433	38.00	2.50
2-322	31.12	5.33	6-752	34.65	2.60	6-1092	38.00	3.00
2-218	31.34	3.53	6-1100	35.00	1.50	6-1025	38.00	3.50
2-124	31.42	2.62	6-047	35.00	2.00	6-2020	38.00	4.00
2-026	31.47	1.78	6-606	35.00	2.50	6-221	38.00	5.00
6-1146	31.50	3.15	6-1116	35.00	3.00	6-782	38.70	2.65
6-1769	31.50	7.00	6-993	35.00	3.20	6-353	38.70	2.80
6-1461	31.57	1.98	6-1926	35.00	3.50	6-575	39.00	2.00
6-766	31.70	3.50	6-1166	35.00	4.00	6-1547	39.00	2.50
6-760	31.95	2.60	6-545	35.00	4.50	6-1038	39.00	3.00
6-1556	32.00	1.50	6-1414	35.00	5.00	6-1482	39.00	5.00
6-2130	32.00	1.78	6-377	35.00	5.30	6-205	39.20	3.00
6-869	32.00	2.00	6-1124	35.15	3.15	6-1362	39.20	5.70
6-850	32.00	2.50	6-1600	35.40	3.25	2-129	39.34	2.62
6-646	32.00	2.70	6-1650	35.50	4.00	6-1148	39.40	2.10
6-1332	32.00	3.00	5-605	35.60	3.60	6-586	39.40	3.10
6-1920	32.00	3.50	6-1808	35.95	1.78	6-753	39.50	2.60
6-838	32.00	4.00	6-1805	35.96	2.32	5-321	39.60	3.53
6-1634	32.50	3.00	6-980	36.00	1.50	6-642	40.00	1.50
6-784	32.50	3.55	6-2133	36.00	1.78	6-027	40.00	2.00
5-603	32.50	3.60	6-678	36.00	2.00	6-566	40.00	2.50
2-323	32.69	5.33	6-694	36.00	2.10	6-292	40.00	3.00
2-219	32.92	3.53	6-609	36.00	2.20	6-1912	40.00	3.50
2-125	32.99	2.62	6-329	36.00	2.50	6-1497	40.00	4.00
6-1780	33.00	1.50	6-1140	36.00	3.00	6-1023	40.00	5.00



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-1114	40.00	6.00	6-1724	44.96	2.57	6-194	49.50	3.00
6-102	40.60	4.00	6-882	45.00	1.00	6-1931	49.50	5.00
2-326	40.64	5.33	6-082	45.00	1.50	6-2113	49.88	1.78
6-972	40.82	2.59	6-054	45.00	2.00	6-1981	50.00	1.50
2-223	40.87	3.53	6-323	45.00	2.50	6-051	50.00	2.00
2-130	40.94	2.62	6-783	45.00	2.65	6-055	50.00	2.50
6-1144	41.00	1.50	6-997	45.00	3.00	6-964	50.00	3.00
2-030	41.00	1.78	6-1907	45.00	3.50	6-1437	50.00	3.50
6-541	41.00	2.50	6-1178	45.00	4.00	6-603	50.00	4.00
6-449	41.00	3.00	6-1195	45.00	4.50	6-791	50.00	4.50
6-525	41.28	3.53	6-726	45.00	5.00	6-1226	50.00	5.00
6-337	41.40	2.62	6-1897	45.00	6.00	2-329	50.17	5.33
6-2083	41.50	2.00	6-2008	45.30	1.93	6-1489	50.20	3.00
6-875	41.60	2.40	5-035	45.36	3.53	6-1684	50.30	2.50
6-414	41.75	2.60	6-2090	45.69	1.78	2-226	50.39	3.53
6-1486	42.00	1.00	2-133	45.69	2.62	2-136	50.47	2.62
6-015	42.00	1.50	6-750	45.90	1.50	2-033	50.52	1.78
6-2088	42.00	2.00	6-1176	46.00	2.00	6-630	51.00	3.00
6-594	42.00	2.50	6-1020	46.00	3.00	6-1721	51.10	1.60
6-227	42.00	3.00	6-944	46.00	4.00	6-434	51.50	1.50
6-1319	42.00	4.00	6-1248	46.00	5.00	5-037	51.71	3.53
6-1399	42.00	4.50	6-159	46.02	3.53	6-1333	51.94	3.53
6-1224	42.00	5.00	6-354	46.70	2.80	6-1587	52.00	1.00
6-1601	42.40	4.25	6-423	46.87	2.62	6-1234	52.00	2.50
6-845	42.50	1.80	2-328	46.99	5.33	6-556	52.00	3.00
6-2119	42.50	3.53	6-1141	47.00	2.00	2-137	52.07	2.62
2-131	42.52	2.62	6-1041	47.00	2.50	6-893	52.20	5.70
5-330	42.52	5.33	6-1633	47.00	3.00	6-1991	52.39	3.53
5-332	42.85	3.53	6-1059	47.00	4.00	6-1185	52.50	1.80
6-1189	43.00	2.00	6-1913	47.00	5.00	6-1347	53.00	2.00 3.50
6-996 6-1903	43.00 43.00	3.00 3.50	6-1483 6-293	47.00 47.20	5.50 5.70	6-1024 6-2143	53.00 53.00	3.55
6-1903	43.00	4.00	2-225	47.20	3.53	6-1914	53.00	4.00
6-2018	43.00	5.00	2-134	47.29	2.62	6-113	53.00	5.00
6-1413	43.00	5.50	2-134	47.29	1.78	6-112	53.00	6.50
6-759	43.25	2.60	6-009	47.50	4.00	3-928	53.09	3.00
6-809	43.70	1.80	6-1854	48.00	1.00	2-330	53.34	5.33
6-1723	43.70	3.55	6-370	48.00	2.00	6-1657	53.50	2.00
2-327	43.82	5.33	6-2074	48.00	2.10	2-227	53.57	3.53
6-431	44.00	2.00	6-2052	48.00	2.30	2-138	53.64	2.62
6-1054	44.00	3.00	6-155	48.00	3.00	2-034	53.70	1.78
2-224	44.04	3.53	6-1196	48.00	4.00	6-1317	53.80	4.00
2-132	44.12	2.62	6-673	48.20	1.78	6-1513	54.00	1.50
2-031	44.17	1.78	6-1343	48.20	3.00	6-1274	54.00	2.00
6-542	44.20	2.50	6-435	48.40	4.85	6-819	54.00	3.00
6-1349	44.30	5.70	2-135	48.90	2.62	6-1643	54.00	3.15
6-1520	44.35	2.58	6-1253	49.00	2.00	6-879	54.00	4.00
6-193	44.35	3.00	6-912	49.20	3.00	6-2117	54.00	4.5
6-772	44.70	3.50	5-701	49.20	3.53	6-1602	54.40	4.25
6-975	44.83	2.67	6-1070	49.20	5.70	6-810	54.50	2.65



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-1438	54.70	3.53	6-851	61.00	2.00	6-659	67.00	3.00
6-1695	55.00	1.20	6-1034	61.00	4.00	6-786	67.00	3.55
6-141	55.00	2.00	6-633	61.00	4.50	6-1607	67.00	4.00
6-1709	55.00	2.50	6-792	61.00	5.00	6-1797	67.39	2.26
6-1065	55.00	3.00	2-143	61.60	2.62	5-361	67.84	3.53
6-1192	55.00	3.50	6-1439	61.70	4.50	2-147	67.95	2.62
6-1186	55.00	4.00	6-1419	62.00	1.50	6-2079	68.00	2.50
6-1448	55.00	5.00	6-455	62.00	2.50	6-884	68.00	3.00
2-139	55.25	2.62	6-699	62.00	3.00	6-1380	68.00	3.50
6-703	55.30	2.00	6-1209	62.00	3.53	6-1272	68.00	4.00
6-568	56.00	2.00	6-1261	62.00	4.00	6-941	68.00	5.00
6-985	56.00	3.00	6-1117	62.00	6.00	6-1908	68.00	5.50
6-785	56.00	3.55	2-333	62.87	5.33	6-990	69.00	2.50
6-1145	56.00	4.00	6-242	63.00	2.50	6-824	69.00	3.00
6-739	56.00	4.50	6-2045	63.00	3.00	6-1966	69.00	4.50
6-1703	56.50	5.30	6-1162	63.00	3.50	6-1704	69.20	5.30
2-331	56.52	5.33	6-151	63.00	4.00	2-335	69.22	5.33
6-1271	56.70	3.00	6-474	63.00	4.50	6-272	69.24	3.40
2-228	56.74	3.53	6-1094	63.00	6.00	2-232	69.44	3.53
2-140	56.82	2.62	2-230	63.09	3.53	2-148	69.52	2.62
2-035	56.87	1.78	6-2132	63.10	3.53	2-039	69.57	1.78
6-643	57.00	1.50	2-144	63.17	2.62	6-2120	69.60	5.00
6-719	57.00	2.50	2-037	63.22	1.78	6-0641	70.00	1.50
6-427	57.00	3.00	6-636	64.00	3.00	6-552	70.00	2.00
6-1137	57.00	4.00	6-1661	64.00	4.00	6-1462	70.00	2.50
6-447	58.00	2.00	6-1123	64.20	5.70	6-031	70.00	3.00
6-1985	58.00	2.50	5-805	64.39	1.78	6-1778	70.00	3.50
6-1354	58.00	3.00 3.55	2-145	64.77	2.62 1.00	6-1194	70.00	4.00
6-2019	58.00		6-1588	65.00		6-539	70.00	4.50
6-1666	58.00 58.00	3.75 4.00	6-1372 6-501	65.00 65.00	1.80 2.00	6-899 6-1917	70.00 70.00	5.00 5.50
6-109		2.62			2.65	6-2077		
2-141 5-702	58.42 58.74	3.53	6-1377 6-523	65.00 65.00	3.00	6-1212	70.00 70.00	7.00 8.00
6-1585	59.20	5.70	6-1053		4.00			3.20
3-932	59.36	3.00	6-596	65.00 65.00	4.50	6-1740 6-787	70.50 71.00	3.55
6-1864	59.50	5.00	6-1037	65.00	5.00	6-634	71.00	4.50
6-764	59.60	5.85	6-416	65.00	5.30	2-149	71.12	2.62
2-332	59.69	5.33	6-1927	65.00	5.50	5-704	71.44	3.53
6-560	59.70	7.00	5-703	65.09	3.53	6-979	72.00	2.50
2-229	59.92	3.53	6-1974	66.00	1.50	6-045	72.00	3.00
2-142	59.99	2.62	6-500	66.00	2.00	6-1013	72.00	4.00
6-883	60.00	1.20	6-1193	66.00	3.00	6-1909	72.00	5.50
6-1726	60.00	2.00	6-1273	66.00	5.00	2-336	72.39	5.33
6-411	60.00	2.50	2-334	66.04	5.33	2-233	72.62	3.53
6-665	60.00	3.00	2-231	66.27	3.53	2-150	72.69	2.62
6-107	60.00	4.10	2-146	66.34	2.62	2-040	72.75	1.78
6-1368	60.00	4.50	2-038	66.40	1.78	6-1628	73.00	2.00
6-114	60.00	5.00	6-243	67.00	1.50	6-030	73.00	3.00
2-036	60.05	1.78	6-316	67.00	2.50	6-757	73.00	4.00
6-2118	60.40	3.00	6-1876	67.00	2.80	6-1348	73.00	7.00



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d	No.	mm	sect. d	No.	mm	sect. d
6-178	74.00	2.00	6-1057	80.00	4.00	5-381	88.27	6.99
6-2012	74.00	2.50	6-1181	80.00	5.00	6-561	88.30	7.00
6-483	74.00	3.00	5-816	80.31	1.78	6-1705	88.40	5.30
6-2104	74.00	4.50	6-885	80.50	4.00	2-238	88.49	3.53
6-294	74.00	5.70	6-121	81.00	3.00	6-1508	88.50	6.50
6-587	74.20	3.10	6-1077	81.00	4.00	2-153	88.57	2.62
6-1771	74.40	3.10	2-339	81.92	5.33	2-133	88.62	1.78
6-2075	74.50	4.00	6-513	82.00	2.00	6-2030	89.00	1.50
6-1609	74.60	3.53	6-1472	82.00	3.00	6-2108	89.00	1.90
5-705	74.60	3.53	6-445	82.00	4.00	6-867	89.20	5.70
6-1889	74.01	1.78	2-236	82.14	3.53	6-013	89.50	3.00
6-2096	74.90	2.00	2-152	82.22	2.62	6-1782	90.00	1.50
6-1357	75.00	2.50	2-132	82.27	1.78	6-498	90.00	2.00
6-1075	75.00	3.00	6-821	83.00	1.00	6-1113	90.00	2.50
6-1001	75.00	4.00	6-900	83.00	3.00	6-216	90.00	3.00
6-1916	75.00	4.50	6-1715	83.00	4.00	6-1179	90.00	4.00
6-1928	75.00	5.50	6-1713	83.77	1.78	6-1179	90.00	4.80
2-337	75.57	5.33	6-184	83.80	2.62	6-1214	90.00	5.00
2-234	75.79	3.53	6-676	84.00	2.50	6-1904	90.00	5.50
2-151	75.87	2.62	6-456	84.00	3.00	6-1103	90.00	7.00
2-041	75.92	1.78	6-1134	84.00	3.50	6-1777	90.80	3.50
6-1369	76.00	2.00	6-1012	84.30	5.70	6-1429	91.00	2.00
6-754	76.00	2.50	6-588	84.40	3.10	6-100	91.00	3.00
6-921	76.00	3.00	6-2122	84.50	3.00	2-342	91.44	5.33
6-464	76.00	4.50	6-822	85.00	1.50	2-342	91.67	3.53
6-805	77.00	2.00	6-733	85.00	2.00	6-1452	92.00	3.00
6-1417	77.00	2.50	6-1014	85.00	3.00	6-1061	92.00	4.00
6-1069	77.10	2.62	6-853	85.00	4.00	6-1507	92.20	2.62
6-1662	77.50	2.00	6-1445	85.00	5.00	6-804	92.50	3.55
6-1467	77.50	2.62	6-1174	85.00	6.00	6-720	93.00	2.00
6-1950	77.80	1.50	6-1406	85.00	6.99	6-743	93.00	3.00
6-2033	78.00	1.50	2-340	85.09	5.33	6-963	93.00	4.00
6-1475	78.00	2.00	6-452	85.20	9.25	6-1056	93.00	5.00
6-978	78.00	2.50	2-237	85.32	3.53	6-257	93.39	1.47
6-729	78.00	3.00	6-991	86.00	2.62	6-1672	93.40	2.57
6-826	78.00	3.50	6-1776	86.00	3.20	6-405	93.50	9.50
6-1002	78.00	5.00	6-1457	86.00	4.00	6-446	94.00	2.00
2-338	78.74	5.33	6-1573	86.50	4.00	6-1095	94.00	3.00
2-235	78.97	3.53	6-574	86.84	5.33	6-1029	94.00	4.00
6-820	79.00	1.50	6-579	87.00	3.00	6-1665	94.00	5.70
6-1152	79.20	5.70	6-558	87.20	2.50	6-608	94.20	5.70
6-992	79.30	2.62	6-1016	87.20	5.70	6-339	94.50	3.00
6-1675	79.50	2.65	6-309	87.30	2.00	2-343	94.62	5.33
6-195	79.50	3.00	6-1779	87.60	3.00	2-240	94.84	3.53
6-108	79.60	3.20	6-276	88.00	3.00	2-154	94.92	2.62
6-790	80.00	1.80	6-1052	88.00	4.00	2-134	94.97	1.78
6-569	80.00	2.00	6-1629	88.00	5.00	6-1781	95.00	1.50
6-1270	80.00	3.00	6-1165	88.00	6.00	6-1673	95.00	3.00
6-1316	80.00	3.50	6-1111	88.00	8.00	6-863	95.00	4.00
6-788	80.00	3.55	2-341	88.27	5.33	6-1062	95.00	4.50
0-700	00.00	ა.ეე	2-341	00.27	U. 33	0-1002	90.00	4.50



Dorkor	Øч	Cross	Dorkor	Мd	Cross	Dorkor	Øч	Cross
Parker No.	Ø d mm	Cross- sect. d _a	Parker No.	Ø d mm	Cross- sect. d _a	Parker No.	Ø d mm	Cross- sect. d _a
		2	-		2			2
6-874	95.00	5.00	2-046	107.67	1.78	6-1427	120.00	10.00
6-1910	95.00	5.50	6-1106	108.00	8.00	2-351 2-427	120.02	5.33
6-582 6-700	95.50 96.00	3.53 2.00	6-740 6-837	109.00	3.00 5.70	2-427	120.02 120.24	6.99 3.53
6-832	96.00	9.00	6-815	109.20	5.84	2-246	120.24	2.62
6-640	97.00	1.50	6-767	109.20	3.10	2-136	120.32	1.78
6-1415	97.00	4.00	6-2036	109.40	5.33	6-2064	121.00	8.00
6-1306	97.00	5.00	6-1580	110.00	1.50	6-961	122.00	3.00
2-344	97.79	5.33	6-1367	110.00	2.50	6-1630	122.00	6.00
6-1708	98.00	2.50	6-903	110.00	3.00	6-2107	123.00	3.00
6-157	98.00	3.00	6-1644	110.00	3.50	2-352	123.19	5.33
2-241	98.02	3.53	6-915	110.00	5.00	2-428	123.19	6.99
6-1303	99.00	3.00	6-1671	110.00	6.00	2-420	123.19	3.53
6-392	99.00	6.99	2-348	110.49	5.33	6-1143	124.00	4.00
6-1089	99.20	5.70	2-245	110.72	3.53	6-1281	125.00	2.50
6-601	100.00	2.00	6-1651	112.00	2.50	6-612	125.00	3.00
6-174	100.00	2.50	6-421	112.00	3.00	6-1990	125.00	3.50
6-1305	100.00	3.00	6-873	112.00	4.00	6-1199	125.00	4.00
6-413	100.00	4.00	6-1182	112.00	7.00	6-115	125.00	8.00
6-137	100.00	5.00	2-349	113.67	5.33	5-850	125.09	6.60
6-1905	100.00	5.50	2-425	113.67	6.99	6-255	126.00	5.00
6-1395	100.00	6.00	2-246	113.89	3.53	6-1942	126.30	5.33
6-1237	100.00	8.00	2-157	113.97	2.62	2-353	126.37	5.33
2-345	100.97	5.33	6-982	114.00	3.00	2-429	126.37	6.99
6-025	101.00	3.00	6-1164	114.00	5.00	2-250	126.59	3.53
2-242	101.19	3.53	2-047	114.02	1.78	2-159	126.67	2.62
2-155	101.27	2.62	6-1005	114.20	5.70	2-049	126.72	1.78
2-045	101.32	1.78	6-769	114.40	3.10	6-722	128.00	2.00
6-724	102.00	3.00	6-1826	114.55	2.57	6-1473	128.00	3.00
6-1163	102.00	4.00	6-1151	115.00	2.00	6-1962	128.00	4.00
6-1055	103.00	5.00	6-274	115.00	3.00	6-1073	128.00	5.00
6-2121	104.00	5.00	6-1169	115.00	5.00	6-1591	129.00	1.50
6-1200	104.00	5.30	6-1660	115.00	5.33	6-1096	129.00	4.00
2-346	104.14	5.33	6-1421	115.00	6.00	6-451	129.20	5.70
6-1720	104.20	5.70	6-1322	116.00	3.00	2-354	129.54	5.33
6-1350	104.30	5.70	6-1105	116.50	1.78	2-430	129.54	6.99
2-243	104.37	3.53	2-350	116.84	5.33	2-251	129.77	3.53
6-1175	104.50	3.00	2-426	116.84	6.99	6-693	130.00	2.50
6-589	105.00	2.00	2-247	117.07	3.53	6-1296	130.00	3.00
6-1381	105.00	3.00	6-032	118.00	2.00	6-1084	130.00	4.00
6-806	105.00	3.50	6-580	118.31	3.53	6-902	130.00	5.00
6-995	105.00	4.00	6-123	118.50	3.00	6-2046	130.00	5.80
6-1074	105.00	5.00	5-843	118.72	2.62	6-577	130.00	6.00
6-094	106.00	3.00	6-448	119.20	5.70	6-1436	131.00	5.30
6-253	106.80	2.66	6-768	119.60	5.70	6-1775	131.10	3.20
6-1320	107.00	8.00	6-674	120.00	1.50	6-1217	131.50	4.00
6-762	107.31	6.99	6-504	120.00	3.00	6-095	132.00	3.00
2-347	107.32	5.33	6-1076	120.00	4.00	6-1015	132.00	4.00
2-244	107.54	3.53	6-1180	120.00	5.00	2-355	132.72	5.33
2-156	107.62	2.62	6-1003	120.00	6.00	2-431	132.72	6.99



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d	No.	mm	sect. d	No.	mm	sect. d
2-252	132.94	3.53	2-435	145.42	6.99	6-494	162.50	3.53
6-1933	133.00	3.00	2-455	145.64	3.53	6-1815	163.07	1.63
2-160	133.02	2.62	2-162	145.72	2.62	6-1612	164.00	2.00
2-050	133.07	1.78	6-061	146.00	3.23	6-983	164.20	5.70
6-688	133.35	5.33	6-1680	147.60	2.65	6-814	164.20	5.84
6-812	133.50	12.00	6-2021	148.00	2.50	6-1865	164.33	2.62
6-515	134.00	3.00	6-756	148.00	10.00	2-363	164.47	5.33
6-1329	134.00	8.00	2-257	148.52	3.53	2-439	164.47	6.99
6-1783	135.00	1.50	2-360	148.59	5.33	2-260	164.69	3.53
6-1277	135.00	3.00	2-436	148.59	6.99	2-165	164.77	2.62
6-059	135.00	3.23	6-1774	148.60	3.20	6-911	165.00	2.00
6-060	135.00	3.43	6-623	149.20	5.70	6-1402	165.00	4.00
6-844	135.00	4.00	6-932	150.00	2.00	6-1529	165.00	5.00
6-1085	135.00	5.00	6-2022	150.00	2.50	6-1593	165.10	3.20
6-2000	135.50	6.00	6-689	150.00	3.00	6-2125	165.30	1.78
2-356	135.89	5.33	6-872	150.00	4.00	6-1336	167.50	3.50
2-432	135.89	6.99	6-1295	150.00	5.00	6-1929	168.40	6.00
6-1559	136.00	3.00	6-2129	150.00	5.30	6-746	169.20	5.70
6-1154	136.00	4.00	6-222	150.00	5.40	6-2131	169.98	3.56
2-253	136.12	3.53	6-1147	150.00	6.00	6-1097	170.00	4.00
6-1807	136.53	1.78	6-496	151.00	3.00	6-1290	170.00	5.00
6-026	137.00	3.00	6-1803	151.39	2.57	2-364	170.82	5.33
6-833	137.00	4.00	6-318	151.70	5.60	2-440	170.82	6.99
6-559	137.00	14.00	2-361	151.77	5.33	6-282	171.00	11.00
6-341	137.30	8.00	2-437	151.77	6.99	2-261	171.04	3.53
6-1949	137.50	3.30	2-258	151.99	3.53	2-166	171.12	2.62
6-379	138.00	2.10	6-1107	152.00	8.00	6-1659	171.45	3.20
6-224	138.00	6.00	2-163	152.07	2.62	6-887	172.00	3.00
2-357	139.07	5.33	6-1594	152.40	3.20	6-1177	172.00	4.00
2-433	139.07	6.99	6-1773	153.50	3.20	6-1004	172.00	6.00
2-254	139.29	3.53	6-1625	154.60	1.78	6-492	174.00	3.00
2-161	139.37	2.62	6-1294	155.00	3.00	6-655	174.20	5.70
6-698	140.00	2.00	6-1390	155.00	3.53	6-889	174.30	3.50
6-511	140.00	3.00	6-1318	155.00	4.00	6-1356	175.00	5.00
6-1136	140.00	5.00	6-1324	155.00	5.00	6-1068	175.00	6.00
6-602	140.00	10.00	6-773	155.00	10.00	6-841	175.00	10.00
6-1051	142.00	4.00	6-1605	156.00	4.00	6-148	177.00	2.00
6-1093	142.00	6.00	2-362	158.12	5.33	2-365	177.17	5.33
6-1207	142.00	12.00	2-438	158.12	6.99	2-441	177.17	6.99
2-358	142.24	5.33	2-259	158.34	3.53	2-262	177.39	3.53
2-434	142.24	6.99	2-164	158.42	2.62	2-167	177.47	2.62
2-255	142.47	3.53	6-170	159.00	4.00	6-631	179.00	3.00
6-1592	142.90	3.20	6-444	159.20	5.70	6-1098	179.20	5.70
6-2149	143.00	1.45	6-576	160.00	3.00	6-704	180.00	3.00
6-512	144.00	3.70	6-818	160.00	4.00	6-1088	180.00	4.00
6-1632	145.00	2.50	6-1081	160.00	5.00	6-1280	180.00	5.00
6-1696	145.00	2.88	6-1702	160.00	5.30	6-1706	180.00	5.30
6-1233	145.00	4.00	6-1292	160.00	6.00	6-1110	180.00	6.00
6-1046	145.00	5.00	6-103	161.00	3.00	6-1119	180.00	8.00
2-359	145.42	5.33	6-1045	162.00	2.50	6-862	180.00	10.00



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Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-1108	180.52	5.33	6-342	204.00	8.00	2-175	228.27	2.62
5-434	180.54	6.99	6-1849	205.00	1.78	6-516	230.00	3.00
6-1816	183.00	1.78	6-149	205.00	2.00	6-1727	230.00	4.50
2-366	183.52	5.33	6-546	205.00	3.00	6-1767	230.00	4.80
2-442	183.52	6.99	6-1565	205.00	5.00	6-1948	230.00	5.00
2-263	183.74	3.53	6-1866	206.00	5.70	6-1293	230.00	8.00
2-168	183.82	2.62	6-1153	206.00	7.00	6-252	231.50	6.00
6-1058	185.00	3.00	6-1725	208.00	4.00	6-918	234.10	8.40
6-1428	185.00	4.00	2-370	208.92	5.33	6-846	234.20	7.00
6-1028	185.00	5.00	2-267	209.14	3.53	6-618	234.32	1.78
6-1121	185.00	6.00	6-600	209.20	5.70	2-374	234.34	5.33
6-122	186.44	6.99	2-172	209.22	2.62	2-271	234.54	3.53
6-1007	187.10	8.40	6-0629	210.00	3.00	2-176	234.62	2.62
6-466	188.00	4.00	6-1118	210.00	4.00	6-1451	235.00	4.00
6-2084	188.14	1.78	6-152	210.00	5.00	6-2145	235.00	6.00
6-706	189.20	5.70	5-445	210.24	6.99	6-1360	236.00	6.00
2-367	189.87	5.33	6-2051	212.00	5.30	6-635	236.00	7.00
2-443	189.87	6.99	6-461	213.68	7.14	6-412	238.00	5.00
6-1848	190.00	1.78	6-954	214.63	2.18	6-1426	238.00	6.00
6-495	190.00	3.00	6-1867	215.00	5.00	6-1282	238.00	10.00
6-1044	190.00	4.00	6-570	215.00	6.00	6-1239	238.00	14.00
6-614	190.00	5.00	2-371	215.27	5.33	6-1895	239.20	3.53
2-264	190.09	3.53	2-446	215.27	6.99	6-604	240.00	3.00
2-169	190.17	2.62	2-268	215.49	3.53	6-1346	240.00	5.00
6-299	191.00	1.78	2-173	215.57	2.62	6-1564	240.00	8.00
6-1260	192.00	4.00	6-1302	216.00	4.00	6-436	240.00	12.00
6-1391	192.00	8.00	6-1048	218.00	5.80	6-1384	240.66	7.40
6-1238	194.00	14.00	6-1050	218.00	6.00	2-375	240.67	5.33
6-2098	193.70	7.00	6-254	218.00	12.00	2-448	240.67	6.99
6-868	195.00	3.50	6-183	219.00	5.30	2-272	240.89	3.53
6-1283	195.00	5.00	6-502	220.00	3.00	2-177	240.97	2.62
6-1453 6-920	195.00 195.50	6.00	6-1063 6-1425	220.00	5.00	6-281 6-407	241.00 242.00	7.00
6-273	195.50	12.00 12.00	6-1425	220.00 221.00	7.00 1.78	6-878	245.00	6.00 3.00
2-368	196.00	5.33	2-372	221.62	5.33	6-1861	245.00	3.53
2-444	196.22	6.99	2-269	221.84	3.53	6-1155	245.00	5.00
2-265	196.44	3.53	2-174	221.92	2.62	6-11534	245.00	7.00
2-203	196.44	2.62	6-1225	222.00	7.00	6-671	245.00	10.00
6-547	197.00	3.00	6-1679	223.00	2.65	6-967	245.00	10.85
6-1932	197.00	6.00	6-949	223.00	5.33	6-1668	246.00	3.00
6-1450	198.00	4.00	6-1654	224.00	6.00	6-1263	246.00	4.00
6-1563	198.00	8.00	6-1945	224.00	7.00	2-376	247.02	5.33
6-1307	200.00	4.00	6-1250	225.00	3.00	2-273	247.02	3.53
6-1139	200.00	5.00	6-485	225.00	5.00	2-178	247.32	2.62
6-226	200.00	6.00	6-1896	226.20	3.53	6-1030	248.00	5.00
6-865	201.00	4.00	6-150	227.00	2.00	6-1167	248.00	7.00
2-369	202.57	5.33	2-373	227.97	5.33	6-1010	249.30	5.70
2-445	202.57	6.99	2-447	227.97	6.99	6-514	250.00	3.00
2-266	202.79	3.53	6-1211	228.00	3.00	6-1993	250.00	4.00
2-171	202.87	2.62	2-270	228.19	3.53	6-1132	250.00	8.00



Daulian	α .l	0	Daulian	0 J	0	Dauliau	α .l	0
Parker No.	Ø d mm	Cross-	Parker No.	Ø d mm	Cross-	Parker No.	Ø d mm	Cross-
		sect. d ₂			sect. d ₂			sect. d ₂
6-1582	250.00	10.00	6-1663	294.00	3.00	6-1129	335.00	7.00
6-1227	252.00	4.00	6-2140	295.00	6.00	6-1235	336.00	5.33
2-377	253.37	5.33	6-917	296.00	6.00	6-1090	336.00	7.00
2-449	253.37	6.99	6-1424	297.00	4.00	6-1043	338.00	6.00
2-274	253.59	3.53	6-2037	297.80	6.99	6-1218	340.00	4.00
6-842	255.00	4.00	6-854	298.00	2.62	6-1881	340.00	5.33
6-1522	255.00	5.00	6-1278	299.50	5.00	6-1334	340.00	10.00
6-1388	256.00	4.00	6-2134	300.00	4.00	6-813	341.00	14.00
6-896	257.20	14.00	6-2080	300.00	5.00	2-456	342.27	6.99
6-718	258.40	1.60	6-1168	300.00	6.00	6-1255	343.00	6.00
6-1860	259.20	3.53	6-1370	300.00	8.00	6-1135	345.00	5.00
6-1231	260.00	4.00	6-1310	300.00	10.00	6-1918	349.00	5.33
6-871	260.00	5.00	2-381	304.17	5.33	6-1583	350.00	10.00
6-2146	260.00	6.00	2-453	304.17	6.99	6-1639	351.21	4.00
6-1201	260.00	8.00	2-278	304.39	3.53	6-1392	354.96	6.09
6-1042	261.00	6.00	6-553	304.80	1.78	2-383	354.97	5.33
6-336	262.00	5.33	6-1359	304.80	3.18	2-457	354.97	6.99
5-976	264.79	6.60	6-935	307.57	3.53	6-518	355.00	3.00
6-1403	265.00	5.00	6-1351	309.30	5.70	6-1888	355.00	8.00
6-1190	266.00	4.00	6-1371	310.00	5.00	2-280	355.19	3.53
2-378	266.07	5.33	6-2111	310.00	2.62	6-895	359.20	13.80
2-450	266.07	6.99	6-1125	311.00	10.00	6-1795	359.53	5.33
2-275	266.29	3.53	6-2109	312.90	1.78	6-1142	360.00	4.00
6-505	270.00	3.00 5.33	6-1880 6-607	313.00	5.33 4.00	6-1101	360.00	7.50 4.00
6-988 6-1868	270.00 270.00	6.00	6-1171	315.00 315.00	5.00	6-1836 6-1205	362.00 362.00	5.00
6-1331	272.00	8.00	6-510	315.00	6.00	6-672	364.00	10.00
6-936	272.64	3.53	5-488	316.56	2.62	6-1786	365.00	5.30
6-175	273.05	3.53	2-454	316.87	6.99	6-203	367.00	3.50
6-1279	273.60	5.00	6-1210	320.00	3.00	2-458	367.67	6.99
6-948	274.00	5.33	6-1707	320.00	3.53	6-1842	367.89	2.66
6-1476	275.00	5.00	6-716	320.00	6.00	6-1254	368.00	6.00
6-2005	276.00	2.62	6-1458	320.00	6.50	6-807	370.00	5.50
2-379	278.77	5.33	6-153	320.00	5.33	6-1958	372.00	4.00
2-451	278.77	6.99	6-1172	320.62	3.53	6-598	375.00	5.34
6-1667	278.99	2.62	6-1404	325.00	5.00	6-682	375.00	10.00
2-276	278.99	3.53	6-947	325.00	5.33	6-723	380.00	4.00
6-638	281.00	5.00	6-1546	328.00	6.99	6-897	380.00	6.00
6-840	282.37	3.53	6-1126	329.00	10.00	6-927	380.00	8.00
6-234	283.00	12.00	6-1784	329.57	4.80	2-384	380.37	5.33
6-1477	285.00	5.00	2-382	329.57	5.33	2-459	380.37	6.99
6-2114	285.00	6.00	2-455	329.57	6.99	2-281	380.59	3.53
6-238	285.00	12.00	2-279	329.79	3.53	6-204	381.00	5.00
6-1240	285.00	14.10	6-1258	330.00	5.00	6-1328	383.60	5.00
6-1018	289.42	5.87	6-283	330.00	6.00	6-1241	385.00	14.20
6-1191	290.00	5.00	6-469	330.00	8.00	6-711	388.00	5.00
6-241	291.00	6.00	6-1408	331.50	6.00	6-1387	390.00	4.00
2-380	291.47	5.33	6-1947	334.00	2.62	2-460	393.07	6.99
2-452	291.47	6.99	6-517	335.00	3.00	6-1374	395.00	12.00
2-277	291.69	3.53	6-2013	335.00	5.00	6-209	398.00	8.00
	_01100	3.00	0 2010	555.00	0.00	0 200	555.00	3.00



Parker	Ød	Cross-	Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-892	400.00	5.00	6-2015	470.00	4.50	2-471	557.66	6.99
6-458	400.00	12.00	6-827	470.00	10.00	6-462	558.00	10.00
6-934	401.71	3.53	6-930	477.00	10.50	6-1964	560.00	7.00
2-282	405.26	3.53	6-1219	480.00	4.00	6-1229	564.30	6.99
2-385	405.26	5.33	6-1243	480.00	14.00	6-709	565.00	7.00
2-461	405.26	6.99	6-256	480.06	10.00	6-1678	571.00	8.00
6-938	409.00	6.99	2-388	481.41	5.33	6-176	577.85	6.99
6-1326	410.00	6.00	2-467	481.46	6.99	6-1300	579.00	5.00
6-1335	412.00	8.00	6-1979	484.00	8.40	6-626	580.00	8.00
6-1242	415.00	14.20	6-834	484.86	3.53	6-1127	580.50	3.53
2-462	417.96	6.99	6-1080	485.00	5.00	2-392	582.68	5.33
6-1352	419.30	5.70	6-1444	490.00	5.00	2-472	582.68	6.99
6-165	420.00	3.50	6-2073	492.00	3.53	6-1244	585.00	14.00
6-164	420.00	5.00	2-468	494.16	6.99	6-1963	587.00	7.00
6-173	422.00	2.00	6-328	500.00	3.53	6-1953	589.00	3.00
6-215	425.00	6.00	6-1221	500.00	5.00	6-817	590.00	10.00
6-1851	425.33	5.33	6-1420	500.00	6.00	6-831	590.00	3.50
5-525	425.83	3.18	6-800	500.00	8.00	6-380	594.51	7.14
6-1937	428.00	5.00	6-261	504.00	6.99	6-1844	595.00	5.33
6-741	428.00	5.70	6-260	506.00	2.62	6-2023	598.00	7.00
6-898	429.00	6.00	2-389	506.81	5.33	6-1858	602.00	7.00
6-734	430.00	12.00	2-469	506.86	6.99	6-233	602.00	8.00
6-1584	430.00	16.00	6-2065	510.00	3.00	6-1301	602.00	5.00
2-283	430.66	3.53	6-202	514.00	8.00	6-422	607.00	4.00
2-386	430.66	5.33	6-394	514.00	8.00	6-320	608.00	10.00
2-463	430.66	6.99	6-1837	515.00	5.33	2-473	608.08	6.99
6-331	431.80	7.10	6-1170	515.00	5.00	2-393	608.08	5.33
6-939	434.00	6.99	6-775	515.00	10.00	6-1220	610.00	4.00
6-158	437.00	3.00	6-919	515.90	6.00	6-1017	613.92	6.99
6-1256	440.00	4.00	6-1158	520.00	5.00	6-742	614.00	7.00
6-1435	440.00	4.30	6-1957	522.00	4.00	6-1157	615.00	5.00
2-464 6-578	443.36 445.00	6.99 8.00	6-1823 6-529	522.00 524.00	10.00 10.00	6-647 6-1841	617.00 618.50	7.00 2.00
6-909	449.00	12.00	6-951	526.00	6.99	6-265	619.50	8.00
6-835	449.50	6.99	6-467	528.00	8.00	6-1528	621.00	8.50
6-1521	450.00	2.62	6-262	532.00	7.00	6-278	622.00	8.00
6-669	450.00	10.00	6-1838	532.18	5.33	6-1824	623.08	5.33
6-1843	455.00	5.33	2-390	532.10	5.33	6-247	624.00	6.99
6-1674	455.00	6.00	2-470	532.26	6.99	6-1262	632.00	6.00
6-530	455.00	8.00	6-179	533.40	3.18	2-394	633.48	5.33
2-284	456.06	3.53	6-1409	534.00	8.00	2-474	633.48	6.99
2-387	456.06	5.33	6-621	535.46	7.24	6-536	635.00	5.00
2-465	456.06	6.99	6-1608	538.00	6.00	6-986	635.00	9.00
6-1128	460.00	5.34	6-1299	540.00	5.00	6-1716	635.00	10.00
6-1753	460.00	6.99	6-836	543.50	6.99	6-235	637.00	10.00
6-1008	463.00	7.00	6-690	546.00	7.00	6-644	638.89	5.44
6-1072	465.00	5.00	6-1641	546.00	2.62	6-1308	640.00	6.00
6-799	468.00	6.00	6-670	550.00	10.00	6-1859	640.00	7.00
2-466	468.76	6.99	6-1952	555.00	3.00	6-1960	645.00	3.53
6-1934	469.00	5.33	2-391	557.61	5.33	6-1959	645.00	4.00



Parker	Ød	Cross-	Parker	Ød	Cross-
No.	mm	sect. d ₂	No.	mm	sect. d ₂
6-381	647.70	6.99	6-1943	818.00	12.00
2-395	658.88	5.33	6-509	819.00	7.00
2-475	658.88	6.99	6-2066	820.00	3.00
6-1418	661.00	14.00	6-648	820.00	7.00
6-653	664.00	5.00	6-268	827.00	7.00
6-645	665.00	5.00	6-1131	835.50	7.00
6-816	670.00	10.00	6-229	837.00	10.00
6-1443	675.00	5.30	6-190	840.00	12.00
6-301	677.00	7.00	6-1130	840.50	7.00
6-535	680.00	5.00	6-508	849.00	7.00
6-236	689.00	10.00	6-330	850.00	10.00
6-1742	690.00	8.00	6-650	853.00	7.00
6-266	693.50	10.10	6-1246	853.00	20.00
6-1160	695.00	5.00	6-2009	855.00	10.00
6-701	695.00	6.99	6-1223	860.00	3.00
6-321	700.00	10.00	6-707	865.00	8.40
5-092	701.68	6.99	6-363	865.00	12.00
6-702	707.00	6.99	6-890	870.00	8.00
6-668	708.00	10.00	6-597	875.00	8.00
6-531	710.00	5.33	6-230	882.00	10.00
6-521	716.00	8.00	6-304	887.00	6.99
6-372	720.00	6.99	6-1156	890.00	5.00
6-389	723.90	6.99	6-924	900.00	10.00
6-267	734.00	6.99	6-249	910.00	6.99
6-1245	735.00	15.00	6-335	914.00	5.33
6-305	736.00	3.53	6-708	929.00	6.00
6-1847	736.00	7.00	6-250	936.00	6.99
6-1577	736.60	5.00	6-409	940.00	10.00
6-1309	740.00	6.00	6-269	950.50	12.06
6-228	740.00	10.00	6-302	955.00	12.60
6-1840	745.00	10.00	6-334	960.00	5.33
6-943	748.50	7.00	6-527	974.00	7.00
6-2067	750.00	3.00	6-232	984.00	10.00
6-1079	750.00	5.00	6-460	996.00	7.00
6-1071	755.00	5.00	6-534	1004.00	8.00
6-417	760.00	5.00	6-1213	1005.00	15.00
6-303	763.01	6.99	6-332	1011.00	5.33
6-1173	764.00	6.99	6-280	1016.00	7.00
6-1222	770.00	7.00	6-2124	1020.00	5.70
6-667	770.00	10.00	6-239	1029.00	10.00
6-1944	777.00	12.00	6-333	1042.00	5.33
6-1215	780.00	7.00	6-270	1046.00	7.00
6-248	783.00	6.99	6-393	1060.00	10.00
6-1956	786.00	4.00	6-385	1071.00	14.40
6-237	786.00	10.00	6-240	1075.00	10.00
6-649	798.00	7.00	6-271	1103.00	10.00
6-415	800.00	5.33	6-245	1154.00	10.00
6-2042	801.00	4.00	6-1304	1840.00	5.00
6-279	810.00	7.10	6-1325	1865.00	5.00
6-322	810.00	10.00	6-1066	1960.00	10.85

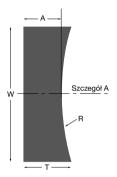
Parker No.	Ø d mm	$\begin{array}{c} \text{Cross-} \\ \text{sect.} \ \textbf{d}_{\scriptscriptstyle 2} \end{array}$
6-1067	2072.00	10.00
6-1845	2324.00	6.99
6-1846	2350.00	6.99
6-984	2965.00	7.00

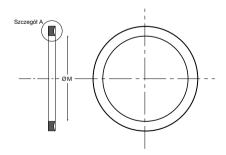


Parbak® Back-up ring

Parbak® Back-up rings prevent extrusion in high-pressure applications, help to maintain the lubricant film and thus prolong the service life of O-rings.

Developed primarily for service in hydraulic fluids at -40 °C to 120 °C, Parker's standard Parbak® N0300-90 compound provide the maximum benefits in back-up ring service. Compounds for use in other fluids and for temperatures up to 200 °C 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, toward or away from the O-ring.





D. J.		*** +0.00	D. d.		*** +0.00	D. d.		*** +0.00
Parker No.	M (mm)	W ±0.08	Parker No.	M (mm)	W ±0.08	Parker No.	M (mm)	W ±0.08
8-004	2.44	(mm) 1.35	8-103	2.77	(mm) 2.18	8-151	76.66	(mm) 2.18
8-005	3.23	1.35	8-104	3.56	2.18	8-152	83.01	2.18
8-006	3.56	1.35	8-105	4.34	2.18	8-153	89.36	2.18
8-007	4.34	1.35	8-106	5.13	2.18	8-154	95.71	2.18
8-007	5.13	1.35	8-107	5.13	2.18	8-155	102.06	2.18
8-009	5.13	1.35	8-107	6.73	2.18	8-156	102.00	2.18
8-010			8-109	8.31		8-157		
	6.73 8.31	1.35			2.18		114.76	2.18
8-011 8-012		1.35	8-110 8-111	9.91	2.18	8-158	121.11	2.18
	9.91	1.35		11.48	2.18	8-159	127.46	2.18
8-013	11.56		8-112	13.08		8-160	133.81	2.18
8-014	13.16	1.35	8-113	14.66	2.18	8-161	140.16	2.18
8-015	14.73	1.35	8-114	16.26	2.18	8-162	146.51	2.18
8-016	16.33	1.35	8-115	17.83	2.18	8-163	152.86	2.18
8-017	17.91	1.35	8-116	19.43	2.18	8-164	159.21	2.18
8-018	19.51	1.35	8-117	21.11	2.18	8-165	165.56	2.18
8-019	21.08	1.35	8-118	22.68	2.18	8-166	171.91	2.18
8-020	22.68	1.35	8-119	24.28	2.18	8-167	178.26	2.18
8-021	24.26	1.35	8-120	25.86	2.18	8-168	184.61	2.18
8-022	25.86	1.35	8-121	27.46	2.18	8-169	190.96	2.18
8-023	27.43	1.35	8-122	29.03	2.18	8-170	197.31	2.18
8-024	29.03	1.35	8-123	30.63	2.18	8-171	203.66	2.18
8-025	30.61	1.35	8-124	32.21	2.18	8-172	210.01	2.18
8-026	32.21	1.35	8-125	33.81	2.18	8-173	216.36	2.18
8-027	33.78	1.35	8-126	35.38	2.18	8-174	222.71	2.18
8-028	35.38	1.35	8-127	36.98	2.18	8-175	229.06	2.18
8-029	38.56	1.35	8-128	38.56	2.18	8-176	235.41	2.18
8-030	41.73	1.35	8-129	40.16	2.18	8-177	241.76	2.18
8-031	44.91	1.35	8-130	41.73	2.18	8-178	248.11	2.18
8-032	48.08	1.35	8-131	43.33	2.18			
8-033	51.26	1.35	8-132	44.91	2.18			
8-034	54.43	1.35	8-133	46.51	2.18			
8-035	57.61	1.35	8-134	48.08	2.18			
8-036	60.78	1.35	8-135	49.68	2.18			
8-037	63.96	1.35	8-136	51.26	2.18			
8-038	67.13	1.35	8-137	52.86	2.18			
8-039	70.31	1.35	8-138	54.43	2.18			
8-040	73.48	1.35	8-139	56.03	2.18			
8-041	76.66	1.35	8-140	57.61	2.18			
8-042	83.01	1.35	8-141	59.21	2.18			
8-043	89.36	1.35	8-142	60.78	2.18			
8-044	95.71	1.35	8-143	62.38	2.18			
8-045	102.06	1.35	8-144	63.96	2.18			
8-046	108.41	1.35	8-145	65.56	2.18			
8-047	114.76	1.35	8-146	67.13	2.18			
8-048	121.11	1.35	8-147	68.73	2.18			
8-049	127.46	1.35	8-148	70.31	2.18			
8-050	133.81	1.35	8-149	71.91	2.18			
8-102	1.96	2.18	8-150	73.48	2.18			
0-102	1.30	2.10	0-130	13.40	2.10			

Sizing charts - Parbak® back-up ring 8-xxx sizes

Parker	M	W ±0.13	Parker	M	W ±0.15
No.	(mm)	(mm)	No.	(mm)	(mm)
8-357	140.41	4.65	8-425	115.60	5.99
8-358	143.59	4.65	8-426	118.77	5.99
8-359	146.76	4.65	8-427	121.95	5.99
8-360	149.94	4.65	8-428	125.20	5.99
8-361	153.11	4.65	8-429	128.30	5.99
8-362	159.46	4.65	8-430	131.47	5.99
8-363	165.81	4.65	8-431	134.65	5.99
8-364	172.16	4.65	8-432	137.82	5.99
8-365	178.51	4.65	8-433	141.00	5.99
8-366	184.86	4.65	8-434	144.17	5.99
8-367	191.21	4.65	8-435	147.35	5.99
8-368	197.56	4.65	8-436	150.52	5.99
8-369	203.91	4.65	8-437	153.70	5.99
8-370	210.26	4.65	8-438	159.36	5.99
8-371	216.61	4.65	8-439	165.71	5.99
8-372	222.96	4.65	8-440	172.06	5.99
8-373	229.31	4.65	8-441	178.41	5.99
8-374	235.66	4.65	8-442	184.76	5.99
8-375	242.01	4.65	8-443	191.11	5.99
8-376	248.36	4.65	8-444	197.46	5.99
8-377	254.71	4.65	8-445	203.81	5.99
8-378	267.41	4.65	8-446	216.51	5.99
8-379	280.11	4.65	8-447	229.21	5.99
8-380	292.81	4.65	8-448	241.91	5.99
8-381	305.51	4.65	8-449	254.61	5.99
8-382	330.91	4.65	8-450	267.31	5.99
8-383	356.31	4.65	8-451	280.01	5.99
8-384	381.71	4.65	8-452	292.71	5.99
8-385	406.60	4.65	8-453	305.41	5.99
8-386	432.00	4.65	8-454	318.11	5.99
8-387	457.40	4.65	8-455	330.81	5.99
8-388	482.75	4.65	8-456	343.51	5.99
8-389	508.15	4.65	8-457	356.21	5.99
8-390	533.55	4.65	8-458	368.91	5.99
8-391	558.95	4.65	8-459	381.61	5.99
8-392	584.02	4.65	8-460	394.31	5.99
8-393	609.42	4.65	8-461	406.50	5.99
8-394	634.82	4.65	8-462	419.20	5.99
8-395	660.22	4.65	8-463	431.90	5.99
			8-464	444.60	5.99
			8-465	457.30	5.99
			8-466	470.00	5.99
			8-467	482.70	5.99
			8-468	495.40	5.99
			8-469	508.10	5.99
			8-470	533.50	5.99
			8-471	558.90	5.99
			8-472	584.30	5.99
			0 II L	5000	0.00

		0.45
Parker	M	W ±0.15
No.	(mm)	(mm)
8-473	609.70	5.99
8-474	635.10	5.99
8-475	660.50	5.99

Sizing charts - Parbak® back-up ring other dimensions

Other dimensions				
Parker No.	R (mm)	T (mm)	A (mm)	
004-050	2.21	1.24	1.14	
102-178	3.28	1.35	1.14	
201-284	4.42	1.27	1.02	
309-395	6.65	1.93	1.52	
425-475	8.74	2.97	2.44	

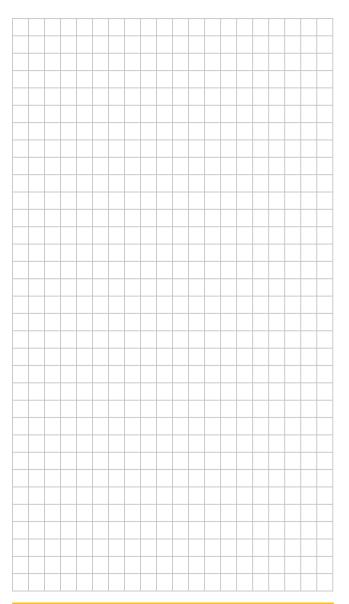
Size tolerances			
Parker No.	M ±		
004-009	0.15 mm		
009-012	0.18 mm		
012-019	0.23 mm		
020-029	1.00 %		
030-041	0.86 %		
042-050	0.78 %		
102-107	0.15 mm		
108-110	0.18 mm		
111-117	0.25 mm		
118-128	1.10 %		
129-151	0.95 %		
152-164	0.78 %		
165-178	0.74 %		
201-204	0.18 mm		
204-211	0.25 mm		
212-227	1.10 %		
228-235	0.90 %		
236-259	0.78 %		
260-277	0.74 %		
278-284	0.67 %		
309-315	0.25 mm		
316-325	1.10 %		
326-338	0.95 %		
339-362	0.78 %		
363-380	0.74 %		
381-395	0.67 %		
425-438	0.78 %		
439-452	0.74 %		
453-475	0.67 %		

Size tolerances			
Parker No.	A ±		
004-284	0.08 mm		
309-325	0.10 mm		
425-475	0.13 mm		

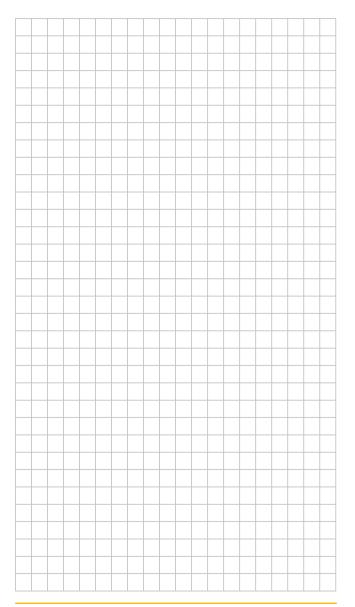
Please note:

- 1. On ordering both size and compound should be stated e.g. 8-130, N300-90.
- Parbak® size numbers correspond to O-rings in the 2-xxx series, e.g. 8-211, N 300-90 is fitted with the O-ring 2-211, N 674-70.

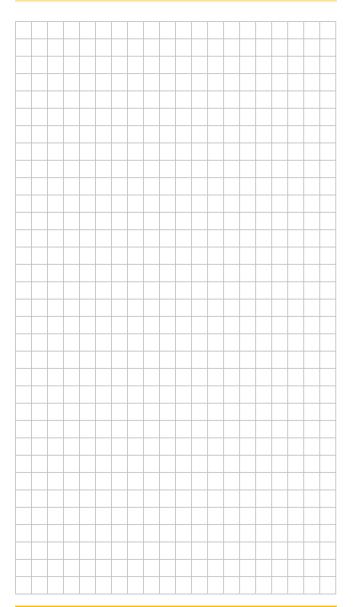




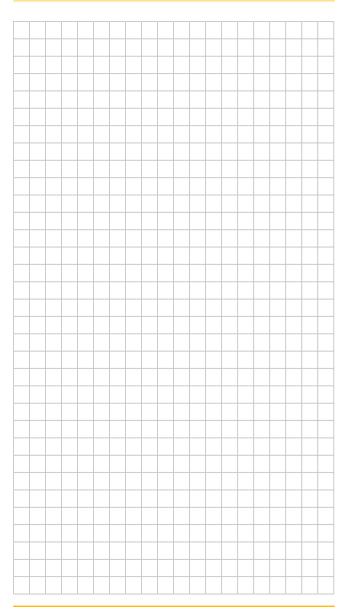




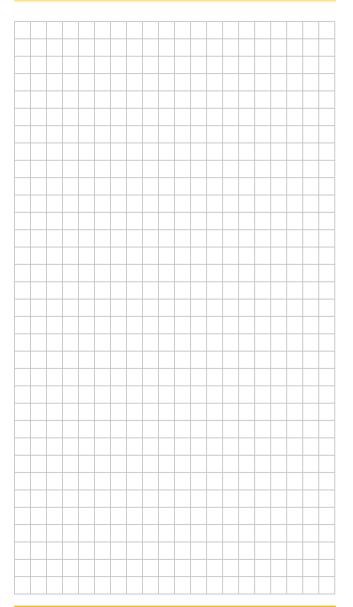














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