AUTOMOTIVE | AEROSPACE | FOOD & BEVERAGE | FLUID TECHNOLOGIES | MOBILE MACHINERY

FRANCEJOINT

SEALING SYSTEMS

O'RINGS

BACK-UP RINGS

FRANCEJOINT
SEALING SYSTEMS

FRANCEJOINT

L'ÉTANCHÉITÉ PRESTIGE

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FRANCEJOINT
SEALING SYSTEMS

Site n°1: Compression Molding – Injection Molding – Water Jet Cutting – Finition – Quality Control – Logistics

Site N°2: Administrative Area – Research & Development – Machining – Tooling

FRANCEJOINT
SEALING SYSTEMS

Since 1981, FRANCE JOINT – SEALING SYSTEMS has been designing, manufacturing and distributing seals and precision rubber parts for its customers for whom quality is a determining factor.

Faced with tough competition among the big decision-makers of the industrial world, FRANCE JOINT has responded with innovation, research and development, experience in Best-Cost manufacturing, and a consistently high level of quality, thanks to certificates ISO 9001, IATF 16949, EN/AS 9100 and ISO 14001.

Today, FRANCE JOINT is working in close collaboration with its customers, meeting challenges head on with success. Automotive, Aeronautics, Mobile hydraulics, Beverages & Foods, Fluid engineering industries... every solution emerges from a uniquely individual partnership, constantly fostered and renewed.

Our prime objective, based on unrivalled quality, is to find the most suitable solutions for ensuring that you will stand out in what has become an extremely competitive domain. Our position of excellence has led us since the birth of our company to acquire the tools necessary to anticipate and prevent risks and maximize our service; the ultimate objective being of course to help you keep ahead of developments in this more and more technological market.

- AUTOMOTIVE
- AERONAUTICS
- BEVERAGES & FOODS
- FLUID ENGINEERING
- MOBILE HYDRAULICS

Compression molding

Injection molding

Machining / Tooling

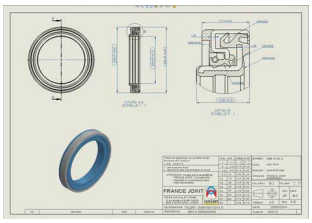
Logistics / Packaging

RESEARCH & **DEVELOPMENT**

Innovation, reliability, safety, minimization of risk: your expectations are our daily concern. To get from the idea to the finished product demands firm managerial control over a wide range of projects in addition to expertise in manufacturing.

FRANCE JOINT's contributors, who are as much inventors as technicians, get the best of fully automated, state-of-the-art technology that takes them from drawing-board to prototype and finally to assembly line. From writing specifications to putting on a major technical event through designing (3D Solidwrks software) and testing for validation and compliance, FRANCE JOINT engineering works hand in hand with you to find the best solutions guaranteeing the level of expected performance.

More than 1000 compounds integrating elastomers, PTFE materials, Polyurethane, or even thermoplastics, as many solutions vis-a-vis the new most complex requirements which will put you in pole position today so that we can all be winners tomorrow. FRANCE JOINT puts in place qualifications in order to examine the behavior of its seals according to various parameters intervening on frictions, pressures, temperatures, speeds, strokes, leakages…



QUALITY **IN OUR CONCERNS**

Several certificates obtained, ISO 9001, IATF 16949, EN/AS 9100 and ISO 14001, testify to the quality department's commitment to constant progress at every level of the company, at all stages of the realization, particularly where continual improvement is what has made FRANCE JOINT the name it is today.

Ambitious with customer satisfaction a priority, FRANCE JOINT has thus obtained the most powerful methods (PPAP, AMDEC, value analysis, Audits, MRP, 8D analysis, SPC, R&R ...) in order to optimize simultaneously the capacity of machines and processes, operational manpower performances, organizational methods, and finally, product and financial results.

FRANCE JOINT guarantees the best technology and pursues its daily objectives of a "Zero defects" production, through physico chemical controls (rheometer, spectrometer, durometer...), through dimensional and final aspects (unit controlling equipment, 3D camera ...). This is because the search for competitiveness is as important as the search for continuous improvement.

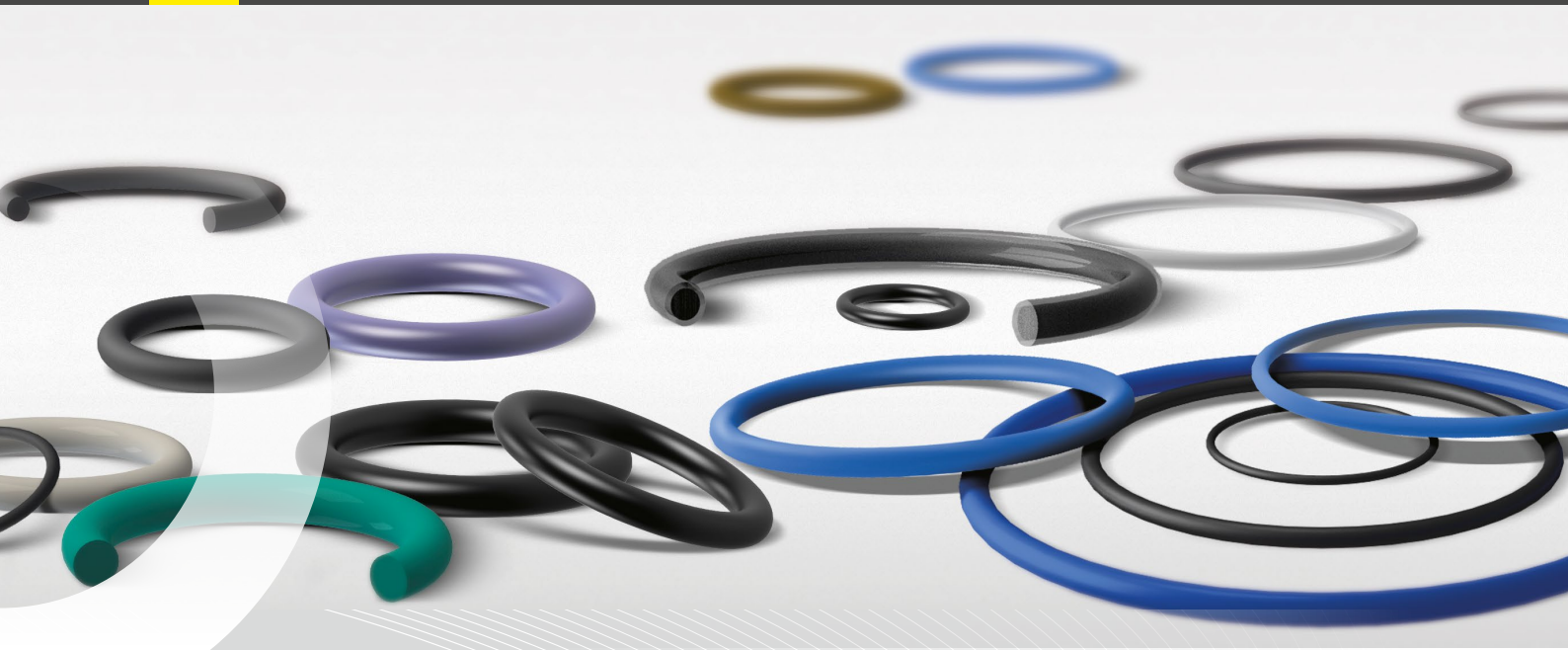
3D test device

CERTIFIÉ ISO 9001 CERTIFIED

CERTIFIÉ ISO 14001 CERTIFIED

CERTIFIÉ IATF 16949 CERTIFIED

CERTIFIÉ EN 9100 CERTIFIED



SECTION 1
O'RINGS

1. Description

O'Rings, because of their simple shape and efficiency, have been used for a number of years in diverse industrial applications - valves, industrial engines, medical equipment, agricultural equipment and construction machinery, machine tools, etc. In short, in situations where a compact design is required for a good sealing effect.

These O'Rings are made from very varied chemical synthetic rubber: ACM, AEM, EPDM, FKM, HNBR, NBR, VMQ, which provides a large selection of materials that are chemically compatible with a wide range of products and fluids. The dimensions of the housing are defined by the O'Ring cross-section Ød2.

These O'Rings are extremely easy to use, both for static and dynamic applications, and do not require any maintenance or adjustment. They can be used under pressure and at significant speeds and temperatures by selecting the right quality and by carefully following the installation instructions. O'Rings are a simple, efficient and cost-effective solution.

2. Materials

2.1 RUBBERS

The table below provides an overview of the different rubber families.

ABBREVIATION ISO 1629 ASTM 1418	FRANCE JOINT CODE	CHEMICAL NAME
ACM	B	Polyacrylate
AEM	V	Ethylene acrylate rubber
CR	E	Polychloroprene
EPDM	C	Ethylene Propylene Diene Monomer rubber
FFKM	FF	Perfluorinated rubber
FKM	G	Fluorinated rubber
FVMQ	FS	Fluorosilicone rubber
HNBR	HK	Hydrogenated Nitrile Butadiene rubber
NBR	K	Nitrile Butadiene rubber
NR	N	Natural rubber
PVMQ	PS	Silicone rubber: Polysiloxane – Phenyl – Vinyl - Methyl
VMQ	F	Silicone rubber: Polysiloxane – Vinyl - Methyl

ACM (Polyacrylate)

Polymers containing ethyl acrylate (or butyl acrylate) have a small amount of monomer, which is necessary for cross-linking; ACM is a material with better heat resistance than NBR. It is often used for automatic gearboxes.

Chemical resistance

Mineral oils (motor oils, gear box oils, ATF oils)
Atmospheric and ozone agents

Compatibility issue

Glycol-based brake fluids (Dot 3 & 4)
Aromatic and chlorinated hydrocarbons
Water and steam
Acids, alkalis and amines

Temperature range

-25°C / +150°C (short-term peak at +160°C)
-35°C / +150°C with particular ACMs

AEM (ethylene acrylate rubber)

As a methyl acrylate and ethylene copolymer, AEM is considered to be better resistant to heat than ACM. Its characteristics make it an intermediary between the ACM and FKM.

Resistance to chemicals	Cooling fluids Aggressive mineral oils Atmospheric agents Water
Compatibility issue	Aromatic solvents Strong acids Brake fluids Gearbox oils ATF oils
Temperature range	-40°C/+150°C

CR (Polychloroprene)

This CR-based elastomer is used in the refrigeration industry and for ventilation systems. This chloroprene was the first synthetic rubber to be developed and marketed.

Chemical resistance	Paraffinic mineral oils Silicone oils and greases Water and water-based solvents for use at low temperatures Refrigerant fluids Ammoniac Carbon dioxide Atmospheric and ozone agents
Limited chemical resistance	Naphthenic mineral oils Aliphatic hydrocarbons (propane, butane, petroleum) Glycol-based brake fluids
Compatibility issue	Aromatic hydrocarbons (benzene) Chlorinated hydrocarbons (trichlorethylene) Polar solvents (ketone, acetone, acetic acid, ethylene-ester)
Temperature range	-40°C / +100°C (short-term peak at +120°C)

EPDM (Ethylene Propylene Diene Monomer rubber)

As an Ethylene Propylene Diene Monomer copolymer, EPDM is commonly used for hot water taps, cooling systems, brake systems, dishwashers and washing machines.

Chemical resistance	Hot water and steam up to +150°C Glycol-based brake fluids (Dot 3 & 4) and silicone-based brake fluids (Dot 5) Organic and inorganic acids Cleaning agents, sodium and potassium alkalis Hydraulic fluids (HFD-R) Silicone oils and greases Polar solvents (alcohols, ketones and esters) Atmospheric and ozone agents
Compatibility issue	Mineral oils and greases Hydrocarbons Low impermeability to gas
Temperature range	-45°C / +150°C (short-term peak at +175°C)

FFKM (perfluorinated rubber)

FFKM has the best resistance to high temperatures and an excellent chemical inertia. This FKM-based rubber is very often used for high-temperature hydraulic and pneumatic systems, industrial valves, injection/fuel systems, motor seals and high-vacuum systems.

Resistance to chemicals	Aliphatic and aromatic hydrocarbons Polar solvents (ketones, esters and ethers) Organic and inorganic acids Water and steam High-vacuum system
Compatibility issue	Coolants (R11, R12, R13, R113, R114, etc.) PFPE
Temperature range	-15°C/+320°C

FKM (fluorinated rubber)

Depending on their structure and fluorine content, fluoroelastomers can vary in terms of chemical resistance and resistance to cold. This FKM-based rubber is very often used for high-temperature hydraulics and pneumatics, for industrial valves, injection/fuel systems, motor seals and high-vacuum systems.

Chemical resistance	Mineral oils and greases, ASTM n°1, IRM 902 and IRM 903 oils. Fire-resistant liquids (HFD) Silicone oils and greases Mineral and vegetable oils and greases Aliphatic hydrocarbons (propane, butane, petroleum) Aromatic hydrocarbons (benzene, toluene) Chlorinated hydrocarbons (trichlorethylene) Fuel (including high alcohol content) Atmospheric and ozone agents
Compatibility issue	Glycol-based brake fluids Ammonia gas Organic acids with a low molecular weight (formic and acetic acids)
Temperature range	-20°C / +200°C (short-term peak at +230°C) -40°C / +200°C with particular FKMs

FVMQ (fluorosilicone rubber)

The FVMQ has mechanical and physical properties that are very similar to those of VMQ. However, the FVMQ offers better resistance to fuels and mineral oils. However, resistance to hot air is not as good as that of VMQ.

Resistance to chemicals	Aromatic mineral oils (IRM 903 oil) Fuels Aromatic hydrocarbons with low molecular weights (benzene, toluene)
Temperature range	-70°C/+175°C

HNBR (Hydrogenated Nitrile Butadiene Rubber)

This HNBR-based elastomer is obtained through selective hydrogenation of the NBR's butadiene groups. It is commonly used for power-assisted steering and for air conditioning.

Chemical resistance	Aliphatic hydrocarbons Mineral and vegetable oils and greases Fire-resistant fluids (HFA, HFB and HFC) Diluted acids, saline solutions and bases for operation at an average temperature Water and steam up to +150°C Atmospheric and ozone agents
Compatibility issue	Chlorinated hydrocarbons Polar solvents (ketones, esters and ethers) Strong acids
Temperature range	-30°C / +150°C (short-term peak at +160°C) -40°C / +150°C with particular HNBRs

NBR (Nitrile Butadiene Rubber)

Nitrile rubber (NBR) is the general term for acrylonitrile-butadiene copolymer. The ACN content can vary between 18% and 50%. While the acrylonitrile content is important, the resistance to oil and fuel is more so. Conversely, the elasticity and compression set are not as good. The NBR has good mechanical properties and good wear resistance. However, its resistance to atmospheric agents and the ozone is relatively low.

Chemical resistance	Aliphatic hydrocarbons (propane, butane, petroleum, diesel fuel) Mineral oils and greases Fire-resistant fluids (HFA, HFB and HFC) Diluted acids, low-temperature alkaline and saline solutions Water (up to +100°C max)
Compatibility issue	Fuels with high aromatic content Aromatic hydrocarbons (benzene) Chlorinated hydrocarbons (trichlorethylene) Polar solvents (ketone, acetone, acetic acid, ethylene-ester) Strong acids Glycol-based brake fluids Atmospheric and ozone agents
Temperature range	-30°C / +100°C (short-term peak at +120°C) -40°C / +100°C with particular NBRs

VMQ (silicone rubber: Methyl Vinyl Polysiloxane)

This FVMQ-based rubber is very often used in fuel systems.

Chemical resistance	Animal and vegetable oils and greases Water for operation at an average temperature Diluted saline solutions Atmospheric and ozone agents
Compatibility issue	Superheated steam up to +120°C Chlorinated hydrocarbons with a low molecular weight (trichlorethylene) Aromatic hydrocarbons (benzene, toluene) Atmospheric and ozone agents
Temperature range	-60°C / +200°C (short-term peak at +230°C)

2.2 CHEMICAL COMPATIBILITY

A "Chemical compatibility guide" catalogue can be downloaded from our website: **www.francejoint.com**

You can also use our online "**Chemical compatibility" tool free of charge.**

These two tools enable you to measure the behaviour of our materials that come into contact with the majority of existing fluids. The data displayed is the result of rigorous testing at the ambient temperature and takes previous publications into consideration. Test results are not fully representative because of the specific features of your application. The tests performed actually do not consider additives and impurities that may exist under actual conditions of use, nor the potential elevation of temperatures. Other parameters can also alter the behaviour of our materials, such as the hardness, persistence, abrasion, etc. We therefore recommend performing your own tests to verify the compatibility of our materials depending on your specific application. Our technical team can provide you with any additional information.

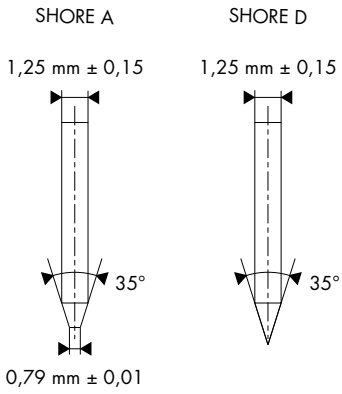
2.3 PHYSICAL PROPERTIES

a. Hardness

Hardness is the major feature that defines resilient materials. The hardness test is carried out using testing devices that display the results as Shore A, Shore D or in IRHD. The majority of O'Rings are Shore A +/-5 tested (IRHD for specific cases). The test must be carried out at 23°C +/-2, at the earliest 16 hours after the last vulcanisation on specimen that have not been subjected to mechanical stress in the meantime. Test conditions must be included in the test report.

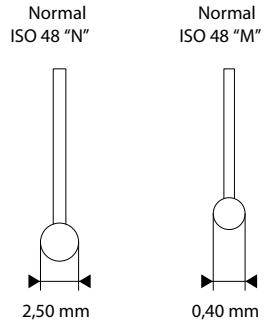
In Shore A / Shore D

- Test on specimen only
- Min. thickness: 6.00 mm
- Min. diameter: 30.00 mm
- Duration of entry: 3 seconds
- Standards applied:
  ISO 868 / ISO 7619 / ASTM D 2240



In IRHD DIDC

- Tests on specimen and finished parts
- Thickness of 1.50 to 2.50 mm with operating mode "M"
- Thickness of 8.00 to 10.00 mm with operating mode "N"
- Duration of entry: 30 seconds
- Standards applied:
  ISO 48 / ASTM 1414 / ASTM 1415



b. Compression Set (CS)

The Compression Set (CS) is a method that measures the ability of rubbers to maintain their elastic properties at specific temperatures following prolonged compression under consistent deformation, in line with standards ISO 815 / ASTM D 395.

THE CS IS MEASURED AS FOLLOWS:

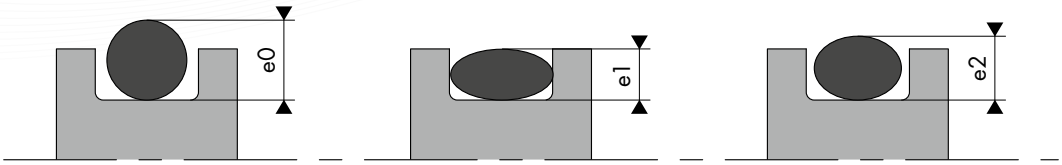
$$CS\ \% = \frac{(e0 - e2)}{(e0 - e1)} \times 100$$

WHERE:

- e0: initial thickness of the O'Ring
- e1: thickness under compression with specified conditions (temperature, fluid, duration, deformation rate)
- e2: thickness after tension release

IMPORTANT

e2 = e0; the material has perfect elasticity
e2 = e1; the material has a complete permanent plastic deformation
The lower the CS, the better the rubber's elasticity.

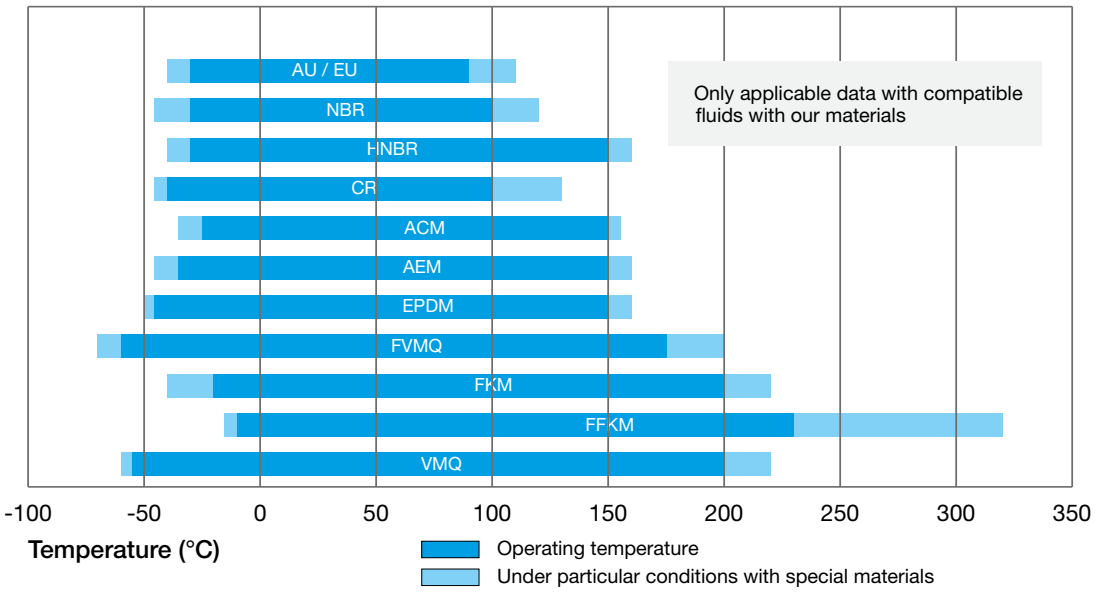


c. Tensile strength, elongation at break, modulus of elasticity 100% to 300%

Usually expressed in MPa for tensile strength and the modulus of elasticity and in % for the elongation at break, the values are obtained according to ISO 37 / ASTM D 412. Once placed between the jaws of the measuring device, the specimen is stretched at a constant speed (approximately 500 mm/min) until it breaks completely. This test characterises the physical properties of rubbers and allows us to understand their limits in terms of resistance to stress, stretching when the seals are stretch-fitted and resistance to extrusion.

d. Temperature resistance

The temperature strongly influences the physical properties of materials. The graph below sets out the temperature limits for each material. However, we can provide custom-made compounds depending on your needs (e.g. NBR or FKM capable of withstanding temperatures of -40°C)



e. Volume change

Chemical resistance is a decisive criteria when it comes to selecting an appropriate material. That's why it is essential to be aware of the liquids or gases used in the application, as this will affect the operation of the material as well as the service temperature.

Moreover, hardening or softening, loss of stiffness or elasticity, loss of tension, deformation relaxation and changes in volume through swelling or shrinkage can be ascertained using the volume change test, in line with standards ISO 1817 / ASTM D 471.

These tests are carried out either in the actual application environment or using standardised liquid tests (ASTM no. 1, IRM 902 and IRM 903 oils, ASTM fuels A to C).

3. Operating principle

3.1 ELONGATION E% – COMPRESSION C%

For the outer radial sealing (piston sealing), the O'Ring is stretch-fitted and must therefore be streteched in its groove. The O'Ring elongation values are applied according to the type of application.

- **IN HYDRAULIC AND PNEUMATIC STATIC APPLICATIONS: 0.5% and 8%**
- **IN HYDRAULIC DYNAMIC APPLICATIONS: 0.5% and 5%**

THE ELONGATION RATE E% IS CALCULATED AS FOLLOWS:

Piston sealing:

$$Emin\% = \frac{(Ød3,min - Ød1,max)}{Ød1,max} \times 100 \qquad Emax\% = \frac{(Ød3,max - Ød1,min)}{Ød1,min} \times 100$$

For the inner radial sealing (rod sealing), the O'Ring is fitted by compression and must therefore be compressed in its groove. The O'Ring compression rate must be less than 5%, whatever the type of application.

THE COMPRESSION RATE C% IS CALCULATED AS FOLLOWS:

Rod sealing:

$$Cmin\% = \left(\frac{(Ød1,max + 2 \times Ød2,max) - ØD6,min}{ØD6,min} \right) \times 100$$

$$Cmax\% = \left(\frac{(Ød1,min + 2 \times Ød2,min) - ØD6,max}{ØD6,max} \right) \times 100$$

3.2 TIGHTNESS S%

The tightening is a determining element to guarantee optimal sealing. It is obtained by suitably sizing the groove that receives the O'Ring. The resulting intitial compression results in an elastic reaction in the O'Ring on the areas to be made watertight and, in this way, creates automatic sealing even if the fluid is not pressurised.

The tightening rate S% depends on the O'Ring cross-section Ød2 and the groove depth t. It is calculated in line with the steps below:

Reduction rate R%

When the O'Ring is stretched in its groove, its cross-section Ød2 is subjected to a slight size reduction.

THE REDUCTION RATE R% OF THE O'RING CROSS-SECTION IS CALCULATED AS FOLLOWS:

- **If $0\% < E\% \leq 3\%$**

$R\% = 0.01 + 1.06(Ød2) - 0.1(Ød2)^2$

- **If $3\% < E\% \leq 25\%$**

$R\% = 0.56 + 0.59(Ød2) - 0.0046(Ød2)^2$

Effective cross-section Ød2*

The effective cross-section Ød2* is the O'Ring's real cross-section, accounting for its stretching and reduction rate.

THE EFFECTIVE O'RING CROSS-SECTION Ød2* IS CALCULATED AS FOLLOWS:

$$Ød2^*,min = Ød2,min - \left(\frac{R,max}{100} \right) \times Ød2,min$$

$$Ød2^*,max = Ød2,max - \left(\frac{R,min}{100} \right) \times Ød2,max$$

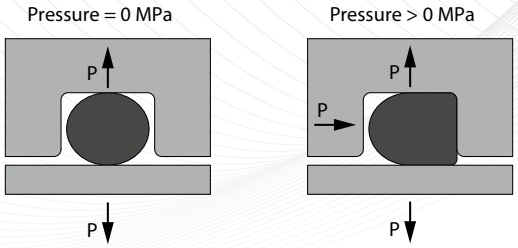
Tightening rate S%

The tightening rate S% is determined according to the effective O'Ring cross-section Ød2* and the groove depth t (or h for axial sealing)

THE TIGHTENING RATE S% IS CALCULATED AS FOLLOWS:

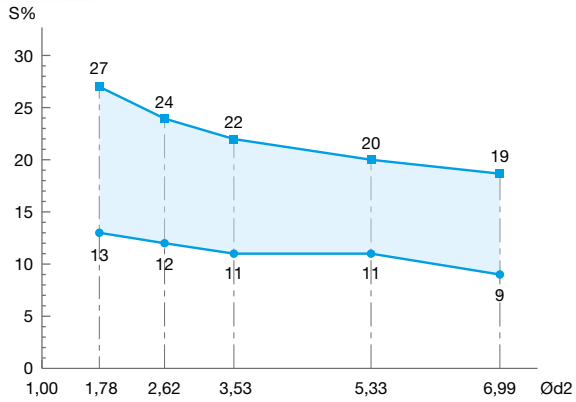
$$Smin\% = \left(\frac{(Ød2^*,min - tmax)}{Ød2^*,min}\right) \times 100$$

$$Smax\% = \left(\frac{(Ød2^*,max - tmin)}{Ød2^*,max}\right) \times 100$$

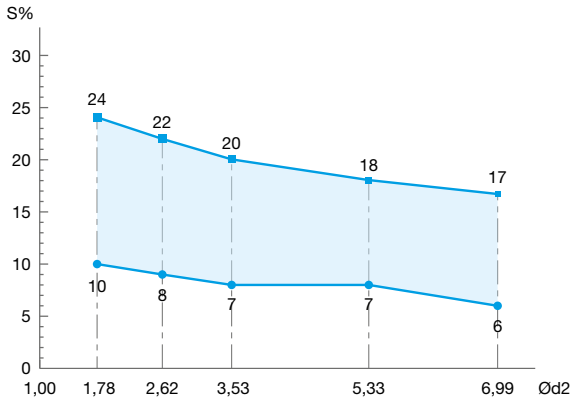


The O'Ring tightening values are applied according to the type of application.

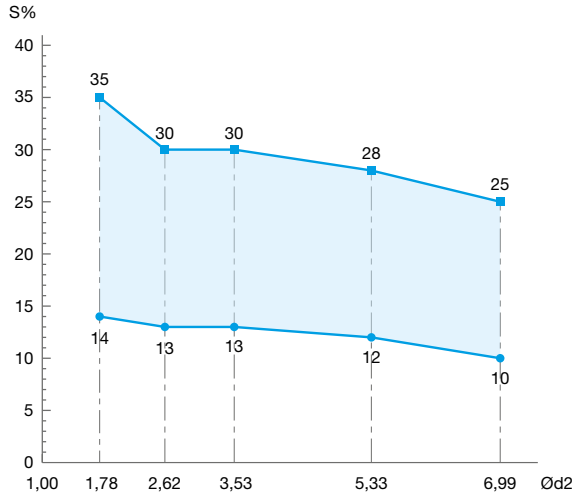
Radial, hydraulic, dynamic applications



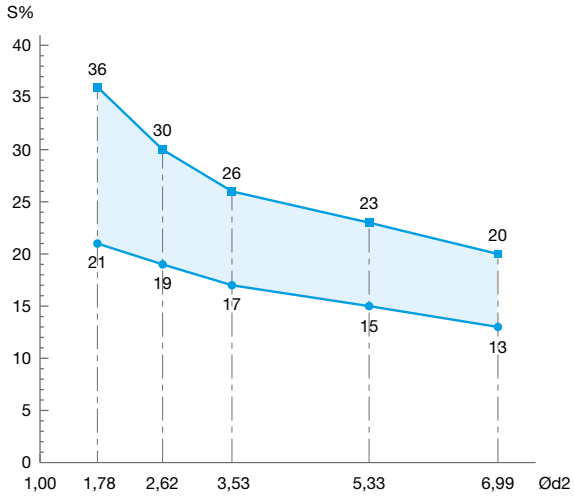
Radial, pneumatic, dynamic applications



Radial, hydraulic and pneumatic, static applications



Axial applications



3.3 GROOVE FILL R%

It is important to take account of the groove fill, according to the O'Ring installed, to prevent a change in radial sealing performances. As the rubber is deformable but incompressible, the volume of the O'Ring must not exceed 85% when in use compared to the volume of the housing, in order to account for possible thermal expansion in the O'Ring, swelling caused by exposure to fluids and the effects of tolerances.

4. Tolerances applied to O'Rings

4.1 TOLERANCES ON THE INSIDE DIAMETER Ød1 FOR O'RINGS

The tolerances on the inside diameters Ød1 set out in the table below relate to standard ISO 3601-1:2008.

THE FORMULA BELOW PROVIDES THE TOLERANCES TO BE APPLIED ON THE INSIDE DIAMETER Ød1 OF THE O'RING.

Tolerance on Ød1 = ± [(d1$^{0.95}$ x 0.009) + 0.11]

Inside diameter Ød1	Tolerances
0.74 ≤ Ød1 ≤ 1.78	± 0.12
1.78 < Ød1 ≤ 3.00	± 0.13
3.00 < Ød1 ≤ 4.20	± 0.14
4.20 < Ød1 ≤ 5.50	± 0.15
5.50 < Ød1 ≤ 6.75	± 0.16
6.75 < Ød1 ≤ 8.10	± 0.17
8.10 < Ød1 ≤ 9.50	± 0.18
9.50 < Ød1 ≤ 10.69	± 0.19
10.69 < Ød1 ≤ 12.00	± 0.20
12.00 < Ød1 ≤ 13.30	± 0.21
13.30 < Ød1 ≤ 14.80	± 0.22
14.80 < Ød1 ≤ 16.00	± 0.23
16.00 < Ød1 ≤ 17.30	± 0.24
17.30 < Ød1 ≤ 18.72	± 0.25
18.72 < Ød1 ≤ 20.22	± 0.26
20.22 < Ød1 ≤ 21.50	± 0.27
21.50 < Ød1 ≤ 23.00	± 0.28
23.00 < Ød1 ≤ 24.20	± 0.29
24.20 < Ød1 ≤ 25.50	± 0.30
25.50 < Ød1 ≤ 27.00	± 0.31
27.00 < Ød1 ≤ 28.24	± 0.32
28.24 < Ød1 ≤ 29.70	± 0.33
29.70 < Ød1 ≤ 31.12	± 0.34
31.12 < Ød1 ≤ 32.50	± 0.35
32.50 < Ød1 ≤ 34.00	± 0.36
34.00 < Ød1 ≤ 35.20	± 0.37
35.20 < Ød1 ≤ 37.00	± 0.38
37.00 < Ød1 ≤ 38.00	± 0.39
38.00 < Ød1 ≤ 39.40	± 0.40
39.40 < Ød1 ≤ 40.87	± 0.41
40.87 < Ød1 ≤ 42.30	± 0.42
42.30 < Ød1 ≤ 43.70	± 0.43
43.70 < Ød1 ≤ 45.30	± 0.44
45.30 < Ød1 ≤ 46.99	± 0.45
46.99 < Ød1 ≤ 48.00	± 0.46
48.00 < Ød1 ≤ 49.30	± 0.47
49.30 < Ød1 ≤ 50.80	± 0.48
50.80 < Ød1 ≤ 52.30	± 0.49
52.30 < Ød1 ≤ 53.57	± 0.50
53.57 < Ød1 ≤ 55.00	± 0.51
55.00 < Ød1 ≤ 56.52	± 0.52

Inside diameter Ød1	Tolerances
56.52 < Ød1 ≤ 58.00	± 0.53
58.00 < Ød1 ≤ 59.30	± 0.54
59.30 < Ød1 ≤ 61.00	± 0.55
61.00 < Ød1 ≤ 62.30	± 0.56
62.30 < Ød1 ≤ 64.00	± 0.57
64.00 < Ød1 ≤ 65.10	± 0.58
65.10 < Ød1 ≤ 66.60	± 0.59
66.60 < Ød1 ≤ 67.95	± 0.60
67.95 < Ød1 ≤ 69.40	± 0.61
69.40 < Ød1 ≤ 71.00	± 0.62
71.00 < Ød1 ≤ 72.39	± 0.63
72.39 < Ød1 ≤ 74.00	± 0.64
74.00 < Ød1 ≤ 75.57	± 0.65
75.57 < Ød1 ≤ 77.00	± 0.66
77.00 < Ød1 ≤ 78.50	± 0.67
78.50 < Ød1 ≤ 79.60	± 0.68
79.60 < Ød1 ≤ 81.00	± 0.69
81.00 < Ød1 ≤ 82.50	± 0.70
82.50 < Ød1 ≤ 84.00	± 0.71
84.00 < Ød1 ≤ 86.00	± 0.72
86.00 < Ød1 ≤ 87.00	± 0.73
87.00 < Ød1 ≤ 88.49	± 0.74
88.49 < Ød1 ≤ 90.00	± 0.75
90.00 < Ød1 ≤ 91.44	± 0.76
91.44 < Ød1 ≤ 93.00	± 0.77
93.00 < Ød1 ≤ 94.30	± 0.78
94.30 < Ød1 ≤ 96.00	± 0.79
96.00 < Ød1 ≤ 97.50	± 0.80
97.50 < Ød1 ≤ 99.00	± 0.81
99.00 < Ød1 ≤ 100.50	± 0.82
100.50 < Ød1 ≤ 101.60	± 0.83
101.60 < Ød1 ≤ 103.00	± 0.84
103.00 < Ød1 ≤ 104.50	± 0.85
104.50 < Ød1 ≤ 106.00	± 0.86
106.00 < Ød1 ≤ 107.54	± 0.87
107.54 < Ød1 ≤ 109.00	± 0.88
109.00 < Ød1 ≤ 110.49	± 0.89
110.49 < Ød1 ≤ 112.00	± 0.90
112.00 < Ød1 ≤ 113.67	± 0.91
113.67 < Ød1 ≤ 115.00	± 0.92
115.00 < Ød1 ≤ 116.84	± 0.93

Inside diameter Ød1	Tolerances
116.84 < Ød1 ≤ 118.00	± 0.94
118.00 < Ød1 ≤ 119.30	± 0.95
119.30 < Ød1 ≤ 121.00	± 0.96
121.00 < Ød1 ≤ 123.00	± 0.97
123.00 < Ød1 ≤ 123.83	± 0.98
123.83 < Ød1 ≤ 126.00	± 0.99
126.00 < Ød1 ≤ 126.72	± 1.00
126.72 < Ød1 ≤ 129.00	± 1.01
129.00 < Ød1 ≤ 129.77	± 1.02
129.77 < Ød1 ≤ 131.50	± 1.03
131.50 < Ød1 ≤ 132.72	± 1.04
132.72 < Ød1 ≤ 134.30	± 1.05
134.30 < Ød1 ≤ 135.76	± 1.06
135.76 < Ød1 ≤ 138.00	± 1.07
138.00 < Ød1 ≤ 138.94	± 1.08
138.94 < Ød1 ≤ 140.50	± 1.09
140.50 < Ød1 ≤ 142.00	± 1.10
142.00 < Ød1 ≤ 144.00	± 1.11
144.00 < Ød1 ≤ 145.00	± 1.12
145.00 < Ød1 ≤ 147.00	± 1.13
147.00 < Ød1 ≤ 148.00	± 1.14
148.00 < Ød1 ≤ 149.23	± 1.15
149.23 < Ød1 ≤ 151.00	± 1.16
151.00 < Ød1 ≤ 152.50	± 1.17
152.50 < Ød1 ≤ 154.00	± 1.18
154.00 < Ød1 ≤ 155.50	± 1.19
155.50 < Ød1 ≤ 157.00	± 1.20
157.00 < Ød1 ≤ 158.34	± 1.21
158.34 < Ød1 ≤ 160.00	± 1.22
160.00 < Ød1 ≤ 161.30	± 1.23
161.30 < Ød1 ≤ 163.00	± 1.24
163.00 < Ød1 ≤ 164.30	± 1.25
164.30 < Ød1 ≤ 166.00	± 1.26
166.00 < Ød1 ≤ 167.50	± 1.27
167.50 < Ød1 ≤ 169.00	± 1.28
169.00 < Ød1 ≤ 170.69	± 1.29
170.69 < Ød1 ≤ 172.00	± 1.30
172.00 < Ød1 ≤ 173.87	± 1.31
173.87 < Ød1 ≤ 175.00	± 1.32
175.00 < Ød1 ≤ 177.00	± 1.33
177.00 < Ød1 ≤ 178.00	± 1.34

Inside diameter Ød1	Tolerances
178.00 < Ød1 ≤ 179.50	± 1.35
179.50 < Ød1 ≤ 181.00	± 1.36
181.00 < Ød1 ≤ 182.50	± 1.37
182.50 < Ød1 ≤ 184.00	± 1.38
184.00 < Ød1 ≤ 186.00	± 1.39
186.00 < Ød1 ≤ 187.00	± 1.40
187.00 < Ød1 ≤ 189.00	± 1.41
189.00 < Ød1 ≤ 190.00	± 1.42
190.00 < Ød1 ≤ 192.00	± 1.43
192.00 < Ød1 ≤ 193.00	± 1.44
193.00 < Ød1 ≤ 195.00	± 1.45
195.00 < Ød1 ≤ 196.22	± 1.46
196.22 < Ød1 ≤ 198.00	± 1.47
198.00 < Ød1 ≤ 199.10	± 1.48
199.10 < Ød1 ≤ 201.00	± 1.49
201.00 < Ød1 ≤ 202.57	± 1.50
202.57 < Ød1 ≤ 204.00	± 1.51
204.00 < Ød1 ≤ 206.00	± 1.52
206.00 < Ød1 ≤ 207.00	± 1.53
207.00 < Ød1 ≤ 208.50	± 1.54
208.50 < Ød1 ≤ 210.00	± 1.55
210.00 < Ød1 ≤ 212.00	± 1.56
212.00 < Ød1 ≤ 213.00	± 1.57
213.00 < Ød1 ≤ 214.50	± 1.58
214.50 < Ød1 ≤ 216.00	± 1.59
216.00 < Ød1 ≤ 218.00	± 1.60
218.00 < Ød1 ≤ 219.00	± 1.61
219.00 < Ød1 ≤ 221.00	± 1.62
221.00 < Ød1 ≤ 222.00	± 1.63
222.00 < Ød1 ≤ 224.00	± 1.64
224.00 < Ød1 ≤ 226.00	± 1.65
226.00 < Ød1 ≤ 227.00	± 1.66
227.00 < Ød1 ≤ 228.19	± 1.67
228.19 < Ød1 ≤ 230.00	± 1.68
230.00 < Ød1 ≤ 232.00	± 1.69
232.00 < Ød1 ≤ 233.00	± 1.70
233.00 < Ød1 ≤ 234.32	± 1.71
234.32 < Ød1 ≤ 236.00	± 1.72
236.00 < Ød1 ≤ 237.50	± 1.73
237.50 < Ød1 ≤ 239.00	± 1.74
239.00 < Ød1 ≤ 240.67	± 1.75
240.67 < Ød1 ≤ 242.00	± 1.76
242.00 < Ød1 ≤ 244.00	± 1.77
244.00 < Ød1 ≤ 246.00	± 1.78
246.00 < Ød1 ≤ 247.00	± 1.79
247.00 < Ød1 ≤ 249.00	± 1.80
249.00 < Ød1 ≤ 250.00	± 1.81
250.00 < Ød1 ≤ 252.00	± 1.82
252.00 < Ød1 ≤ 253.00	± 1.83
253.00 < Ød1 ≤ 254.50	± 1.84
254.50 < Ød1 ≤ 256.00	± 1.85
256.00 < Ød1 ≤ 258.00	± 1.86
258.00 < Ød1 ≤ 259.00	± 1.87
259.00 < Ød1 ≤ 261.00	± 1.88
261.00 < Ød1 ≤ 263.00	± 1.89

Inside diameter Ød1	Tolerances
263.00 < Ød1 ≤ 264.00	± 1.90
264.00 < Ød1 ≤ 266.00	± 1.91
266.00 < Ød1 ≤ 267.00	± 1.92
267.00 < Ød1 ≤ 269.00	± 1.93
269.00 < Ød1 ≤ 270.00	± 1.94
270.00 < Ød1 ≤ 272.00	± 1.95
272.00 < Ød1 ≤ 273.00	± 1.96
273.00 < Ød1 ≤ 274.50	± 1.97
274.50 < Ød1 ≤ 276.00	± 1.98
276.00 < Ød1 ≤ 278.00	± 1.99
278.00 < Ød1 ≤ 279.30	± 2.00
279.30 < Ød1 ≤ 281.00	± 2.01
281.00 < Ød1 ≤ 283.00	± 2.02
283.00 < Ød1 ≤ 284.00	± 2.03
284.00 < Ød1 ≤ 286.00	± 2.04
286.00 < Ød1 ≤ 287.00	± 2.05
287.00 < Ød1 ≤ 289.00	± 2.06
289.00 < Ød1 ≤ 290.00	± 2.07
290.00 < Ød1 ≤ 291.47	± 2.08
291.47 < Ød1 ≤ 293.00	± 2.09
293.00 < Ød1 ≤ 295.00	± 2.10
295.00 < Ød1 ≤ 297.00	± 2.11
297.00 < Ød1 ≤ 297.80	± 2.12
297.80 < Ød1 ≤ 299.30	± 2.13
299.30 < Ød1 ≤ 301.00	± 2.14
301.00 < Ød1 ≤ 303.00	± 2.15
303.00 < Ød1 ≤ 304.00	± 2.16
304.00 < Ød1 ≤ 306.00	± 2.17
306.00 < Ød1 ≤ 307.00	± 2.18
307.00 < Ød1 ≤ 309.00	± 2.19
309.00 < Ød1 ≤ 310.50	± 2.20
310.50 < Ød1 ≤ 312.00	± 2.21
312.00 < Ød1 ≤ 314.00	± 2.22
314.00 < Ød1 ≤ 315.00	± 2.23
315.00 < Ød1 ≤ 316.87	± 2.24
316.87 < Ød1 ≤ 318.00	± 2.25
318.00 < Ød1 ≤ 319.50	± 2.26
319.50 < Ød1 ≤ 321.50	± 2.27
321.50 < Ød1 ≤ 323.00	± 2.28
323.00 < Ød1 ≤ 325.00	± 2.29
325.00 < Ød1 ≤ 326.00	± 2.30
326.00 < Ød1 ≤ 328.00	± 2.31
328.00 < Ød1 ≤ 329.00	± 2.32
329.00 < Ød1 ≤ 331.00	± 2.33
331.00 < Ød1 ≤ 332.00	± 2.34
332.00 < Ød1 ≤ 334.00	± 2.35
334.00 < Ød1 ≤ 335.90	± 2.36
335.90 < Ød1 ≤ 337.00	± 2.37
337.00 < Ød1 ≤ 339.00	± 2.38
339.00 < Ød1 ≤ 340.00	± 2.39
340.00 < Ød1 ≤ 342.00	± 2.40
342.00 < Ød1 ≤ 343.00	± 2.41
343.00 < Ød1 ≤ 345.00	± 2.42
345.00 < Ød1 ≤ 347.00	± 2.43
347.00 < Ød1 ≤ 348.00	± 2.44

Inside diameter Ød1	Tolerances
348.00 < Ød1 ≤ 350.00	± 2.45
350.00 < Ød1 ≤ 351.00	± 2.46
351.00 < Ød1 ≤ 353.00	± 2.47
353.00 < Ød1 ≤ 354.00	± 2.48
354.00 < Ød1 ≤ 356.00	± 2.49
356.00 < Ød1 ≤ 358.00	± 2.50
358.00 < Ød1 ≤ 359.00	± 2.51
359.00 < Ød1 ≤ 361.00	± 2.52
361.00 < Ød1 ≤ 362.00	± 2.53
362.00 < Ød1 ≤ 364.00	± 2.54
364.00 < Ød1 ≤ 365.00	± 2.55
365.00 < Ød1 ≤ 367.00	± 2.56
367.00 < Ød1 ≤ 369.00	± 2.57
369.00 < Ød1 ≤ 370.00	± 2.58
370.00 < Ød1 ≤ 372.00	± 2.59
372.00 < Ød1 ≤ 373.00	± 2.60
373.00 < Ød1 ≤ 374.50	± 2.61
374.50 < Ød1 ≤ 376.00	± 2.62
376.00 < Ød1 ≤ 378.00	± 2.63
378.00 < Ød1 ≤ 379.30	± 2.64
379.30 < Ød1 ≤ 381.00	± 2.65
381.00 < Ød1 ≤ 383.00	± 2.66
383.00 < Ød1 ≤ 384.00	± 2.67
384.00 < Ød1 ≤ 386.00	± 2.68
386.00 < Ød1 ≤ 387.00	± 2.69
387.00 < Ød1 ≤ 389.00	± 2.70
389.00 < Ød1 ≤ 391.00	± 2.71
391.00 < Ød1 ≤ 392.00	± 2.72
392.00 < Ød1 ≤ 394.00	± 2.73
394.00 < Ød1 ≤ 395.00	± 2.74
395.00 < Ød1 ≤ 397.00	± 2.75
397.00 < Ød1 ≤ 398.00	± 2.76
398.00 < Ød1 ≤ 400.00	± 2.77
400.00 < Ød1 ≤ 402.00	± 2.78
402.00 < Ød1 ≤ 403.00	± 2.79
403.00 < Ød1 ≤ 405.00	± 2.80
405.00 < Ød1 ≤ 406.00	± 2.81
406.00 < Ød1 ≤ 408.00	± 2.82
408.00 < Ød1 ≤ 409.00	± 2.83
409.00 < Ød1 ≤ 411.00	± 2.84
411.00 < Ød1 ≤ 413.00	± 2.85
413.00 < Ød1 ≤ 414.00	± 2.86
414.00 < Ød1 ≤ 416.00	± 2.87
416.00 < Ød1 ≤ 417.00	± 2.88
417.00 < Ød1 ≤ 419.00	± 2.89
419.00 < Ød1 ≤ 421.00	± 2.90
421.00 < Ød1 ≤ 422.00	± 2.91
422.00 < Ød1 ≤ 424.00	± 2.92
424.00 < Ød1 ≤ 425.00	± 2.93
425.00 < Ød1 ≤ 427.00	± 2.94
427.00 < Ød1 ≤ 428.00	± 2.95
428.00 < Ød1 ≤ 430.00	± 2.96
430.00 < Ød1 ≤ 432.00	± 2.97
432.00 < Ød1 ≤ 433.00	± 2.98
433.00 < Ød1 ≤ 435.00	± 2.99

Inside diameter Ød1	Tolerances
435.00 < Ød1 ≤ 436.00	± 3.00
436.00 < Ød1 ≤ 438.00	± 3.01
438.00 < Ød1 ≤ 439.30	± 3.02
439.30 < Ød1 ≤ 441.00	± 3.03
441.00 < Ød1 ≤ 443.00	± 3.04
443.00 < Ød1 ≤ 444.00	± 3.05
444.00 < Ød1 ≤ 446.00	± 3.06
446.00 < Ød1 ≤ 447.00	± 3.07
447.00 < Ød1 ≤ 449.00	± 3.08
449.00 < Ød1 ≤ 451.00	± 3.09
451.00 < Ød1 ≤ 452.00	± 3.10
452.00 < Ød1 ≤ 454.00	± 3.11
454.00 < Ød1 ≤ 455.00	± 3.12
455.00 < Ød1 ≤ 457.00	± 3.13
457.00 < Ød1 ≤ 459.00	± 3.14
459.00 < Ød1 ≤ 460.00	± 3.15
460.00 < Ød1 ≤ 462.00	± 3.16
462.00 < Ød1 ≤ 463.00	± 3.17
463.00 < Ød1 ≤ 465.00	± 3.18
465.00 < Ød1 ≤ 467.00	± 3.19
467.00 < Ød1 ≤ 468.00	± 3.20
468.00 < Ød1 ≤ 470.00	± 3.21
470.00 < Ød1 ≤ 471.00	± 3.22
471.00 < Ød1 ≤ 473.00	± 3.23
473.00 < Ød1 ≤ 475.00	± 3.24
475.00 < Ød1 ≤ 476.00	± 3.25
476.00 < Ød1 ≤ 478.00	± 3.26
478.00 < Ød1 ≤ 479.00	± 3.27
479.00 < Ød1 ≤ 481.00	± 3.28

Inside diameter Ød1	Tolerances
481.00 < Ød1 ≤ 482.00	± 3.29
482.00 < Ød1 ≤ 484.00	± 3.30
484.00 < Ød1 ≤ 486.00	± 3.31
486.00 < Ød1 ≤ 487.00	± 3.32
487.00 < Ød1 ≤ 489.00	± 3.33
489.00 < Ød1 ≤ 490.00	± 3.34
490.00 < Ød1 ≤ 492.00	± 3.35
492.00 < Ød1 ≤ 494.00	± 3.36
494.00 < Ød1 ≤ 495.00	± 3.37
495.00 < Ød1 ≤ 497.00	± 3.38
497.00 < Ød1 ≤ 498.00	± 3.39
498.00 < Ød1 ≤ 500.00	± 3.40
500.00 < Ød1 ≤ 504.00	± 3.41
504.00 < Ød1 ≤ 505.00	± 3.43
505.00 < Ød1 ≤ 506.81	± 3.44
506.81 < Ød1 ≤ 508.00	± 3.45
508.00 < Ød1 ≤ 510.00	± 3.46
510.00 < Ød1 ≤ 515.00	± 3.47
515.00 < Ød1 ≤ 516.00	± 3.50
516.00 < Ød1 ≤ 523.00	± 3.51
523.00 < Ød1 ≤ 524.50	± 3.55
524.50 < Ød1 ≤ 530.00	± 3.56
530.00 < Ød1 ≤ 532.21	± 3.60
532.21 < Ød1 ≤ 538.00	± 3.61
538.00 < Ød1 ≤ 540.00	± 3.65
540.00 < Ød1 ≤ 544.00	± 3.66
544.00 < Ød1 ≤ 545.00	± 3.68
545.00 < Ød1 ≤ 549.00	± 3.69
549.00 < Ød1 ≤ 552.00	± 3.71

Inside diameter Ød1	Tolerances
552.00 < Ød1 ≤ 553.00	± 3.73
553.00 < Ød1 ≤ 555.00	± 3.74
555.00 < Ød1 ≤ 557.61	± 3.75
557.61 < Ød1 ≤ 560.00	± 3.77
560.00 < Ød1 ≤ 569.00	± 3.78
569.00 < Ød1 ≤ 570.00	± 3.84
570.00 < Ød1 ≤ 575.00	± 3.85
575.00 < Ød1 ≤ 579.00	± 3.88
579.00 < Ød1 ≤ 580.00	± 3.90
580.00 < Ød1 ≤ 582.68	± 3.91
582.68 < Ød1 ≤ 590.00	± 3.92
590.00 < Ød1 ≤ 596.27	± 3.97
596.27 < Ød1 ≤ 600.00	± 4.01
600.00 < Ød1 ≤ 608.00	± 4.03
608.00 < Ød1 ≤ 615.00	± 4.08
615.00 < Ød1 ≤ 623.00	± 4.12
623.00 < Ød1 ≤ 630.00	± 4.17
630.00 < Ød1 ≤ 633.48	± 4.22
633.48 < Ød1 ≤ 640.00	± 4.24
640.00 < Ød1 ≤ 647.07	± 4.28
647.07 < Ød1 ≤ 650.00	± 4.32
650.00 < Ød1 ≤ 658.88	± 4.34
658.88 < Ød1 ≤ 670.00	± 4.40
670.00 < Ød1 ≤ 683.00	± 4.47
683.00 < Ød1 ≤ 732.50	± 4.55
732.50 < Ød1 ≤ 782.00	± 4.85
782.00 < Ød1 ≤ 836.50	± 5.15
836.50 < Ød1 ≤ 940.50	± 5.49
940.50 < Ød1 ≤ 1044.00	± 6.12

4.2 TOLERANCES ON THE CROSS-SECTION Ød2 FOR STANDARDISED O'RINGS

The tolerances on cross-sections Ød2 set out in the table below relate to standard ISO 3601-1:2008.

O'Ring cross-section Ød2	Tolerances
1.02	± 0.08
1.27	± 0.08
1.52	± 0.08
1.78	± 0.08

O'Ring cross-section Ød2	Tolerances
2.62	± 0.09
3.53	± 0.10
5.33	± 0.13
6.99	± 0.15

4.3 TOLERANCES ON THE CROSS-SECTION Ød2 FOR NON-STANDARDISED O'RINGS

The tolerances set out in the table below relate to standard ISO 3601-1:2008.

If the cross-section Ød2 of the O'Ring is not specified in ISO standard 3601-1:2008, we recommend determining the tolerances to be applied using the table below.

O'Ring cross-section Ød2	Tolerances
0.80 < Ød2 ≤ (-0.25 / 2.25)	± 0.08
2.25 < Ød2 ≤ (-0.25 / 3.15)	± 0.09
3.15 < Ød2 ≤ (-0.25 / 4.50)	± 0.10

O'Ring cross-section Ød2	Tolerances
4.50 < Ød2 ≤ (-0.25 / 6.30)	± 0.13
6.30 < Ød2 ≤ (-0.25 / 8.40)	± 0.15
8.40 < Ød2 ≤ (-0.25 / 10.00)	± 0.21

5. Static sealing

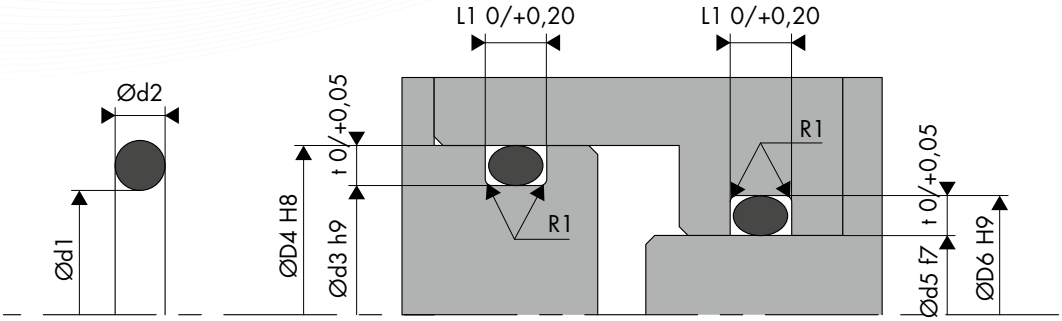
O'Rings are mainly used for the static sealing of mortices, sockets, bolts or covers. The housing design is defined according to the O'Ring cross-section Ød2 and its application.

5.1 INSTALLATION DIMENSIONS - RECTANGULAR GROOVE WITH RADIAL DEFORMATION

The O'Ring ensures sealing under radial deformation at the cross-section Ød2.

For inner sealing (rod sealing), the dimension of the O'Ring should be selected so that the outside diameter (Ød1 + 2xØd2) of the O'Ring is 0.5% to 5% larger than the groove diameter ØD6.

For outer sealing (piston sealing), the dimension of the O'Ring should be selected so that the inside diameter Ød1 of the O'Ring is 0.5% to 8% smaller than the groove diameter Ød3.



O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
0.50	0.35	1.00	0.20
0.74	0.50	1.40	0.20
1.00	0.72	1.60	0.20
1.02	0.72	1.65	0.20
1.20	0.85	1.90	0.20
1.25	0.90	1.90	0.20
1.27	0.90	2.00	0.20
1.30	0.95	2.00	0.20
1.42	1.05	2.20	0.30
1.50	1.10	2.20	0.30
1.52	1.10	2.30	0.30
1.53	1.10	2.30	0.30
1.60	1.15	2.50	0.30
1.63	1.20	2.40	0.30
1.78	1.30	2.70	0.30
1.80	1.30	2.70	0.30
1.83	1.35	2.70	0.30
1.90	1.40	2.80	0.30
1.98	1.50	2.80	0.30
2.00	1.50	2.90	0.30
2.08	1.55	3.00	0.30
2.10	1.55	3.00	0.30
2.20	1.60	3.20	0.30
2.21	1.60	3.20	0.30
2.30	1.75	3.20	0.30
2.34	1.75	3.30	0.30
2.40	1.80	3.40	0.30
2.46	1.85	3.50	0.30
2.50	1.90	3.50	0.30
2.62	2.00	3.60	0.30

O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
2.65	2.00	3.70	0.30
2.70	2.05	3.80	0.30
2.80	2.10	4.30	0.60
2.92	2.20	4.50	0.60
2.95	2.20	4.50	0.60
3.00	2.30	4.50	0.60
3.10	2.40	4.60	0.60
3.15	2.45	4.60	0.60
3.50	2.70	5.10	0.60
3.53	2.70	5.10	0.60
3.55	2.70	5.20	0.60
3.60	2.80	5.20	0.60
4.00	3.10	5.60	0.60
4.50	3.55	6.20	0.60
5.00	4.00	6.70	0.60
5.30	4.30	6.90	0.60
5.33	4.30	7.10	0.60
5.50	4.50	7.10	0.60
5.70	4.60	7.40	0.60
6.00	4.90	7.80	0.60
6.50	5.40	8.70	1.00
6.99	5.80	9.30	1.00
7.00	5.80	9.50	1.00
7.50	6.30	9.70	1.00
8.00	6.70	10.30	1.00
8.40	7.10	10.60	1.00
9.00	7.65	12.50	1.50
9.50	8.10	12.90	1.50
10.00	8.60	15.10	2.00
12.00	10.30	17.30	2.00

These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.fr**.

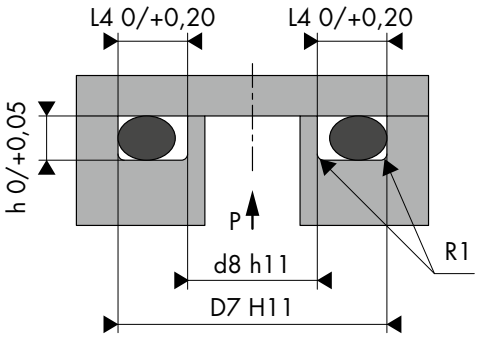
5.2 INSTALLATION DIMENSIONS - RECTANGULAR GROOVE WITH AXIAL DEFORMATION

Flange or cover sealing is generally ensured by an O'Ring that is subject to axial deformation. The groove dimensions are determined according to the direction of the pressure.

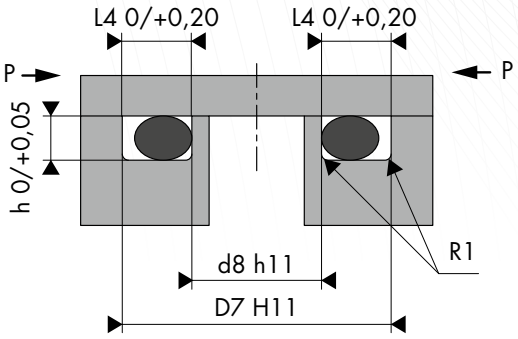
When the pressure is directed from the outside in, the inside diameter Ød1 of the O'Ring must be 0.5% to 3.5% less than the inside diameter of the groove.

On the other hand, when the pressure is directed from the inside out, the outside diameter (Ød1 + 2xØd2) of the O'Ring must be 0.5% to 3.5% larger than the outside diameter ØD7 of the groove.

PRESSURE FROM INSIDE



PRESSURE FROM OUTSIDE



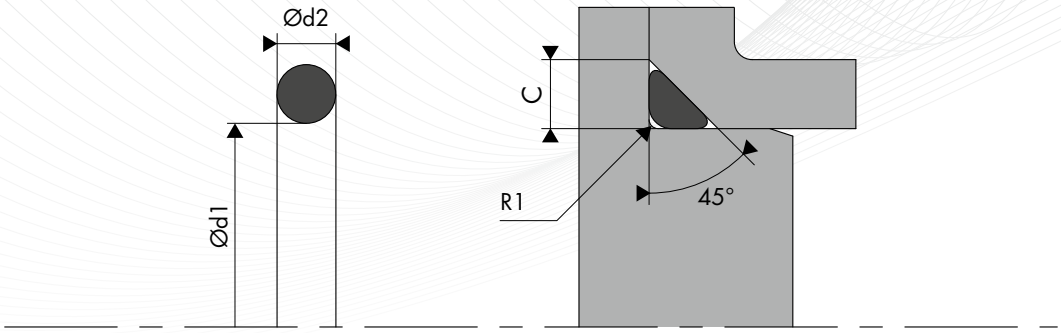
O'Ring cross-section Ød2	Groove depth h 0/+0.05	Groove width L4 0/+0.20	Radius R1
0.50	0.33	1.10	0.20
0.74	0.45	1.60	0.20
1.00	0.65	1.90	0.20
1.02	0.67	1.90	0.20
1.20	0.81	2.10	0.20
1.25	0.85	2.10	0.20
1.27	0.89	2.10	0.20
1.30	0.91	2.10	0.20
1.42	1.00	2.30	0.30
1.50	1.05	2.40	0.30
1.52	1.07	2.40	0.30
1.53	1.08	2.40	0.30
1.60	1.15	2.50	0.30
1.63	1.15	2.50	0.30
1.78	1.25	2.70	0.30
1.80	1.30	2.80	0.30
1.83	1.35	2.80	0.30
1.90	1.40	2.90	0.30
1.98	1.45	3.00	0.30
2.00	1.45	3.00	0.30
2.08	1.50	3.10	0.30
2.10	1.50	3.20	0.30
2.20	1.60	3.30	0.30
2.21	1.60	3.30	0.30
2.30	1.70	3.40	0.30
2.34	1.75	3.40	0.30
2.40	1.80	3.50	0.30
2.46	1.85	3.60	0.30
2.50	1.85	3.70	0.30
2.62	1.95	3.70	0.30

O'Ring cross-section Ød2	Groove depth h 0/+0.05	Groove width L4 0/+0.20	Radius R1
2.65	2.00	3.70	0.30
2.70	2.05	3.80	0.30
2.80	2.15	4.00	0.60
2.92	2.20	4.20	0.60
2.95	2.25	4.20	0.60
3.00	2.30	4.30	0.60
3.10	2.40	4.40	0.60
3.15	2.40	4.50	0.60
3.50	2.70	4.80	0.60
3.53	2.75	4.80	0.60
3.55	2.80	4.80	0.60
3.60	2.85	4.90	0.60
4.00	3.20	5.30	0.60
4.50	3.60	5.80	0.60
5.00	4.00	6.50	0.60
5.30	4.20	6.90	0.60
5.33	4.30	6.80	0.60
5.50	4.50	6.90	0.60
5.70	4.70	7.10	0.60
6.00	4.90	7.40	0.60
6.50	5.30	8.40	1.00
6.99	5.80	8.80	1.00
7.00	5.80	8.80	1.00
7.50	6.30	9.20	1.00
8.00	6.70	9.80	1.00
8.40	7.20	10.00	1.00
9.00	7.60	11.50	1.50
9.50	8.00	12.10	1.50
10.00	8.70	13.10	2.00
12.00	10.40	15.30	2.00

These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

5.3 INSTALLATION DIMENSIONS - TRIANGULAR GROOVE

We use these types of fittings for cover or flange seals. This type of groove is difficult to machine and only allows a reduced swelling of the O'Ring. The values included in the table below set out all of our recommendations so that the connection between the O'Ring cross-section Ød2 and the groove length of the edge C gives a full seal.



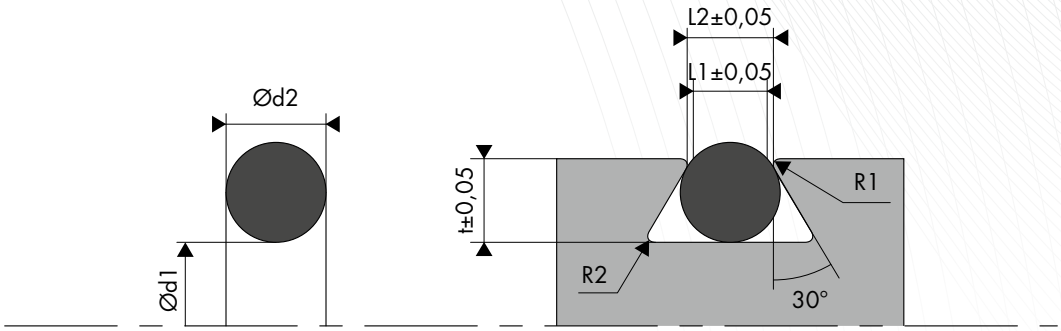
O'Ring cross-section Ød2	Length of the edge C	Radius R1
1.78 - 1.80	2.40	0.30
1.83	2.50	0.30
1.90	2.55	0.30
1.98	2.70	0.30
2.00	2.70	0.40
2.08	2.70	0.40
2.10	2.70	0.40
2.20	3.00	0.40
2.21	3.00	0.40
2.30	3.10	0.40
2.34	3.15	0.40
2.40	3.20	0.40
2.46	3.30	0.40
2.50	3.40	0.60
2.62 - 2.65	3.50	0.60
2.70	3.60	0.60
2.80	3.80	0.60
2.92	3.90	0.60
2.95	4.00	0.60
3.00	4.00	0.60
3.10	4.20	0.60

O'Ring cross-section Ød2	Length of the edge C	Radius R1
3.15	4.30	0.60
3.50	4.80	0.60
3.53 - 3.55	4.80	0.90
3.60	4.90	0.90
4.00	5.40	1.20
4.50	6.10	1.20
5.00	6.80	1.20
5.30 - 5.33	7.20	1.50
5.50	7.50	1.50
5.70	7.70	1.50
6.00	8.10	1.50
6.50	8.80	1.50
6.99 - 7.00	9.50	2.00
7.50	10.10	2.00
8.00	10.80	2.00
8.40	11.40	2.00
9.00	13.20	2.00
9.50	13.90	2.00
10.00	14.70	2.50
12.00	17.60	2.50

These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

5.4 INSTALLATION DIMENSIONS - TRAPEZOIDAL GROOVE

In specific cases, the O'Ring must be mechanically held in its groove. In this case, it is possible to mount the O'Ring in a trapezoidal groove. This installation is typically used in several static applications, and only from an O'Ring cross-section of 3.53 mm. The installation dimensions are listed in the table below.



O'Ring Cross-section Ød2	Groove depth t +/-0.05	Groove width L1 ±-0.05	Groove width L2 ±-0.05	Radius	
				R1	R2
3.53 - 3.55	2.90	2.90	3.20	0.25	0.80
3.60	3.00	3.00	3.45	0.25	0.80
4.00	3.20	3.40	3.70	0.25	0.80
4.50	3.70	3.85	4.15	0.25	0.80
5.00	4.20	4.30	4.60	0.25	0.80
5.30 - 5.33	4.60	4.60	4.90	0.40	0.80
5.50	4.70	4.70	5.00	0.40	0.80
5.70	4.80	4.75	5.25	0.40	0.80
6.00	5.10	5.05	5.55	0.40	0.80
6.50	5.50	5.55	6.00	0.40	0.80
6.99 - 7.00	6.00	6.00	6.50	0.40	1.60
7.50	6.40	6.45	6.95	0.40	1.60
8.00	6.90	6.85	7.45	0.40	1.60
8.40	7.30	7.25	7.85	0.40	1.60
9.00	7.50	7.50	8.10	0.50	1.60
9.50	7.90	7.90	8.60	0.50	1.60
10.00	8.25	8.30	9.00	0.60	1.70
12.00	10.20	10.25	11.00	0.60	1.70

These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

6. Dynamic sealing

Hydraulic and pneumatic applications are differentiated for dynamic seals. The O'Rings ensure the sealing of mechanical components with linear motions and rotating motions by radial deformation of the o'Ring cross-section Ød2. However, this radial deformation must be limited to increase the life expectancy of the seal under friction. It is also essential to ensure good lubrication of the seal.

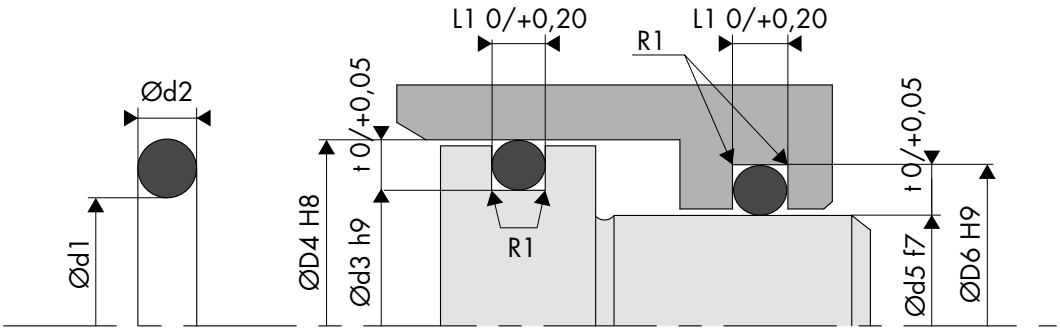
6.1 INSTALLATION DIMENSIONS - HYDRAULIC WITH AXIAL MOVEMENTS - RECTANGULAR GROOVE WITH RADIAL DEFORMATION

O'Rings can be used as sealing components for hydraulic applications in linear motion. However, they have an average efficiency and are only suitable for relatively low travel and frequencies. Other seal profiles are prioritised for such applications (see the hydraulic seals range).

For rod sealing (inside sealing), the dimension of the O'Ring should be selected so that the outside diameter (Ød1 + 2xØd2) of the O'Ring is 0.5% to 5% larger than the groove diameter ØD6.

For piston sealing (outside sealing), the dimension of the O'Ring should be selected so that the inside diameter Ød1 of the O'Ring is 0.5% to 5% smaller than the groove diameter Ød3.

MOS_2 or PTFE-based surface treatments can be carried out to reduce friction and increase the life span of O'Rings. The table below sets out the installation dimensions to follow.



O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
1.50	1.10	2.25	0.30
1.52	1.13	2.25	0.30
1.53	1.13	2.30	0.30
1.60	1.20	2.40	0.30
1.63	1.20	2.45	0.30
1.78	1.35	2.60	0.30
1.80	1.35	2.60	0.30
1.83	1.40	2.60	0.30
1.90	1.45	2.70	0.30
1.98	1.50	2.80	0.30
2.00	1.55	2.80	0.30
2.08	1.60	2.90	0.30
2.10	1.60	2.90	0.30
2.20	1.70	3.00	0.30
2.21	1.70	3.00	0.30
2.30	1.80	3.10	0.30
2.34	1.85	3.20	0.30
2.40	1.90	3.20	0.30
2.46	1.95	3.30	0.30
2.50	1.95	3.40	0.30
2.62	2.05	3.50	0.30
2.65	2.10	3.50	0.30
2.70	2.15	3.60	0.30
2.80	2.25	4.00	0.60
2.92	2.35	4.20	0.60
2.95	2.35	4.20	0.60

O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
3.00	2.40	4.30	0.60
3.10	2.50	4.40	0.60
3.15	2.55	4.50	0.60
3.50	2.85	4.90	0.60
3.53	2.85	4.90	0.60
3.55	2.90	4.90	0.60
3.60	2.95	4.90	0.60
4.00	3.25	5.40	0.60
4.50	3.70	5.90	0.60
5.00	4.10	6.60	0.60
5.30	4.40	6.80	0.60
5.33	4.40	6.80	0.60
5.50	4.65	6.80	0.60
5.70	4.80	7.10	0.60
6.00	5.10	7.40	0.60
6.50	5.50	8.60	1.00
6.99	5.90	9.20	1.00
7.00	5.90	9.20	1.00
7.50	6.50	9.50	1.00
8.00	7.00	9.90	1.00
8.40	7.30	10.30	1.00
9.00	7.80	11.20	1.50
9.50	8.10	11.90	1.50
10.00	8.80	12.00	2.00
12.00	10.60	14.30	2.00

These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

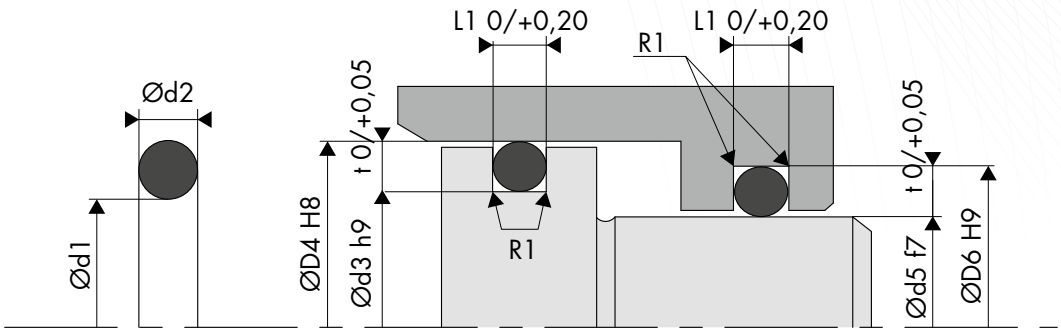
6.2 INSTALLATION DIMENSIONS - HYDRAULIC WITH ROTATING MOVEMENTS - RECTANGULAR GROOVE WITH RADIAL DEFORMATION

O'Rings can be used for rotational movements in certain less aggressive and casual applications. However, other seal profiles are prioritised for such applications (see the rotary seals range). In general, O'Rings have a tendency to contract under the effects of heat, which increases tightening on the rotating shaft, preventing the formation of a lubricating film and increasing friction at the same time.

In order to prevent this type of significant wear, we recommend selecting an O'Ring dimension where the outside diameter (Ød1 + 2xØd2) of the O'Ring is 0.5% to 5% larger than the groove diameter ØD6 as part of the seal on the rotating shaft.

Conversely, the inside diameter Ød1 of the O'Ring must be 0.5% to 5% smaller than the groove diameter Ød3 as part of the seal for a rotating support with a fixed shaft.

MOS_2 or PTFE-based surface treatments can be carried out to reduce friction and increase the life span of O'Rings. The table below sets out the installation dimensions to follow.



O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
1.50	1.10	2.25	0.30
1.52	1.13	2.25	0.30
1.53	1.13	2.30	0.30
1.60	1.20	2.40	0.30
1.63	1.20	2.45	0.30
1.78	1.35	2.60	0.30
1.80	1.35	2.60	0.30
1.83	1.40	2.60	0.30
1.90	1.45	2.70	0.30
1.98	1.50	2.80	0.30
2.00	1.55	2.80	0.30
2.08	1.60	2.90	0.30
2.10	1.60	2.90	0.30
2.20	1.70	3.00	0.30
2.21	1.70	3.00	0.30
2.30	1.80	3.10	0.30
2.34	1.85	3.20	0.30
2.40	1.90	3.20	0.30
2.46	1.95	3.30	0.30
2.50	1.95	3.40	0.30
2.62	2.05	3.50	0.30
2.65	2.10	3.50	0.30
2.70	2.15	3.60	0.30
2.80	2.25	4.00	0.60
2.92	2.35	4.20	0.60
2.95	2.35	4.20	0.60

O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
3.00	2.40	4.30	0.60
3.10	2.50	4.40	0.60
3.15	2.55	4.50	0.60
3.50	2.85	4.90	0.60
3.53	2.85	4.90	0.60
3.55	2.90	4.90	0.60
3.60	2.95	4.90	0.60
4.00	3.25	5.40	0.60
4.50	3.70	5.90	0.60
5.00	4.10	6.60	0.60
5.30	4.40	6.80	0.60
5.33	4.40	6.80	0.60
5.50	4.65	6.80	0.60
5.70	4.80	7.10	0.60
6.00	5.10	7.40	0.60
6.50	5.50	8.60	1.00
6.99	5.90	9.20	1.00
7.00	5.90	9.20	1.00
7.50	6.50	9.50	1.00
8.00	7.00	9.90	1.00
8.40	7.30	10.30	1.00
9.00	7.80	11.20	1.50
9.50	8.10	11.90	1.50
10.00	8.80	12.00	2.00
12.00	10.60	14.30	2.00

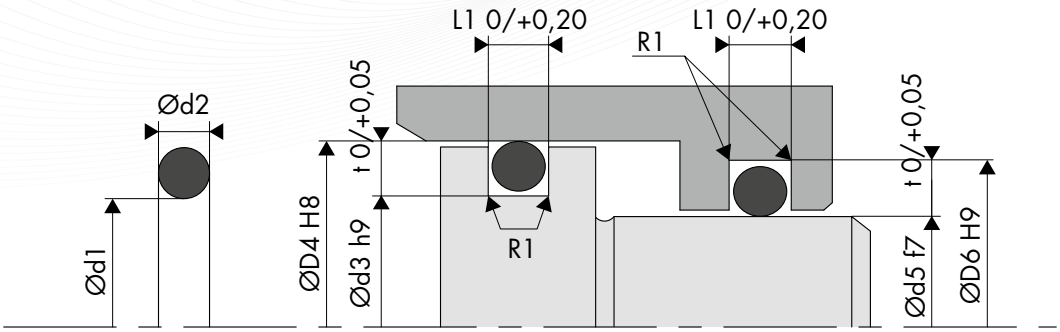
These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

6.3 INSTALLATION DIMENSIONS - PNEUMATIC WITH AXIAL MOVEMENTS - RECTANGULAR GROOVE WITHOUT RADIAL DEFORMATION - FLOAT-MOUNTED FITTING

The float-mounting principle, without radial deformation on the O'Ring, is mainly used for pneumatic applications. When pressurised, a volume of air leaks out until the gap is filled between the piston and the cylinder (piston sealing) or between the rod and the tip of the cylinder (rod sealing).

For rod sealing (inside sealing), the dimension of the O'Ring should be selected so that the inside diameter Ød1 of the O'Ring is 0.5% to 5% smaller than the rod diameter Ød5.

For piston sealing (outside sealing), the dimension of the O'Ring should be selected so that the outside diameter (Ød1 + 2xØd2) of the O'Ring is 0.5% to 5% larger than the bore diameter ØD4.



O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
1.50	1.75	1.65	0.30
1.52	1.80	1.65	0.30
1.53	1.80	1.70	0.30
1.60	1.85	1.75	0.30
1.63	1.85	1.75	0.30
1.78	2.05	1.95	0.30
1.80	2.05	1.95	0.30
1.83	2.10	2.00	0.30
1.90	2.20	2.05	0.30
1.98	2.30	2.20	0.30
2.00	2.30	2.20	0.30
2.08	2.35	2.30	0.30
2.10	2.40	2.30	0.30
2.20	2.50	2.40	0.30
2.21	2.50	2.40	0.30
2.30	2.60	2.50	0.30
2.34	2.65	2.50	0.30
2.40	2.70	2.60	0.30
2.46	2.85	2.65	0.30
2.50	2.80	2.70	0.30
2.62	2.95	2.95	0.30
2.65	2.95	2.95	0.30
2.70	3.10	2.90	0.30
2.80	3.20	3.00	0.60
2.92	3.30	3.15	0.60
2.95	3.40	3.20	0.60

O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
3.00	3.45	3.30	0.60
3.10	3.50	3.40	0.60
3.15	3.60	3.40	0.60
3.50	4.00	3.80	0.60
3.53	4.00	3.80	0.60
3.55	4.05	3.80	0.60
3.60	4.05	3.80	0.60
4.00	4.55	4.30	0.60
4.50	4.95	4.80	0.60
5.00	5.45	5.30	0.60
5.30	5.75	5.50	0.60
5.33	5.80	5.60	0.60
5.50	6.00	5.80	0.60
5.70	6.20	6.00	0.60
6.00	6.50	6.30	0.60
6.50	7.00	6.80	1.00
6.99	7.50	7.30	1.00
7.00	7.50	7.30	1.00
7.50	8.10	7.80	1.00
8.00	8.50	8.30	1.00
8.40	9.00	8.70	1.00
9.00	9.60	9.30	1.50
9.50	10.10	9.85	1.50
10.00	10.60	10.35	2.00
12.00	12.70	12.40	2.00

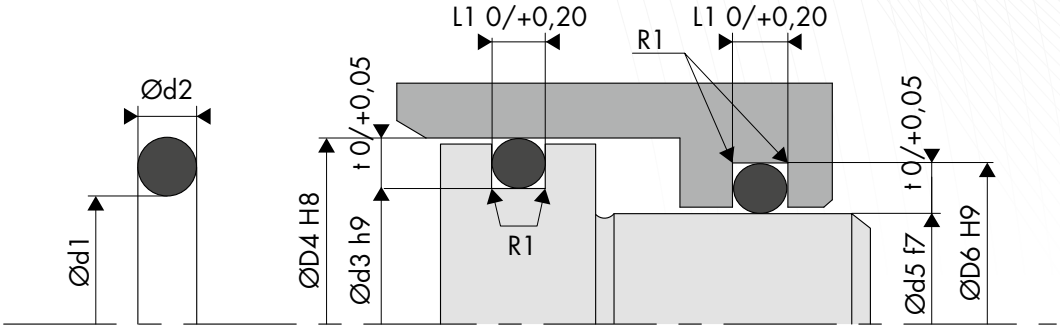
These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

6.4 INSTALLATION DIMENSIONS - PNEUMATIC WITH AXIAL MOVEMENTS - RECTANGULAR GROOVE WITH RADIAL DEFORMATION - NON-FLOAT-MOUNTED FITTING

With often problematic lubrication conditions, correct O'Ring operation in linear motion can be achieved with a very reduced radial deformation.

For rod sealing (inside sealing), the dimension of the O'Ring should be selected so that the outside diameter (Ød1 + 2xØd2) of the O'Ring is 0.5% to 5% larger than the groove diameter ØD6.

For piston sealing (outside sealing), the dimension of the O'Ring should be selected so that the inside diameter Ød1 of the O'Ring is 0.5% to 5% smaller than the groove diameter Ød3.



O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
1.50	1.15	2.20	0.30
1.52	1.18	2.20	0.30
1.53	1.18	2.20	0.30
1.60	1.23	2.30	0.30
1.63	1.25	2.40	0.30
1.78	1.40	2.50	0.30
1.80	1.43	2.50	0.30
1.83	1.45	2.50	0.30
1.90	1.53	2.60	0.30
1.98	1.60	2.70	0.30
2.00	1.60	2.70	0.30
2.08	1.70	2.70	0.30
2.10	1.70	2.70	0.30
2.20	1.80	2.80	0.30
2.21	1.80	2.80	0.30
2.30	1.85	3.00	0.30
2.34	1.90	3.00	0.30
2.40	1.95	3.10	0.30
2.46	2.00	3.20	0.30
2.50	2.05	3.20	0.30
2.62	2.15	3.30	0.30
2.65	2.20	3.30	0.30
2.70	2.25	3.50	0.30
2.80	2.35	3.90	0.60
2.92	2.45	4.00	0.60
2.95	2.50	4.00	0.60

O'Ring cross-section Ød2	Groove depth t 0/+0.05	Groove width L1 0/+0.20	Radius R1
3.00	2.55	4.10	0.60
3.10	2.60	4.20	0.60
3.15	2.65	4.20	0.60
3.50	2.95	4.60	0.60
3.53	3.00	4.60	0.60
3.55	3.00	4.60	0.60
3.60	3.05	4.70	0.60
4.00	3.45	5.10	0.60
4.50	3.85	5.60	0.60
5.00	4.30	6.30	0.60
5.30	4.55	6.50	0.60
5.33	4.55	6.50	0.60
5.50	4.80	6.60	0.60
5.70	5.00	6.80	0.60
6.00	5.25	7.10	0.60
6.50	5.65	8.20	1.00
6.99	6.10	8.80	1.00
7.00	6.10	8.80	1.00
7.50	6.65	9.10	1.00
8.00	7.10	9.60	1.00
8.40	7.40	10.10	1.00
9.00	7.90	11.90	1.50
9.50	8.40	12.30	1.50
10.00	8.90	14.30	2.00
12.00	10.70	16.30	2.00

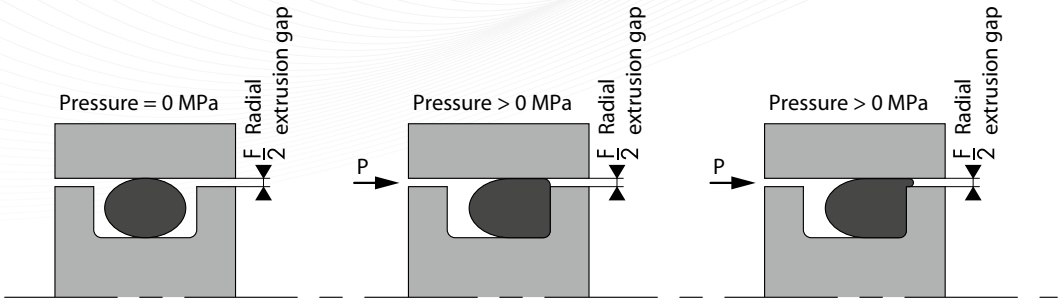
These values are provided for information purposes only. We recommend using our O'Ring calculator, which is available at **www.francejoint.com**.

7. Extrusion gaps

Against the extrusion of O'Rings under significant pressures, it's best to use back-up rings, BECA 008, BECA 008P, BECA 011 and BECA 012, and O'Rings with a hardness of 70 Shore A, in line with the following parameters:

Pressures above 5.0 MPa for diameters Ød1 > 50.00 mm
Pressures above 10.0 MPa for diameters Ød1 ≤ 50.00 mm

However, this is not always possible if there is a lack of space in the housing. In this case, the tolerances of the mechanical parts must be adapted depending on the O'Ring cross-section Ød2 and the material hardness. It is important to scrupulously observe the extrusion gaps to prevent any O'Ring creep, which would lead to its complete destruction.



O'Ring cross-section Ød2	< 2.00	2.00 - 3.00	3.00 - 5.00	5.00 - 7.00	> 7.00
Hardness of 70 Shore A					
Pressure	**Radial extrusion gap F/2**				
≤ 3,5 MPa	0.08	0.09	0.10	0.13	0.15
≤ 7,0 MPa	0.05	0.07	0.09	0.09	0.10
≤ 10,5 MPa	0.03	0.04	0.07	0.07	0.08
Hardness of 80 Shore A					
Pressure	**Radial extrusion gap F/2**				
≤ 3,5 MPa	0.10	0.13	0.15	0.18	0.20
≤ 7,0 MPa	0.07	0.09	0.10	0.13	0.15
≤ 10,5 MPa	0.05	0.07	0.08	0.09	0.10
≤ 14,0 MPa	0.03	0.04	0.05	0.07	0.08
≤ 17,5 MPa	0.02	0.03	0.03	0.04	0.04
Hardness of 90 Shore A					
Pressure	**Radial extrusion gap F/2**				
≤ 3,5 MPa	0.13	0.15	0.18	0.20	0.23
≤ 7,0 MPa	0.10	0.13	0.15	0.18	0.20
≤ 10,5 MPa	0.07	0.09	0.10	0.13	0.15
≤ 14,0 MPa	0.05	0.07	0.08	0.09	0.10
≤ 17,5 MPa	0.04	0.05	0.07	0.08	0.09
≤ 21,0 MPa	0.03	0.04	0.05	0.07	0.08
≤ 35,0 MPa	0.02	0.03	0.03	0.04	0.04

8. Surface roughness

We recommend using steel or non-porous cast iron to make the tubes and rods. For dynamic applications, brass, untreated stainless steel and aluminium are not as hard and are therefore not recommended, as they would be subjected to a lot of wear.

The sealing must be of a high quality due to the roughness. The surface roughness of grooves improves during alternating pressures.

Type of application	Type of surface	Ra µm	Rz µm	Rmax µm
Radial - Static	**Under non-pulsating pressure**			
	Mating surface (rod and cylinder)	1.6	6.3	10.0
	Groove diameter and groove flanks	1.6	6.3	10.0
	Under pulsating pressure			
	Mating surface (rod and cylinder)	0.8	3.2	5.0
	Groove diameter and groove flanks	1.6	6.3	10.0
Radial - Dynamic	Mating surface (rod and cylinder)	0.4	1.6	2.5
	Groove diameter and groove flanks	0.8	3.2	5.0
Axial - Static	Clamping surface	1.6	6.3	10.0
	Groove flanks	1.6	6.3	10.0

9. Dimensions

The table below sets out the O'Ring sizes according to standards AS 568A, BS 1806, ISO 3601, DIN 3771, NFT 47-501, JIS B2401, SMS 1586, BS 4518 and the current specifications in France, R'Ring. The tolerances applied on the inside diameter Ød1 and the cross-section Ød2 of the O'Rings are in line with international standard ISO 3601-1 class B.

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A002	0.74	0.12	1.02	0.08	001	x	x						
010.00105	1.00	0.12	0.50	0.08									
010.1A004	1.07	0.12	1.27	0.08	002	x	x						
010.1A001	1.15	0.12	1.00	0.08						R000			
010.1A179	1.24	0.12	2.62	0.09	102	x	x						
010.1A006	1.42	0.12	1.52	0.08	003	x	x						
010.14215	1.42	0.12	1.53	0.08	003	x							
010.1B015	1.50	0.12	1.00	0.08									
010.1A003	1.78	0.13	1.02	0.08									
010.1A037	1.78	0.13	1.78	0.08	004	x	x						
010.1B018	1.80	0.13	1.00	0.08									
010.1B430	1.80	0.13	1.80	0.08				x	A0018GN				
010.1B153	1.85	0.13	1.50	0.08									
010.00205	2.00	0.13	0.50	0.08									
010.1B021	2.00	0.13	1.00	0.08									
010.1B156	2.00	0.13	1.50	0.08									
010.1B431	2.00	0.13	1.80	0.08				x	A0020GN				
010.1A180	2.06	0.13	2.62	0.09	103	x	x						
010.1A007	2.20	0.13	1.60	0.08						R00			
010.1B443	2.24	0.13	1.80	0.08				x	A0022GN				
010.1A091	2.40	0.13	1.90	0.08						R0			
010.02505	2.50	0.13	0.50	0.08									
010.1B027	2.50	0.13	1.00	0.08									
010.1B158	2.50	0.13	1.50	0.08									
010.1B393	2.50	0.13	1.80	0.08				x	A0025GN				
010.1B461	2.50	0.13	2.00	0.08									
010.1A038	2.57	0.13	1.78	0.08	005	x	x						
010.1A092	2.60	0.13	1.90	0.08						R1			
010.1A008	2.75	0.13	1.60	0.08									
010.1B160	2.80	0.13	1.50	0.08									
010.1B396	2.80	0.13	1.80	0.08				x	A0028GN				
010.02819	2.80	0.13	1.90	0.08							P3		
010.1A181	2.84	0.13	2.62	0.09	104	x	x						
010.1A039	2.90	0.13	1.78	0.08	006	x	x						
010.1B030	3.00	0.14	1.00	0.08									
010.1B162	3.00	0.14	1.50	0.08									
010.1B462	3.00	0.14	2.00	0.08									
010.1BD54	3.00	0.14	3.00	0.09									
010.1A009	3.10	0.14	1.60	0.14								x	x
010.1B402	3.15	0.14	1.80	0.08				x	A0031GN				
010.1B347	3.17	0.14	1.78	0.08									
010.1A105	3.30	0.14	2.40	0.14								x	
010.1A093	3.40	0.14	1.90	0.08						R2			
010.1B031	3.50	0.14	1.00	0.08									
010.1B165	3.50	0.14	1.50	0.08									
010.1B466	3.50	0.14	2.00	0.08									
010.1BD55	3.50	0.14	3.00	0.09									
010.1B445	3.55	0.14	1.80	0.08				x	A0035GN				
010.1A106	3.60	0.14	2.40	0.09									x
010.1A182	3.63	0.14	2.62	0.09	105	x	x						
010.1A040	3.68	0.14	1.78	0.08	007	x	x						
010.36917	3.69	0.14	1.78	0.08	007	x							
010.1B446	3.75	0.14	1.80	0.08					A0037GN				
010.03819	3.80	0.14	1.90	0.08							P4		
010.00405	4.00	0.14	0.50	0.08									
010.1B033	4.00	0.14	1.00	0.08									
010.1B171	4.00	0.14	1.50	0.08									
010.1B448	4.00	0.14	1.80	0.08				x	A0040GN				
010.1B465	4.00	0.14	2.00	0.08									
010.1B812	4.00	0.14	2.50	0.09									
010.1BD56	4.00	0.14	3.00	0.09									
010.1BS02	4.00	0.14	4.00	0.10									
010.1BJ99	4.00	0.14	5.00	0.13									
010.1A010	4.10	0.14	1.60	0.14								x	x
010.1A094	4.20	0.15	1.90	0.08						R3			

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A107	4.30	0.15	2.40	0.15								x	
010.1A358	4.34	0.15	3.53	0.10	201	x	x						
010.1A183	4.42	0.15	2.62	0.09	106	x	x						
010.1A041	4.47	0.15	1.78	0.08	008	x	x						
010.1B034	4.50	0.15	1.00	0.08									
010.1B174	4.50	0.15	1.50	0.08									
010.1B411	4.50	0.15	1.80	0.08				x	A0045GN				
010.1B467	4.50	0.15	2.00	0.08									
010.04265	4.50	0.15	2.65	0.09					A0045GN				
010.1BD57	4.50	0.15	3.00	0.09									
010.1A108	4.60	0.15	2.40	0.09									x
010.1B803	4.60	0.15	2.50	0.09									
010.1A005	4.70	0.15	1.42	0.08	901								
010.1A011	4.70	0.15	1.60	0.08									
010.047501	4.75	0.15	1.80	0.08				x	A0047GN				
010.1B353	4.76	0.15	1.78	0.08									
010.04819	4.80	0.15	1.90	0.08							P5		
010.1B449	4.87	0.15	1.80	0.08				x	A0048GN				
010.1A095	4.90	0.15	1.90	0.08						R4			
010.1B036	5.00	0.15	1.00	0.08									
010.1B177	5.00	0.15	1.50	0.08									
010.1A012	5.00	0.15	1.60	0.08									
010.1B414	5.00	0.15	1.80	0.08				x	A0050GN				
010.1B471	5.00	0.15	2.00	0.08									
010.1B804	5.00	0.15	2.50	0.09									
010.1BD58	5.00	0.15	3.00	0.09									
010.1BR48	5.00	0.15	4.00	0.10									
010.1BY01	5.00	0.15	5.00	0.13									
010.1A013	5.10	0.15	1.60	0.15								x	x
010.1B454	5.15	0.15	1.80	0.08				x	A0051GN				
010.1A184	5.23	0.15	2.62	0.09	107	x	x						
010.1A042	5.28	0.15	1.78	0.08	009	x	x						
010.1B417	5.30	0.15	1.80	0.08				x	A0053GN				
010.1A109	5.30	0.15	2.40	0.15								x	
010.05326	5.30	0.15	2.65	0.09					A0053GN				
010.1B037	5.50	0.16	1.00	0.08									
010.1B180	5.50	0.16	1.50	0.08									
010.1B472	5.50	0.16	2.00	0.08									
010.1A110	5.50	0.16	2.40	0.09									
010.1B815	5.50	0.16	2.50	0.09									
010.1BD59	5.50	0.16	3.00	0.09									
010.1B455	5.60	0.16	1.80	0.08				x	A0056GN				
010.1A111	5.60	0.16	2.40	0.09									x
010.1A096	5.70	0.16	1.90	0.08						R5			
010.05819	5.80	0.16	1.90	0.08							P6		
010.1A359	5.94	0.16	3.53	0.10	202	x	x						
010.1B039	6.00	0.16	1.00	0.08									
010.1B183	6.00	0.16	1.50	0.08									
010.1B420	6.00	0.16	1.80	0.08				x	A0060GN				
010.1B474	6.00	0.16	2.00	0.08									
010.1A103	6.00	0.16	2.20	0.08									
010.1B806	6.00	0.16	2.50	0.09									
010.06265	6.00	0.16	2.65	0.09					A0060GN				
010.1BD62	6.00	0.16	3.00	0.09									
010.1BR50	6.00	0.16	4.00	0.10									
010.1BZ40	6.00	0.16	4.50	0.10									
010.1BY02	6.00	0.16	5.00	0.13									
010.1B26F	6.00	0.16	6.00	0.13									
010.1A185	6.02	0.16	2.62	0.09	108	x	x						
010.1A035	6.07	0.16	1.63	0.08	902								
010.1A043	6.07	0.16	1.78	0.08	010	x	x						
010.1A014	6.10	0.16	1.60	0.16								x	x
010.1B469	6.30	0.16	1.80	0.08				x	A0063GN				
010.1A112	6.30	0.16	2.40	0.16								x	
010.1A044	6.35	0.16	1.78	0.08									
010.1A097	6.40	0.16	1.90	0.08									
010.1B038	6.50	0.16	1.00	0.08									
010.1B186	6.50	0.16	1.50	0.08									
010.1B477	6.50	0.16	2.00	0.08									
010.1B817	6.50	0.16	2.50	0.09									
010.1BD63	6.50	0.16	3.00	0.09									
010.1A113	6.60	0.16	2.40	0.09									x
010.1B423	6.70	0.16	1.80	0.08				x	A0067GN				
010.1A045	6.75	0.17	1.78	0.08									
010.06819	6.80	0.17	1.90	0.08							P7		
010.1B470	6.90	0.17	1.80	0.08				x	A0069GN				
010.06902	6.90	0.17	2.65	0.09					A0069GN				
010.1B041	7.00	0.17	1.00	0.08									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B188	7.00	0.17	1.50	0.08									
010.1B480	7.00	0.17	2.00	0.08									
010.1B807	7.00	0.17	2.50	0.09									
010.1BD65	7.00	0.17	3.00	0.09									
010.1BR51	7.00	0.17	4.00	0.10									
010.1BJ89	7.00	0.17	5.00	0.13									
010.1B10F	7.00	0.17	6.00	0.13									
010.1A015	7.10	0.17	1.60	0.17								x	x
010.1B473	7.10	0.17	1.80	0.08				x	A0071GN				
010.1A098	7.20	0.17	1.90	0.08						R6			
010.1A114	7.30	0.17	2.40	0.17								x	
010.1B043	7.50	0.17	1.00	0.08									
010.1B189	7.50	0.17	1.50	0.08									
010.1B429	7.50	0.17	1.80	0.08				x	A0075GN				
010.1B483	7.50	0.17	2.00	0.08									
010.1A115	7.50	0.17	2.40	0.09									
010.1B809	7.50	0.17	2.50	0.09									
010.1BD66	7.50	0.17	3.00	0.09									
010.1A360	7.52	0.17	3.53	0.10	203	x	x						
010.1A186	7.59	0.17	2.62	0.09	109	x	x						
010.1A116	7.60	0.17	2.40	0.09									x
010.1A036	7.65	0.17	1.63	0.08	903								
010.1A046	7.65	0.17	1.78	0.08	011	x	x						
010.07819	7.80	0.17	1.90	0.08							P8		
010.1B356	7.94	0.17	1.78	0.08									
010.1B042	8.00	0.17	1.00	0.08									
010.1B192	8.00	0.17	1.50	0.08									
010.1B475	8.00	0.17	1.80	0.08				x	A0080GN				
010.1A099	8.00	0.17	1.90	0.08									
010.1B486	8.00	0.17	2.00	0.08									
010.1A173	8.00	0.17	2.50	0.09									
010.08265	8.00	0.17	2.65	0.09					A0080GN				
010.1BD68	8.00	0.17	3.00	0.09									
010.1BL17	8.00	0.17	3.50	0.10									
010.1BR49	8.00	0.17	4.00	0.10									
010.1BZ42	8.00	0.17	4.50	0.10									
010.1BY04	8.00	0.17	5.00	0.13									
010.1A016	8.10	0.18	1.60	0.18								x	x
010.1A117	8.30	0.18	2.40	0.18								x	
010.1B045	8.50	0.18	1.00	0.08									
010.1B195	8.50	0.18	1.50	0.08									
010.1B476	8.50	0.18	1.80	0.08				x	A0085GN				
010.1B487	8.50	0.18	2.00	0.08									
010.1B818	8.50	0.18	2.50	0.09									
010.1BD70	8.50	0.18	3.00	0.09									
010.1A118	8.60	0.18	2.40	0.09									x
010.1A047	8.73	0.18	1.78	0.08									
010.87518	8.75	0.18	1.80	0.08				x	A0087GN				
010.1B478	8.76	0.18	1.80	0.08									
010.08819	8.80	0.18	1.90	0.08							P9		
010.1A100	8.90	0.18	1.90	0.08						R7			
010.1A266	8.90	0.18	2.70	0.09						R8			
010.1A089	8.92	0.18	1.83	0.08	904								
010.1B048	9.00	0.18	1.00	0.08									
010.1B198	9.00	0.18	1.50	0.08									
010.1B479	9.00	0.18	1.80	0.08				x	A0090GN				
010.1B489	9.00	0.18	2.00	0.08									
010.1B813	9.00	0.18	2.50	0.09									
010.09265	9.00	0.18	2.65	0.09					A0090GN				
010.1BD71	9.00	0.18	3.00	0.09									
010.1BL20	9.00	0.18	3.50	0.10									
010.1BR52	9.00	0.18	4.00	0.10									
010.1BZ45	9.00	0.18	4.50	0.10									
010.1BY05	9.00	0.18	5.00	0.13									
010.1B11F	9.00	0.18	6.00	0.13									
010.1A017	9.10	0.18	1.60	0.18								x	x
010.1A361	9.12	0.18	3.53	0.10	204	x	x						
010.1A187	9.13	0.18	2.62	0.09									
010.1A188	9.19	0.18	2.62	0.09	110	x	x						
010.1A048	9.25	0.18	1.78	0.08	012	x	x						
010.1A119	9.30	0.18	2.40	0.18								x	
010.1B047	9.50	0.19	1.00	0.08									
010.1B200	9.50	0.19	1.50	0.08									
010.1B435	9.50	0.19	1.80	0.08				x	A0095GN				
010.1B490	9.50	0.19	2.00	0.08									
010.1B814	9.50	0.19	2.50	0.09									
010.09502	9.50	0.19	2.65	0.09					A0095GN				
010.1BD74	9.50	0.19	3.00	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BZ33	9.50	0.19	4.50	0.10									
010.1A049	9.52	0.19	1.78	0.08									
010.1A120	9.60	0.19	2.40	0.09									x
010.97518	9.75	0.19	1.80	0.08				x	A0097GN				
010.09702	9.75	0.19	2.65	0.09					A0097GN				
010.09819	9.80	0.19	1.90	0.08							P10		
010.09824	9.80	0.19	2.40	0.08							P10A		
010.1A189	9.90	0.19	2.62	0.09									
010.1B050	10.00	0.19	1.00	0.08									
010.1B201	10.00	0.19	1.50	0.08									
010.1B481	10.00	0.19	1.80	0.08				x	A0100GN				
010.1B492	10.00	0.19	2.00	0.08									
010.1B816	10.00	0.19	2.50	0.09									
010.10265	10.00	0.19	2.65	0.09					A0100GN				
010.1BD77	10.00	0.19	3.00	0.09									
010.1BL25	10.00	0.19	3.50	0.10									
010.1BR55	10.00	0.19	4.00	0.10									
010.1BZ46	10.00	0.19	4.50	0.10									
010.1BJ87	10.00	0.19	5.00	0.13									
010.1B13F	10.00	0.19	6.00	0.13									
010.1A018	10.10	0.19	1.60	0.19								x	x
010.1A121	10.30	0.19	2.40	0.19								x	
010.1A528	10.46	0.19	5.33	0.13	309	x	x						
010.1B052	10.50	0.19	1.00	0.08									
010.1B202	10.50	0.19	1.50	0.08									
010.1B493	10.50	0.19	2.00	0.08									
010.1A122	10.50	0.19	2.40	0.09									
010.1B820	10.50	0.19	2.50	0.09									
010.1A267	10.50	0.19	2.70	0.09						R9			
010.1BD78	10.50	0.19	3.00	0.09									
010.1BZ39	10.50	0.19	4.50	0.10									
010.1A090	10.52	0.19	1.83	0.08	905								
010.1B438	10.60	0.19	1.80	0.08				x	A0106GN				
010.1A123	10.60	0.19	2.40	0.09									x
010.10602	10.60	0.19	2.65	0.09					A0106GN				
010.1A362	10.69	0.20	3.53	0.10	205	x	x						
010.1A190	10.77	0.20	2.62	0.09	111	x	x						
010.10824	10.80	0.20	2.40	0.08							P11		
010.1A050	10.82	0.20	1.78	0.08	013	x	x						
010.1B053	11.00	0.20	1.00	0.08									
010.1B204	11.00	0.20	1.50	0.08									
010.1B495	11.00	0.20	2.00	0.08									
010.01124	11.00	0.20	2.40	0.08							P11.2		
010.1B819	11.00	0.20	2.50	0.09									
010.1BD80	11.00	0.20	3.00	0.09									
010.1BL26	11.00	0.20	3.50	0.10									
010.1BR58	11.00	0.20	4.00	0.10									
010.1BZ48	11.00	0.20	4.50	0.10									
010.1BY07	11.00	0.20	5.00	0.13									
010.1B14F	11.00	0.20	6.00	0.13									
010.1A019	11.10	0.20	1.60	0.20								x	x
010.1A051	11.11	0.20	1.78	0.08									
010.1B482	11.20	0.20	1.80	0.08				x	A0112GN				
010.11202	11.20	0.20	2.65	0.09					A0112GN				
010.1A124	11.30	0.20	2.40	0.20								x	
010.1B046	11.50	0.20	1.00	0.08									
010.1B207	11.50	0.20	1.50	0.08									
010.1B496	11.50	0.20	2.00	0.08									
010.1A125	11.50	0.20	2.40	0.09									
010.1B822	11.50	0.20	2.50	0.09									
010.1BD83	11.50	0.20	3.00	0.09									
010.11618	11.60	0.20	1.80	0.08				x	A0116GN				
010.1A126	11.60	0.20	2.40	0.09									x
010.11626	11.60	0.20	2.65	0.09					A0116GN				
010.1B484	11.80	0.20	1.80	0.08				x	A0118GN				
010.11824	11.80	0.20	2.40	0.08							P12		
010.11802	11.80	0.20	2.65	0.09					A0118GN				
010.1A101	11.89	0.20	1.98	0.08	906								
010.1A191	11.91	0.20	2.62	0.09									
010.1B054	12.00	0.21	1.00	0.08									
010.1B210	12.00	0.21	1.50	0.08									
010.1B498	12.00	0.21	2.00	0.08									
010.1B828	12.00	0.21	2.50	0.09									
010.1BD86	12.00	0.21	3.00	0.09									
010.1BL29	12.00	0.21	3.50	0.10									
010.1BR61	12.00	0.21	4.00	0.10									
010.1BZ47	12.00	0.21	4.50	0.10									
010.1BJ88	12.00	0.21	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B17F	12.00	0.21	6.00	0.13									
010.1A529	12.07	0.21	5.33	0.13	310	x	x						
010.1A020	12.10	0.21	1.60	0.21								x	x
010.12118	12.10	0.21	1.80	0.08				x	A0121GN				
010.12126	12.10	0.21	2.65	0.09					A0121GN				
010.1A268	12.10	0.21	2.70	0.09						R10			
010.1A363	12.29	0.21	3.53	0.10	206	x	x						
010.1A127	12.30	0.21	2.40	0.08							P12.5	x	
010.1A192	12.37	0.21	2.62	0.09	112	x	x						
010.1A052	12.42	0.21	1.78	0.08	014	x	x						
010.1B044	12.50	0.21	1.00	0.08									
010.1B213	12.50	0.21	1.50	0.08									
010.1B441	12.50	0.21	1.80	0.08				x	A0125GN				
010.1B501	12.50	0.21	2.00	0.08									
010.1B831	12.50	0.21	2.50	0.09									
010.12502	12.50	0.21	2.65	0.09					A0125GN				
010.1BD87	12.50	0.21	3.00	0.09									
010.1A128	12.60	0.21	2.40	0.09									x
010.1BB36	12.70	0.21	2.62	0.09									
010.12818	12.80	0.21	1.80	0.08				x	A0128GN				
010.12826	12.80	0.21	2.65	0.09					A0128GN				
010.1B057	13.00	0.21	1.00	0.08									
010.1B216	13.00	0.21	1.50	0.08									
010.1B504	13.00	0.21	2.00	0.08									
010.1B834	13.00	0.21	2.50	0.09									
010.1BD89	13.00	0.21	3.00	0.09									
010.1BL32	13.00	0.21	3.50	0.10									
010.1BS04	13.00	0.21	4.00	0.10									
010.1BZ49	13.00	0.21	4.50	0.10									
010.1BJ91	13.00	0.21	5.00	0.13									
010.1B20F	13.00	0.21	6.00	0.13									
010.1A021	13.10	0.21	1.60	0.21								x	x
010.1A193	13.10	0.21	2.62	0.09									
010.1B485	13.20	0.21	1.80	0.08				x	A0132GN				
010.13202	13.20	0.21	2.65	0.09					A0132GN				
010.1A129	13.30	0.22	2.40	0.22								x	
010.1A102	13.46	0.22	2.08	0.08	907								
010.1B035	13.50	0.22	1.00	0.08									
010.1B217	13.50	0.22	1.50	0.08									
010.1B505	13.50	0.22	2.00	0.08									
010.1A130	13.50	0.22	2.40	0.09									
010.1B836	13.50	0.22	2.50	0.09									
010.1BD90	13.50	0.22	3.00	0.09									
010.1A131	13.60	0.22	2.40	0.09									x
010.1A269	13.60	0.22	2.70	0.09						R11			
010.1A530	13.64	0.22	5.33	0.13	311	x	x						
010.13824	13.80	0.22	2.40	0.08							P14		
010.1A364	13.87	0.22	3.53	0.10	207	x	x						
010.1A194	13.94	0.22	2.62	0.09	113	x	x						
010.1B055	14.00	0.22	1.00	0.08									
010.1B219	14.00	0.22	1.50	0.08									
010.1A053	14.00	0.22	1.78	0.08	015	x	x						
010.1B444	14.00	0.22	1.80	0.08				x	A0140GN				
010.1B510	14.00	0.22	2.00	0.08									
010.1A174	14.00	0.22	2.50	0.09									
010.1BC15	14.00	0.22	2.65	0.09				x	A0140GN				
010.1BD92	14.00	0.22	3.00	0.09									
010.1BL33	14.00	0.22	3.50	0.10									
010.14355	14.00	0.22	3.55	0.10					A0140GN				
010.1BR64	14.00	0.22	4.00	0.10									
010.1BJ94	14.00	0.22	5.00	0.13									
010.1B22F	14.00	0.22	6.00	0.13									
010.1A022	14.10	0.22	1.60	0.22								x	x
010.1A132	14.30	0.22	2.40	0.22								x	
010.1B074	14.50	0.22	1.00	0.08									
010.1B220	14.50	0.22	1.50	0.08									
010.14518	14.50	0.22	1.80	0.08					A0145GN				
010.1B514	14.50	0.22	2.00	0.08									
010.1A133	14.50	0.22	2.40	0.09									
010.1B841	14.50	0.22	2.50	0.09									
010.14265	14.50	0.22	2.65	0.09				x	A0145GN				
010.1BD93	14.50	0.22	3.00	0.09									
010.14535	14.50	0.22	3.55	0.10					A0145GN				
010.01454	14.50	0.22	4.00	0.10							V15		
010.1A134	14.60	0.22	2.40	0.09									x
010.14824	14.80	0.23	2.40	0.08							P15		
010.1B061	15.00	0.23	1.00	0.08									
010.1B222	15.00	0.23	1.50	0.08									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B488	15.00	0.23	1.80	0.08				x	A0150GN				
010.1B516	15.00	0.23	2.00	0.08									
010.1A175	15.00	0.23	2.50	0.09									
010.1BC16	15.00	0.23	2.65	0.09				x	A0150GN				
010.1BD95	15.00	0.23	3.00	0.09									
010.1BL35	15.00	0.23	3.50	0.10									
010.15355	15.00	0.23	3.55	0.10					A0150GN				
010.1BR67	15.00	0.23	4.00	0.10									
010.1BZ51	15.00	0.23	4.50	0.10									
010.1BJ97	15.00	0.23	5.00	0.13									
010.1B27F	15.00	0.23	6.00	0.13									
010.1A195	15.08	0.23	2.62	0.09									
010.1A023	15.10	0.23	1.60	0.23								x	x
010.1A270	15.10	0.23	2.70	0.09						R12			
010.1A531	15.24	0.23	5.33	0.13	312	x	x						
010.1A135	15.30	0.23	2.40	0.23								x	
010.1A365	15.47	0.23	3.53	0.10	208	x	x						
010.1B076	15.50	0.23	1.00	0.08									
010.1B223	15.50	0.23	1.50	0.08									
010.15518	15.50	0.23	1.80	0.08					A0155GN				
010.1B517	15.50	0.23	2.00	0.08									
010.1A136	15.50	0.23	2.40	0.09									
010.1B844	15.50	0.23	2.50	0.09									
010.15265	15.50	0.23	2.65	0.09				x	A0155GN				
010.1BD96	15.50	0.23	3.00	0.09									
010.15535	15.50	0.23	3.55	0.10					A0155GN				
010.1BZ61	15.50	0.23	4.50	0.10									
010.1A196	15.54	0.23	2.62	0.09	114	x	x						
010.1A054	15.60	0.23	1.78	0.08	016	x	x						
010.1A137	15.60	0.23	2.40	0.09									x
010.15824	15.80	0.23	2.40	0.08							P16		
010.1A197	15.88	0.23	2.62	0.09									
010.1B060	16.00	0.24	1.00	0.08									
010.1B225	16.00	0.24	1.50	0.08									
010.1B491	16.00	0.24	1.80	0.08				x	A0160GN				
010.1B519	16.00	0.24	2.00	0.08									
010.1A176	16.00	0.24	2.50	0.09									
010.1BC17	16.00	0.24	2.65	0.09				x	A0160GN				
010.1BD98	16.00	0.24	3.00	0.09									
010.1BL38	16.00	0.24	3.50	0.10									
010.16355	16.00	0.24	3.55	0.10					A0160GN				
010.1BR70	16.00	0.24	4.00	0.10									
010.1BZ64	16.00	0.24	4.50	0.10									
010.1BY00	16.00	0.24	5.00	0.13									
010.1B28F	16.00	0.24	6.00	0.13									
010.1A024	16.10	0.24	1.60	0.24								x	x
010.1A138	16.30	0.24	2.40	0.24								x	
010.1A104	16.36	0.24	2.21	0.08	908								
010.1B077	16.50	0.24	1.00	0.08									
010.1B228	16.50	0.24	1.50	0.08									
010.1B520	16.50	0.24	2.00	0.08									
010.1B847	16.50	0.24	2.50	0.09									
010.1BD99	16.50	0.24	3.00	0.09									
010.1A139	16.60	0.24	2.40	0.09									x
010.1A532	16.81	0.24	5.33	0.13	313	x	x						
010.1A271	16.90	0.24	2.70	0.09						R13			
010.1B056	17.00	0.24	1.00	0.08									
010.1B231	17.00	0.24	1.50	0.08									
010.1B494	17.00	0.24	1.80	0.08				x	A0170GN				
010.1B522	17.00	0.24	2.00	0.08									
010.1B849	17.00	0.24	2.50	0.09									
010.1BC18	17.00	0.24	2.65	0.09				x	A0170GN				
010.1BE01	17.00	0.24	3.00	0.09									
010.1BL44	17.00	0.24	3.50	0.10									
010.17355	17.00	0.24	3.55	0.10					A0170GN				
010.1BR73	17.00	0.24	4.00	0.10									
010.1BZ52	17.00	0.24	4.50	0.10									
010.1BY03	17.00	0.24	5.00	0.13									
010.1A366	17.04	0.24	3.53	0.10	209	x	x						
010.1A025	17.10	0.24	1.60	0.24								x	x
010.1A198	17.12	0.24	2.62	0.09	115	x	x						
010.17117	17.16	0.24	1.78	0.08	017	x							
010.1A055	17.17	0.24	1.78	0.08	017	x	x						
010.1A140	17.30	0.25	2.40	0.25								x	
010.1BB44	17.46	0.25	2.62	0.09									
010.1B091	17.50	0.25	1.00	0.08									
010.1B232	17.50	0.25	1.50	0.08									
010.1B523	17.50	0.25	2.00	0.08									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A141	17.50	0.25	2.40	0.09									
010.1B851	17.50	0.25	2.50	0.09									
010.1BE02	17.50	0.25	3.00	0.09									
010.1A142	17.60	0.25	2.40	0.09									x
010.17824	17.80	0.25	2.40	0.08							P18		
010.1A199	17.86	0.25	2.62	0.09									
010.1A171	17.93	0.25	2.46	0.09	909								
010.1B062	18.00	0.25	1.00	0.08									
010.1B234	18.00	0.25	1.50	0.08									
010.01818	18.00	0.25	1.80	0.08					A0180GN				
010.1B525	18.00	0.25	2.00	0.08									
010.1B855	18.00	0.25	2.50	0.09									
010.1BC24	18.00	0.25	2.65	0.09				x	A0180GN				
010.1BE04	18.00	0.25	3.00	0.09									
010.1BL47	18.00	0.25	3.50	0.10									
010.1BP48	18.00	0.25	3.55	0.10				x	A0180GN				
010.1BR76	18.00	0.25	4.00	0.10									
010.1BZ53	18.00	0.25	4.50	0.10									
010.1BY06	18.00	0.25	5.00	0.13									
010.1B29F	18.00	0.25	6.00	0.13									
010.1A026	18.10	0.25	1.60	0.25								x	x
010.1A466	18.30	0.25	3.60	0.10						R15			
010.1A272	18.40	0.25	2.70	0.09						R14			
010.1A533	18.42	0.25	5.33	0.13	314	x	x						
010.1B092	18.50	0.25	1.00	0.08									
010.1B235	18.50	0.25	1.50	0.08									
010.1B527	18.50	0.25	2.00	0.08									
010.1B858	18.50	0.25	2.50	0.09									
010.1BE06	18.50	0.25	3.00	0.09									
010.1A143	18.60	0.25	2.40	0.09									x
010.1A367	18.64	0.25	3.53	0.10	210	x	x						
010.1A200	18.72	0.26	2.62	0.09	116	x	x						
010.1A056	18.77	0.26	1.78	0.08	018	x	x						
010.1B063	19.00	0.26	1.00	0.08									
010.1B237	19.00	0.26	1.50	0.08									
010.01918	19.00	0.26	1.80	0.08					A0190GN				
010.1B528	19.00	0.26	2.00	0.08									
010.1B861	19.00	0.26	2.50	0.09									
010.1BC28	19.00	0.26	2.65	0.09				x	A0190GN				
010.1BE07	19.00	0.26	3.00	0.09									
010.1BL53	19.00	0.26	3.50	0.10									
010.1BP51	19.00	0.26	3.55	0.10				x	A0190GN				
010.1BR79	19.00	0.26	4.00	0.10									
010.1BZ54	19.00	0.26	4.50	0.10									
010.1BY09	19.00	0.26	5.00	0.13									
010.1B31F	19.00	0.26	6.00	0.13									
010.1A027	19.10	0.26	1.60	0.26								x	x
010.1A172	19.18	0.26	2.46	0.09	910								
010.1A280	19.20	0.26	3.00	0.26								x	
010.1B106	19.50	0.26	1.00	0.08									
010.1B240	19.50	0.26	1.50	0.08									
010.1B529	19.50	0.26	2.00	0.08									
010.1B862	19.50	0.26	2.50	0.09									
010.1A281	19.50	0.26	3.00	0.09									x
010.1B32F	19.50	0.26	6.00	0.13									
010.1A144	19.60	0.26	2.40	0.09									x
010.19824	19.80	0.26	2.40	0.08							P20		
010.1A467	19.80	0.26	3.60	0.10						R16			
010.1A534	19.99	0.26	5.33	0.13	315	x	x						
010.1B067	20.00	0.26	1.00	0.08									
010.1B243	20.00	0.26	1.50	0.08									
010.02018	20.00	0.26	1.80	0.08					A0200GN				
010.1B531	20.00	0.26	2.00	0.08									
010.1A177	20.00	0.26	2.50	0.09									
010.1BC29	20.00	0.26	2.65	0.09				x	A0200GN				
010.1BE13	20.00	0.26	3.00	0.09									
010.1BL56	20.00	0.26	3.50	0.10									
010.1BP54	20.00	0.26	3.55	0.10				x	A0200GN				
010.1BR82	20.00	0.26	4.00	0.10									
010.1BZ60	20.00	0.26	4.50	0.10									
010.1BY12	20.00	0.26	5.00	0.13									
010.1B33F	20.00	0.26	6.00	0.13									
010.1A368	20.22	0.27	3.53	0.10	211	x	x						
010.20226	20.29	0.27	2.62	0.09	117	x	x						
010.1A201	20.30	0.27	2.62	0.09									
010.1A057	20.35	0.27	1.78	0.08	019	x	x						
010.1B107	20.50	0.27	1.00	0.08									
010.1B244	20.50	0.27	1.50	0.08									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B532	20.50	0.27	2.00	0.08									
010.1A145	20.50	0.27	2.40	0.09									
010.1B865	20.50	0.27	2.50	0.09									
010.1BE14	20.50	0.27	3.00	0.09									
010.20618	20.60	0.27	1.80	0.08					A0206GN				
010.20624	20.60	0.27	2.40	0.09									x
010.20265	20.60	0.27	2.65	0.09				x	A0206GN				
010.20355	20.60	0.27	3.55	0.10				x	A0206GN				
010.1A202	20.64	0.27	2.62	0.09									
010.20824	20.80	0.27	2.40	0.08							P21		
010.1B065	21.00	0.27	1.00	0.08									
010.1B246	21.00	0.27	1.50	0.08									
010.1B534	21.00	0.27	2.00	0.08									
010.1B867	21.00	0.27	2.50	0.09									
010.1BE16	21.00	0.27	3.00	0.09									
010.1BL59	21.00	0.27	3.50	0.10									
010.1BR85	21.00	0.27	4.00	0.10									
010.1BZ70	21.00	0.27	4.50	0.10									
010.1BY14	21.00	0.27	5.00	0.13									
010.1B34F	21.00	0.27	6.00	0.13									
010.21218	21.20	0.27	1.80	0.08					A0212GN				
010.1BC31	21.20	0.27	2.65	0.09				x	A0212GN				
010.1BI77	21.20	0.27	3.55	0.10				x	A0212GN				
010.1A468	21.30	0.27	3.60	0.10						R17			
010.1B109	21.50	0.28	1.00	0.08									
010.1B249	21.50	0.28	1.50	0.08									
010.1B535	21.50	0.28	2.00	0.08									
010.1A146	21.50	0.28	2.40	0.09									
010.1B868	21.50	0.28	2.50	0.09									
010.1A282	21.50	0.28	3.00	0.09									x
010.1BZ73	21.50	0.28	4.50	0.10									
010.1A535	21.59	0.28	5.33	0.13	316	x	x						
010.1A147	21.60	0.28	2.40	0.09									x
010.21735	21.70	0.28	3.50	0.10							P22A		
010.21824	21.80	0.28	2.40	0.08							P22		
010.1A369	21.82	0.28	3.53	0.10	212	x	x						
010.1A203	21.89	0.28	2.62	0.09	118	x	x						
010.1A274	21.92	0.28	2.95	0.09	911								
010.1A058	21.95	0.28	1.78	0.08	020	x	x						
010.1B064	22.00	0.28	1.00	0.08									
010.1B252	22.00	0.28	1.50	0.08									
010.1B537	22.00	0.28	2.00	0.08									
010.1B870	22.00	0.28	2.50	0.09									
010.1BE19	22.00	0.28	3.00	0.09									
010.1BL68	22.00	0.28	3.50	0.10									
010.1BR88	22.00	0.28	4.00	0.10									
010.1BZ58	22.00	0.28	4.50	0.10									
010.1BY15	22.00	0.28	5.00	0.13									
010.1B35F	22.00	0.28	6.00	0.13									
010.1A028	22.10	0.28	1.60	0.28								x	x
010.22135	22.10	0.28	3.50	0.10							P22.4		
010.1A283	22.20	0.28	3.00	0.28								x	
010.1A204	22.23	0.28	2.62	0.09									
010.22418	22.40	0.28	1.80	0.08					A0224GN				
010.1BC32	22.40	0.28	2.65	0.09				x	A0224GN				
010.1BI79	22.40	0.28	3.55	0.10				x	A0224GN				
010.1B112	22.50	0.28	1.00	0.08									
010.1B253	22.50	0.28	1.50	0.08									
010.1B538	22.50	0.28	2.00	0.08									
010.1B871	22.50	0.28	2.50	0.09									
010.1A284	22.50	0.28	3.00	0.09									x
010.1BZ75	22.50	0.28	4.50	0.10									
010.1B071	23.00	0.29	1.00	0.08									
010.1B255	23.00	0.29	1.50	0.08									
010.1B540	23.00	0.29	2.00	0.08									
010.1B873	23.00	0.29	2.50	0.09									
010.1BE25	23.00	0.29	3.00	0.09									
010.1BL71	23.00	0.29	3.50	0.10									
010.1A469	23.00	0.29	3.60	0.10						R18			
010.1BR91	23.00	0.29	4.00	0.10									
010.1BZ57	23.00	0.29	4.50	0.10									
010.1BY16	23.00	0.29	5.00	0.13									
010.1B36F	23.00	0.29	6.00	0.13									
010.1A536	23.16	0.29	5.33	0.13	317	x	x						
010.1A370	23.39	0.29	3.53	0.10	213	x	x						
010.1A205	23.47	0.29	2.62	0.09	119	x	x						
010.1A275	23.47	0.29	2.95	0.09	912								
010.1B113	23.50	0.29	1.00	0.08									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B256	23.50	0.29	1.50	0.08									
010.1B541	23.50	0.29	2.00	0.08									
010.1A148	23.50	0.29	2.40	0.09									
010.1B874	23.50	0.29	2.50	0.09									
010.1BE26	23.50	0.29	3.00	0.09									
010.02354	23.50	0.29	4.00	0.10							V24		
010.1B37F	23.50	0.29	6.00	0.13									
010.1A059	23.52	0.29	1.78	0.08	021	x	x						
010.23618	23.60	0.29	1.80	0.08					B0236GN				
010.1BC33	23.60	0.29	2.65	0.09				x	B0236GN				
010.1BP60	23.60	0.29	3.55	0.10				x	B0236GN				
010.23735	23.70	0.29	3.50	0.10							P24		
010.1A206	23.81	0.29	2.62	0.09									
010.1B068	24.00	0.29	1.00	0.08									
010.1B258	24.00	0.29	1.50	0.08									
010.1B543	24.00	0.29	2.00	0.08									
010.1B876	24.00	0.29	2.50	0.09									
010.1A285	24.00	0.29	3.00	0.09									
010.1BL74	24.00	0.29	3.50	0.10									
010.1BR94	24.00	0.29	4.00	0.10									
010.1BZ55	24.00	0.29	4.50	0.10									
010.1BY18	24.00	0.29	5.00	0.13									
010.1B39F	24.00	0.29	6.00	0.13									
010.1A286	24.20	0.30	3.00	0.30								x	
010.24318	24.30	0.30	1.80	0.08					B0243GN				
010.24265	24.30	0.30	2.65	0.09				x	B0243GN				
010.24355	24.30	0.30	3.55	0.10				x	B0243GN				
010.24431	24.40	0.30	3.10	0.09							G25		
010.1B118	24.50	0.30	1.00	0.08									
010.1B259	24.50	0.30	1.50	0.08									
010.1B544	24.50	0.30	2.00	0.08									
010.1A149	24.50	0.30	2.40	0.09									
010.1B877	24.50	0.30	2.50	0.09									
010.1A287	24.50	0.30	3.00	0.09									x
010.1BZ76	24.50	0.30	4.50	0.10									
010.1A150	24.60	0.30	2.40	0.09									x
010.1A288	24.60	0.30	3.00	0.09									
010.1A470	24.60	0.30	3.60	0.10						R19			
010.24703	24.70	0.30	3.50	0.10							P25		
010.1A537	24.77	0.30	5.33	0.13	318	x	x						
010.1A371	24.99	0.30	3.53	0.10	214	x	x						
010.1B070	25.00	0.30	1.00	0.08									
010.1B261	25.00	0.30	1.50	0.08									
010.02518	25.00	0.30	1.80	0.08					B0250GN				
010.1B546	25.00	0.30	2.00	0.08									
010.1A151	25.00	0.30	2.40	0.09									
010.1B879	25.00	0.30	2.50	0.09									
010.1BC36	25.00	0.30	2.65	0.09				x	B0250GN				
010.1A289	25.00	0.30	3.00	0.09									
010.1BL77	25.00	0.30	3.50	0.10									
010.1BP63	25.00	0.30	3.55	0.10				x	B0250GN				
010.1BR97	25.00	0.30	4.00	0.10									
010.1BZ56	25.00	0.30	4.50	0.10									
010.1BY21	25.00	0.30	5.00	0.13									
010.1B40F	25.00	0.30	6.00	0.13									
010.1A276	25.04	0.30	2.95	0.09	913								
010.1A207	25.07	0.30	2.62	0.09	120	x	x						
010.1A029	25.10	0.30	1.60	0.30								x	x
010.1A060	25.12	0.30	1.78	0.08	022	x	x						
010.25235	25.20	0.30	3.50	0.10							P25.5		
010.1B262	25.50	0.31	1.50	0.08									
010.1B547	25.50	0.31	2.00	0.08									
010.1B885	25.50	0.31	2.50	0.09									
010.1A290	25.50	0.31	3.00	0.09									x
010.25735	25.70	0.31	3.50	0.10							P26		
010.25818	25.80	0.31	1.80	0.08					B0258GN				
010.1BC40	25.80	0.31	2.65	0.09				x	B0258GN				
010.1A372	25.80	0.31	3.53	0.10									
010.1BI86	25.80	0.31	3.55	0.10				x	B0258GN				
010.1B264	26.00	0.31	1.50	0.08									
010.1B549	26.00	0.31	2.00	0.08									
010.1B891	26.00	0.31	2.50	0.09									
010.1BE34	26.00	0.31	3.00	0.09									
010.1BL80	26.00	0.31	3.50	0.10									
010.1BS00	26.00	0.31	4.00	0.10									
010.1BZ59	26.00	0.31	4.50	0.10									
010.1BY24	26.00	0.31	5.00	0.13									
010.1B41F	26.00	0.31	6.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A291	26.20	0.31	3.00	0.31								x	
010.1A471	26.20	0.31	3.60	0.10						R20			
010.1A538	26.34	0.31	5.33	0.13	319	x	x						
010.1B265	26.50	0.31	1.50	0.08									
010.26518	26.50	0.31	1.80	0.08					B0265GN				
010.1B550	26.50	0.31	2.00	0.08									
010.1B892	26.50	0.31	2.50	0.09									
010.1BC42	26.50	0.31	2.65	0.09				x	B0265GN				
010.1A292	26.50	0.31	3.00	0.09									x
010.1BP66	26.50	0.31	3.55	0.10				x	B0265GN				
010.1A373	26.57	0.31	3.53	0.10	215	x	x						
010.1A277	26.59	0.31	2.95	0.09	914								
010.1A208	26.64	0.31	2.62	0.09	121	x	x						
010.1A061	26.70	0.31	1.78	0.08	023	x	x						
010.1B266	27.00	0.32	1.50	0.08									
010.1B552	27.00	0.32	2.00	0.08									
010.1B894	27.00	0.32	2.50	0.09									
010.1BE43	27.00	0.32	3.00	0.09									
010.1BL83	27.00	0.32	3.50	0.10									
010.1BS03	27.00	0.32	4.00	0.10									
010.1BZ62	27.00	0.32	4.50	0.10									
010.1BY27	27.00	0.32	5.00	0.13									
010.1B43F	27.00	0.32	6.00	0.13									
010.1A030	27.10	0.32	1.60	0.32								x	x
010.27318	27.30	0.32	1.80	0.08					B0273GN				
010.27265	27.30	0.32	2.65	0.09				x	B0273GN				
010.1A273	27.30	0.32	2.70	0.09									
010.27355	27.30	0.32	3.55	0.10				x	B0273GN				
010.1B267	27.50	0.32	1.50	0.08									
010.1B553	27.50	0.32	2.00	0.08									
010.1A152	27.50	0.32	2.40	0.09									
010.1B895	27.50	0.32	2.50	0.09									
010.1A293	27.50	0.32	3.00	0.09									x
010.1BZ78	27.50	0.32	4.50	0.10									
010.1A153	27.60	0.32	2.40	0.09									x
010.27735	27.70	0.32	3.50	0.10							P28		
010.1A472	27.80	0.32	3.60	0.10						R21			
010.1A539	27.94	0.32	5.33	0.13	320	x	x						
010.1B268	28.00	0.32	1.50	0.08									
010.02818	28.00	0.32	1.80	0.08					B0280GN				
010.1B555	28.00	0.32	2.00	0.08									
010.1B897	28.00	0.32	2.50	0.09									
010.1BC45	28.00	0.32	2.65	0.09				x	B0280GN				
010.1BE46	28.00	0.32	3.00	0.09									
010.1BL86	28.00	0.32	3.50	0.10									
010.1BP69	28.00	0.32	3.55	0.10				x	B0280GN				
010.1BS06	28.00	0.32	4.00	0.10									
010.1BZ63	28.00	0.32	4.50	0.10									
010.1BY30	28.00	0.32	5.00	0.13									
010.1B42F	28.00	0.32	6.00	0.13									
010.1A374	28.17	0.32	3.53	0.10	216	x	x						
010.1A209	28.24	0.33	2.62	0.09	122	x	x						
010.1A062	28.30	0.33	1.78	0.08	024	x	x						
010.1B263	28.50	0.33	1.50	0.08									
010.1B556	28.50	0.33	2.00	0.08									
010.1B898	28.50	0.33	2.50	0.09									
010.1BE49	28.50	0.33	3.00	0.09									
010.1BZ79	28.50	0.33	4.50	0.10									
010.28735	28.70	0.33	3.50	0.10							P29		
010.1B269	29.00	0.33	1.50	0.08									
010.1B557	29.00	0.33	2.00	0.08									
010.1B900	29.00	0.33	2.50	0.09									
010.1BE52	29.00	0.33	3.00	0.09									
010.1BL94	29.00	0.33	3.50	0.10									
010.1BS09	29.00	0.33	4.00	0.10									
010.1BZ82	29.00	0.33	4.50	0.10									
010.1BY31	29.00	0.33	5.00	0.13									
010.1B46F	29.00	0.33	6.00	0.13									
010.1A031	29.10	0.33	1.60	0.33								x	x
010.1A294	29.20	0.33	3.00	0.33								x	
010.29235	29.20	0.33	3.50	0.10							P29.5		
010.1A473	29.30	0.33	3.60	0.10						R22			
010.29431	29.40	0.33	3.10	0.09							G30		
010.1B271	29.50	0.33	1.50	0.08									
010.1B559	29.50	0.33	2.00	0.08									
010.1B901	29.50	0.33	2.50	0.09									
010.1A295	29.50	0.33	3.00	0.09									x
010.1BZ65	29.50	0.33	4.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A540	29.51	0.33	5.33	0.13	321	x	x						
010.1A154	29.60	0.33	2.40	0.09									x
010.29735	29.70	0.34	3.50	0.10							P30		
010.1A278	29.74	0.34	2.95	0.09	916								
010.1A375	29.74	0.34	3.53	0.10	217	x	x						
010.1A210	29.82	0.34	2.62	0.09	123	x	x						
010.1A063	29.87	0.34	1.78	0.08	025	x	x						
010.1B270	30.00	0.34	1.50	0.08									
010.03018	30.00	0.34	1.80	0.08					B0300GN				
010.1B561	30.00	0.34	2.00	0.08									
010.1B903	30.00	0.34	2.50	0.09									
010.1BC51	30.00	0.34	2.65	0.09				x	B0300GN				
010.1A296	30.00	0.34	3.00	0.09									
010.1BL97	30.00	0.34	3.50	0.10									
010.1BP72	30.00	0.34	3.55	0.10				x	B0300GN				
010.1BS12	30.00	0.34	4.00	0.10									
010.1BZ66	30.00	0.34	4.50	0.10									
010.1BY33	30.00	0.34	5.00	0.13									
010.1B45F	30.00	0.34	6.00	0.13									
010.1B272	30.50	0.34	1.50	0.08									
010.1B562	30.50	0.34	2.00	0.08									
010.1B904	30.50	0.34	2.50	0.09									
010.1A297	30.50	0.34	3.00	0.09									
010.30703	30.70	0.34	3.50	0.10							P31		
010.1A474	30.80	0.34	3.60	0.10						R23			
010.1B273	31.00	0.34	1.50	0.08									
010.1B564	31.00	0.34	2.00	0.08									
010.1B906	31.00	0.34	2.50	0.09									
010.1BE61	31.00	0.34	3.00	0.09									
010.1BL98	31.00	0.34	3.50	0.10									
010.1BS15	31.00	0.34	4.00	0.10									
010.1BZ67	31.00	0.34	4.50	0.10									
010.1BY37	31.00	0.34	5.00	0.13									
010.1B48F	31.00	0.34	6.00	0.13									
010.1A541	31.12	0.35	5.33	0.13	322	x	x						
010.31235	31.20	0.35	3.50	0.10							P31.5		
010.1A376	31.34	0.35	3.53	0.10	218	x	x						
010.1A211	31.42	0.35	2.62	0.09	124	x	x						
010.1A064	31.47	0.35	1.78	0.08	026	x	x						
010.1B275	31.50	0.35	1.50	0.08									
010.31518	31.50	0.35	1.80	0.08					B0315GN				
010.1B565	31.50	0.35	2.00	0.08									
010.1B907	31.50	0.35	2.50	0.09									
010.1BC57	31.50	0.35	2.65	0.09				x	B0315GN				
010.1A298	31.50	0.35	3.00	0.09									x
010.1BP75	31.50	0.35	3.55	0.10				x	B0315GN				
010.1BZ84	31.50	0.35	4.50	0.10									
010.1A155	31.60	0.35	2.40	0.09									x
010.31735	31.70	0.35	3.50	0.10							P32		
010.1B274	32.00	0.35	1.50	0.08									
010.1B567	32.00	0.35	2.00	0.08									
010.1B909	32.00	0.35	2.50	0.09									
010.1BE67	32.00	0.35	3.00	0.09									
010.1BM00	32.00	0.35	3.50	0.10									
010.1BS18	32.00	0.35	4.00	0.10									
010.1BZ69	32.00	0.35	4.50	0.10									
010.1BY36	32.00	0.35	5.00	0.13									
010.1B49F	32.00	0.35	6.00	0.13									
010.1A032	32.10	0.35	1.60	0.35								x	x
010.1A299	32.20	0.35	3.00	0.35								x	
010.1B260	32.50	0.36	1.50	0.08									
010.32518	32.50	0.36	1.80	0.08					B0325GN				
010.1B568	32.50	0.36	2.00	0.08									
010.1B910	32.50	0.36	2.50	0.09									
010.1BC59	32.50	0.36	2.65	0.09				x	B0325GN				
010.1A300	32.50	0.36	3.00	0.09									x
010.1BI88	32.50	0.36	3.55	0.10				x	B0325GN				
010.1A475	32.50	0.36	3.60	0.10						R24			
010.1A542	32.69	0.36	5.33	0.13	323	x	x						
010.1A377	32.92	0.36	3.53	0.10	219	x	x						
010.1A212	32.99	0.36	2.62	0.09	125	x	x						
010.1B276	33.00	0.36	1.50	0.08									
010.1B570	33.00	0.36	2.00	0.08									
010.1B912	33.00	0.36	2.50	0.09									
010.1BE70	33.00	0.36	3.00	0.09									
010.1BM03	33.00	0.36	3.50	0.10									
010.1BS19	33.00	0.36	4.00	0.10									
010.1BZ85	33.00	0.36	4.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BY39	33.00	0.36	5.00	0.13									
010.1B51F	33.00	0.36	6.00	0.13									
010.1A065	33.05	0.36	1.78	0.08	027	x	x						
010.1B257	33.50	0.36	1.50	0.08									
010.33518	33.50	0.36	1.80	0.08					B0335GN				
010.1B573	33.50	0.36	2.00	0.08									
010.1B913	33.50	0.36	2.50	0.09									
010.1BC64	33.50	0.36	2.65	0.09				x	B0335GN				
010.1BE71	33.50	0.36	3.00	0.09									
010.1BP78	33.50	0.36	3.55	0.10				x	B0335GN				
010.03354	33.50	0.36	4.00	0.10							V34		
010.33735	33.70	0.36	3.50	0.10							P34		
010.1B277	34.00	0.37	1.50	0.08									
010.1B576	34.00	0.37	2.00	0.08									
010.1B915	34.00	0.37	2.50	0.09									
010.1BE73	34.00	0.37	3.00	0.09									
010.1BM04	34.00	0.37	3.50	0.10									
010.1BS21	34.00	0.37	4.00	0.10									
010.1BZ87	34.00	0.37	4.50	0.10									
010.1BY40	34.00	0.37	5.00	0.13									
010.1B52F	34.00	0.37	6.00	0.13									
010.1A476	34.10	0.37	3.60	0.10						R25			
010.1A301	34.20	0.37	3.00	0.37								x	
010.1A543	34.29	0.37	5.33	0.13	324	x	x						
010.34431	34.40	0.37	3.10	0.09							G35		
010.1A279	34.42	0.37	2.95	0.09	918								
010.1B254	34.50	0.37	1.50	0.08									
010.34518	34.50	0.37	1.80	0.08					B0345GN				
010.1B577	34.50	0.37	2.00	0.08									
010.1B916	34.50	0.37	2.50	0.09									
010.1BC66	34.50	0.37	2.65	0.09				x	B0345GN				
010.1A302	34.50	0.37	3.00	0.09									x
010.1BP81	34.50	0.37	3.55	0.10				x	B0345GN				
010.1BZ91	34.50	0.37	4.50	0.10									
010.1A378	34.52	0.37	3.53	0.10	220	x	x						
010.1A213	34.59	0.37	2.62	0.09	126	x	x						
010.1A156	34.60	0.37	2.40	0.09									x
010.1A066	34.65	0.37	1.78	0.08	028	x	x						
010.34735	34.70	0.37	3.50	0.10							P35		
010.1B279	35.00	0.37	1.50	0.08									
010.1B579	35.00	0.37	2.00	0.08									
010.1B918	35.00	0.37	2.50	0.09									
010.1A303	35.00	0.37	3.00	0.09									
010.1BM06	35.00	0.37	3.50	0.10									
010.1BS24	35.00	0.37	4.00	0.10									
010.1BZ68	35.00	0.37	4.50	0.10									
010.1BY42	35.00	0.37	5.00	0.13									
010.1B53F	35.00	0.37	6.00	0.13									
010.1A033	35.10	0.37	1.60	0.37								x	x
010.35235	35.20	0.38	3.50	0.10							P35.5		
010.1B251	35.50	0.38	1.50	0.08									
010.35518	35.50	0.38	1.80	0.08					B0355GN				
010.1B580	35.50	0.38	2.00	0.08									
010.1B919	35.50	0.38	2.50	0.09									
010.1BC67	35.50	0.38	2.65	0.09				x	B0355GN				
010.1BE79	35.50	0.38	3.00	0.09									x
010.1BI89	35.50	0.38	3.55	0.10				x	B0355GN				
010.1BJ06	35.50	0.38	4.50	0.10									
010.35624	35.60	0.38	2.40	0.09									x
010.1A477	35.60	0.38	3.60	0.10						R26			
010.35735	35.70	0.38	3.50	0.10							P36		
010.1B278	36.00	0.38	1.50	0.08									
010.1B582	36.00	0.38	2.00	0.08									
010.1B921	36.00	0.38	2.50	0.09									
010.1A304	36.00	0.38	3.00	0.09									
010.1BM09	36.00	0.38	3.50	0.10									
010.1BS27	36.00	0.38	4.00	0.10									
010.1BJ15	36.00	0.38	4.50	0.10									
010.1BY45	36.00	0.38	5.00	0.13									
010.1B54F	36.00	0.38	6.00	0.13									
010.1A379	36.09	0.38	3.53	0.10	221	x	x						
010.1A214	36.17	0.38	2.62	0.09	127	x	x						
010.1A305	36.20	0.38	3.00	0.38								x	
010.1B374	36.27	0.38	1.78	0.08									
010.1B250	36.50	0.38	1.50	0.08									
010.36518	36.50	0.38	1.80	0.08					B0365GN				
010.1B583	36.50	0.38	2.00	0.08									
010.1BC72	36.50	0.38	2.65	0.09				x	B0365GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A306	36.50	0.38	3.00	0.09									x
010.1BP84	36.50	0.38	3.55	0.10				x	B0365GN				
010.1B280	37.00	0.39	1.50	0.08									
010.1B585	37.00	0.39	2.00	0.08									
010.1BE88	37.00	0.39	3.00	0.09									
010.1BM15	37.00	0.39	3.50	0.10									
010.1BS30	37.00	0.39	4.00	0.10									
010.1BJ17	37.00	0.39	4.50	0.10									
010.1BY48	37.00	0.39	5.00	0.13									
010.1B55F	37.00	0.39	6.00	0.13									
010.1A034	37.10	0.39	1.60	0.39								x	x
010.1A478	37.30	0.39	3.60	0.10						R27			
010.1A307	37.47	0.39	3.00	0.09	920								
010.1A544	37.47	0.39	5.33	0.13	325	x	x			R28			
010.1B248	37.50	0.39	1.50	0.08									
010.37518	37.50	0.39	1.80	0.08					B0375GN				
010.1B586	37.50	0.39	2.00	0.08									
010.1B920	37.50	0.39	2.50	0.09									
010.1BC75	37.50	0.39	2.65	0.09				x	B0375GN				
010.1A308	37.50	0.39	3.00	0.09									x
010.1BP87	37.50	0.39	3.55	0.10				x	B0375GN				
010.1BJ18	37.50	0.39	4.50	0.10									
010.37505	37.50	0.39	5.30	0.13					B0375GN				
010.1A157	37.60	0.39	2.40	0.09									x
010.1A380	37.69	0.39	3.53	0.10	222	x	x						
010.37735	37.70	0.39	3.50	0.10							P38		
010.1A215	37.77	0.39	2.62	0.09	128	x	x						
010.1A067	37.82	0.39	1.78	0.08	029	x	x						
010.1B281	38.00	0.40	1.50	0.08									
010.1B588	38.00	0.40	2.00	0.08									
010.1B922	38.00	0.40	2.50	0.09									
010.1BE91	38.00	0.40	3.00	0.09									
010.1BM21	38.00	0.40	3.50	0.10									
010.1BS33	38.00	0.40	4.00	0.10									
010.1BZ71	38.00	0.40	4.50	0.10									
010.1BY51	38.00	0.40	5.00	0.13									
010.1B57F	38.00	0.40	6.00	0.13									
010.1B247	38.50	0.40	1.50	0.08									
010.1B589	38.50	0.40	2.00	0.08									
010.1B923	38.50	0.40	2.50	0.09									
010.1BE92	38.50	0.40	3.00	0.09									
010.38718	38.70	0.40	1.80	0.08					B0387GN				
010.1BC76	38.70	0.40	2.65	0.09				x	B0387GN				
010.38735	38.70	0.40	3.50	0.10							P39		
010.1BI91	38.70	0.40	3.55	0.10				x	B0387GN				
010.38705	38.70	0.40	5.30	0.13					B0387GN				
010.1B282	39.00	0.40	1.50	0.08									
010.1B591	39.00	0.40	2.00	0.08									
010.1B927	39.00	0.40	2.50	0.09									
010.1BE94	39.00	0.40	3.00	0.09									
010.1BM22	39.00	0.40	3.50	0.10									
010.1BS36	39.00	0.40	4.00	0.10									
010.1BZ72	39.00	0.40	4.50	0.10									
010.1BY52	39.00	0.40	5.00	0.13									
010.1B58F	39.00	0.40	6.00	0.13									
010.1A309	39.20	0.40	3.00	0.40								x	
010.1A216	39.34	0.40	2.62	0.09	129	x	x						
010.39431	39.40	0.41	3.10	0.09							G40		
010.1B379	39.45	0.41	1.78	0.08									
010.1B245	39.50	0.41	1.50	0.08									
010.1B592	39.50	0.41	2.00	0.08									
010.1B928	39.50	0.41	2.50	0.09									
010.1A310	39.50	0.41	3.00	0.09									x
010.03954	39.50	0.41	4.00	0.10							V40		
010.1B59F	39.50	0.41	6.00	0.13									
010.1A158	39.60	0.41	2.40	0.09									x
010.39735	39.70	0.41	3.50	0.10							P40		
010.1A381	39.70	0.41	3.53	0.10									
010.1B285	40.00	0.41	1.50	0.08									
010.04018	40.00	0.41	1.80	0.08					B0400GN				
010.1B594	40.00	0.41	2.00	0.08									
010.1B930	40.00	0.41	2.50	0.09									
010.40265	40.00	0.41	2.65	0.09					B0400GN				
010.1A311	40.00	0.41	3.00	0.09									
010.1BM23	40.00	0.41	3.50	0.10									
010.1BP90	40.00	0.41	3.55	0.10				x	B0400GN				
010.1BS39	40.00	0.41	4.00	0.10									
010.1BZ74	40.00	0.41	4.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BY54	40.00	0.41	5.00	0.13									
010.1B50A	40.00	0.41	5.30	0.13				x	B0400GN				
010.1B61F	40.00	0.41	6.00	0.13									
010.1BJ20	40.50	0.41	4.50	0.10									
010.1A545	40.64	0.41	5.33	0.13	326	x	x			R29			
010.40735	40.70	0.41	3.50	0.10							P41		
010.1A382	40.87	0.42	3.53	0.10	223	x	x						
010.1A217	40.94	0.42	2.62	0.09	130	x	x						
010.1B242	41.00	0.42	1.50	0.08									
010.1A068	41.00	0.42	1.78	0.08	030	x	x						
010.1B597	41.00	0.42	2.00	0.08									
010.1B933	41.00	0.42	2.50	0.09									
010.1BF00	41.00	0.42	3.00	0.09									
010.1BM25	41.00	0.42	3.50	0.10									
010.1BS42	41.00	0.42	4.00	0.10									
010.1BZ77	41.00	0.42	4.50	0.10									
010.1BY56	41.00	0.42	5.00	0.13									
010.1B62F	41.00	0.42	6.00	0.13									
010.41218	41.20	0.42	1.80	0.08					B0412GN				
010.41226	41.20	0.42	2.65	0.09					B0412GN				
010.1BP93	41.20	0.42	3.55	0.10				x	B0412GN				
010.1B80B	41.20	0.42	5.30	0.13				x	B0412GN				
010.1A383	41.28	0.42	3.53	0.10									
010.1A526	41.40	0.42	5.30	0.13									
010.1A312	41.50	0.42	3.00	0.09									x
010.1B64F	41.50	0.42	6.00	0.13									
010.1A159	41.60	0.42	2.40	0.09									x
010.41735	41.70	0.42	3.50	0.10							P42		
010.1B286	42.00	0.42	1.50	0.08									
010.1B600	42.00	0.42	2.00	0.08									
010.1B936	42.00	0.42	2.50	0.09									
010.1BF03	42.00	0.42	3.00	0.09									
010.1BM24	42.00	0.42	3.50	0.10									
010.1BS45	42.00	0.42	4.00	0.10									
010.1BZ80	42.00	0.42	4.50	0.10									
010.1BY57	42.00	0.42	5.00	0.13									
010.1B60F	42.00	0.42	6.00	0.13									
010.1A313	42.20	0.42	3.00	0.09									
010.42303	42.30	0.43	3.00	0.43								x	
010.42518	42.50	0.43	1.80	0.08					B0425GN				
010.42526	42.50	0.43	2.65	0.09					B0425GN				
010.1A314	42.50	0.43	3.00	0.09									x
010.1BI92	42.50	0.43	3.55	0.10				x	B0425GN				
010.1B81B	42.50	0.43	5.30	0.13				x	B0425GN				
010.1A218	42.52	0.43	2.62	0.09	131	x	x						
010.1A384	42.86	0.43	3.53	0.10									
010.1B241	43.00	0.43	1.50	0.08									
010.1B603	43.00	0.43	2.00	0.08									
010.1B939	43.00	0.43	2.50	0.09									
010.1BF06	43.00	0.43	3.00	0.09									
010.1BM27	43.00	0.43	3.50	0.10									
010.1BS48	43.00	0.43	4.00	0.10									
010.1BZ81	43.00	0.43	4.50	0.10									
010.1BY60	43.00	0.43	5.00	0.13									
010.1B63F	43.00	0.43	6.00	0.13									
010.1A479	43.40	0.43	3.60	0.10									
010.1A315	43.69	0.44	3.00	0.09	924								
010.43718	43.70	0.44	1.80	0.08					B0437GN				
010.43726	43.70	0.44	2.65	0.09					B0437GN				
010.43735	43.70	0.44	3.50	0.10							P44		
010.1BP96	43.70	0.44	3.55	0.10				x	B0437GN				
010.1B56A	43.70	0.44	5.30	0.13				x	B0437GN				
010.1A546	43.82	0.44	5.33	0.13	327	x	x			R30			
010.1B307	44.00	0.44	1.50	0.08									
010.1B605	44.00	0.44	2.00	0.08									
010.1B942	44.00	0.44	2.50	0.09									
010.1BF09	44.00	0.44	3.00	0.09									
010.1BM30	44.00	0.44	3.50	0.10									
010.1BS51	44.00	0.44	4.00	0.10									
010.1BZ83	44.00	0.44	4.50	0.10									
010.1BY63	44.00	0.44	5.00	0.13									
010.1B65F	44.00	0.44	6.00	0.13									
010.1A385	44.04	0.44	3.53	0.10	224	x	x						
010.1A219	44.12	0.44	2.62	0.09	132	x	x						
010.1A069	44.17	0.44	1.78	0.08	031	x	x						
010.1A316	44.20	0.44	3.00	0.44								x	
010.1A631	44.20	0.44	5.70	0.44								x	
010.1A632	44.30	0.44	5.70	0.13									x

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.44431	44.40	0.44	3.10	0.09							G45		
010.1A317	44.50	0.44	3.00	0.09									x
010.1B67F	44.50	0.44	6.00	0.13									
010.1A160	44.60	0.44	2.40	0.09									x
010.44735	44.70	0.44	3.50	0.10							P45		
010.1A386	44.95	0.44	3.53	0.10									
010.1B287	45.00	0.44	1.50	0.08									
010.04518	45.00	0.44	1.80	0.08					B0450GN				
010.1B609	45.00	0.44	2.00	0.08									
010.1B945	45.00	0.44	2.50	0.09									
010.45265	45.00	0.44	2.65	0.09					B0450GN				
010.1BF12	45.00	0.44	3.00	0.09									
010.1BM33	45.00	0.44	3.50	0.10									
010.1BP99	45.00	0.44	3.55	0.10				x	B0450GN				
010.1BS54	45.00	0.44	4.00	0.10									
010.1BZ86	45.00	0.44	4.50	0.10									
010.1BY66	45.00	0.44	5.00	0.13									
010.1B83B	45.00	0.44	5.30	0.13				x	B0450GN				
010.1B66F	45.00	0.44	6.00	0.13									
010.1A633	45.30	0.45	5.70	0.13									x
010.45624	45.60	0.45	2.40	0.09									x
010.1A220	45.69	0.45	2.62	0.09	133	x	x						
010.45735	45.70	0.45	3.50	0.10							P46		
010.1B239	46.00	0.45	1.50	0.08									
010.1B612	46.00	0.45	2.00	0.08									
010.1B948	46.00	0.45	2.50	0.09									
010.1BF15	46.00	0.45	3.00	0.09									
010.1BM36	46.00	0.45	3.50	0.10									
010.1BS57	46.00	0.45	4.00	0.10									
010.1BZ89	46.00	0.45	4.50	0.10									
010.1BY69	46.00	0.45	5.00	0.13									
010.1B69F	46.00	0.45	6.00	0.13									
010.1A387	46.04	0.45	3.53	0.10									
010.46218	46.20	0.45	1.80	0.08					B0462GN				
010.46226	46.20	0.45	2.65	0.09					B0462GN				
010.1BQ02	46.20	0.45	3.55	0.10				x	B0462GN				
010.1B84B	46.20	0.45	5.30	0.13				x	B0462GN				
010.1A547	46.99	0.46	5.33	0.13	328	x	x			R31			
010.1B289	47.00	0.46	1.50	0.08									
010.1B615	47.00	0.46	2.00	0.08									
010.1B951	47.00	0.46	2.50	0.09									
010.1BF18	47.00	0.46	3.00	0.09									
010.1BM39	47.00	0.46	3.50	0.10									
010.1BS60	47.00	0.46	4.00	0.10									
010.1BZ88	47.00	0.46	4.50	0.10									
010.1BY72	47.00	0.46	5.00	0.13									
010.1B70F	47.00	0.46	6.00	0.13									
010.1A388	47.22	0.46	3.53	0.10	225	x	x						
010.1A221	47.29	0.46	2.62	0.09	134	x	x						
010.1A070	47.35	0.46	1.78	0.08	032	x	x						
010.47518	47.50	0.46	1.80	0.08					B0475GN				
010.47526	47.50	0.46	2.65	0.09					B0475GN				
010.1BQ05	47.50	0.46	3.55	0.10				x	B0475GN				
010.1B62A	47.50	0.46	5.30	0.13				x	B0475GN				
010.1A161	47.60	0.46	2.40	0.09									x
010.47657	47.60	0.46	5.70	0.13							P48A		
010.1A389	47.62	0.46	3.53	0.10									
010.47735	47.70	0.46	3.50	0.10							P48		
010.1B238	48.00	0.47	1.50	0.08									
010.1B616	48.00	0.47	2.00	0.08									
010.1B954	48.00	0.47	2.50	0.09									
010.1BF21	48.00	0.47	3.00	0.09									
010.1BM42	48.00	0.47	3.50	0.10									
010.1BS63	48.00	0.47	4.00	0.10									
010.1BZ90	48.00	0.47	4.50	0.10									
010.1BY75	48.00	0.47	5.00	0.13									
010.1B72F	48.00	0.47	6.00	0.13									
010.48718	48.70	0.47	1.80	0.08					B0487GN				
010.48726	48.70	0.47	2.65	0.09					B0487GN				
010.48735	48.70	0.47	3.50	0.10							P49		
010.1BQ08	48.70	0.47	3.55	0.10				x	B0487GN				
010.1B86B	48.70	0.47	5.30	0.13				x	B0487GN				
010.1A222	48.90	0.47	2.62	0.09	135	x	x						
010.1B236	49.00	0.47	1.50	0.08									
010.1B617	49.00	0.47	2.00	0.08									
010.1B957	49.00	0.47	2.50	0.09									
010.1BF24	49.00	0.47	3.00	0.09									
010.1BM45	49.00	0.47	3.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BS65	49.00	0.47	4.00	0.10									
010.1BJ23	49.00	0.47	4.50	0.10									
010.1BY77	49.00	0.47	5.00	0.13									
010.1B74F	49.00	0.47	6.00	0.13									
010.49203	49.20	0.47	3.00	0.47								x	
010.1A390	49.20	0.47	3.53	0.10									
010.1A634	49.20	0.47	5.70	0.47								x	
010.1A635	49.30	0.48	5.70	0.13									x
010.49431	49.40	0.48	3.10	0.09							G50		
010.1A318	49.50	0.48	3.00	0.09									x
010.1A162	49.60	0.48	2.40	0.09									x
010.49657	49.60	0.48	5.70	0.13							P50A		
010.49735	49.70	0.48	3.50	0.10							P50		
010.1B291	50.00	0.48	1.50	0.08									
010.05018	50.00	0.48	1.80	0.08					B0500GN				
010.1B618	50.00	0.48	2.00	0.08									
010.1B960	50.00	0.48	2.50	0.09									
010.50265	50.00	0.48	2.65	0.09					B0500GN				
010.1BF27	50.00	0.48	3.00	0.09									
010.1BM48	50.00	0.48	3.50	0.10									
010.1BQ11	50.00	0.48	3.55	0.10				x	B0500GN				
010.1BS66	50.00	0.48	4.00	0.10									
010.1BZ92	50.00	0.48	4.50	0.10									
010.1BY81	50.00	0.48	5.00	0.13									
010.1B65A	50.00	0.48	5.30	0.13				x	B0500GN				
010.1B75F	50.00	0.48	6.00	0.13									
010.1A548	50.17	0.48	5.33	0.13	329	x	x			R32			
010.1A391	50.39	0.48	3.53	0.10	226	x	x						
010.1A223	50.47	0.48	2.62	0.09	136	x	x						
010.1A319	50.50	0.48	3.00	0.09									
010.1A071	50.52	0.48	1.78	0.08	033	x	x						
010.1A392	50.80	0.49	3.53	0.10									
010.1B310	51.00	0.49	1.50	0.08									
010.1B619	51.00	0.49	2.00	0.08									
010.1B963	51.00	0.49	2.50	0.09									
010.1BF30	51.00	0.49	3.00	0.09									
010.1BM52	51.00	0.49	3.50	0.10									
010.1BS69	51.00	0.49	4.00	0.10									
010.1BZ95	51.00	0.49	4.50	0.10									
010.1BY84	51.00	0.49	5.00	0.13									
010.1B76F	51.00	0.49	6.00	0.13									
010.51526	51.50	0.49	2.65	0.09					B0515GN				
010.1BI94	51.50	0.49	3.55	0.10				x	B0515GN				
010.1B87B	51.50	0.49	5.30	0.13				x	B0515GN				
010.1A163	51.60	0.49	2.40	0.09									x
010.51657	51.60	0.49	5.70	0.13							P52		
010.1B295	52.00	0.49	1.50	0.08									
010.1B620	52.00	0.49	2.00	0.08									
010.1B966	52.00	0.49	2.50	0.09									
010.1BF33	52.00	0.49	3.00	0.09									
010.1BM54	52.00	0.49	3.50	0.10									
010.1BS72	52.00	0.49	4.00	0.10									
010.1BY87	52.00	0.49	5.00	0.13									
010.1B77F	52.00	0.49	6.00	0.13									
010.1A224	52.07	0.49	2.62	0.09	137	x	x						
010.1A636	52.30	0.50	5.70	0.13									x
010.1A393	52.40	0.50	3.53	0.10									
010.1A637	52.50	0.50	5.70	0.13									
010.52657	52.60	0.50	5.70	0.13							P53		
010.1B316	53.00	0.50	1.50	0.08									
010.05318	53.00	0.50	1.80	0.08					B0530GN				
010.1B621	53.00	0.50	2.00	0.08									
010.1B969	53.00	0.50	2.50	0.09									
010.53265	53.00	0.50	2.65	0.09					B0530GN				
010.1BF36	53.00	0.50	3.00	0.09									
010.1BM57	53.00	0.50	3.50	0.10									
010.1BQ14	53.00	0.50	3.55	0.10				x	B0530GN				
010.1BS75	53.00	0.50	4.00	0.10									
010.1BZ94	53.00	0.50	4.50	0.10									
010.1BY90	53.00	0.50	5.00	0.13									
010.1B68A	53.00	0.50	5.30	0.13				x	B0530GN				
010.1B78F	53.00	0.50	6.00	0.13									
010.1A320	53.09	0.50	3.00	0.09	928								
010.1A549	53.34	0.50	5.33	0.13	330	x	x			R33			
010.1A394	53.57	0.51	3.53	0.10	227	x	x						
010.1A225	53.64	0.51	2.62	0.09	138	x	x						
010.1A072	53.70	0.51	1.78	0.08	034	x	x						
010.1A395	53.97	0.51	3.53	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B296	54.00	0.51	1.50	0.08									
010.1B624	54.00	0.51	2.00	0.08									
010.1B972	54.00	0.51	2.50	0.09									
010.1BF39	54.00	0.51	3.00	0.09									
010.1BM58	54.00	0.51	3.50	0.10									
010.1BS78	54.00	0.51	4.00	0.10									
010.1BY93	54.00	0.51	5.00	0.13									
010.1B79F	54.00	0.51	6.00	0.13									
010.54203	54.20	0.51	3.00	0.51								x	
010.1A638	54.20	0.51	5.70	0.51								x	
010.1A639	54.30	0.51	5.70	0.13									x
010.54431	54.40	0.51	3.10	0.09							G55		
010.1A527	54.40	0.51	5.30	0.13									
010.54526	54.50	0.51	2.65	0.09					B0545GN				
010.1A321	54.50	0.51	3.00	0.09									x
010.1BQ17	54.50	0.51	3.55	0.10				x	B0545GN				
010.05454	54.50	0.51	4.00	0.10							V55		
010.1B89B	54.50	0.51	5.30	0.13				x	B0545GN				
010.1A164	54.60	0.51	2.40	0.09									x
010.54657	54.60	0.51	5.70	0.13							P55		
010.1B298	55.00	0.52	1.50	0.08									
010.1B627	55.00	0.52	2.00	0.08									
010.1B975	55.00	0.52	2.50	0.09									
010.1BF42	55.00	0.52	3.00	0.09									
010.1BM60	55.00	0.52	3.50	0.10									
010.1A480	55.00	0.52	4.00	0.10									
010.1BY96	55.00	0.52	5.00	0.13									
010.1B81F	55.00	0.52	6.00	0.13									
010.1A226	55.25	0.52	2.62	0.09	139	x	x						
010.1A640	55.30	0.52	5.70	0.13									x
010.55530	55.50	0.52	3.00	0.09									x
010.1A396	55.56	0.52	3.53	0.10									
010.55624	55.60	0.52	2.40	0.09									x
010.55657	55.60	0.52	5.70	0.13							P56		
010.1B311	56.00	0.52	1.50	0.08									
010.05618	56.00	0.52	1.80	0.08					C0560GN				
010.1B630	56.00	0.52	2.00	0.08									
010.1B978	56.00	0.52	2.50	0.09									
010.56265	56.00	0.52	2.65	0.09					C0560GN				
010.1BF44	56.00	0.52	3.00	0.09									
010.1BM61	56.00	0.52	3.50	0.10									
010.1BQ20	56.00	0.52	3.55	0.10				x	C0560GN				
010.1BS84	56.00	0.52	4.00	0.10									
010.1BJ00	56.00	0.52	4.50	0.10									
010.1BY97	56.00	0.52	5.00	0.13									
010.1B71A	56.00	0.52	5.30	0.13				x	C0560GN				
010.1B80F	56.00	0.52	6.00	0.13									
010.1A550	56.52	0.53	5.33	0.13	331	x	x			R34			
010.1A397	56.74	0.53	3.53	0.10	228	x	x						
010.1A227	56.82	0.53	2.62	0.09	140	x	x						
010.1A073	56.87	0.53	1.78	0.08	035	x	x						
010.1B300	57.00	0.53	1.50	0.08									
010.1B633	57.00	0.53	2.00	0.08									
010.1B981	57.00	0.53	2.50	0.09									
010.1BF48	57.00	0.53	3.00	0.09									
010.1BM62	57.00	0.53	3.50	0.10									
010.1BS87	57.00	0.53	4.00	0.10									
010.1BZ99	57.00	0.53	4.50	0.10									
010.1BY99	57.00	0.53	5.00	0.13									
010.1B82F	57.00	0.53	6.00	0.13									
010.1A398	57.15	0.53	3.53	0.10									
010.57530	57.50	0.53	3.00	0.09									x
010.1A165	57.60	0.53	2.40	0.09									x
010.57657	57.60	0.53	5.70	0.13							P58		
010.1B299	58.00	0.54	1.50	0.08									
010.1B636	58.00	0.54	2.00	0.08									
010.1B983	58.00	0.54	2.50	0.09									
010.58265	58.00	0.54	2.65	0.09					C0580GN				
010.1BF51	58.00	0.54	3.00	0.09									
010.1BM63	58.00	0.54	3.50	0.10									
010.1BQ23	58.00	0.54	3.55	0.10				x	C0580GN				
010.1BS90	58.00	0.54	4.00	0.10									
010.1BK02	58.00	0.54	5.00	0.13									
010.1B82A	58.00	0.54	5.30	0.13				x	C0580GN				
010.1B83F	58.00	0.54	6.00	0.13									
010.1A228	58.42	0.54	2.62	0.09	141	x	x						
010.58624	58.60	0.54	2.40	0.09									x
010.1A399	58.74	0.54	3.53	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B313	59.00	0.54	1.50	0.08									
010.1B637	59.00	0.54	2.00	0.08									
010.1B984	59.00	0.54	2.50	0.09									
010.1BF54	59.00	0.54	3.00	0.09									
010.1BM66	59.00	0.54	3.50	0.10									
010.1BS93	59.00	0.54	4.00	0.10									
010.1BK04	59.00	0.54	5.00	0.13									
010.59203	59.20	0.54	3.00	0.54								x	
010.1A641	59.20	0.54	5.70	0.54								x	
010.1A642	59.30	0.55	5.70	0.13									x
010.1A322	59.36	0.55	3.00	0.09	932								
010.59431	59.40	0.55	3.10	0.09							G60		
010.1A323	59.50	0.55	3.00	0.09									x
010.1B85F	59.50	0.55	6.00	0.13									
010.1A166	59.60	0.55	2.40	0.09									x
010.59657	59.60	0.55	5.70	0.13							P60		
010.1A551	59.69	0.55	5.33	0.13	332	x	x			R35			
010.1A643	59.70	0.55	5.70	0.13									
010.1A400	59.92	0.55	3.53	0.10	229	x	x						
010.1A229	59.99	0.55	2.62	0.09	142	x	x						
010.1B301	60.00	0.55	1.50	0.08									
010.06018	60.00	0.55	1.80	0.08					C0600GN				
010.1B639	60.00	0.55	2.00	0.08									
010.1B987	60.00	0.55	2.50	0.09									
010.60265	60.00	0.55	2.65	0.09					C0600GN				
010.1BF57	60.00	0.55	3.00	0.09									
010.1BM69	60.00	0.55	3.50	0.10									
010.1BQ26	60.00	0.55	3.55	0.10				x	C0600GN				
010.1A481	60.00	0.55	4.00	0.10									
010.1BZ97	60.00	0.55	4.50	0.10									
010.1BK05	60.00	0.55	5.00	0.13									
010.1B86A	60.00	0.55	5.30	0.13				x	C0600GN				
010.1B87F	60.00	0.55	6.00	0.13									
010.1A074	60.04	0.55	1.78	0.08	036	x							
010.60178	60.05	0.55	1.78	0.08	036	x	x						
010.1A401	60.32	0.55	3.53	0.10									
010.1B317	61.00	0.56	1.50	0.08									
010.1B641	61.00	0.56	2.00	0.08									
010.1B989	61.00	0.56	2.50	0.09									
010.1BF58	61.00	0.56	3.00	0.09									
010.1BM70	61.00	0.56	3.50	0.10									
010.1BS99	61.00	0.56	4.00	0.10									
010.1BJ03	61.00	0.56	4.50	0.10									
010.1BK08	61.00	0.56	5.00	0.13									
010.1B86F	61.00	0.56	6.00	0.13									
010.61526	61.50	0.56	2.65	0.09					C0615GN				
010.1BQ29	61.50	0.56	3.55	0.10				x	C0615GN				
010.1B90B	61.50	0.56	5.30	0.13				x	C0615GN				
010.1A167	61.60	0.56	2.40	0.09									x
010.1A230	61.60	0.56	2.62	0.09	143	x	x						
010.61657	61.60	0.56	5.70	0.13							P62		
010.1A402	61.90	0.56	3.53	0.10									
010.1B302	62.00	0.56	1.50	0.08									
010.1B642	62.00	0.56	2.00	0.08									
010.1B990	62.00	0.56	2.50	0.09									
010.1BF60	62.00	0.56	3.00	0.09									
010.1BM71	62.00	0.56	3.50	0.10									
010.1BT02	62.00	0.56	4.00	0.10									
010.1BK11	62.00	0.56	5.00	0.13									
010.1A644	62.00	0.56	5.70	0.13									
010.1B88F	62.00	0.56	6.00	0.13									
010.1A645	62.30	0.57	5.70	0.13									x
010.62530	62.50	0.57	3.00	0.09									x
010.62624	62.60	0.57	2.40	0.09									x
010.62657	62.60	0.57	5.70	0.13							P63		
010.1A552	62.87	0.57	5.33	0.13	333	x	x			R36			
010.1B314	63.00	0.57	1.50	0.08									
010.06318	63.00	0.57	1.80	0.08					C0630GN				
010.1B645	63.00	0.57	2.00	0.08									
010.1B993	63.00	0.57	2.50	0.09									
010.63265	63.00	0.57	2.65	0.09					C0630GN				
010.1BF63	63.00	0.57	3.00	0.09									
010.1BM72	63.00	0.57	3.50	0.10									
010.1BQ32	63.00	0.57	3.55	0.10				x	C0630GN				
010.1A482	63.00	0.57	4.00	0.10									
010.1BZ93	63.00	0.57	4.50	0.10									
010.1BK14	63.00	0.57	5.00	0.13									
010.1B89A	63.00	0.57	5.30	0.13				x	C0630GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B89F	63.00	0.57	6.00	0.13									
010.1A403	63.09	0.57	3.53	0.10	230	x	x						
010.1A231	63.17	0.57	2.62	0.09	144	x	x						
010.1A075	63.22	0.57	1.78	0.08	037	x	x						
010.1A404	63.50	0.57	3.53	0.10									
010.1B326	64.00	0.58	1.50	0.08									
010.1B646	64.00	0.58	2.00	0.08									
010.1B995	64.00	0.58	2.50	0.09									
010.1BF66	64.00	0.58	3.00	0.09									
010.1BM75	64.00	0.58	3.50	0.10									
010.1BT08	64.00	0.58	4.00	0.10									
010.1BJ01	64.00	0.58	4.50	0.10									
010.1BK17	64.00	0.58	5.00	0.13									
010.1A646	64.00	0.58	5.70	0.13									
010.1B90F	64.00	0.58	6.00	0.13									
010.1A647	64.20	0.58	5.70	0.58								x	
010.1A648	64.30	0.58	5.70	0.13									x
010.64431	64.40	0.58	3.10	0.09							G65		
010.1A324	64.50	0.58	3.00	0.58								x	x
010.1A168	64.60	0.58	2.40	0.09									x
010.64657	64.60	0.58	5.70	0.13							P65		
010.1A232	64.77	0.58	2.62	0.09	145	x	x						
010.1B320	65.00	0.58	1.50	0.08									
010.1B648	65.00	0.58	2.00	0.08									
010.1B996	65.00	0.58	2.50	0.09									
010.65265	65.00	0.58	2.65	0.09					C0650GN				
010.1BF69	65.00	0.58	3.00	0.09									
010.1BM77	65.00	0.58	3.50	0.10									
010.1BQ35	65.00	0.58	3.55	0.10				x	C0650GN				
010.1A483	65.00	0.58	4.00	0.10									
010.1BJ02	65.00	0.58	4.50	0.10									
010.1BK20	65.00	0.58	5.00	0.13									
010.1B92A	65.00	0.58	5.30	0.13				x	C0650GN				
010.1B93F	65.00	0.58	6.00	0.13									
010.1A405	65.10	0.59	3.53	0.10									
010.1B290	66.00	0.59	1.50	0.08									
010.1B649	66.00	0.59	2.00	0.08									
010.1B997	66.00	0.59	2.50	0.09									
010.1BF72	66.00	0.59	3.00	0.09									
010.1BM80	66.00	0.59	3.50	0.10									
010.1BT12	66.00	0.59	4.00	0.10									
010.1BJ24	66.00	0.59	4.50	0.10									
010.1BK23	66.00	0.59	5.00	0.13									
010.1B94F	66.00	0.59	6.00	0.13									
010.1A553	66.04	0.59	5.33	0.13	334	x	x			R37			
010.1A406	66.27	0.59	3.53	0.10	231	x	x						
010.1A233	66.34	0.59	2.62	0.09	146	x	x						
010.1A076	66.40	0.59	1.78	0.08	038	x	x						
010.66657	66.60	0.60	5.70	0.13							P67		
010.1A407	66.67	0.60	3.53	0.10									
010.1B322	67.00	0.60	1.50	0.08									
010.06718	67.00	0.60	1.80	0.08					C0670GN				
010.1B650	67.00	0.60	2.00	0.08									
010.1B999	67.00	0.60	2.50	0.09									
010.67265	67.00	0.60	2.65	0.09					C0670GN				
010.1BF75	67.00	0.60	3.00	0.09									
010.1BM82	67.00	0.60	3.50	0.10									
010.1BI95	67.00	0.60	3.55	0.10				x	C0670GN				
010.1BT14	67.00	0.60	4.00	0.10									
010.1BK24	67.00	0.60	5.00	0.13									
010.1B92B	67.00	0.60	5.30	0.13				x	C0670GN				
010.1B95F	67.00	0.60	6.00	0.13									
010.1A169	67.60	0.60	2.40	0.09									x
010.1A234	67.95	0.61	2.62	0.09	147	x	x						
010.1B233	68.00	0.61	1.50	0.08									
010.1B651	68.00	0.61	2.00	0.08									
010.1BA01	68.00	0.61	2.50	0.09									
010.1BF78	68.00	0.61	3.00	0.09									
010.1BM85	68.00	0.61	3.50	0.10									
010.1BT17	68.00	0.61	4.00	0.10									
010.1BJ04	68.00	0.61	4.50	0.10									
010.1BK26	68.00	0.61	5.00	0.13									
010.1B96F	68.00	0.61	6.00	0.13									
010.1A408	68.26	0.61	3.53	0.10									
010.1B230	69.00	0.61	1.50	0.08									
010.1B652	69.00	0.61	2.00	0.08									
010.1BA02	69.00	0.61	2.50	0.09									
010.69265	69.00	0.61	2.65	0.09					C0690GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BF81	69.00	0.61	3.00	0.09									
010.1BM83	69.00	0.61	3.50	0.10									
010.1BQ38	69.00	0.61	3.55	0.10				x	C0690GN				
010.1BT20	69.00	0.61	4.00	0.10							V70		
010.1BJ26	69.00	0.61	4.50	0.10									
010.1BK29	69.00	0.61	5.00	0.13									
010.1B98A	69.00	0.61	5.30	0.13				x	C0690GN				
010.1A649	69.00	0.61	5.70	0.13									
010.1B98F	69.00	0.61	6.00	0.13									
010.1A650	69.20	0.61	5.70	0.61								x	
010.1A554	69.22	0.61	5.33	0.13	335	x	x			R38			
010.1A651	69.30	0.61	5.70	0.13									x
010.69431	69.40	0.62	3.10	0.09							G70		
010.1A409	69.44	0.62	3.53	0.10	232	x	x						
010.1A325	69.50	0.62	3.00	0.62								x	x
010.1A235	69.52	0.62	2.62	0.09	148	x	x						
010.1A077	69.57	0.62	1.78	0.08	039	x	x						
010.1A170	69.60	0.62	2.40	0.09									x
010.69657	69.60	0.62	5.70	0.13							P70		
010.1A410	69.85	0.62	3.53	0.10									
010.1B305	70.00	0.62	1.50	0.08									
010.1B654	70.00	0.62	2.00	0.08									
010.1BA05	70.00	0.62	2.50	0.09									
010.1BF84	70.00	0.62	3.00	0.09									
010.1BM87	70.00	0.62	3.50	0.10									
010.1A484	70.00	0.62	4.00	0.10									
010.1BJ05	70.00	0.62	4.50	0.10									
010.1BK32	70.00	0.62	5.00	0.13									
010.1B99F	70.00	0.62	6.00	0.13									
010.70657	70.60	0.62	5.70	0.13							P71		
010.1B229	71.00	0.63	1.50	0.08									
010.07118	71.00	0.63	1.80	0.08					C0710GN				
010.1B653	71.00	0.63	2.00	0.08									
010.1BA07	71.00	0.63	2.50	0.09									
010.71265	71.00	0.63	2.65	0.09					C0710GN				
010.1BF85	71.00	0.63	3.00	0.09									
010.1BM90	71.00	0.63	3.50	0.10									
010.1BQ41	71.00	0.63	3.55	0.10				x	C0710GN				
010.1BT25	71.00	0.63	4.00	0.10									
010.1BJ29	71.00	0.63	4.50	0.10									
010.1BK33	71.00	0.63	5.00	0.13									
010.1B93B	71.00	0.63	5.30	0.13				x	C0710GN				
010.1A236	71.12	0.63	2.62	0.09	149	x	x						
010.1A411	71.44	0.63	3.53	0.10									
010.1B227	72.00	0.63	1.50	0.08									
010.1B655	72.00	0.63	2.00	0.08									
010.1BA08	72.00	0.63	2.50	0.09									
010.1BF87	72.00	0.63	3.00	0.09									
010.1BM91	72.00	0.63	3.50	0.10									
010.1BT26	72.00	0.63	4.00	0.10									
010.1BK35	72.00	0.63	5.00	0.13									
010.1B03G	72.00	0.63	6.00	0.13									
010.1A555	72.39	0.64	5.33	0.13	336	x	x			R39			
010.1A412	72.62	0.64	3.53	0.10	233	x	x						
010.1A237	72.69	0.64	2.62	0.09	150	x	x						
010.1A078	72.75	0.64	1.78	0.08	040	x	x						
010.1B283	73.00	0.64	1.50	0.08									
010.1B656	73.00	0.64	2.00	0.08									
010.1BA11	73.00	0.64	2.50	0.09									
010.73265	73.00	0.64	2.65	0.09					C0730GN				
010.1BF90	73.00	0.64	3.00	0.09									
010.1BM92	73.00	0.64	3.50	0.10									
010.1BQ44	73.00	0.64	3.55	0.10				x	C0730GN				
010.1BT29	73.00	0.64	4.00	0.10									
010.1BJ08	73.00	0.64	4.50	0.10									
010.1BK39	73.00	0.64	5.00	0.13									
010.1B04B	73.00	0.64	5.30	0.13				x	C0730GN				
010.1B05G	73.00	0.64	6.00	0.13									
010.1A413	73.02	0.64	3.53	0.10									
010.1B226	74.00	0.65	1.50	0.08									
010.1B657	74.00	0.65	2.00	0.08									
010.1BA12	74.00	0.65	2.50	0.09									
010.1BF93	74.00	0.65	3.00	0.09									
010.1BM94	74.00	0.65	3.50	0.10									
010.1BT32	74.00	0.65	4.00	0.10									
010.1BJ30	74.00	0.65	4.50	0.10									
010.1BK38	74.00	0.65	5.00	0.13									
010.1A652	74.00	0.65	5.70	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B08G	74.00	0.65	6.00	0.13									
010.1A653	74.20	0.65	5.70	0.65								x	
010.1BB89	74.30	0.65	2.62	0.09									
010.1A654	74.30	0.65	5.70	0.13									x
010.74431	74.40	0.65	3.10	0.09							G75		
010.1A326	74.50	0.65	3.00	0.65								x	x
010.1A414	74.60	0.65	3.53	0.10									
010.74657	74.60	0.65	5.70	0.13							P75		
010.1A556	74.63	0.65	5.33	0.13									
010.1B224	75.00	0.65	1.50	0.08									
010.07518	75.00	0.65	1.80	0.08					C0750GN				
010.1B659	75.00	0.65	2.00	0.08									
010.1BA14	75.00	0.65	2.50	0.09									
010.75265	75.00	0.65	2.65	0.09					C0750GN				
010.1BF96	75.00	0.65	3.00	0.09									
010.1BM95	75.00	0.65	3.50	0.10									
010.1BQ47	75.00	0.65	3.55	0.10				x	C0750GN				
010.1A485	75.00	0.65	4.00	0.10									
010.1BJ09	75.00	0.65	4.50	0.10									
010.1BK41	75.00	0.65	5.00	0.13									
010.1B07B	75.00	0.65	5.30	0.13				x	C0750GN				
010.1B11G	75.00	0.65	6.00	0.13									
010.1A557	75.57	0.66	5.33	0.13	337	x	x			R40			
010.1A415	75.79	0.66	3.53	0.10	234	x	x						
010.1A238	75.87	0.66	2.62	0.09	151	x	x						
010.1A079	75.92	0.66	1.78	0.08	041	x	x						
010.1B337	76.00	0.66	1.50	0.08									
010.1B660	76.00	0.66	2.00	0.08									
010.1BA17	76.00	0.66	2.50	0.09									
010.1BF99	76.00	0.66	3.00	0.09									
010.1BM97	76.00	0.66	3.50	0.10									
010.1BT38	76.00	0.66	4.00	0.10									
010.1BJ10	76.00	0.66	4.50	0.10									
010.1BK44	76.00	0.66	5.00	0.13									
010.1B10G	76.00	0.66	6.00	0.13									
010.1B338	77.00	0.67	1.50	0.08									
010.1B661	77.00	0.67	2.00	0.08									
010.1BA20	77.00	0.67	2.50	0.09									
010.1BG00	77.00	0.67	3.00	0.09									
010.1BM96	77.00	0.67	3.50	0.10									
010.1BT41	77.00	0.67	4.00	0.10									
010.1BK45	77.00	0.67	5.00	0.13									
010.1BB90	77.50	0.67	2.62	0.09									
010.77526	77.50	0.67	2.65	0.09					C0775GN				
010.1BI97	77.50	0.67	3.55	0.10				x	C0775GN				
010.1B95B	77.50	0.67	5.30	0.13				x	C0775GN				
010.1B340	78.00	0.67	1.50	0.08									
010.1B663	78.00	0.67	2.00	0.08									
010.1BA23	78.00	0.67	2.50	0.09									
010.1BG02	78.00	0.67	3.00	0.09									
010.1BM99	78.00	0.67	3.50	0.10									
010.1BT44	78.00	0.67	4.00	0.10									
010.1BK47	78.00	0.67	5.00	0.13									
010.1B09G	78.00	0.67	6.00	0.13									
010.1B07G	78.50	0.68	6.00	0.13									
010.1A558	78.74	0.68	5.33	0.13	338	x	x			R41			
010.1A416	78.97	0.68	3.53	0.10	235	x	x						
010.1B343	79.00	0.68	1.50	0.08									
010.1B395	79.00	0.68	1.78	0.08									
010.1B664	79.00	0.68	2.00	0.08									
010.1BA25	79.00	0.68	2.50	0.09									
010.1BG05	79.00	0.68	3.00	0.09									
010.1BN00	79.00	0.68	3.50	0.10									
010.1BT47	79.00	0.68	4.00	0.10									
010.1BK50	79.00	0.68	5.00	0.13									
010.1A655	79.00	0.68	5.70	0.13									
010.1B06G	79.00	0.68	6.00	0.13									
010.1A656	79.20	0.68	5.70	0.68								x	
010.1A657	79.30	0.68	5.70	0.13									x
010.79431	79.40	0.68	3.10	0.09							G80		
010.1A327	79.50	0.68	3.00	0.68								x	x
010.79657	79.60	0.69	5.70	0.13							P80		
010.1A559	79.73	0.69	5.33	0.13									
010.1B284	80.00	0.69	1.50	0.08									
010.08018	80.00	0.69	1.80	0.08					C0800GN				
010.1B666	80.00	0.69	2.00	0.08									
010.1BA26	80.00	0.69	2.50	0.09									
010.80265	80.00	0.69	2.65	0.09					C0800GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BG08	80.00	0.69	3.00	0.09									
010.1BN02	80.00	0.69	3.50	0.10									
010.1BQ53	80.00	0.69	3.55	0.10				x	C0800GN				
010.1BT50	80.00	0.69	4.00	0.10									
010.1BJ11	80.00	0.69	4.50	0.10									
010.1BK53	80.00	0.69	5.00	0.13									
010.1B13B	80.00	0.69	5.30	0.13				x	C0800GN				
010.1B12G	80.00	0.69	6.00	0.13									
010.1BB92	80.60	0.69	2.62	0.09									
010.1B344	81.00	0.70	1.50	0.08									
010.1B667	81.00	0.70	2.00	0.08									
010.1BA27	81.00	0.70	2.50	0.09									
010.1BG11	81.00	0.70	3.00	0.09									
010.1BN04	81.00	0.70	3.50	0.10									
010.1BT53	81.00	0.70	4.00	0.10									
010.1BJ32	81.00	0.70	4.50	0.10									
010.1BK55	81.00	0.70	5.00	0.13									
010.1B13G	81.00	0.70	6.00	0.13									
010.1B15G	81.50	0.70	6.00	0.13									
010.1A560	81.92	0.70	5.33	0.13	339	x	x			R42			
010.1B349	82.00	0.70	1.50	0.08									
010.1B668	82.00	0.70	2.00	0.08									
010.1BA28	82.00	0.70	2.50	0.09									
010.1BG14	82.00	0.70	3.00	0.09									
010.1BN08	82.00	0.70	3.50	0.10									
010.1BT56	82.00	0.70	4.00	0.10									
010.1BK56	82.00	0.70	5.00	0.13									
010.1A417	82.14	0.70	3.53	0.10	236	x	x						
010.1A239	82.22	0.70	2.62	0.09	152	x	x						
010.1A080	82.27	0.70	1.78	0.08	042	x	x						
010.82526	82.50	0.71	2.65	0.09					C0825GN				
010.1BQ56	82.50	0.71	3.55	0.10				x	C0825GN				
010.1B19B	82.50	0.71	5.30	0.13				x	C0825GN				
010.1B350	83.00	0.71	1.50	0.08									
010.1B670	83.00	0.71	2.00	0.08									
010.1BA30	83.00	0.71	2.50	0.09									
010.1BG17	83.00	0.71	3.00	0.09									
010.1BN09	83.00	0.71	3.50	0.10									
010.1BT57	83.00	0.71	4.00	0.10									
010.1BJ33	83.00	0.71	4.50	0.10									
010.1BK57	83.00	0.71	5.00	0.13									
010.1BB95	83.80	0.71	2.62	0.09									
010.1B352	84.00	0.72	1.50	0.08									
010.1B669	84.00	0.72	2.00	0.08									
010.1BA29	84.00	0.72	2.50	0.09									
010.1BG20	84.00	0.72	3.00	0.09									
010.1BN10	84.00	0.72	3.50	0.10									
010.1BT59	84.00	0.72	4.00	0.10							V85		
010.1BK58	84.00	0.72	5.00	0.13									
010.1A658	84.00	0.72	5.70	0.13									
010.1B16G	84.00	0.72	6.00	0.13									
010.1A659	84.10	0.72	5.70	0.72								x	
010.1A660	84.30	0.72	5.70	0.13									x
010.84431	84.40	0.72	3.10	0.09							G85		
010.1A328	84.50	0.72	3.00	0.72								x	x
010.84657	84.60	0.72	5.70	0.13							P85		
010.1B359	85.00	0.72	1.50	0.08									
010.08518	85.00	0.72	1.80	0.08					C0850GN				
010.1B672	85.00	0.72	2.00	0.08									
010.1BA31	85.00	0.72	2.50	0.09									
010.85265	85.00	0.72	2.65	0.09					C0850GN				
010.1BG23	85.00	0.72	3.00	0.09									
010.1BN11	85.00	0.72	3.50	0.10									
010.1BI98	85.00	0.72	3.55	0.10				x	C0850GN				
010.1A486	85.00	0.72	4.00	0.10									
010.1BJ12	85.00	0.72	4.50	0.10									
010.1BK59	85.00	0.72	5.00	0.13									
010.1B25B	85.00	0.72	5.30	0.13				x	C0850GN				
010.1B14G	85.00	0.72	6.00	0.13									
010.1A561	85.09	0.72	5.33	0.13	340	x	x			R43			
010.1A418	85.32	0.72	3.53	0.10	237	x	x						
010.1B397	85.34	0.72	1.78	0.08									
010.1B361	86.00	0.73	1.50	0.08									
010.1B675	86.00	0.73	2.00	0.08									
010.1BA33	86.00	0.73	2.50	0.09									
010.1BG26	86.00	0.73	3.00	0.09									
010.1BN12	86.00	0.73	3.50	0.10									
010.1BT65	86.00	0.73	4.00	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BJ35	86.00	0.73	4.50	0.10									
010.1BK62	86.00	0.73	5.00	0.13									
010.1B17G	86.00	0.73	6.00	0.13									
010.1B362	87.00	0.74	1.50	0.08									
010.1B676	87.00	0.74	2.00	0.08									
010.1BA34	87.00	0.74	2.50	0.09									
010.1BG29	87.00	0.74	3.00	0.09									
010.1BN13	87.00	0.74	3.50	0.10									
010.1BT66	87.00	0.74	4.00	0.10									
010.1BK63	87.00	0.74	5.00	0.13									
010.87526	87.50	0.74	2.65	0.09					C0875GN				
010.1BL00	87.50	0.74	3.55	0.10				x	C0875GN				
010.1B96B	87.50	0.74	5.30	0.13				x	C0875GN				
010.1B364	88.00	0.74	1.50	0.08									
010.1B678	88.00	0.74	2.00	0.08									
010.1BA36	88.00	0.74	2.50	0.09									
010.1BG32	88.00	0.74	3.00	0.09									
010.1BN14	88.00	0.74	3.50	0.10									
010.1BT68	88.00	0.74	4.00	0.10									
010.1BK65	88.00	0.74	5.00	0.13									
010.1B20G	88.00	0.74	6.00	0.13									
010.1A562	88.27	0.74	5.33	0.13	341	x	x			R44			
010.1A419	88.49	0.75	3.53	0.10	238	x	x						
010.1A240	88.57	0.75	2.62	0.09	153	x	x						
010.1A081	88.62	0.75	1.78	0.08	043	x	x						
010.1B368	89.00	0.75	1.50	0.08									
010.1B679	89.00	0.75	2.00	0.08									
010.1BA37	89.00	0.75	2.50	0.09									
010.1BG35	89.00	0.75	3.00	0.09									
010.1BN15	89.00	0.75	3.50	0.10									
010.1BT71	89.00	0.75	4.00	0.10									
010.1BJ13	89.00	0.75	4.50	0.10									
010.1BK66	89.00	0.75	5.00	0.13									
010.1A661	89.00	0.75	5.70	0.13									
010.1A662	89.10	0.75	5.70	0.75								x	
010.1A663	89.30	0.75	5.70	0.13									x
010.89431	89.40	0.75	3.10	0.09							G90		
010.1A329	89.50	0.75	3.00	0.75								x	x
010.89657	89.60	0.75	5.70	0.13							P90		
010.1A563	89.69	0.75	5.33	0.13									
010.1B335	90.00	0.76	1.50	0.08									
010.09018	90.00	0.76	1.80	0.08					C0900GN				
010.1B681	90.00	0.76	2.00	0.08									
010.1BA38	90.00	0.76	2.50	0.09									
010.90265	90.00	0.76	2.65	0.09					C0900GN				
010.1BG38	90.00	0.76	3.00	0.09									
010.1BN17	90.00	0.76	3.50	0.10									
010.1BQ62	90.00	0.76	3.55	0.10				x	C0900GN				
010.1A487	90.00	0.76	4.00	0.10									
010.1BJ14	90.00	0.76	4.50	0.10									
010.1BK68	90.00	0.76	5.00	0.13									
010.1B28B	90.00	0.76	5.30	0.13				x	C0900GN				
010.1B23G	90.00	0.76	6.00	0.13									
010.1B370	91.00	0.76	1.50	0.08									
010.1B682	91.00	0.76	2.00	0.08									
010.1BA40	91.00	0.76	2.50	0.09									
010.1BG39	91.00	0.76	3.00	0.09									
010.1BN18	91.00	0.76	3.50	0.10									
010.1BT77	91.00	0.76	4.00	0.10									
010.1BK69	91.00	0.76	5.00	0.13									
010.1A564	91.44	0.77	5.33	0.13	342	x	x			R45			
010.1A420	91.67	0.77	3.53	0.10	239	x	x						
010.1B398	91.70	0.77	1.78	0.08									
010.1B371	92.00	0.77	1.50	0.08									
010.1B683	92.00	0.77	2.00	0.08									
010.1BA42	92.00	0.77	2.50	0.09									
010.1BG41	92.00	0.77	3.00	0.09									
010.1BN16	92.00	0.77	3.50	0.10									
010.1BT80	92.00	0.77	4.00	0.10									
010.1BJ38	92.00	0.77	4.50	0.10									
010.1BK71	92.00	0.77	5.00	0.13									
010.1B22G	92.00	0.77	6.00	0.13									
010.92526	92.50	0.77	2.65	0.09					C0925GN				
010.1BQ65	92.50	0.77	3.55	0.10				x	C0925GN				
010.1B99B	92.50	0.77	5.30	0.13				x	C0925GN				
010.1B373	93.00	0.78	1.50	0.08									
010.1B684	93.00	0.78	2.00	0.08									
010.1BA43	93.00	0.78	2.50	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BG44	93.00	0.78	3.00	0.09									
010.1BN21	93.00	0.78	3.50	0.10									
010.1BT83	93.00	0.78	4.00	0.10									
010.1BK74	93.00	0.78	5.00	0.13									
010.1B24G	93.00	0.78	6.00	0.13									
010.1BJ16	93.50	0.78	4.50	0.10									
010.1B385	94.00	0.78	1.50	0.08									
010.1B687	94.00	0.78	2.00	0.08									
010.1BA44	94.00	0.78	2.50	0.09									
010.1BG47	94.00	0.78	3.00	0.09									
010.1BN19	94.00	0.78	3.50	0.10									
010.1BT86	94.00	0.78	4.00	0.10									
010.1BK75	94.00	0.78	5.00	0.13									
010.1A664	94.00	0.78	5.70	0.13									
010.1A665	94.10	0.78	5.70	0.78								x	
010.1A666	94.30	0.79	5.70	0.13									x
010.94431	94.40	0.79	3.10	0.09							G95		
010.1A330	94.50	0.79	3.00	0.79								x	x
010.94657	94.60	0.79	5.70	0.13							P95		
010.1A565	94.62	0.79	5.33	0.13	343	x	x			R46			
010.1A421	94.84	0.79	3.53	0.10	240	x	x						
010.1A241	94.92	0.79	2.62	0.09	154	x	x						
010.1A082	94.97	0.79	1.78	0.08	044	x	x						
010.1B386	95.00	0.79	1.50	0.08									
010.09518	95.00	0.79	1.80	0.08					C0950GN				
010.1B688	95.00	0.79	2.00	0.08									
010.1BA47	95.00	0.79	2.50	0.09									
010.95265	95.00	0.79	2.65	0.09					C0950GN				
010.1BG50	95.00	0.79	3.00	0.09									
010.1BN22	95.00	0.79	3.50	0.10									
010.1BQ68	95.00	0.79	3.55	0.10				x	C0950GN				
010.1BT89	95.00	0.79	4.00	0.10									
010.1BJ19	95.00	0.79	4.50	0.10									
010.1BK77	95.00	0.79	5.00	0.13									
010.1B31B	95.00	0.79	5.30	0.13				x	C0950GN				
010.1B25G	95.00	0.79	6.00	0.13									
010.1B388	96.00	0.80	1.50	0.08									
010.1B690	96.00	0.80	2.00	0.08									
010.1BA48	96.00	0.80	2.50	0.09									
010.1BG53	96.00	0.80	3.00	0.09									
010.1BN24	96.00	0.80	3.50	0.10									
010.1BT92	96.00	0.80	4.00	0.10									
010.1BK78	96.00	0.80	5.00	0.13									
010.1B26G	96.00	0.80	6.00	0.13									
010.1B436	97.00	0.80	1.50	0.08									
010.1B689	97.00	0.80	2.00	0.08									
010.1BA49	97.00	0.80	2.50	0.09									
010.1BG54	97.00	0.80	3.00	0.09									
010.1BN23	97.00	0.80	3.50	0.10									
010.1BT95	97.00	0.80	4.00	0.10									
010.1BK80	97.00	0.80	5.00	0.13									
010.97526	97.50	0.81	2.65	0.09					C0975GN				
010.1BQ71	97.50	0.81	3.55	0.10				x	C0975GN				
010.1BJ39	97.50	0.81	4.50	0.10									
010.1B01C	97.50	0.81	5.30	0.13				x	C0975GN				
010.1A566	97.79	0.81	5.33	0.13	344	x	x			R47			
010.1B437	98.00	0.81	1.50	0.08									
010.1B691	98.00	0.81	2.00	0.08									
010.1BA51	98.00	0.81	2.50	0.09									
010.1BG56	98.00	0.81	3.00	0.09									
010.1BN26	98.00	0.81	3.50	0.10									
010.1BT96	98.00	0.81	4.00	0.10									
010.1BJ41	98.00	0.81	4.50	0.10									
010.1BK81	98.00	0.81	5.00	0.13									
010.1B27G	98.00	0.81	6.00	0.13									
010.1A422	98.02	0.81	3.53	0.10	241	x	x						
010.1B400	98.05	0.81	1.78	0.08									
010.1B439	99.00	0.82	1.50	0.08									
010.1B692	99.00	0.82	2.00	0.08									
010.1BA50	99.00	0.82	2.50	0.09									
010.1BG59	99.00	0.82	3.00	0.09									
010.1BN27	99.00	0.82	3.50	0.10									
010.1BT97	99.00	0.82	4.00	0.10							V100		
010.1BK83	99.00	0.82	5.00	0.13									
010.1A667	99.00	0.82	5.70	0.13									
010.1B28G	99.00	0.82	6.00	0.13									
010.1A668	99.10	0.82	5.70	0.82								x	
010.1A669	99.30	0.82	5.70	0.13									x

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.99431	99.40	0.82	3.10	0.09							G100		
010.1A331	99.50	0.82	3.00	0.82								x	x
010.1BJ42	99.50	0.82	4.50	0.10									
010.99657	99.60	0.82	5.70	0.13							P100		
010.1B440	100.00	0.82	1.50	0.08									
010.10018	100.00	0.82	1.80	0.08					C1000GN				
010.1B693	100.00	0.82	2.00	0.08									
010.1BA53	100.00	0.82	2.50	0.09									
010.10026	100.00	0.82	2.65	0.09					C1000GN				
010.1BG62	100.00	0.82	3.00	0.09									
010.1BN29	100.00	0.82	3.50	0.10									
010.1BQ74	100.00	0.82	3.55	0.10				x	C1000GN				
010.1A488	100.00	0.82	4.00	0.10									
010.1BJ21	100.00	0.82	4.50	0.10									
010.1BK86	100.00	0.82	5.00	0.13									
010.1B34B	100.00	0.82	5.30	0.13				x	C1000GN				
010.1A567	100.00	0.82	5.33	0.13									
010.1B29G	100.00	0.82	6.00	0.13									
010.1BJ44	100.50	0.83	4.50	0.10									
010.1A568	100.97	0.83	5.33	0.13	345	x	x			R48			
010.1BA54	101.00	0.83	2.50	0.09									
010.1BG65	101.00	0.83	3.00	0.09									
010.1BN31	101.00	0.83	3.50	0.10									
010.1BU01	101.00	0.83	4.00	0.10									
010.1BJ22	101.00	0.83	4.50	0.10									
010.1BK87	101.00	0.83	5.00	0.13									
010.1B32G	101.00	0.83	6.00	0.13									
010.1A423	101.19	0.83	3.53	0.10	242	x	x						
010.1A242	101.27	0.83	2.62	0.09	155	x	x						
010.1A083	101.32	0.83	1.78	0.08	045	x	x						
010.10157	101.60	0.84	5.70	0.13							P102		
010.1BA55	102.00	0.84	2.50	0.09									
010.1BG68	102.00	0.84	3.00	0.09									
010.1BN33	102.00	0.84	3.50	0.10									
010.1BU04	102.00	0.84	4.00	0.10									
010.1BK89	102.00	0.84	5.00	0.13									
010.1BA57	103.00	0.85	2.50	0.09									
010.1BG71	103.00	0.85	3.00	0.09									
010.1BN35	103.00	0.85	3.50	0.10									
010.1BQ77	103.00	0.85	3.55	0.10				x	C1030GN				
010.1BU06	103.00	0.85	4.00	0.10									
010.1BK92	103.00	0.85	5.00	0.13									
010.1B02C	103.00	0.85	5.30	0.13				x	C1030GN				
010.1B36G	103.00	0.85	6.00	0.13									
010.1BJ47	103.50	0.85	4.50	0.10									
010.1BA52	104.00	0.85	2.50	0.09									
010.1BG72	104.00	0.85	3.00	0.09									
010.1BN36	104.00	0.85	3.50	0.10									
010.1BU07	104.00	0.85	4.00	0.10									
010.1BK95	104.00	0.85	5.00	0.13									
010.1A670	104.00	0.85	5.70	0.13									
010.1B37G	104.00	0.85	6.00	0.13									
010.1A671	104.10	0.85	5.70	0.85								x	
010.1A569	104.14	0.85	5.33	0.13	346	x	x			R49			
010.1A672	104.30	0.85	5.70	0.13									x
010.1A424	104.37	0.85	3.53	0.10	243	x	x						
010.1B401	104.40	0.85	1.78	0.08									
010.10431	104.40	0.85	3.10	0.09							G105		
010.1A332	104.50	0.86	3.00	0.86								x	x
010.1B39G	104.50	0.86	6.00	0.13									
010.10457	104.60	0.86	5.70	0.13							P105		
010.1BA46	105.00	0.86	2.50	0.09									
010.1BG77	105.00	0.86	3.00	0.09									
010.1BN38	105.00	0.86	3.50	0.10									
010.1BU10	105.00	0.86	4.00	0.10									
010.1BJ25	105.00	0.86	4.50	0.10									
010.1BK98	105.00	0.86	5.00	0.13									
010.1B38G	105.00	0.86	6.00	0.13									
010.10618	106.00	0.87	1.80	0.08					C1060GN				
010.1BA58	106.00	0.87	2.50	0.09									
010.10626	106.00	0.87	2.65	0.09					C1060GN				
010.1BG80	106.00	0.87	3.00	0.09									
010.1BN37	106.00	0.87	3.50	0.10									
010.1BL06	106.00	0.87	3.55	0.10				x	C1060GN				
010.1BU11	106.00	0.87	4.00	0.10									
010.1BJ27	106.00	0.87	4.50	0.10									
010.1BK99	106.00	0.87	5.00	0.13									
010.1B04C	106.00	0.87	5.30	0.13				x	C1060GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B41G	106.00	0.87	6.00	0.13									
010.1BA59	107.00	0.87	2.50	0.09									
010.1BG83	107.00	0.87	3.00	0.09									
010.1BN39	107.00	0.87	3.50	0.10									
010.1BU12	107.00	0.87	4.00	0.10									
010.1BW01	107.00	0.87	5.00	0.13									
010.1A570	107.32	0.87	5.33	0.13	347	x	x			R50			
010.1A425	107.54	0.88	3.53	0.10	244	x	x						
010.1A243	107.62	0.88	2.62	0.09	156	x	x						
010.1A084	107.67	0.88	1.78	0.08	046	x	x						
010.1BA45	108.00	0.88	2.50	0.09									
010.1BG86	108.00	0.88	3.00	0.09									
010.1BN40	108.00	0.88	3.50	0.10									
010.1BU13	108.00	0.88	4.00	0.10									
010.1BW04	108.00	0.88	5.00	0.13									
010.1B44G	108.00	0.88	6.00	0.13									
010.1BA39	109.00	0.89	2.50	0.09									
010.1BG89	109.00	0.89	3.00	0.09									
010.1BN42	109.00	0.89	3.50	0.10									
010.1BL07	109.00	0.89	3.55	0.10				x	C1090GN				
010.1BU16	109.00	0.89	4.00	0.10									
010.1BW06	109.00	0.89	5.00	0.13									
010.1B37B	109.00	0.89	5.30	0.13				x	C1090GN				
010.1A673	109.00	0.89	5.70	0.13									
010.10907	109.00	0.89	7.00	0.15				x	C1090GN				
010.1A674	109.10	0.89	5.70	0.89								x	
010.1A675	109.30	0.89	5.70	0.13									x
010.10931	109.40	0.89	3.10	0.09							G110		
010.1A333	109.50	0.89	3.00	0.89								x	x
010.1A571	109.54	0.89	5.33	0.13									
010.10957	109.60	0.89	5.70	0.13							P110		
010.1BA60	110.00	0.89	2.50	0.09									
010.1BG95	110.00	0.89	3.00	0.09									
010.1BN41	110.00	0.89	3.50	0.10									
010.1BU19	110.00	0.89	4.00	0.10									
010.1BJ31	110.00	0.89	4.50	0.10									
010.1BW07	110.00	0.89	5.00	0.13									
010.1B50G	110.00	0.89	6.00	0.13									
010.1A572	110.49	0.90	5.33	0.13	348	x	x			R51			
010.1A426	110.72	0.90	3.53	0.10	245	x	x						
010.1B403	110.74	0.90	1.78	0.08									
010.1BA24	111.00	0.90	2.50	0.09									
010.1BG97	111.00	0.90	3.00	0.09									
010.1BN45	111.00	0.90	3.50	0.10									
010.1BU21	111.00	0.90	4.00	0.10									
010.1BW08	111.00	0.90	5.00	0.13									
010.1B51G	111.00	0.90	6.00	0.13									
010.11157	111.60	0.90	5.70	0.13							P112		
010.11218	112.00	0.91	1.80	0.08					C1120GN				
010.1BA22	112.00	0.91	2.50	0.09									
010.11226	112.00	0.91	2.65	0.09					C1120GN				
010.1BG98	112.00	0.91	3.00	0.09									
010.1BN43	112.00	0.91	3.50	0.10									
010.1BQ80	112.00	0.91	3.55	0.10				x	C1120GN				
010.1BU22	112.00	0.91	4.00	0.10									
010.1BW10	112.00	0.91	5.00	0.13									
010.1B05C	112.00	0.91	5.30	0.13				x	C1120GN				
010.1B52G	112.00	0.91	6.00	0.13									
010.11207	112.00	0.91	7.00	0.15				x	C1120GN				
010.1BA21	113.00	0.91	2.50	0.09									
010.1BG99	113.00	0.91	3.00	0.09									
010.1BN44	113.00	0.91	3.50	0.10									
010.1BU23	113.00	0.91	4.00	0.10									
010.1BW11	113.00	0.91	5.00	0.13									
010.1A573	113.67	0.92	5.33	0.13	349	x	x			R52			
010.1A738	113.67	0.92	6.99	0.15	425	x	x						
010.1A427	113.89	0.92	3.53	0.10	246	x	x						
010.1A244	113.97	0.92	2.62	0.09	157	x	x						
010.1BA61	114.00	0.92	2.50	0.09									
010.1BH01	114.00	0.92	3.00	0.09									
010.1BN47	114.00	0.92	3.50	0.10									
010.1BU24	114.00	0.92	4.00	0.10									
010.1BW13	114.00	0.92	5.00	0.13									
010.1A676	114.00	0.92	5.70	0.13									
010.1B53G	114.00	0.92	6.00	0.13									
010.1A085	114.02	0.92	1.78	0.08	047	x	x						
010.1A677	114.30	0.92	5.70	0.92								x	x
010.11431	114.40	0.92	3.10	0.09							G115		

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A334	114.50	0.92	3.00	0.92								x	x
010.11457	114.60	0.92	5.70	0.13							P115		
010.1A739	114.70	0.92	6.99	0.15									
010.1BA62	115.00	0.93	2.50	0.09									
010.1BH04	115.00	0.93	3.00	0.09									
010.1BN50	115.00	0.93	3.50	0.10									
010.1BQ83	115.00	0.93	3.55	0.10				x	C1150GN				
010.1BU25	115.00	0.93	4.00	0.10									
010.1BJ34	115.00	0.93	4.50	0.10									
010.1BW16	115.00	0.93	5.00	0.13									
010.1B07C	115.00	0.93	5.30	0.13				x	C1150GN				
010.1B56G	115.00	0.93	6.00	0.13									
010.11507	115.00	0.93	7.00	0.15				x	C1150GN				
010.1BA63	116.00	0.93	2.50	0.09									
010.1BH05	116.00	0.93	3.00	0.09									
010.1BN53	116.00	0.93	3.50	0.10									
010.1BU28	116.00	0.93	4.00	0.10									
010.1BW17	116.00	0.93	5.00	0.13									
010.1A574	116.84	0.94	5.33	0.13	350	x	x						
010.1A740	116.84	0.94	6.99	0.15	426	x	x			R54			
010.1BA64	117.00	0.94	2.50	0.09									
010.1BH06	117.00	0.94	3.00	0.09									
010.1BN34	117.00	0.94	3.50	0.10									
010.1BU31	117.00	0.94	4.00	0.10									
010.1BW19	117.00	0.94	5.00	0.13									
010.1A428	117.07	0.94	3.53	0.10	247	x	x						
010.1B404	117.10	0.94	1.78	0.08									
010.1A575	117.48	0.94	5.33	0.13									
010.11818	118.00	0.95	1.80	0.08					C1180GN				
010.1BA19	118.00	0.95	2.50	0.09									
010.11826	118.00	0.95	2.65	0.09					C1180GN				
010.1BH07	118.00	0.95	3.00	0.09									
010.1BN30	118.00	0.95	3.50	0.10									
010.1BL09	118.00	0.95	3.55	0.10				x	C1180GN				
010.1BU34	118.00	0.95	4.00	0.10									
010.1BJ37	118.00	0.95	4.50	0.10									
010.1BW22	118.00	0.95	5.00	0.13									
010.1B08C	118.00	0.95	5.30	0.13				x	C1180GN				
010.1B59G	118.00	0.95	6.00	0.13									
010.11807	118.00	0.95	7.00	0.15				x	C1180GN				
010.1BA18	119.00	0.95	2.50	0.09									
010.1BH10	119.00	0.95	3.00	0.09									
010.1BN55	119.00	0.95	3.50	0.10									
010.1BU35	119.00	0.95	4.00	0.10							V120		
010.1BW23	119.00	0.95	5.00	0.13									
010.1A678	119.00	0.95	5.70	0.13									
010.1A679	119.30	0.96	5.70	0.96								x	x
010.11931	119.40	0.96	3.10	0.09							G120		
010.1A335	119.50	0.96	3.00	0.96								x	x
010.11957	119.60	0.96	5.70	0.13							P120		
010.1BA65	120.00	0.96	2.50	0.09									
010.1BH11	120.00	0.96	3.00	0.09									
010.1BN56	120.00	0.96	3.50	0.10									
010.1BU37	120.00	0.96	4.00	0.10									
010.1BJ40	120.00	0.96	4.50	0.10									
010.1A489	120.00	0.96	5.00	0.13									
010.1B62G	120.00	0.96	6.00	0.13									
010.1A576	120.02	0.96	5.33	0.13	351	x	x						
010.1A741	120.02	0.96	6.99	0.15	427	x	x			R55			
010.1A429	120.24	0.96	3.53	0.10	248	x	x						
010.1A245	120.32	0.96	2.62	0.09	158	x	x						
010.1A086	120.37	0.96	1.78	0.08	048	x	x						
010.1A577	120.65	0.96	5.33	0.13									
010.1BA16	121.00	0.97	2.50	0.09									
010.1BH12	121.00	0.97	3.00	0.09									
010.1BN28	121.00	0.97	3.50	0.10									
010.1BU38	121.00	0.97	4.00	0.10									
010.1BW24	121.00	0.97	5.00	0.13									
010.1BA66	122.00	0.97	2.50	0.09									
010.1BH13	122.00	0.97	3.00	0.09									
010.1BN59	122.00	0.97	3.50	0.10									
010.1BQ86	122.00	0.97	3.55	0.10				x	C1220GN				
010.1BU40	122.00	0.97	4.00	0.10									
010.1BJ43	122.00	0.97	4.50	0.10									
010.1BW27	122.00	0.97	5.00	0.13									
010.1B10C	122.00	0.97	5.30	0.13				x	C1220GN				
010.1B63G	122.00	0.97	6.00	0.13									
010.12207	122.00	0.97	7.00	0.15				x	C1220GN				

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BA67	123.00	0.98	2.50	0.09									
010.1BH14	123.00	0.98	3.00	0.09									
010.1BN62	123.00	0.98	3.50	0.10									
010.1BU41	123.00	0.98	4.00	0.10									
010.1BW29	123.00	0.98	5.00	0.13									
010.1B64G	123.00	0.98	6.00	0.13									
010.1A578	123.19	0.98	5.33	0.13	352	x	x						
010.1A742	123.19	0.98	6.99	0.15	428	x	x						
010.12369	123.20	0.98	6.99	0.15	428	x				R56			
010.1A430	123.42	0.98	3.53	0.10	249	x	x						
010.1B406	123.44	0.98	1.78	0.08									
010.1A579	123.83	0.99	5.33	0.13									
010.1BA69	124.00	0.99	2.50	0.09									
010.1BH16	124.00	0.99	3.00	0.09									
010.1BN07	124.00	0.99	3.50	0.10									
010.1BU43	124.00	0.99	4.00	0.10									
010.1BJ48	124.00	0.99	4.50	0.10									
010.1BW30	124.00	0.99	5.00	0.13									
010.1A680	124.00	0.99	5.70	0.13									
010.1B66G	124.00	0.99	6.00	0.13									
010.1A681	124.30	0.99	5.70	0.99								x	x
010.12431	124.40	0.99	3.10	0.09							G125		
010.1A336	124.50	0.99	3.00	0.99								x	x
010.12457	124.60	0.99	5.70	0.13							P125		
010.1A743	124.60	0.99	6.99	0.15									
010.12518	125.00	0.99	1.80	0.08					C1250GN				
010.1BA68	125.00	0.99	2.50	0.09									
010.12526	125.00	0.99	2.65	0.09					C1250GN				
010.1BH17	125.00	0.99	3.00	0.09									
010.1BN65	125.00	0.99	3.50	0.10									
010.1BQ89	125.00	0.99	3.55	0.10				x	C1250GN				
010.1BU46	125.00	0.99	4.00	0.10									
010.1A490	125.00	0.99	5.00	0.13									
010.1B11C	125.00	0.99	5.30	0.13				x	C1250GN				
010.1B65G	125.00	0.99	6.00	0.13									
010.12507	125.00	0.99	7.00	0.15				x	C1250GN				
010.1BA71	126.00	1.00	2.50	0.09									
010.1BH19	126.00	1.00	3.00	0.09									
010.1BN68	126.00	1.00	3.50	0.10									
010.1BU49	126.00	1.00	4.00	0.10									
010.1BJ46	126.00	1.00	4.50	0.10									
010.1BW31	126.00	1.00	5.00	0.13									
010.1A580	126.37	1.00	5.33	0.13	353	x	x						
010.1A744	126.37	1.00	6.99	0.15	429	x	x			R57			
010.1A431	126.59	1.00	3.53	0.10	250	x	x						
010.1A246	126.67	1.00	2.62	0.09	159	x	x						
010.1A087	126.72	1.01	1.78	0.08	049	x	x						
010.1BA70	127.00	1.01	2.50	0.09									
010.1BH20	127.00	1.01	3.00	0.09									
010.1BN06	127.00	1.01	3.50	0.10									
010.1BU50	127.00	1.01	4.00	0.10									
010.1BW34	127.00	1.01	5.00	0.13									
010.1A581	127.00	1.01	5.33	0.13									
010.1BA72	128.00	1.01	2.50	0.09									
010.1BH22	128.00	1.01	3.00	0.09									
010.1BN03	128.00	1.01	3.50	0.10									
010.1BL10	128.00	1.01	3.55	0.10				x	C1280GN				
010.1BU51	128.00	1.01	4.00	0.10									
010.1BJ49	128.00	1.01	4.50	0.10									
010.1BW37	128.00	1.01	5.00	0.13									
010.1B13C	128.00	1.01	5.30	0.13				x	C1280GN				
010.1B68G	128.00	1.01	6.00	0.13									
010.12807	128.00	1.01	7.00	0.15				x	C1280GN				
010.1BA73	129.00	1.02	2.50	0.09									
010.1BH23	129.00	1.02	3.00	0.09									
010.1BN01	129.00	1.02	3.50	0.10									
010.1BU52	129.00	1.02	4.00	0.10									
010.1BW38	129.00	1.02	5.00	0.13									
010.1A682	129.30	1.02	5.70	1.02								x	x
010.1B407	129.40	1.02	1.78	0.08									
010.12931	129.40	1.02	3.10	0.09							G130		
010.1A337	129.50	1.02	3.00	1.02								x	x
010.1A582	129.54	1.02	5.33	0.13	354	x	x						
010.1A745	129.54	1.02	6.99	0.15	430	x	x			R58			
010.12957	129.60	1.02	5.70	0.13							P130		
010.1A432	129.77	1.03	3.53	0.10	251	x	x						
010.1BA74	130.00	1.03	2.50	0.09									
010.1BH25	130.00	1.03	3.00	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BM98	130.00	1.03	3.50	0.10									
010.1BU55	130.00	1.03	4.00	0.10									
010.1BJ52	130.00	1.03	4.50	0.10									
010.1A491	130.00	1.03	5.00	0.13									
010.1B70G	130.00	1.03	6.00	0.13									
010.1A583	130.18	1.03	5.33	0.13									
010.1BA75	131.00	1.03	2.50	0.09									
010.1BH26	131.00	1.03	3.00	0.09									
010.1BN64	131.00	1.03	3.50	0.10									
010.1BU56	131.00	1.03	4.00	0.10									
010.1BW41	131.00	1.03	5.00	0.13									
010.1BJ51	131.50	1.04	4.50	0.10									
010.13157	131.60	1.04	5.70	0.13							P132		
010.1BA77	132.00	1.04	2.50	0.09									
010.13226	132.00	1.04	2.65	0.09					C1320GN				
010.1BH28	132.00	1.04	3.00	0.09									
010.1BN70	132.00	1.04	3.50	0.10									
010.1BL12	132.00	1.04	3.55	0.10				x	C1320GN				
010.1BU58	132.00	1.04	4.00	0.10									
010.1BW43	132.00	1.04	5.00	0.13									
010.1B14C	132.00	1.04	5.30	0.13				x	C1320GN				
010.1B74G	132.00	1.04	6.00	0.13									
010.13207	132.00	1.04	7.00	0.15				x	C1320GN				
010.1A584	132.72	1.05	5.33	0.13	355	x	x						
010.1A746	132.72	1.05	6.99	0.15	431	x	x			R59			
010.1A433	132.94	1.05	3.53	0.10	252	x	x						
010.1BA78	133.00	1.05	2.50	0.09									
010.1BH30	133.00	1.05	3.00	0.09									
010.1BN71	133.00	1.05	3.50	0.10									
010.1BU59	133.00	1.05	4.00	0.10									
010.1BW44	133.00	1.05	5.00	0.13									
010.1A247	133.02	1.05	2.62	0.09	160	x	x						
010.1A088	133.07	1.05	1.78	0.08	050	x	x						
010.1A585	133.35	1.05	5.33	0.13									
010.1BA79	134.00	1.05	2.50	0.09									
010.1BH31	134.00	1.05	3.00	0.09									
010.1BM89	134.00	1.05	3.50	0.10									
010.1BU60	134.00	1.05	4.00	0.10									
010.1BW45	134.00	1.05	5.00	0.13									
010.1B75G	134.00	1.05	6.00	0.13									
010.1A683	134.30	1.06	5.70	1.06								x	x
010.13431	134.40	1.06	3.10	0.09							G135		
010.1A338	134.50	1.06	3.00	1.06								x	x
010.1BJ50	134.50	1.06	4.50	0.10									
010.1A747	134.50	1.06	6.99	0.15									
010.13457	134.60	1.06	5.70	0.13							P135		
010.1BA80	135.00	1.06	2.50	0.09									
010.1BH32	135.00	1.06	3.00	0.09									
010.1BN72	135.00	1.06	3.50	0.10									
010.1BU61	135.00	1.06	4.00	0.10									
010.1A492	135.00	1.06	5.00	0.13									
010.1B76G	135.00	1.06	6.00	0.13									
010.1B410	135.76	1.07	1.78	0.08									
010.1A586	135.89	1.07	5.33	0.13	356	x	x						
010.1A748	135.89	1.07	6.99	0.15	432	x	x						
010.13569	135.90	1.07	6.99	0.15	432	x				R60			
010.1BA81	136.00	1.07	2.50	0.09									
010.1BH33	136.00	1.07	3.00	0.09									
010.1BM88	136.00	1.07	3.50	0.10									
010.1BQ92	136.00	1.07	3.55	0.10				x	C1360GN				
010.1BU64	136.00	1.07	4.00	0.10									
010.1BW49	136.00	1.07	5.00	0.13									
010.1B52B	136.00	1.07	5.30	0.13				x	C1360GN				
010.1B78G	136.00	1.07	6.00	0.13									
010.13607	136.00	1.07	7.00	0.15				x	C1360GN				
010.1A434	136.12	1.07	3.53	0.10	253	x	x						
010.1A587	136.53	1.07	5.33	0.13									
010.1BA90	137.00	1.07	2.50	0.09									
010.1BH34	137.00	1.07	3.00	0.09									
010.1BM86	137.00	1.07	3.50	0.10									
010.1BU67	137.00	1.07	4.00	0.10									
010.1BJ53	137.00	1.07	4.50	0.10									
010.1BW51	137.00	1.07	5.00	0.13									
010.1BA91	138.00	1.08	2.50	0.09									
010.1BH37	138.00	1.08	3.00	0.09									
010.1BM79	138.00	1.08	3.50	0.10									
010.1BU68	138.00	1.08	4.00	0.10									
010.1BW52	138.00	1.08	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B77G	138.00	1.08	6.00	0.13									
010.1B412	138.94	1.09	1.78	0.08									
010.1BA93	139.00	1.09	2.50	0.09									
010.1BH38	139.00	1.09	3.00	0.09									
010.1BM76	139.00	1.09	3.50	0.10									
010.1BU69	139.00	1.09	4.00	0.10									
010.1BW54	139.00	1.09	5.00	0.13									
010.1A588	139.07	1.09	5.33	0.13	357	x	x						
010.1A749	139.07	1.09	6.99	0.15	433	x	x			R61			
010.1B79G	139.20	1.09	6.00	0.13									
010.1A435	139.29	1.09	3.53	0.10	254	x	x						
010.1A684	139.30	1.09	5.70	1.09								x	x
010.1A248	139.37	1.09	2.62	0.09	161	x	x						
010.13931	139.40	1.09	3.10	0.09							G140		
010.1A339	139.50	1.09	3.00	1.09								x	x
010.13957	139.60	1.09	5.70	0.13							P140		
010.1A589	139.70	1.09	5.33	0.13									
010.1BA82	140.00	1.09	2.50	0.09									
010.14026	140.00	1.09	2.65	0.09					D1400GN				
010.1BH40	140.00	1.09	3.00	0.09									
010.1BM74	140.00	1.09	3.50	0.10									
010.1BQ95	140.00	1.09	3.55	0.10				x	D1400GN				
010.1BU70	140.00	1.09	4.00	0.10									
010.1BJ54	140.00	1.09	4.50	0.10									
010.1A493	140.00	1.09	5.00	0.13									
010.1B16C	140.00	1.09	5.30	0.13				x	D1400GN				
010.1B80G	140.00	1.09	6.00	0.13									
010.14007	140.00	1.09	7.00	0.15				x	D1400GN				
010.1BJ56	140.50	1.10	4.50	0.10									
010.1BA84	141.00	1.10	2.50	0.09									
010.1BH39	141.00	1.10	3.00	0.09									
010.1BM73	141.00	1.10	3.50	0.10									
010.1BU71	141.00	1.10	4.00	0.10									
010.1BW57	141.00	1.10	5.00	0.13									
010.1BA83	142.00	1.11	2.50	0.09									
010.1BH41	142.00	1.11	3.00	0.09									
010.1BM68	142.00	1.11	3.50	0.10									
010.1BU73	142.00	1.11	4.00	0.10									
010.1BW59	142.00	1.11	5.00	0.13									
010.1B83G	142.00	1.11	6.00	0.13									
010.1B413	142.11	1.11	1.78	0.08									
010.1A590	142.24	1.11	5.33	0.13	358	x	x						
010.1A750	142.24	1.11	6.99	0.15	434	x	x			R62			
010.1A436	142.47	1.11	3.53	0.10	255	x	x						
010.14235	142.50	1.11	3.55	0.10					D1425GN				
010.14253	142.50	1.11	5.30	0.13					D1425GN				
010.14257	142.50	1.11	7.00	0.15				x	D1425GN				
010.1A591	142.88	1.11	5.33	0.13									
010.1BA94	143.00	1.11	2.50	0.09									
010.1BH42	143.00	1.11	3.00	0.09									
010.1BM67	143.00	1.11	3.50	0.10									
010.1BU74	143.00	1.11	4.00	0.10									
010.1BW60	143.00	1.11	5.00	0.13									
010.1BA85	144.00	1.12	2.50	0.09									
010.1BH43	144.00	1.12	3.00	0.09									
010.1BN66	144.00	1.12	3.50	0.10									
010.1BU76	144.00	1.12	4.00	0.10									
010.1BW61	144.00	1.12	5.00	0.13									
010.1A815	144.10	1.12	8.40	1.12								x	x
010.1A685	144.30	1.12	5.70	1.12								x	x
010.14431	144.40	1.12	3.10	0.09							G145		
010.1A340	144.50	1.12	3.00	1.12								x	x
010.14457	144.60	1.12	5.70	0.13							P145		
010.1BA86	145.00	1.13	2.50	0.09									
010.1BH44	145.00	1.13	3.00	0.09									
010.1BM65	145.00	1.13	3.50	0.10									
010.1BQ98	145.00	1.13	3.55	0.10				x	D1450GN				
010.1BU79	145.00	1.13	4.00	0.10									
010.1A494	145.00	1.13	5.00	0.13									
010.1B55B	145.00	1.13	5.30	0.13				x	D1450GN				
010.1B87G	145.00	1.13	6.00	0.13									
010.14507	145.00	1.13	7.00	0.15				x	D1450GN				
010.1B415	145.29	1.13	1.78	0.08									
010.1A592	145.42	1.13	5.33	0.13	359	x	x						
010.1A751	145.42	1.13	6.99	0.15	435	x	x			R63			
010.1A437	145.64	1.13	3.53	0.10	256	x	x						
010.1A249	145.72	1.13	2.62	0.09	162	x	x						
010.1BA96	146.00	1.13	2.50	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BH46	146.00	1.13	3.00	0.09									
010.1BM64	146.00	1.13	3.50	0.10									
010.1BU75	146.00	1.13	4.00	0.10									
010.1BW67	146.00	1.13	5.00	0.13									
010.1B81G	146.00	1.13	6.00	0.13									
010.1A593	146.05	1.13	5.33	0.13									
010.1BA97	147.00	1.14	2.50	0.09									
010.1BH45	147.00	1.14	3.00	0.09									
010.1BM59	147.00	1.14	3.50	0.10									
010.1BU77	147.00	1.14	4.00	0.10									
010.1BW68	147.00	1.14	5.00	0.13									
010.14735	147.50	1.14	3.55	0.10				x	D1475GN				
010.14753	147.50	1.14	5.30	0.13				x	D1475GN				
010.14757	147.50	1.14	7.00	0.15				x	D1475GN				
010.1BA99	148.00	1.15	2.50	0.09									
010.1BH47	148.00	1.15	3.00	0.09									
010.1BN48	148.00	1.15	3.50	0.10									
010.1BU80	148.00	1.15	4.00	0.10									
010.1BW70	148.00	1.15	5.00	0.13									
010.1B89G	148.00	1.15	6.00	0.13									
010.1B416	148.46	1.15	1.78	0.08									
010.14854	148.50	1.15	4.00	0.10							V150		
010.1A594	148.59	1.15	5.33	0.13	360	x	x						
010.1A752	148.59	1.15	6.99	0.15	436	x	x						
010.14869	148.60	1.15	6.99	0.15	436	x				R64			
010.1A438	148.82	1.15	3.53	0.10	257	x	x						
010.1BA87	149.00	1.15	2.50	0.09									
010.1BH49	149.00	1.15	3.00	0.09									
010.1BM56	149.00	1.15	3.50	0.10									
010.1BU81	149.00	1.15	4.00	0.10									
010.1BW73	149.00	1.15	5.00	0.13									
010.1A816	149.10	1.15	8.40	1.15								x	x
010.1A595	149.23	1.16	5.33	0.13									
010.1A686	149.30	1.16	5.70	0.13							G150	x	x
010.1A341	149.50	1.16	3.00	0.09									x
010.14984	149.50	1.16	8.40	0.15							P150A		
010.14957	149.60	1.16	5.70	0.13							P150		
010.1BA88	150.00	1.16	2.50	0.09									
010.15026	150.00	1.16	2.65	0.09					D1500GN				
010.1BH52	150.00	1.16	3.00	0.09									
010.1BN76	150.00	1.16	3.50	0.10									
010.1BL13	150.00	1.16	3.55	0.10				x	D1500GN				
010.1BU82	150.00	1.16	4.00	0.10									
010.1BJ55	150.00	1.16	4.50	0.10									
010.1A495	150.00	1.16	5.00	0.13									
010.1B58B	150.00	1.16	5.30	0.13				x	D1500GN				
010.1B92G	150.00	1.16	6.00	0.13									
010.15007	150.00	1.16	7.00	0.15				x	D1500GN				
010.1BH53	151.00	1.17	3.00	0.09									
010.1BM55	151.00	1.17	3.50	0.10									
010.1BU85	151.00	1.17	4.00	0.10									
010.1BW75	151.00	1.17	5.00	0.13									
010.1B418	151.64	1.17	1.78	0.08									
010.1A596	151.77	1.17	5.33	0.13	361	x	x						
010.1A753	151.77	1.17	6.99	0.15	437	x	x			R65			
010.1A439	151.99	1.17	3.53	0.10	258	x	x						
010.1BH54	152.00	1.17	3.00	0.09									
010.1BN77	152.00	1.17	3.50	0.10									
010.1BU78	152.00	1.17	4.00	0.10									
010.1BW77	152.00	1.17	5.00	0.13									
010.1A250	152.07	1.17	2.62	0.09	163	x	x						
010.15235	152.50	1.18	3.55	0.10				x	D1525GN				
010.15253	152.50	1.18	5.30	0.13					D1525GN				
010.15257	152.50	1.18	7.00	0.15				x	D1525GN				
010.1BH55	153.00	1.18	3.00	0.09									
010.1BN51	153.00	1.18	3.50	0.10									
010.1BU87	153.00	1.18	4.00	0.10									
010.1BJ57	153.00	1.18	4.50	0.10									
010.1BW78	153.00	1.18	5.00	0.13									
010.1B05H	153.00	1.18	6.00	0.13									
010.1BH51	154.00	1.19	3.00	0.09									
010.1BN61	154.00	1.19	3.50	0.10									
010.1BU86	154.00	1.19	4.00	0.10									
010.1BW81	154.00	1.19	5.00	0.13									
010.1B07H	154.00	1.19	6.00	0.13									
010.1A817	154.10	1.19	8.40	1.19								x	x
010.1A687	154.30	1.19	5.70	0.13							G155	x	x
010.1A342	154.50	1.19	3.00	0.09									x

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.15484	154.50	1.19	8.40	0.15							P155		
010.1B419	154.81	1.19	1.78	0.08									
010.1BH58	155.00	1.19	3.00	0.09									
010.1BN67	155.00	1.19	3.50	0.10									
010.1BL15	155.00	1.19	3.55	0.10				x	D1550GN				
010.1BU88	155.00	1.19	4.00	0.10									
010.1BJ59	155.00	1.19	4.50	0.10									
010.1A496	155.00	1.19	5.00	0.13									
010.1B17C	155.00	1.19	5.30	0.13				x	D1550GN				
010.1B49C	155.00	1.19	5.33	0.13									
010.1B08H	155.00	1.19	6.00	0.13									
010.15507	155.00	1.19	7.00	0.15				x	D1550GN				
010.1B10H	155.50	1.20	6.00	0.13									
010.1A754	155.60	1.20	6.99	0.15									
010.1BH59	156.00	1.20	3.00	0.09									
010.1BN63	156.00	1.20	3.50	0.10									
010.1BU89	156.00	1.20	4.00	0.10									
010.1BW80	156.00	1.20	5.00	0.13									
010.1B11H	156.00	1.20	6.00	0.13									
010.1BH57	157.00	1.21	3.00	0.09									
010.1BN79	157.00	1.21	3.50	0.10									
010.1BU92	157.00	1.21	4.00	0.10									
010.1BJ62	157.00	1.21	4.50	0.10									
010.1BW83	157.00	1.21	5.00	0.13									
010.1B24H	157.00	1.21	6.00	0.13									
010.15735	157.50	1.21	3.55	0.10				x	D1575GN				
010.15753	157.50	1.21	5.30	0.13				x	D1575GN				
010.15757	157.50	1.21	7.00	0.15				x	D1575GN				
010.1B421	158.00	1.21	1.78	0.08									
010.1BH56	158.00	1.21	3.00	0.09									
010.1BM53	158.00	1.21	3.50	0.10									
010.1BU84	158.00	1.21	4.00	0.10									
010.1BW82	158.00	1.21	5.00	0.13									
010.1B25H	158.00	1.21	6.00	0.13									
010.1A597	158.12	1.21	5.33	0.13	362	x	x						
010.1A755	158.12	1.21	6.99	0.15	438	x	x			R66			
010.1A440	158.34	1.22	3.53	0.10	259	x	x						
010.1A251	158.42	1.22	2.62	0.09	164	x	x						
010.1BH60	159.00	1.22	3.00	0.09									
010.1BN52	159.00	1.22	3.50	0.10									
010.1BU90	159.00	1.22	4.00	0.10									
010.1BW84	159.00	1.22	5.00	0.13									
010.1B26H	159.00	1.22	6.00	0.13									
010.1A818	159.10	1.22	8.40	1.22								x	x
010.1A688	159.30	1.22	5.70	0.13							G160	x	x
010.1A343	159.50	1.22	3.00	0.09									x
010.1A756	159.50	1.22	6.99	0.15									
010.15984	159.50	1.22	8.40	0.15							P160		
010.16026	160.00	1.23	2.65	0.09					D1600GN				
010.1BH61	160.00	1.23	3.00	0.09									
010.1BN82	160.00	1.23	3.50	0.10									
010.1BL16	160.00	1.23	3.55	0.10				x	D1600GN				
010.1BU91	160.00	1.23	4.00	0.10									
010.1BJ67	160.00	1.23	4.50	0.10									
010.1A497	160.00	1.23	5.00	0.13									
010.1B19C	160.00	1.23	5.30	0.13				x	D1600GN				
010.1B95G	160.00	1.23	6.00	0.13									
010.16007	160.00	1.23	7.00	0.15				x	D1600GN				
010.1BH62	161.00	1.23	3.00	0.09									
010.1BN78	161.00	1.23	3.50	0.10									
010.1BU96	161.00	1.23	4.00	0.10									
010.1BW86	161.00	1.23	5.00	0.13									
010.1B422	161.16	1.23	1.78	0.08									
010.1B506	161.30	1.24	5.33	0.13									
010.1A757	161.90	1.24	6.99	0.15									
010.1BH64	162.00	1.24	3.00	0.09									
010.1BN81	162.00	1.24	3.50	0.10									
010.1BU93	162.00	1.24	4.00	0.10									
010.1BW88	162.00	1.24	5.00	0.13									
010.1B98G	162.00	1.24	6.00	0.13									
010.16235	162.50	1.24	3.55	0.10				x	D1625GN				
010.16253	162.50	1.24	5.30	0.13					D1625GN				
010.16257	162.50	1.24	7.00	0.15				x	D1625GN				
010.1BH63	163.00	1.25	3.00	0.09									
010.1BN85	163.00	1.25	3.50	0.10									
010.1BU95	163.00	1.25	4.00	0.10									
010.1BW91	163.00	1.25	5.00	0.13									
010.1BH36	164.00	1.25	3.00	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BN46	164.00	1.25	3.50	0.10									
010.1BU94	164.00	1.25	4.00	0.10									
010.1BW90	164.00	1.25	5.00	0.13									
010.1A819	164.10	1.25	8.40	1.25								x	x
010.1A689	164.30	1.26	5.70	0.13							G165	x	x
010.1B424	164.34	1.26	1.78	0.08									
010.1A598	164.47	1.26	5.33	0.13	363	x	x						
010.1A758	164.47	1.26	6.99	0.15	439	x	x			R67			
010.1A344	164.50	1.26	3.00	0.09									x
010.16484	164.50	1.26	8.40	0.15							P165		
010.1A441	164.69	1.26	3.53	0.10	260	x	x						
010.1A252	164.77	1.26	2.62	0.09	165	x	x						
010.1BH35	165.00	1.26	3.00	0.09									
010.1BM50	165.00	1.26	3.50	0.10									
010.1BR01	165.00	1.26	3.55	0.10				x	D1650GN				
010.1BU97	165.00	1.26	4.00	0.10									
010.1BJ65	165.00	1.26	4.50	0.10									
010.1A498	165.00	1.26	5.00	0.13									
010.1B20C	165.00	1.26	5.30	0.13				x	D1650GN				
010.1B90G	165.00	1.26	6.00	0.13									
010.16507	165.00	1.26	7.00	0.15				x	D1650GN				
010.1BH71	166.00	1.27	3.00	0.09									
010.1BN73	166.00	1.27	3.50	0.10									
010.1BU98	166.00	1.27	4.00	0.10									
010.1BW93	166.00	1.27	5.00	0.13									
010.1B27H	166.00	1.27	6.00	0.13									
010.1A759	166.70	1.27	6.99	0.15									
010.1BH66	167.00	1.27	3.00	0.09									
010.1BN60	167.00	1.27	3.50	0.10									
010.1BU99	167.00	1.27	4.00	0.10									
010.1BW95	167.00	1.27	5.00	0.13									
010.16735	167.50	1.28	3.55	0.10				x	D1675GN				
010.16753	167.50	1.28	5.30	0.13					D1675GN				
010.16757	167.50	1.28	7.00	0.15				x	D1675GN				
010.1B425	167.51	1.28	1.78	0.08									
010.1B52C	167.70	1.28	5.33	0.13									
010.1BH65	168.00	1.28	3.00	0.09									
010.1BN84	168.00	1.28	3.50	0.10									
010.1BV00	168.00	1.28	4.00	0.10									
010.1BW96	168.00	1.28	5.00	0.13									
010.1A760	168.30	1.28	6.99	0.15									
010.1BH75	169.00	1.29	3.00	0.09									
010.1BN87	169.00	1.29	3.50	0.10									
010.1BV02	169.00	1.29	4.00	0.10									
010.1BW98	169.00	1.29	5.00	0.13									
010.1B82G	169.00	1.29	6.00	0.13									
010.1A820	169.10	1.29	8.40	1.29								x	x
010.1A690	169.30	1.29	5.70	0.13							G170	x	x
010.1A345	169.50	1.29	3.00	0.09									x
010.16984	169.50	1.29	8.40	0.15							P170		
010.17026	170.00	1.29	2.65	0.09					D1700GN				
010.1BH77	170.00	1.29	3.00	0.09									
010.1BN86	170.00	1.29	3.50	0.10									
010.1BR04	170.00	1.29	3.55	0.10				x	D1700GN				
010.1BV03	170.00	1.29	4.00	0.10									
010.1A499	170.00	1.29	5.00	0.13									
010.1B64B	170.00	1.29	5.30	0.13				x	D1700GN				
010.1B91G	170.00	1.29	6.00	0.13									
010.17007	170.00	1.29	7.00	0.15				x	D1700GN				
010.1B427	170.69	1.30	1.78	0.08									
010.1A599	170.82	1.30	5.33	0.13	364	x	x						
010.1A761	170.82	1.30	6.99	0.15	440	x	x			R68			
010.1BH68	171.00	1.30	3.00	0.09									
010.1BM49	171.00	1.30	3.50	0.10									
010.1BV05	171.00	1.30	4.00	0.10									
010.1BW99	171.00	1.30	5.00	0.13									
010.1A442	171.04	1.30	3.53	0.10	261	x	x						
010.1A253	171.12	1.30	2.62	0.09	166	x	x						
010.1BH67	172.00	1.31	3.00	0.09									
010.1BN58	172.00	1.31	3.50	0.10									
010.1BV06	172.00	1.31	4.00	0.10									
010.1BJ70	172.00	1.31	4.50	0.10									
010.1BX00	172.00	1.31	5.00	0.13									
010.1B84G	172.00	1.31	6.00	0.13									
010.17235	172.50	1.31	3.55	0.10				x	D1725GN				
010.17253	172.50	1.31	5.30	0.13					D1725GN				
010.17257	172.50	1.31	7.00	0.15				x	D1725GN				
010.1BH69	173.00	1.31	3.00	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BN91	173.00	1.31	3.50	0.10									
010.1BV07	173.00	1.31	4.00	0.10							V175		
010.1BW92	173.00	1.31	5.00	0.13									
010.1B428	173.87	1.32	1.78	0.08									
010.1BH70	174.00	1.32	3.00	0.09									
010.1BN88	174.00	1.32	3.50	0.10									
010.1BV08	174.00	1.32	4.00	0.10									
010.1BX01	174.00	1.32	5.00	0.13									
010.1B53C	174.00	1.32	5.33	0.13									
010.1A821	174.10	1.32	8.40	1.32								x	x
010.1A691	174.30	1.32	5.70	0.13							G175	x	x
010.1A346	174.50	1.32	3.00	0.09									x
010.17484	174.50	1.32	8.40	0.15							P175		
010.1A762	174.60	1.32	6.99	0.15									
010.1BH78	175.00	1.33	3.00	0.09									
010.1BN75	175.00	1.33	3.50	0.10									
010.1BR07	175.00	1.33	3.55	0.10				x	D1750GN				
010.1BV09	175.00	1.33	4.00	0.10									
010.1A500	175.00	1.33	5.00	0.13									
010.1B23C	175.00	1.33	5.30	0.13				x	D1750GN				
010.1B29H	175.00	1.33	6.00	0.13									
010.17507	175.00	1.33	7.00	0.15				x	D1750GN				
010.1BH72	176.00	1.33	3.00	0.09									
010.1BN90	176.00	1.33	3.50	0.10									
010.1BV11	176.00	1.33	4.00	0.10									
010.1BX03	176.00	1.33	5.00	0.13									
010.1B30H	176.00	1.33	6.00	0.13									
010.1BH73	177.00	1.34	3.00	0.09									
010.1BM47	177.00	1.34	3.50	0.10									
010.1BV12	177.00	1.34	4.00	0.10									
010.1BX02	177.00	1.34	5.00	0.13									
010.1A600	177.17	1.34	5.33	0.13	365	x	x						
010.1A763	177.17	1.34	6.99	0.15	441	x	x			R69			
010.1A443	177.39	1.34	3.53	0.10	262	x	x						
010.1A254	177.47	1.34	2.62	0.09	167	x	x						
010.17735	177.50	1.34	3.55	0.10				x	D1775GN				
010.17753	177.50	1.34	5.30	0.13					D1775GN				
010.17757	177.50	1.34	7.00	0.15				x	D1775GN				
010.1BH74	178.00	1.35	3.00	0.09									
010.1BN92	178.00	1.35	3.50	0.10									
010.1BV13	178.00	1.35	4.00	0.10									
010.1BJ66	178.00	1.35	4.50	0.10									
010.1BX04	178.00	1.35	5.00	0.13									
010.1BH76	179.00	1.35	3.00	0.09									
010.1BN93	179.00	1.35	3.50	0.10									
010.1BV14	179.00	1.35	4.00	0.10									
010.1BX05	179.00	1.35	5.00	0.13									
010.1A822	179.10	1.35	8.40	1.35								x	x
010.1A692	179.30	1.35	5.70	0.13							G180	x	x
010.1A347	179.50	1.36	3.00	0.09									x
010.17984	179.50	1.36	8.40	0.15							P180		
010.18026	180.00	1.36	2.65	0.09					D1800GN				
010.1BH79	180.00	1.36	3.00	0.09									
010.1BN69	180.00	1.36	3.50	0.10									
010.1BL18	180.00	1.36	3.55	0.10				x	D1800GN				
010.1BV15	180.00	1.36	4.00	0.10									
010.1BJ63	180.00	1.36	4.50	0.10									
010.1A501	180.00	1.36	5.00	0.13									
010.1B25C	180.00	1.36	5.30	0.13				x	D1800GN				
010.1B32H	180.00	1.36	6.00	0.13									
010.18007	180.00	1.36	7.00	0.15				x	D1800GN				
010.1BH86	181.00	1.37	3.00	0.09									
010.1BN54	181.00	1.37	3.50	0.10									
010.1BV16	181.00	1.37	4.00	0.10									
010.1BX07	181.00	1.37	5.00	0.13									
010.1A764	181.00	1.37	6.99	0.15									
010.1BH80	182.00	1.37	3.00	0.09									
010.1BN94	182.00	1.37	3.50	0.10									
010.1BV18	182.00	1.37	4.00	0.10									
010.1BX08	182.00	1.37	5.00	0.13									
010.1B88G	182.00	1.37	6.00	0.13									
010.18235	182.50	1.38	3.55	0.10				x	D1825GN				
010.18253	182.50	1.38	5.30	0.13				x	D1825GN				
010.18257	182.50	1.38	7.00	0.15					D1825GN				
010.1BH81	183.00	1.38	3.00	0.09									
010.1BM46	183.00	1.38	3.50	0.10									
010.1BV19	183.00	1.38	4.00	0.10									
010.1BX09	183.00	1.38	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A601	183.52	1.38	5.33	0.13	366	x	x						
010.1A765	183.52	1.38	6.99	0.15	442	x	x			R70			
010.1A444	183.74	1.38	3.53	0.10	263	x	x						
010.1A255	183.82	1.38	2.62	0.09	168	x	x						
010.1BH87	184.00	1.39	3.00	0.09									
010.1BM44	184.00	1.39	3.50	0.10									
010.1BV20	184.00	1.39	4.00	0.10									
010.1BX10	184.00	1.39	5.00	0.13									
010.1B33H	184.00	1.39	6.00	0.13									
010.1A823	184.10	1.39	8.40	1.39								x	x
010.1A693	184.30	1.39	5.70	0.13							G185	x	x
010.1A348	184.50	1.39	3.00	0.09									x
010.18484	184.50	1.39	8.40	0.15							P185		
010.1BH82	185.00	1.39	3.00	0.09									
010.1BN57	185.00	1.39	3.50	0.10									
010.1BR10	185.00	1.39	3.55	0.10				x	D1850GN				
010.1BV21	185.00	1.39	4.00	0.10									
010.1BJ78	185.00	1.39	4.50	0.10									
010.1A502	185.00	1.39	5.00	0.13									
010.1B26C	185.00	1.39	5.30	0.13				x	D1850GN				
010.1B35H	185.00	1.39	6.00	0.13									
010.18507	185.00	1.39	7.00	0.15				x	D1850GN				
010.1BH83	186.00	1.40	3.00	0.09									
010.1BN98	186.00	1.40	3.50	0.10									
010.1BV22	186.00	1.40	4.00	0.10									
010.1BJ60	186.00	1.40	4.50	0.10									
010.1BX11	186.00	1.40	5.00	0.13									
010.1BH84	187.00	1.41	3.00	0.09									
010.1BN97	187.00	1.41	3.50	0.10									
010.1BV23	187.00	1.41	4.00	0.10									
010.1BX13	187.00	1.41	5.00	0.13									
010.1A766	187.30	1.41	6.99	0.15									
010.18735	187.50	1.41	3.55	0.10				x	D1875GN				
010.18753	187.50	1.41	5.30	0.13				x	D1875GN				
010.18757	187.50	1.41	7.00	0.15					D1875GN				
010.1BH85	188.00	1.41	3.00	0.09									
010.1BN96	188.00	1.41	3.50	0.10									
010.1BV24	188.00	1.41	4.00	0.10									
010.1BX14	188.00	1.41	5.00	0.13									
010.1B36H	188.00	1.41	6.00	0.13									
010.1BH89	189.00	1.42	3.00	0.09									
010.1BO47	189.00	1.42	3.50	0.10									
010.1BV26	189.00	1.42	4.00	0.10									
010.1BX16	189.00	1.42	5.00	0.13									
010.1A824	189.10	1.42	8.40	1.42								x	x
010.1A694	189.30	1.42	5.70	0.13							G190	x	x
010.1A349	189.50	1.42	3.00	0.09									x
010.1BJ80	189.50	1.42	4.50	0.10									
010.18984	189.50	1.42	8.40	0.15							P190		
010.1A602	189.87	1.42	5.33	0.13	367	x	x						
010.1A767	189.87	1.42	6.99	0.15	443	x	x			R71			
010.19026	190.00	1.43	2.65	0.09					D1900GN				
010.1BH88	190.00	1.43	3.00	0.09									
010.1BN99	190.00	1.43	3.50	0.10									
010.1BR13	190.00	1.43	3.55	0.10				x	D1900GN				
010.1BV25	190.00	1.43	4.00	0.10									
010.1A503	190.00	1.43	5.00	0.13									
010.1B28C	190.00	1.43	5.30	0.13				x	D1900GN				
010.1B38H	190.00	1.43	6.00	0.13									
010.19007	190.00	1.43	7.00	0.15				x	D1900GN				
010.1A445	190.09	1.43	3.53	0.10	264	x	x						
010.1A256	190.17	1.43	2.62	0.09	169	x	x						
010.1BH91	191.00	1.43	3.00	0.09									
010.1BO56	191.00	1.43	3.50	0.10									
010.1BV34	191.00	1.43	4.00	0.10									
010.1BX19	191.00	1.43	5.00	0.13									
010.1B39H	191.20	1.43	6.00	0.13									
010.1BH92	192.00	1.44	3.00	0.09									
010.1BO57	192.00	1.44	3.50	0.10									
010.1BV27	192.00	1.44	4.00	0.10									
010.1BJ81	192.00	1.44	4.50	0.10									
010.1BX17	192.00	1.44	5.00	0.13									
010.1BH93	193.00	1.45	3.00	0.09									
010.1BO50	193.00	1.45	3.50	0.10									
010.1BV28	193.00	1.45	4.00	0.10									
010.1BX18	193.00	1.45	5.00	0.13									
010.1B41H	193.00	1.45	6.00	0.13									
010.1A768	193.70	1.45	6.99	0.15									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BH94	194.00	1.45	3.00	0.09									
010.1BO00	194.00	1.45	3.50	0.10									
010.1BV30	194.00	1.45	4.00	0.10									
010.1BX20	194.00	1.45	5.00	0.13									
010.1A825	194.10	1.45	8.40	1.45								x	x
010.1A695	194.30	1.45	5.70	0.13							G195	x	x
010.1A350	194.50	1.45	3.00	0.09									x
010.19484	194.50	1.45	8.40	0.15							P195		
010.1BH95	195.00	1.46	3.00	0.09									
010.1BO01	195.00	1.46	3.50	0.10									
010.1BR16	195.00	1.46	3.55	0.10				x	D1950GN				
010.1BV29	195.00	1.46	4.00	0.10									
010.1A504	195.00	1.46	5.00	0.13									
010.1B73B	195.00	1.46	5.30	0.13				x	D1950GN				
010.1B42H	195.00	1.46	6.00	0.13									
010.19507	195.00	1.46	7.00	0.15				x	D1950GN				
010.1BH96	196.00	1.46	3.00	0.09									
010.1BO59	196.00	1.46	3.50	0.10									
010.1BV32	196.00	1.46	4.00	0.10									
010.1BX26	196.00	1.46	5.00	0.13									
010.1B44H	196.00	1.46	6.00	0.13									
010.1A603	196.22	1.47	5.33	0.13	368	x	x						
010.1A769	196.22	1.47	6.99	0.15	444	x	x			R72			
010.1A446	196.44	1.47	3.53	0.10	265	x	x						
010.1A257	196.52	1.47	2.62	0.09	170	x	x						
010.1BH97	197.00	1.47	3.00	0.09									
010.1BO60	197.00	1.47	3.50	0.10									
010.1BV31	197.00	1.47	4.00	0.10									
010.1BX22	197.00	1.47	5.00	0.13									
010.1BH98	198.00	1.48	3.00	0.09									
010.1BO02	198.00	1.48	3.50	0.10									
010.1BV35	198.00	1.48	4.00	0.10									
010.1BX32	198.00	1.48	5.00	0.13									
010.1B45H	198.00	1.48	6.00	0.13									
010.1BH90	199.00	1.48	3.00	0.09									
010.1BO06	199.00	1.48	3.50	0.10									
010.1BV37	199.00	1.48	4.00	0.10									
010.1BX34	199.00	1.48	5.00	0.13									
010.1A826	199.10	1.49	8.40	1.49								x	x
010.1A696	199.30	1.49	5.70	0.13							G200	x	x
010.1A351	199.50	1.49	3.00	0.09									x
010.19984	199.50	1.49	8.40	0.15							P200		
010.20026	200.00	1.49	2.65	0.09					D2000GN				
010.1BI01	200.00	1.49	3.00	0.09									
010.1BO03	200.00	1.49	3.50	0.10									
010.1BL19	200.00	1.49	3.55	0.10				x	D2000GN				
010.1BV33	200.00	1.49	4.00	0.10									
010.1A505	200.00	1.49	5.00	0.13									
010.1B29C	200.00	1.49	5.30	0.13				x	D2000GN				
010.1B85G	200.00	1.49	6.00	0.13									
010.1A770	200.00	1.49	6.99	0.15									
010.20007	200.00	1.49	7.00	0.15				x	D2000GN				
010.1BI02	201.00	1.50	3.00	0.09									
010.1BO05	201.00	1.50	3.50	0.10									
010.1BV40	201.00	1.50	4.00	0.10									
010.1BX23	201.00	1.50	5.00	0.13									
010.1B47H	201.00	1.50	6.00	0.13									
010.1BI05	202.00	1.50	3.00	0.09									
010.1BO62	202.00	1.50	3.50	0.10									
010.1BV36	202.00	1.50	4.00	0.10									
010.1BX25	202.00	1.50	5.00	0.13									
010.1B48H	202.00	1.50	6.00	0.13									
010.1A604	202.57	1.51	5.33	0.13	369	x	x						
010.1A771	202.57	1.51	6.99	0.15	445	x	x			R73			
010.1A447	202.79	1.51	3.53	0.10	266	x	x						
010.1A258	202.87	1.51	2.62	0.09	171	x	x						
010.1BH99	203.00	1.51	3.00	0.09									
010.1BO63	203.00	1.51	3.50	0.10									
010.1BV50	203.00	1.51	4.00	0.10									
010.1BX35	203.00	1.51	5.00	0.13									
010.20353	203.00	1.51	5.30	0.13					D2030GN				
010.1B50H	203.00	1.51	6.00	0.13									
010.20307	203.00	1.51	7.00	0.15				x	D2030GN				
010.1B51H	203.50	1.51	6.00	0.13									
010.1BI07	204.00	1.52	3.00	0.09									
010.1BO41	204.00	1.52	3.50	0.10									
010.1BV38	204.00	1.52	4.00	0.10									
010.1BX43	204.00	1.52	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B53H	204.00	1.52	6.00	0.13									
010.1A827	204.10	1.52	8.40	0.15									x
010.1A352	204.50	1.52	3.00	0.09									
010.20484	204.50	1.52	8.40	0.15							P205		
010.1BI10	205.00	1.52	3.00	0.09									
010.1BO12	205.00	1.52	3.50	0.10									
010.1BV39	205.00	1.52	4.00	0.10									
010.1A506	205.00	1.52	5.00	0.13									
010.1B54H	205.00	1.52	6.00	0.13									
010.1BI11	206.00	1.53	3.00	0.09									
010.1BO65	206.00	1.53	3.50	0.10									
010.20635	206.00	1.53	3.55	0.10					D2060GN				
010.1BV52	206.00	1.53	4.00	0.10									
010.1BX44	206.00	1.53	5.00	0.13									
010.20653	206.00	1.53	5.30	0.13				x	D2060GN				
010.1B47L	206.00	1.53	7.00	0.15				x	D2060GN				
010.1BI13	207.00	1.54	3.00	0.09									
010.1BO53	207.00	1.54	3.50	0.10									
010.1BV53	207.00	1.54	4.00	0.10									
010.1BX46	207.00	1.54	5.00	0.13									
010.1BI14	208.00	1.54	3.00	0.09									
010.1BO66	208.00	1.54	3.50	0.10									
010.1BV41	208.00	1.54	4.00	0.10									
010.1BJ75	208.00	1.54	4.50	0.10									
010.1BX28	208.00	1.54	5.00	0.13									
010.1B56H	208.00	1.54	6.00	0.13									
010.20884	208.50	1.55	8.40	0.15							P209		
010.1A605	208.92	1.55	5.33	0.13	370	x	x						
010.1A772	208.92	1.55	6.99	0.15									
010.1BI17	209.00	1.55	3.00	0.09									
010.1BO68	209.00	1.55	3.50	0.10									
010.1BV17	209.00	1.55	4.00	0.10									
010.1BX29	209.00	1.55	5.00	0.13									
010.1A828	209.10	1.55	8.40	1.55								x	x
010.1A448	209.14	1.55	3.53	0.10	267	x	x						
010.1A259	209.22	1.55	2.62	0.09	172	x	x						
010.1A697	209.30	1.55	5.70	0.13							G210	x	x
010.1A353	209.50	1.55	3.00	0.09									x
010.20984	209.50	1.55	8.40	0.15							P210		
010.1BI03	210.00	1.56	3.00	0.09									
010.1BO33	210.00	1.56	3.50	0.10									
010.1BV42	210.00	1.56	4.00	0.10									
010.1A507	210.00	1.56	5.00	0.13									
010.1B93G	210.00	1.56	6.00	0.13									
010.1BI04	211.00	1.56	3.00	0.09									
010.1BO07	211.00	1.56	3.50	0.10									
010.1BV10	211.00	1.56	4.00	0.10									
010.1BX49	211.00	1.56	5.00	0.13									
010.21226	212.00	1.57	2.65	0.09					D2120GN				
010.1BI25	212.00	1.57	3.00	0.09									
010.1BO69	212.00	1.57	3.50	0.10									
010.21235	212.00	1.57	3.55	0.10					D2120GN				
010.1BV43	212.00	1.57	4.00	0.10									
010.1BX31	212.00	1.57	5.00	0.13									
010.21253	212.00	1.57	5.30	0.13				x	D2120GN				
010.1B57H	212.00	1.57	6.00	0.13									
010.1B50L	212.00	1.57	7.00	0.15				x	D2120GN				
010.1BI06	213.00	1.58	3.00	0.09									
010.1BO08	213.00	1.58	3.50	0.10									
010.1BV04	213.00	1.58	4.00	0.10									
010.1BX52	213.00	1.58	5.00	0.13									
010.1BI26	214.00	1.58	3.00	0.09									
010.1BO09	214.00	1.58	3.50	0.10									
010.1BV01	214.00	1.58	4.00	0.10									
010.1BX53	214.00	1.58	5.00	0.13									
010.21484	214.50	1.59	8.40	0.15							P215		
010.1BI08	215.00	1.59	3.00	0.09									
010.1BO71	215.00	1.59	3.50	0.10									
010.1BV44	215.00	1.59	4.00	0.10									
010.1BJ83	215.00	1.59	4.50	0.10									
010.1A508	215.00	1.59	5.00	0.13									
010.1B59H	215.00	1.59	6.00	0.13									
010.1A606	215.27	1.59	5.33	0.13	371	x	x						
010.1A773	215.27	1.59	6.99	0.15	446	x	x			R74			
010.1A449	215.49	1.59	3.53	0.10	268	x	x						
010.1A260	215.57	1.59	2.62	0.09	173	x	x						
010.1BI09	216.00	1.60	3.00	0.09									
010.1BO72	216.00	1.60	3.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BV45	216.00	1.60	4.00	0.10									
010.1BX56	216.00	1.60	5.00	0.13									
010.1B60H	216.00	1.60	6.00	0.13									
010.1BO42	217.00	1.60	3.00	0.09									
010.1BO10	217.00	1.60	3.50	0.10									
010.1BV49	217.00	1.60	4.00	0.10									
010.1BX36	217.00	1.60	5.00	0.13									
010.1B62H	217.00	1.60	6.00	0.13									
010.1BI31	218.00	1.61	3.00	0.09									
010.1BO11	218.00	1.61	3.50	0.10									
010.21835	218.00	1.61	3.55	0.10					D2180GN				
010.1BV46	218.00	1.61	4.00	0.10									
010.1BX37	218.00	1.61	5.00	0.13									
010.21853	218.00	1.61	5.30	0.13				x	D2180GN				
010.1B71H	218.00	1.61	6.00	0.13									
010.1B54L	218.00	1.61	7.00	0.15				x	D2180GN				
010.1BJ90	218.50	1.61	4.50	0.10									
010.1BI32	219.00	1.62	3.00	0.09									
010.1BO74	219.00	1.62	3.50	0.10									
010.1BU83	219.00	1.62	4.00	0.10									
010.1BX58	219.00	1.62	5.00	0.13									
010.1A829	219.10	1.62	8.40	1.62								x	x
010.1A698	219.30	1.62	5.70	0.13							G220	x	x
010.1A354	219.50	1.62	3.00	0.09									x
010.21984	219.50	1.62	8.40	0.15							P220		
010.1BI12	220.00	1.62	3.00	0.09									
010.1BO36	220.00	1.62	3.50	0.10									
010.1BV47	220.00	1.62	4.00	0.10									
010.1A509	220.00	1.62	5.00	0.13									
010.1B94G	220.00	1.62	6.00	0.13									
010.1BI34	221.00	1.63	3.00	0.09									
010.1BO75	221.00	1.63	3.50	0.10									
010.1BU72	221.00	1.63	4.00	0.10									
010.1BX38	221.00	1.63	5.00	0.13									
010.1B72H	221.00	1.63	6.00	0.13									
010.1A607	221.62	1.63	5.33	0.13	372	x	x						
010.1A774	221.62	1.63	6.99	0.15									
010.1A450	221.84	1.63	3.53	0.10	269	x	x						
010.1A261	221.92	1.63	2.62	0.09	174	x	x						
010.1BI35	222.00	1.64	3.00	0.09									
010.1BO77	222.00	1.64	3.50	0.10									
010.1BV48	222.00	1.64	4.00	0.10									
010.1BX40	222.00	1.64	5.00	0.13									
010.22256	222.50	1.64	6.00	0.13							V225		
010.1BI37	223.00	1.64	3.00	0.09									
010.1BO78	223.00	1.64	3.50	0.10									
010.1BU66	223.00	1.64	4.00	0.10									
010.1BX41	223.00	1.64	5.00	0.13									
010.22426	224.00	1.65	2.65	0.09					D2240GN				
010.1BI50	224.00	1.65	3.00	0.09									
010.1BO80	224.00	1.65	3.50	0.10									
010.22435	224.00	1.65	3.55	0.10					D2240GN				
010.1BU65	224.00	1.65	4.00	0.10									
010.1BX59	224.00	1.65	5.00	0.13									
010.22453	224.00	1.65	5.30	0.13				x	D2240GN				
010.1B57L	224.00	1.65	7.00	0.15				x	D2240GN				
010.22484	224.50	1.65	8.40	0.15							P225		
010.1BI15	225.00	1.65	3.00	0.09									
010.1BO24	225.00	1.65	3.50	0.10									
010.1BV51	225.00	1.65	4.00	0.10									
010.1BJ77	225.00	1.65	4.50	0.10									
010.1A510	225.00	1.65	5.00	0.13									
010.1B74H	225.00	1.65	6.00	0.13									
010.1BI16	226.00	1.66	3.00	0.09									
010.1BO81	226.00	1.66	3.50	0.10									
010.1BV55	226.00	1.66	4.00	0.10									
010.1BX61	226.00	1.66	5.00	0.13									
010.1B75H	226.00	1.66	6.00	0.13									
010.1BI52	227.00	1.67	3.00	0.09									
010.1BO83	227.00	1.67	3.50	0.10									
010.1BV54	227.00	1.67	4.00	0.10									
010.1BJ92	227.00	1.67	4.50	0.10									
010.1BX62	227.00	1.67	5.00	0.13									
010.22753	227.00	1.67	5.30	0.13				x	D2270GN				
010.22707	227.00	1.67	7.00	0.15					D2270GN				
010.1A608	227.97	1.67	5.33	0.13	373	x	x						
010.1A775	227.97	1.67	6.99	0.15	447	x	x			R75			
010.1BI18	228.00	1.67	3.00	0.09									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BO84	228.00	1.67	3.50	0.10									
010.1BV56	228.00	1.67	4.00	0.10									
010.1BX64	228.00	1.67	5.00	0.13									
010.1A451	228.19	1.68	3.53	0.10	270	x	x						
010.1A262	228.27	1.68	2.62	0.09	175	x	x						
010.1BI53	229.00	1.68	3.00	0.09									
010.1BO86	229.00	1.68	3.50	0.10									
010.1BV57	229.00	1.68	4.00	0.10									
010.1BX68	229.00	1.68	5.00	0.13									
010.1B77H	229.00	1.68	6.00	0.13									
010.1A830	229.10	1.68	8.40	1.68								x	x
010.1A699	229.30	1.68	5.70	0.13							G230	x	x
010.1A355	229.50	1.68	3.00	0.09									x
010.22984	229.50	1.68	8.40	0.15							P230		
010.23026	230.00	1.69	2.65	0.09					D2300GN				
010.1BI19	230.00	1.69	3.00	0.09									
010.1BO13	230.00	1.69	3.50	0.10									
010.23035	230.00	1.69	3.55	0.10					D2300GN				
010.1BV58	230.00	1.69	4.00	0.10									
010.1A511	230.00	1.69	5.00	0.13									
010.23053	230.00	1.69	5.30	0.13				x	D2300GN				
010.1B78H	230.00	1.69	6.00	0.13									
010.1B60L	230.00	1.69	7.00	0.15				x	D2300GN				
010.1BI55	231.00	1.69	3.00	0.09									
010.1BO87	231.00	1.69	3.50	0.10									
010.1BV65	231.00	1.69	4.00	0.10									
010.1BX70	231.00	1.69	5.00	0.13									
010.1BI56	232.00	1.70	3.00	0.09									
010.1BO93	232.00	1.70	3.50	0.10									
010.1BV60	232.00	1.70	4.00	0.10									
010.1BX47	232.00	1.70	5.00	0.13									
010.1BI20	233.00	1.71	3.00	0.09									
010.1BO95	233.00	1.71	3.50	0.10									
010.1BV67	233.00	1.71	4.00	0.10									
010.1BX79	233.00	1.71	5.00	0.13									
010.1BI23	234.00	1.71	3.00	0.09									
010.1BO96	234.00	1.71	3.50	0.10									
010.1BV59	234.00	1.71	4.00	0.10									
010.1BX82	234.00	1.71	5.00	0.13									
010.1A831	234.10	1.71	8.40	0.15									x
010.1A609	234.32	1.72	5.33	0.13	374	x	x						
010.1A776	234.32	1.72	6.99	0.15									
010.23484	234.50	1.72	8.40	0.15							P235		
010.1A452	234.54	1.72	3.53	0.10	271	x	x						
010.1A263	234.62	1.72	2.62	0.09	176	x	x						
010.1BI22	235.00	1.72	3.00	0.09									
010.1BO98	235.00	1.72	3.50	0.10									
010.1BV61	235.00	1.72	4.00	0.10									
010.1A512	235.00	1.72	5.00	0.13									
010.1B81H	235.00	1.72	6.00	0.13									
010.23626	236.00	1.73	2.65	0.09					D2360GN				
010.1BI58	236.00	1.73	3.00	0.09									
010.1BO99	236.00	1.73	3.50	0.10									
010.23635	236.00	1.73	3.55	0.10					D2360GN				
010.1BV70	236.00	1.73	4.00	0.10									
010.1BX83	236.00	1.73	5.00	0.13									
010.23653	236.00	1.73	5.30	0.13				x	D2360GN				
010.1B83H	236.00	1.73	6.00	0.13									
010.1B65L	236.00	1.73	7.00	0.15				x	D2360GN				
010.1BI59	237.00	1.73	3.00	0.09									
010.1BP01	237.00	1.73	3.50	0.10									
010.1BV73	237.00	1.73	4.00	0.10									
010.1BX85	237.00	1.73	5.00	0.13									
010.1B84H	237.00	1.73	6.00	0.13									
010.1B86H	237.50	1.74	6.00	0.13									
010.1BI61	238.00	1.74	3.00	0.09									
010.1BP02	238.00	1.74	3.50	0.10									
010.1BV74	238.00	1.74	4.00	0.10									
010.1BX50	238.00	1.74	5.00	0.13									
010.1B87H	238.00	1.74	6.00	0.13									
010.1BI62	239.00	1.75	3.00	0.09									
010.1BP04	239.00	1.75	3.50	0.10									
010.1BV76	239.00	1.75	4.00	0.10									
010.1BX86	239.00	1.75	5.00	0.13									
010.23953	239.00	1.75	5.30	0.13				x	D2390GN				
010.23907	239.00	1.75	7.00	0.15					D2390GN				
010.1A832	239.10	1.75	8.40	1.75								x	x
010.1A700	239.30	1.75	5.70	0.13							G240	x	x

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A356	239.50	1.75	3.00	0.09									x
010.23984	239.50	1.75	8.40	0.15							P240		
010.1BI21	240.00	1.75	3.00	0.09									
010.1BO35	240.00	1.75	3.50	0.10									
010.1BV62	240.00	1.75	4.00	0.10									
010.1A513	240.00	1.75	5.00	0.13									
010.1B96G	240.00	1.75	6.00	0.13									
010.1A610	240.67	1.76	5.33	0.13	375	x	x						
010.1A777	240.67	1.76	6.99	0.15	448	x	x			R76			
010.1A453	240.89	1.76	3.53	0.10	272	x	x						
010.1A264	240.97	1.76	2.62	0.09	177	x	x						
010.1BI64	241.00	1.76	3.00	0.09									
010.1BP05	241.00	1.76	3.50	0.10									
010.1BV77	241.00	1.76	4.00	0.10									
010.1BX54	241.00	1.76	5.00	0.13									
010.1BI65	242.00	1.77	3.00	0.09									
010.1BP07	242.00	1.77	3.50	0.10									
010.1BV63	242.00	1.77	4.00	0.10									
010.1BX55	242.00	1.77	5.00	0.13									
010.1B89H	242.00	1.77	6.00	0.13									
010.24326	243.00	1.77	2.65	0.09					D2430GN				
010.1BI67	243.00	1.77	3.00	0.09									
010.1BP08	243.00	1.77	3.50	0.10									
010.24335	243.00	1.77	3.55	0.10					D2430GN				
010.1BV79	243.00	1.77	4.00	0.10									
010.1BX88	243.00	1.77	5.00	0.13									
010.24353	243.00	1.77	5.30	0.13				x	D2430GN				
010.1B66L	243.00	1.77	7.00	0.15				x	D2430GN				
010.1BI68	244.00	1.78	3.00	0.09									
010.1BP10	244.00	1.78	3.50	0.10									
010.1BV80	244.00	1.78	4.00	0.10									
010.1BX94	244.00	1.78	5.00	0.13									
010.1B90H	244.00	1.78	6.00	0.13									
010.24453	244.50	1.78	3.00	0.09									x
010.24484	244.50	1.78	8.40	0.15							P245		
010.1BI24	245.00	1.78	3.00	0.09									
010.1BO30	245.00	1.78	3.50	0.10									
010.1BV64	245.00	1.78	4.00	0.10									
010.1A514	245.00	1.78	5.00	0.13									
010.1BI27	246.00	1.79	3.00	0.09									
010.1BP11	246.00	1.79	3.50	0.10									
010.1BV82	246.00	1.79	4.00	0.10									
010.1BX98	246.00	1.79	5.00	0.13									
010.1BI70	247.00	1.80	3.00	0.09									
010.1BP13	247.00	1.80	3.50	0.10									
010.1BV83	247.00	1.80	4.00	0.10									
010.1B00A	247.00	1.80	5.00	0.13									
010.1B92H	247.00	1.80	6.00	0.13									
010.1A778	247.00	1.80	6.99	0.15									
010.1A611	247.02	1.80	5.33	0.13	376	x	x						
010.24735	247.24	1.80	3.53	0.10	273	x	x						
010.1A454	247.26	1.80	3.53	0.10									
010.1A265	247.32	1.80	2.62	0.09	178	x	x						
010.1BI28	248.00	1.80	3.00	0.09									
010.1BP14	248.00	1.80	3.50	0.10									
010.1BV85	248.00	1.80	4.00	0.10									
010.1B01A	248.00	1.80	5.00	0.13									
010.1BI71	249.00	1.81	3.00	0.09									
010.1BP16	249.00	1.81	3.50	0.10									
010.1BV91	249.00	1.81	4.00	0.10									
010.1B03A	249.00	1.81	5.00	0.13									
010.1B93H	249.00	1.81	6.00	0.13									
010.1A833	249.10	1.81	8.40	1.81								x	x
010.1A701	249.30	1.81	5.70	0.13							G250	x	x
010.1A357	249.50	1.81	3.00	0.09									x
010.24984	249.50	1.81	8.40	0.15							P250		
010.25026	250.00	1.82	2.65	0.09					D2500GN				
010.1BI30	250.00	1.82	3.00	0.09									
010.1BO16	250.00	1.82	3.50	0.10									
010.25035	250.00	1.82	3.55	0.10					D2500GN				
010.1BV66	250.00	1.82	4.00	0.10									
010.1BJ93	250.00	1.82	4.50	0.10									
010.1A515	250.00	1.82	5.00	0.13									
010.25053	250.00	1.82	5.30	0.13				x	D2500GN				
010.1B02H	250.00	1.82	6.00	0.13									
010.1B71L	250.00	1.82	7.00	0.15				x	D2500GN				
010.1BP17	251.00	1.82	3.50	0.10									
010.1BV95	251.00	1.82	4.00	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BX63	251.00	1.82	5.00	0.13									
010.1BO44	252.00	1.83	3.50	0.10									
010.1BV69	252.00	1.83	4.00	0.10									
010.1B09A	252.00	1.83	5.00	0.13									
010.1BP19	253.00	1.84	3.50	0.10									
010.1BV68	253.00	1.84	4.00	0.10									
010.1B10A	253.00	1.84	5.00	0.13									
010.1A612	253.37	1.84	5.33	0.13	377	x	x						
010.1A779	253.37	1.84	6.99	0.15	449		x						
010.25369	253.57	1.84	6.99	0.15	449	x				R77			
010.1A455	253.59	1.84	3.53	0.10	274	x	x						
010.1BP22	254.00	1.84	3.50	0.10									
010.1BV97	254.00	1.84	4.00	0.10									
010.1B12A	254.00	1.84	5.00	0.13									
010.25453	254.00	1.84	5.30	0.13				x	D2540GN				
010.25407	254.00	1.84	7.00	0.15				x	D2540GN				
010.25484	254.50	1.85	8.40	0.15							P255		
010.1BO26	255.00	1.85	3.50	0.10									
010.1BV71	255.00	1.85	4.00	0.10									
010.1A516	255.00	1.85	5.00	0.13									
010.1BP23	256.00	1.86	3.50	0.10									
010.1BV72	256.00	1.86	4.00	0.10									
010.1B13A	256.00	1.86	5.00	0.13									
010.1BP25	257.00	1.86	3.50	0.10									
010.1BZ01	257.00	1.86	4.00	0.10									
010.1B18A	257.00	1.86	5.00	0.13									
010.1BP26	258.00	1.87	3.50	0.10									
010.25835	258.00	1.87	3.55	0.10					D2580GN				
010.1BZ03	258.00	1.87	4.00	0.10									
010.1BX65	258.00	1.87	5.00	0.13									
010.25853	258.00	1.87	5.30	0.13				x	E2580GN				
010.1B95H	258.00	1.87	6.00	0.13									
010.1B75L	258.00	1.87	7.00	0.15				x	E2580GN				
010.1BP28	259.00	1.88	3.50	0.10									
010.1BZ07	259.00	1.88	4.00	0.10									
010.1B21A	259.00	1.88	5.00	0.13									
010.1B96H	259.00	1.88	6.00	0.13									
010.1A702	259.30	1.88	5.70	0.13							G260	x	x
010.25984	259.50	1.88	8.40	0.15							P260		
010.1A780	259.70	1.88	6.99	0.15									
010.1BO39	260.00	1.88	3.50	0.10									
010.1BV75	260.00	1.88	4.00	0.10									
010.1A517	260.00	1.88	5.00	0.13									
010.1B99H	260.00	1.88	6.00	0.13									
010.1BP29	261.00	1.89	3.50	0.10									
010.1BZ09	261.00	1.89	4.00	0.10									
010.1B22A	261.00	1.89	5.00	0.13									
010.26153	261.00	1.89	5.30	0.13				x	E2610GN				
010.26107	261.00	1.89	7.00	0.15				x	E2610GN				
010.1BO45	262.00	1.89	3.50	0.10									
010.1BZ13	262.00	1.89	4.00	0.10									
010.1BX67	262.00	1.89	5.00	0.13									
010.1B04I	262.00	1.89	6.00	0.13									
010.1BP31	263.00	1.90	3.50	0.10									
010.1BZ15	263.00	1.90	4.00	0.10									
010.1B24A	263.00	1.90	5.00	0.13									
010.1BP32	264.00	1.91	3.50	0.10									
010.1BZ16	264.00	1.91	4.00	0.10									
010.1B25A	264.00	1.91	5.00	0.13									
010.26484	264.50	1.91	8.40	0.15							P265		
010.1BO38	265.00	1.91	3.50	0.10									
010.26535	265.00	1.91	3.55	0.10					E2650GN				
010.1BZ18	265.00	1.91	4.00	0.10									
010.1A518	265.00	1.91	5.00	0.13									
010.26553	265.00	1.91	5.30	0.13				x	E2650GN				
010.1B05I	265.00	1.91	6.00	0.13									
010.1B78L	265.00	1.91	7.00	0.15				x	E2650GN				
010.1BO19	266.00	1.92	3.50	0.10									
010.1BV78	266.00	1.92	4.00	0.10									
010.1B27A	266.00	1.92	5.00	0.13									
010.1B07I	266.00	1.92	6.00	0.13									
010.1A613	266.07	1.92	5.33	0.13	378	x	x						
010.1A781	266.07	1.92	6.99	0.15	450	x	x			R78			
010.1A456	266.29	1.92	3.53	0.10	275	x	x						
010.1BP34	267.00	1.93	3.50	0.10									
010.1BZ21	267.00	1.93	4.00	0.10									
010.1BJ95	267.00	1.93	4.50	0.10									
010.1B28A	267.00	1.93	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BO32	268.00	1.93	3.50	0.10									
010.1BZ22	268.00	1.93	4.00	0.10									
010.1B30A	268.00	1.93	5.00	0.13									
010.26853	268.00	1.93	5.30	0.13				x	E2680GN				
010.26807	268.00	1.93	7.00	0.15				x	E2680GN				
010.1BP35	269.00	1.94	3.50	0.10									
010.1BZ25	269.00	1.94	4.00	0.10									
010.1B31A	269.00	1.94	5.00	0.13									
010.1A703	269.30	1.94	5.70	0.13							G270	x	x
010.26984	269.50	1.94	8.40	0.15							P270		
010.1BO27	270.00	1.95	3.50	0.10									
010.1BV81	270.00	1.95	4.00	0.10									
010.1A519	270.00	1.95	5.00	0.13									
010.1B08I	270.00	1.95	6.00	0.13									
010.1BP38	271.00	1.95	3.50	0.10									
010.1BZ27	271.00	1.95	4.00	0.10									
010.1BX73	271.00	1.95	5.00	0.13									
010.1BP40	272.00	1.96	3.50	0.10									
010.27235	272.00	1.96	3.55	0.10					E2720GN				
010.1BZ28	272.00	1.96	4.00	0.10									
010.1BX71	272.00	1.96	5.00	0.13									
010.27253	272.00	1.96	5.30	0.13				x	E2720GN				
010.27206	272.00	1.96	6.00	0.13							V275		
010.1B79L	272.00	1.96	7.00	0.15				x	E2720GN				
010.1A782	272.40	1.96	6.99	0.15									
010.1BP41	273.00	1.97	3.50	0.10									
010.1BZ30	273.00	1.97	4.00	0.10									
010.1BX74	273.00	1.97	5.00	0.13									
010.1BP43	274.00	1.97	3.50	0.10									
010.1BZ31	274.00	1.97	4.00	0.10									
010.1BX76	274.00	1.97	5.00	0.13									
010.27484	274.50	1.98	8.40	0.15							P275		
010.1BP44	275.00	1.98	3.50	0.10									
010.1BV84	275.00	1.98	4.00	0.10									
010.1A520	275.00	1.98	5.00	0.13									
010.1BP47	276.00	1.99	3.50	0.10									
010.1BZ00	276.00	1.99	4.00	0.10									
010.1B33A	276.00	1.99	5.00	0.13									
010.27653	276.00	1.99	5.30	0.13				x	E2760GN				
010.27607	276.00	1.99	7.00	0.15				x	E2760GN				
010.1BP49	277.00	1.99	3.50	0.10									
010.1BU63	277.00	1.99	4.00	0.10									
010.1B34A	277.00	1.99	5.00	0.13									
010.1BP50	278.00	2.00	3.50	0.10									
010.1BU62	278.00	2.00	4.00	0.10									
010.1B36A	278.00	2.00	5.00	0.13									
010.1B10I	278.00	2.00	6.00	0.13									
010.1A614	278.77	2.00	5.33	0.13	379	x	x						
010.1A783	278.77	2.00	6.99	0.15	451	x	x			R79			
010.1A457	278.99	2.00	3.53	0.10	276	x	x						
010.1BP52	279.00	2.00	3.50	0.10									
010.1BU57	279.00	2.00	4.00	0.10									
010.1B37A	279.00	2.00	5.00	0.13									
010.1A704	279.30	2.01	5.70	0.13							G280	x	x
010.27984	279.50	2.01	8.40	0.15							P280		
010.1BP53	280.00	2.01	3.50	0.10									
010.28035	280.00	2.01	3.55	0.10					E2800GN				
010.1BV86	280.00	2.01	4.00	0.10									
010.1BJ96	280.00	2.01	4.50	0.10									
010.1A521	280.00	2.01	5.00	0.13									
010.28053	280.00	2.01	5.30	0.13				x	E2800GN				
010.1B11I	280.00	2.01	6.00	0.13									
010.1B81L	280.00	2.01	7.00	0.15				x	E2800GN				
010.1BP55	281.00	2.02	3.50	0.10									
010.1BU54	281.00	2.02	4.00	0.10									
010.1BX78	281.00	2.02	5.00	0.13									
010.1BP56	282.00	2.02	3.50	0.10									
010.1BV87	282.00	2.02	4.00	0.10									
010.1B39A	282.00	2.02	5.00	0.13									
010.1BP58	283.00	2.03	3.50	0.10									
010.1BU48	283.00	2.03	4.00	0.10									
010.1B40A	283.00	2.03	5.00	0.13									
010.28353	283.00	2.03	5.30	0.13				x	E2830GN				
010.28307	283.00	2.03	7.00	0.15				x	E2830GN				
010.1BP59	284.00	2.04	3.50	0.10									
010.1BU47	284.00	2.04	4.00	0.10									
010.1B42A	284.00	2.04	5.00	0.13									
010.1B13I	284.00	2.04	6.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.28484	284.50	2.04	8.40	0.15							P285		
010.1BP61	285.00	2.04	3.50	0.10									
010.1BU45	285.00	2.04	4.00	0.10									
010.1A522	285.00	2.04	5.00	0.13									
010.1B14I	285.00	2.04	6.00	0.13									
010.1A784	285.10	2.04	6.99	0.15									
010.1BP62	286.00	2.05	3.50	0.10									
010.1BU44	286.00	2.05	4.00	0.10									
010.1B45A	286.00	2.05	5.00	0.13									
010.28653	286.00	2.05	5.30	0.13				x	E2860GN				
010.28607	286.00	2.05	7.00	0.15				x	E2860GN				
010.1BP64	287.00	2.06	3.50	0.10									
010.1BU42	287.00	2.06	4.00	0.10									
010.1BX80	287.00	2.06	5.00	0.13									
010.1BO17	288.00	2.06	3.50	0.10									
010.1BV88	288.00	2.06	4.00	0.10									
010.1B46A	288.00	2.06	5.00	0.13									
010.1B16I	288.00	2.06	6.00	0.13									
010.1BP65	289.00	2.07	3.50	0.10									
010.1BU53	289.00	2.07	4.00	0.10									
010.1B48A	289.00	2.07	5.00	0.13									
010.1A705	289.30	2.07	5.70	0.13							G290	x	x
010.28984	289.50	2.07	8.40	0.15							P290		
010.1BP67	290.00	2.08	3.50	0.10									
010.29035	290.00	2.08	3.55	0.10					E2900GN				
010.1BU39	290.00	2.08	4.00	0.10									
010.1A523	290.00	2.08	5.00	0.13									
010.29053	290.00	2.08	5.30	0.13				x	E2900GN				
010.1B17I	290.00	2.08	6.00	0.13									
010.1B83L	290.00	2.08	7.00	0.15				x	E2900GN				
010.1BP68	291.00	2.08	3.50	0.10									
010.1BV89	291.00	2.08	4.00	0.10									
010.1B49A	291.00	2.08	5.00	0.13									
010.1A615	291.47	2.09	5.33	0.13	380	x	x						
010.1A785	291.47	2.09	6.99	0.15	452	x	x			R80			
010.1A458	291.69	2.09	3.53	0.10	277	x	x						
010.1BP70	292.00	2.09	3.50	0.10									
010.1BV90	292.00	2.09	4.00	0.10									
010.1B52A	292.00	2.09	5.00	0.13									
010.1BP71	293.00	2.10	3.50	0.10									
010.1BU36	293.00	2.10	4.00	0.10									
010.1B54A	293.00	2.10	5.00	0.13									
010.1BO15	294.00	2.10	3.50	0.10									
010.1BU33	294.00	2.10	4.00	0.10									
010.1B55A	294.00	2.10	5.00	0.13									
010.1B19I	294.00	2.10	6.00	0.13									
010.29484	294.50	2.10	8.40	0.15							P295		
010.1BP73	295.00	2.11	3.50	0.10									
010.1BV92	295.00	2.11	4.00	0.10									
010.1A524	295.00	2.11	5.00	0.13									
010.29553	295.00	2.11	5.30	0.13				x	E2950GN				
010.1B20I	295.00	2.11	6.00	0.13									
010.29507	295.00	2.11	7.00	0.15				x	E2950GN				
010.1BP74	296.00	2.11	3.50	0.10									
010.1BU32	296.00	2.11	4.00	0.10									
010.1B57A	296.00	2.11	5.00	0.13									
010.1BP76	297.00	2.12	3.50	0.10									
010.1BV93	297.00	2.12	4.00	0.10									
010.1B58A	297.00	2.12	5.00	0.13									
010.1A786	297.80	2.13	6.99	0.15									
010.1BP77	298.00	2.13	3.50	0.10									
010.1BU29	298.00	2.13	4.00	0.10									
010.1B60A	298.00	2.13	5.00	0.13									
010.1BP79	299.00	2.13	3.50	0.10									
010.1BU30	299.00	2.13	4.00	0.10									
010.1B61A	299.00	2.13	5.00	0.13									
010.1A706	299.30	2.14	5.70	0.13							G230	x	x
010.29984	299.50	2.14	8.40	0.15							P300		
010.1BP80	300.00	2.14	3.50	0.10									
010.30035	300.00	2.14	3.55	0.10					E3000GN				
010.1BV94	300.00	2.14	4.00	0.10									
010.1A525	300.00	2.14	5.00	0.13									
010.30053	300.00	2.14	5.30	0.13				x	E3000GN				
010.1B22I	300.00	2.14	6.00	0.13									
010.1B92L	300.00	2.14	7.00	0.15				x	E3000GN				
010.1BP82	301.00	2.15	3.50	0.10									
010.1BU27	301.00	2.15	4.00	0.10									
010.1B63A	301.00	2.15	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B23I	301.00	2.15	6.00	0.13									
010.1BP83	302.00	2.15	3.50	0.10									
010.1BU26	302.00	2.15	4.00	0.10									
010.1B64A	302.00	2.15	5.00	0.13									
010.1BP85	303.00	2.16	3.50	0.10									
010.1BU20	303.00	2.16	4.00	0.10									
010.1B66A	303.00	2.16	5.00	0.13									
010.30353	303.00	2.16	5.30	0.13				x	E3030GN				
010.30307	303.00	2.16	7.00	0.15				x	E3030GN				
010.1BP86	304.00	2.17	3.50	0.10									
010.1BU18	304.00	2.17	4.00	0.10									
010.1BX84	304.00	2.17	5.00	0.13									
010.1A616	304.17	2.17	5.33	0.13	381	x	x						
010.1A787	304.17	2.17	6.99	0.15	453	x	x			R81			
010.1A459	304.39	2.17	3.53	0.10	278	x	x						
010.1BP88	305.00	2.17	3.50	0.10									
010.1BU17	305.00	2.17	4.00	0.10									
010.1BX87	305.00	2.17	5.00	0.13									
010.1A718	305.00	2.17	6.00	0.13									
010.1BP89	306.00	2.18	3.50	0.10									
010.1BU15	306.00	2.18	4.00	0.10									
010.1B67A	306.00	2.18	5.00	0.13									
010.1BP91	307.00	2.19	3.50	0.10									
010.30735	307.00	2.19	3.55	0.10					E3070GN				
010.1BU14	307.00	2.19	4.00	0.10									
010.1B69A	307.00	2.19	5.00	0.13									
010.30753	307.00	2.19	5.30	0.13				x	E3070GN				
010.1B96L	307.00	2.19	7.00	0.15				x	E3070GN				
010.1BO23	308.00	2.19	3.50	0.10									
010.1BU09	308.00	2.19	4.00	0.10									
010.1B70A	308.00	2.19	5.00	0.13									
010.1BP92	309.00	2.20	3.50	0.10									
010.1BU08	309.00	2.20	4.00	0.10									
010.1B72A	309.00	2.20	5.00	0.13									
010.30935	309.30	2.20	5.70	0.13									x
010.1BO29	310.00	2.20	3.50	0.10									
010.1BV98	310.00	2.20	4.00	0.10									
010.1BX90	310.00	2.20	5.00	0.13									
010.1A719	310.00	2.20	6.00	0.13									
010.1B65H	310.50	2.21	6.99	0.15									
010.1BP94	311.00	2.21	3.50	0.10									
010.1BU05	311.00	2.21	4.00	0.10									
010.1BX89	311.00	2.21	5.00	0.13									
010.31153	311.00	2.21	5.30	0.13				x	E3110GN				
010.1B25I	311.00	2.21	6.00	0.13									
010.31107	311.00	2.21	7.00	0.15				x	E3110GN				
010.1BP95	312.00	2.22	3.50	0.10									
010.1BU03	312.00	2.22	4.00	0.10									
010.1BX91	312.00	2.22	5.00	0.13									
010.1BP97	313.00	2.22	3.50	0.10									
010.1BV99	313.00	2.22	4.00	0.10									
010.1BX92	313.00	2.22	5.00	0.13									
010.1BP98	314.00	2.23	3.50	0.10									
010.1BU02	314.00	2.23	4.00	0.10									
010.1B73A	314.00	2.23	5.00	0.13									
010.31484	314.50	2.23	8.40	0.15							P315		
010.1BQ00	315.00	2.24	3.50	0.10									
010.31535	315.00	2.24	3.55	0.10					E3150GN				
010.1BZ02	315.00	2.24	4.00	0.10									
010.1BJ98	315.00	2.24	4.50	0.10									
010.1BX93	315.00	2.24	5.00	0.13									
010.31553	315.00	2.24	5.30	0.13				x	E3150GN				
010.1A720	315.00	2.24	6.00	0.13									
010.1B97L	315.00	2.24	7.00	0.15				x	E3150GN				
010.1BQ01	316.00	2.24	3.50	0.10									
010.1BU00	316.00	2.24	4.00	0.10									
010.1B75A	316.00	2.24	5.00	0.13									
010.1A788	316.87	2.25	6.99	0.15	454	x	x			R82			
010.1BO18	317.00	2.25	3.50	0.10									
010.1BT99	317.00	2.25	4.00	0.10									
010.1B76A	317.00	2.25	5.00	0.13									
010.1BQ03	318.00	2.26	3.50	0.10									
010.1BT94	318.00	2.26	4.00	0.10									
010.1B78A	318.00	2.26	5.00	0.13									
010.1BQ04	319.00	2.26	3.50	0.10									
010.1BT93	319.00	2.26	4.00	0.10									
010.1B79A	319.00	2.26	5.00	0.13									
010.1A707	319.30	2.26	5.70	2.26								x	x

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.31984	319.50	2.27	8.40	0.15							P320		
010.1BQ06	320.00	2.27	3.50	0.10									
010.1BT91	320.00	2.27	4.00	0.10									
010.1B81A	320.00	2.27	5.00	0.13									
010.32053	320.00	2.27	5.30	0.13				x	E3200GN				
010.1A721	320.00	2.27	6.00	0.13									
010.32007	320.00	2.27	7.00	0.15				x	E3200GN				
010.1BQ07	321.00	2.27	3.50	0.10									
010.1BT90	321.00	2.27	4.00	0.10									
010.1B84A	321.00	2.27	5.00	0.13									
010.32156	321.50	2.28	6.00	0.13							V325		
010.1BQ09	322.00	2.28	3.50	0.10									
010.1BT88	322.00	2.28	4.00	0.10									
010.1BX95	322.00	2.28	5.00	0.13									
010.1BQ10	323.00	2.29	3.50	0.10									
010.1BT87	323.00	2.29	4.00	0.10									
010.1B85A	323.00	2.29	5.00	0.13									
010.1B66H	323.20	2.29	6.99	0.15									
010.1BQ12	324.00	2.29	3.50	0.10									
010.1BT85	324.00	2.29	4.00	0.10									
010.1B87A	324.00	2.29	5.00	0.13									
010.1B26I	324.00	2.29	6.00	0.13									
010.1BQ13	325.00	2.30	3.50	0.10									
010.1BT84	325.00	2.30	4.00	0.10									
010.1BX97	325.00	2.30	5.00	0.13									
010.32553	325.00	2.30	5.30	0.13				x	E3250GN				
010.1A722	325.00	2.30	6.00	0.13									
010.1B99L	325.00	2.30	7.00	0.15				x	E3250GN				
010.1BQ15	326.00	2.31	3.50	0.10									
010.1BT82	326.00	2.31	4.00	0.10									
010.1B88A	326.00	2.31	5.00	0.13									
010.1BQ16	327.00	2.31	3.50	0.10									
010.1BT81	327.00	2.31	4.00	0.10									
010.1BX96	327.00	2.31	5.00	0.13									
010.1BQ18	328.00	2.32	3.50	0.10									
010.1BT79	328.00	2.32	4.00	0.10									
010.1B90A	328.00	2.32	5.00	0.13									
010.1BQ19	329.00	2.33	3.50	0.10									
010.1BT78	329.00	2.33	4.00	0.10									
010.1B91A	329.00	2.33	5.00	0.13									
010.1A708	329.30	2.33	5.70	0.13									
010.1A617	329.57	2.33	5.33	0.13	382	x	x						
010.1A789	329.57	2.33	6.99	0.15	455	x	x			R83			
010.1A460	329.79	2.33	3.53	0.10	279	x	x						
010.1BQ21	330.00	2.33	3.50	0.10									
010.1BZ04	330.00	2.33	4.00	0.10									
010.1BX99	330.00	2.33	5.00	0.13									
010.33053	330.00	2.33	5.30	0.13				x	E3300GN				
010.1A723	330.00	2.33	6.00	0.13									
010.33007	330.00	2.33	7.00	0.15				x	E3300GN				
010.1BQ22	331.00	2.34	3.50	0.10									
010.1BT76	331.00	2.34	4.00	0.10									
010.1B93A	331.00	2.34	5.00	0.13									
010.1BQ24	332.00	2.35	3.50	0.10									
010.1BT75	332.00	2.35	4.00	0.10									
010.1B94A	332.00	2.35	5.00	0.13									
010.1BQ25	333.00	2.35	3.50	0.10									
010.1BT73	333.00	2.35	4.00	0.10									
010.1B96A	333.00	2.35	5.00	0.13									
010.1B28I	333.00	2.35	6.00	0.13									
010.1BQ27	334.00	2.36	3.50	0.10									
010.1BT72	334.00	2.36	4.00	0.10									
010.1B97A	334.00	2.36	5.00	0.13									
010.33484	334.50	2.36	8.40	0.15							P335		
010.1BQ28	335.00	2.36	3.50	0.10									
010.33535	335.00	2.36	3.55	0.10					E3350GN				
010.1BT70	335.00	2.36	4.00	0.10									
010.1B99A	335.00	2.36	5.00	0.13									
010.33553	335.00	2.36	5.30	0.13				x	E3350GN				
010.1A724	335.00	2.36	6.00	0.13									
010.1B01M	335.00	2.36	7.00	0.15				x	E3350GN				
010.1B68H	335.90	2.37	6.99	0.15									
010.1BQ30	336.00	2.37	3.50	0.10									
010.1BT69	336.00	2.37	4.00	0.10									
010.1B00B	336.00	2.37	5.00	0.13									
010.1BQ31	337.00	2.38	3.50	0.10									
010.1BT67	337.00	2.38	4.00	0.10									
010.1B02B	337.00	2.38	5.00	0.13									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BQ33	338.00	2.38	3.50	0.10									
010.1BT64	338.00	2.38	4.00	0.10									
010.1B03B	338.00	2.38	5.00	0.13									
010.1B00H	338.00	2.38	6.00	0.13									
010.1BQ34	339.00	2.39	3.50	0.10									
010.1BT63	339.00	2.39	4.00	0.10									
010.1B05B	339.00	2.39	5.00	0.13									
010.1A709	339.30	2.39	5.70	2.39								x	x
010.33984	339.50	2.39	8.40	0.15							P340		
010.1BQ36	340.00	2.40	3.50	0.10									
010.1BT61	340.00	2.40	4.00	0.10									
010.1B02A	340.00	2.40	5.00	0.13									
010.34053	340.00	2.40	5.30	0.13				x	E3400GN				
010.1A725	340.00	2.40	6.00	0.13									
010.34007	340.00	2.40	7.00	0.15				x	E3400GN				
010.1BQ37	341.00	2.40	3.50	0.10									
010.1BT60	341.00	2.40	4.00	0.10									
010.1B06B	341.00	2.40	5.00	0.13									
010.1BQ39	342.00	2.41	3.50	0.10									
010.1BT58	342.00	2.41	4.00	0.10									
010.1B08B	342.00	2.41	5.00	0.13									
010.1A790	342.27	2.41	6.99	0.15	456	x	x			R84			
010.1BQ40	343.00	2.42	3.50	0.10									
010.1BT55	343.00	2.42	4.00	0.10									
010.1B04A	343.00	2.42	5.00	0.13									
010.1BQ42	344.00	2.42	3.50	0.10									
010.1BT54	344.00	2.42	4.00	0.10									
010.1B09B	344.00	2.42	5.00	0.13									
010.1BQ43	345.00	2.43	3.50	0.10									
010.34535	345.00	2.43	3.55	0.10					E3450GN				
010.1BZ06	345.00	2.43	4.00	0.10									
010.1B05A	345.00	2.43	5.00	0.13									
010.34553	345.00	2.43	5.30	0.13				x	E3450GN				
010.1A726	345.00	2.43	6.00	0.13									
010.1B08M	345.00	2.43	7.00	0.15				x	E3450GN				
010.1BQ45	346.00	2.43	3.50	0.10									
010.1BT52	346.00	2.43	4.00	0.10									
010.1B11B	346.00	2.43	5.00	0.13									
010.1BQ46	347.00	2.44	3.50	0.10									
010.1BT51	347.00	2.44	4.00	0.10									
010.1B12B	347.00	2.44	5.00	0.13									
010.1BQ48	348.00	2.45	3.50	0.10									
010.1BT49	348.00	2.45	4.00	0.10									
010.1B06A	348.00	2.45	5.00	0.13									
010.1B31I	348.00	2.45	6.00	0.13									
010.1BQ49	349.00	2.45	3.50	0.10									
010.1BT48	349.00	2.45	4.00	0.10									
010.1B14B	349.00	2.45	5.00	0.13									
010.1BQ51	350.00	2.46	3.50	0.10									
010.1BT46	350.00	2.46	4.00	0.10									
010.1B07A	350.00	2.46	5.00	0.13									
010.35053	350.00	2.46	5.30	0.13				x	E3500GN				
010.1A727	350.00	2.46	6.00	0.13									
010.35007	350.00	2.46	7.00	0.15				x	E3500GN				
010.1BQ52	351.00	2.47	3.50	0.10									
010.1BT45	351.00	2.47	4.00	0.10									
010.1B15B	351.00	2.47	5.00	0.13									
010.1BQ54	352.00	2.47	3.50	0.10									
010.1BT43	352.00	2.47	4.00	0.10									
010.1B08A	352.00	2.47	5.00	0.13									
010.1BQ55	353.00	2.48	3.50	0.10									
010.1BT42	353.00	2.48	4.00	0.10									
010.1B18B	353.00	2.48	5.00	0.13									
010.1BQ57	354.00	2.49	3.50	0.10									
010.1BT40	354.00	2.49	4.00	0.10									
010.1B20B	354.00	2.49	5.00	0.13									
010.35484	354.50	2.49	8.40	0.15							P355		
010.1A618	354.97	2.49	5.33	0.13	383	x	x						
010.1A791	354.97	2.49	6.99	0.15	457	x	x			R85			
010.1BQ58	355.00	2.49	3.50	0.10									
010.35535	355.00	2.49	3.55	0.10					E3550GN				
010.1BT39	355.00	2.49	4.00	0.10									
010.1B21B	355.00	2.49	5.00	0.13									
010.35553	355.00	2.49	5.30	0.13				x	E3550GN				
010.1A728	355.00	2.49	6.00	0.13									
010.1B11M	355.00	2.49	7.00	0.15				x	E3550GN				
010.1A461	355.19	2.49	3.53	0.10	280	x	x						
010.1BQ60	356.00	2.50	3.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BT37	356.00	2.50	4.00	0.10									
010.1B23B	356.00	2.50	5.00	0.13									
010.1BQ61	357.00	2.50	3.50	0.10									
010.1BT36	357.00	2.50	4.00	0.10									
010.1B11A	357.00	2.50	5.00	0.13									
010.1BQ63	358.00	2.51	3.50	0.10									
010.1BT34	358.00	2.51	4.00	0.10									
010.1B24B	358.00	2.51	5.00	0.13									
010.1B04H	358.00	2.51	6.00	0.13									
010.1BQ64	359.00	2.52	3.50	0.10									
010.1BT33	359.00	2.52	4.00	0.10									
010.1B26B	359.00	2.52	5.00	0.13									
010.1A710	359.30	2.52	5.70	2.52								x	x
010.35984	359.50	2.52	8.40	0.15							P360		
010.1BO48	360.00	2.52	3.50	0.10									
010.1BZ08	360.00	2.52	4.00	0.10									
010.1B27B	360.00	2.52	5.00	0.13									
010.36053	360.00	2.52	5.30	0.13				x	E3600GN				
010.1A729	360.00	2.52	6.00	0.13									
010.36007	360.00	2.52	7.00	0.15				x	E3600GN				
010.1BO21	361.00	2.53	3.50	0.10									
010.1BT31	361.00	2.53	4.00	0.10									
010.1B29B	361.00	2.53	5.00	0.13									
010.1BQ66	362.00	2.54	3.50	0.10									
010.1BT30	362.00	2.54	4.00	0.10									
010.1B14A	362.00	2.54	5.00	0.13									
010.1BQ67	363.00	2.54	3.50	0.10									
010.1BT28	363.00	2.54	4.00	0.10									
010.1B30B	363.00	2.54	5.00	0.13									
010.1BQ69	364.00	2.55	3.50	0.10									
010.1BT27	364.00	2.55	4.00	0.10									
010.1B32B	364.00	2.55	5.00	0.13									
010.1BQ70	365.00	2.56	3.50	0.10									
010.1BT24	365.00	2.56	4.00	0.10									
010.1B15A	365.00	2.56	5.00	0.13									
010.36553	365.00	2.56	5.30	0.13				x	E3650GN				
010.1A730	365.00	2.56	6.00	0.13									
010.1B13M	365.00	2.56	7.00	0.15				x	E3650GN				
010.1BQ72	366.00	2.56	3.50	0.10									
010.1BT22	366.00	2.56	4.00	0.10									
010.1B33B	366.00	2.56	5.00	0.13									
010.1BQ73	367.00	2.57	3.50	0.10									
010.1BT21	367.00	2.57	4.00	0.10									
010.1B35B	367.00	2.57	5.00	0.13									
010.1A792	367.67	2.57	6.99	0.15	458	x	x			R86			
010.1BQ75	368.00	2.57	3.50	0.10									
010.1BT19	368.00	2.57	4.00	0.10									
010.1B38B	368.00	2.57	5.00	0.13									
010.1B32I	368.00	2.57	6.00	0.13									
010.1BQ76	369.00	2.58	3.50	0.10									
010.1BT18	369.00	2.58	4.00	0.10									
010.1B39B	369.00	2.58	5.00	0.13									
010.1BQ78	370.00	2.59	3.50	0.10									
010.1BZ10	370.00	2.59	4.00	0.10									
010.1B16A	370.00	2.59	5.00	0.13									
010.37053	370.00	2.59	5.30	0.13				x	E3700GN				
010.1A731	370.00	2.59	6.00	0.13									
010.37007	370.00	2.59	7.00	0.15				x	E3700GN				
010.1BQ79	371.00	2.59	3.50	0.10									
010.1BT16	371.00	2.59	4.00	0.10									
010.1B41B	371.00	2.59	5.00	0.13									
010.1BQ81	372.00	2.60	3.50	0.10									
010.1BZ11	372.00	2.60	4.00	0.10									
010.1B42B	372.00	2.60	5.00	0.13									
010.1BQ82	373.00	2.61	3.50	0.10									
010.1BT15	373.00	2.61	4.00	0.10									
010.1B44B	373.00	2.61	5.00	0.13									
010.1BQ84	374.00	2.61	3.50	0.10									
010.1BT13	374.00	2.61	4.00	0.10									
010.1B45B	374.00	2.61	5.00	0.13									
010.37484	374.50	2.62	8.40	0.15							P375		
010.1BQ85	375.00	2.62	3.50	0.10									
010.1BZ12	375.00	2.62	4.00	0.10									
010.1B47B	375.00	2.62	5.00	0.13									
010.37553	375.00	2.62	5.30	0.13				x	E3750GN				
010.1A732	375.00	2.62	6.00	0.13									
010.1B12M	375.00	2.62	7.00	0.15				x	E3750GN				
010.1BQ87	376.00	2.63	3.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BT10	376.00	2.63	4.00	0.10									
010.1B48B	376.00	2.63	5.00	0.13									
010.1B34I	376.00	2.63	6.00	0.13							V380		
010.1BQ88	377.00	2.63	3.50	0.10									
010.1BT09	377.00	2.63	4.00	0.10									
010.1B50B	377.00	2.63	5.00	0.13									
010.1BQ90	378.00	2.64	3.50	0.10									
010.1BT07	378.00	2.64	4.00	0.10									
010.1B51B	378.00	2.64	5.00	0.13									
010.1BQ91	379.00	2.64	3.50	0.10									
010.1BT06	379.00	2.64	4.00	0.10									
010.1B53B	379.00	2.64	5.00	0.13									
010.37953	379.00	2.64	5.30	0.13				x	E3790GN				
010.37907	379.00	2.64	7.00	0.15				x	E3790GN				
010.1A711	379.30	2.65	5.70	2.65								x	x
010.1BQ93	380.00	2.65	3.50	0.10									
010.1BZ14	380.00	2.65	4.00	0.10									
010.1B17A	380.00	2.65	5.00	0.13									
010.1A733	380.00	2.65	6.00	0.13									
010.1A619	380.37	2.65	5.33	0.13	384	x	x						
010.1A793	380.37	2.65	6.99	0.15	459	x	x			R87			
010.38035	380.57	2.65	3.53	0.10	281	x							
010.1A462	380.59	2.65	3.53	0.10	281	x	x						
010.1BQ94	381.00	2.66	3.50	0.10									
010.1BT04	381.00	2.66	4.00	0.10									
010.1B54B	381.00	2.66	5.00	0.13									
010.1BQ96	382.00	2.66	3.50	0.10									
010.1BT03	382.00	2.66	4.00	0.10									
010.1B56B	382.00	2.66	5.00	0.13									
010.1BQ97	383.00	2.67	3.50	0.10									
010.1BT01	383.00	2.67	4.00	0.10									
010.1B57B	383.00	2.67	5.00	0.13									
010.38353	383.00	2.67	5.30	0.13				x	E3830GN				
010.38307	383.00	2.67	7.00	0.15				x	E3830GN				
010.1BQ99	384.00	2.68	3.50	0.10									
010.1BT00	384.00	2.68	4.00	0.10									
010.1B59B	384.00	2.68	5.00	0.13									
010.38484	384.50	2.68	8.40	0.15							P385		
010.1BR00	385.00	2.68	3.50	0.10									
010.1BS98	385.00	2.68	4.00	0.10									
010.1B19A	385.00	2.68	5.00	0.13									
010.1A734	385.00	2.68	6.00	0.13									
010.1BR02	386.00	2.69	3.50	0.10									
010.1BS97	386.00	2.69	4.00	0.10									
010.1B62B	386.00	2.69	5.00	0.13									
010.1B35I	386.00	2.69	6.00	0.13									
010.1BR03	387.00	2.70	3.50	0.10									
010.1BS95	387.00	2.70	4.00	0.10									
010.1B63B	387.00	2.70	5.00	0.13									
010.38753	387.00	2.70	5.30	0.13				x	E3870GN				
010.1B14M	387.00	2.70	7.00	0.15				x	E3870GN				
010.1BR05	388.00	2.70	3.50	0.10									
010.1BS94	388.00	2.70	4.00	0.10									
010.1B20A	388.00	2.70	5.00	0.13									
010.1B37I	388.00	2.70	6.00	0.13									
010.1BR06	389.00	2.71	3.50	0.10									
010.1BS92	389.00	2.71	4.00	0.10									
010.1B65B	389.00	2.71	5.00	0.13									
010.1B38I	389.00	2.71	6.00	0.13									
010.38935	389.30	2.71	5.70	0.13									x
010.1BR08	390.00	2.71	3.50	0.10									
010.1BZ17	390.00	2.71	4.00	0.10									
010.1B66B	390.00	2.71	5.00	0.13									
010.1A735	390.00	2.71	6.00	0.13									
010.1BR09	391.00	2.72	3.50	0.10									
010.1BS91	391.00	2.72	4.00	0.10									
010.1B68B	391.00	2.72	5.00	0.13									
010.39153	391.00	2.72	5.30	0.13				x	E3910GN				
010.39107	391.00	2.72	7.00	0.15				x	E3910GN				
010.1BR11	392.00	2.73	3.50	0.10									
010.1BS89	392.00	2.73	4.00	0.10									
010.1B23A	392.00	2.73	5.00	0.13									
010.1B06H	392.00	2.73	6.00	0.13									
010.1BR12	393.00	2.73	3.50	0.10									
010.1BS88	393.00	2.73	4.00	0.10									
010.1B69B	393.00	2.73	5.00	0.13									
010.1A794	393.07	2.73	6.99	0.15	460	x	x			R88			
010.1BR14	394.00	2.74	3.50	0.10									

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BS86	394.00	2.74	4.00	0.10									
010.1B71B	394.00	2.74	5.00	0.13									
010.1B40I	394.00	2.74	6.00	0.13									
010.1BR15	395.00	2.75	3.50	0.10									
010.1BS85	395.00	2.75	4.00	0.10									
010.1B72B	395.00	2.75	5.00	0.13									
010.39553	395.00	2.75	5.30	0.13				x	E3950GN				
010.1A736	395.00	2.75	6.00	0.13									
010.39507	395.00	2.75	7.00	0.15				x	E3950GN				
010.1BR17	396.00	2.75	3.50	0.10									
010.1BS83	396.00	2.75	4.00	0.10									
010.1B74B	396.00	2.75	5.00	0.13									
010.1BR18	397.00	2.76	3.50	0.10									
010.1BS82	397.00	2.76	4.00	0.10									
010.1B26A	397.00	2.76	5.00	0.13									
010.1BR20	398.00	2.77	3.50	0.10									
010.1BS80	398.00	2.77	4.00	0.10									
010.1B75B	398.00	2.77	5.00	0.13									
010.1B41I	398.00	2.77	6.00	0.13									
010.1BR21	399.00	2.77	3.50	0.10									
010.1BS79	399.00	2.77	4.00	0.10									
010.1B77B	399.00	2.77	5.00	0.13									
010.1A712	399.30	2.77	5.70	2.77								x	x
010.39984	399.50	2.77	8.40	0.15							P400		
010.1BR23	400.00	2.78	3.50	0.10									
010.1BS77	400.00	2.78	4.00	0.10									
010.1B78B	400.00	2.78	5.00	0.13									
010.40053	400.00	2.78	5.30	0.13				x	E4000GN				
010.1A737	400.00	2.78	6.00	0.13									
010.1B15M	400.00	2.78	7.00	0.15				x	E4000GN				
010.1BR24	401.00	2.78	3.50	0.10									
010.1BS76	401.00	2.78	4.00	0.10									
010.1BR26	402.00	2.79	3.50	0.10									
010.1BS74	402.00	2.79	4.00	0.10									
010.1BR27	403.00	2.80	3.50	0.10									
010.1BS73	403.00	2.80	4.00	0.10									
010.1BR29	404.00	2.80	3.50	0.10									
010.1BS71	404.00	2.80	4.00	0.10									
010.1BR30	405.00	2.81	3.50	0.10									
010.1BZ19	405.00	2.81	4.00	0.10									
010.1A463	405.26	2.81	3.53	0.10	282	x	x						
010.1A620	405.26	2.81	5.33	0.13	385	x	x						
010.1A795	405.26	2.81	6.99	0.15	461	x	x						
010.1BR32	406.00	2.82	3.50	0.10									
010.1BS70	406.00	2.82	4.00	0.10									
010.40607	406.00	2.82	7.00	0.15				x	E4060GN				
010.1BR33	407.00	2.82	3.50	0.10									
010.1BS68	407.00	2.82	4.00	0.10									
010.1BR35	408.00	2.83	3.50	0.10									
010.1BS67	408.00	2.83	4.00	0.10									
010.1BR45	409.00	2.84	3.50	0.10									
010.1BS64	409.00	2.84	4.00	0.10									
010.1BR53	410.00	2.84	3.50	0.10									
010.1BZ20	410.00	2.84	4.00	0.10									
010.1BR54	411.00	2.85	3.50	0.10									
010.1BS62	411.00	2.85	4.00	0.10									
010.1BR56	412.00	2.85	3.50	0.10									
010.1BS61	412.00	2.85	4.00	0.10									
010.1B17M	412.00	2.85	7.00	0.15				x	E4120GN				
010.1BR57	413.00	2.86	3.50	0.10									
010.1BS59	413.00	2.86	4.00	0.10									
010.1BR59	414.00	2.87	3.50	0.10									
010.1BS58	414.00	2.87	4.00	0.10									
010.1BR60	415.00	2.87	3.50	0.10									
010.1BS56	415.00	2.87	4.00	0.10									
010.1B43I	415.00	2.87	6.00	0.13									
010.1BR62	416.00	2.88	3.50	0.10									
010.1BS55	416.00	2.88	4.00	0.10									
010.1BR65	417.00	2.89	3.50	0.10									
010.1BS53	417.00	2.89	4.00	0.10									
010.1A796	417.96	2.89	6.99	0.15	462	x	x						
010.1BR68	418.00	2.89	3.50	0.10									
010.1BS52	418.00	2.89	4.00	0.10									
010.41807	418.00	2.89	7.00	0.15				x	E4180GN				
010.1BR69	419.00	2.90	3.50	0.10									
010.1BS50	419.00	2.90	4.00	0.10									
010.1A713	419.30	2.90	5.70	2.90								x	x
010.1BR71	420.00	2.90	3.50	0.10									

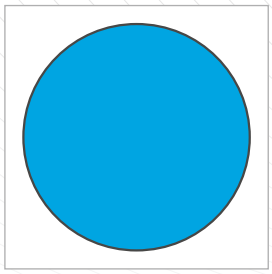
Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1BZ23	420.00	2.90	4.00	0.10									
010.1BR72	421.00	2.91	3.50	0.10									
010.1BS49	421.00	2.91	4.00	0.10									
010.1BR74	422.00	2.92	3.50	0.10									
010.1BS47	422.00	2.92	4.00	0.10									
010.1B44I	422.00	2.92	6.00	0.13									
010.1BR75	423.00	2.92	3.50	0.10									
010.1BS46	423.00	2.92	4.00	0.10									
010.1BR77	424.00	2.93	3.50	0.10									
010.1BS44	424.00	2.93	4.00	0.10									
010.1BR78	425.00	2.94	3.50	0.10									
010.1BZ24	425.00	2.94	4.00	0.10									
010.1B18M	425.00	2.94	7.00	0.15				x	E4250GN				
010.42556	425.50	2.94	6.00	0.13							V430		
010.1BR80	426.00	2.94	3.50	0.10									
010.1BS43	426.00	2.94	4.00	0.10									
010.1BR81	427.00	2.95	3.50	0.10									
010.1BS41	427.00	2.95	4.00	0.10									
010.1BR83	428.00	2.96	3.50	0.10									
010.1BS40	428.00	2.96	4.00	0.10									
010.1BR84	429.00	2.96	3.50	0.10									
010.1BS38	429.00	2.96	4.00	0.10									
010.1B09H	429.00	2.96	6.00	0.13									
010.42907	429.00	2.96	7.00	0.15				x	E4290GN				
010.1BR86	430.00	2.97	3.50	0.10									
010.1BZ26	430.00	2.97	4.00	0.10									
010.1A464	430.66	2.97	3.53	0.10	283	x	x						
010.1A621	430.66	2.97	5.33	0.13	386	x	x						
010.1A797	430.66	2.97	6.99	0.15	463	x	x						
010.1BR87	431.00	2.97	3.50	0.10									
010.1BS37	431.00	2.97	4.00	0.10									
010.1BR89	432.00	2.98	3.50	0.10									
010.1BS35	432.00	2.98	4.00	0.10									
010.1BR90	433.00	2.99	3.50	0.10									
010.1BS34	433.00	2.99	4.00	0.10									
010.43307	433.00	2.99	7.00	0.15				x	E4330GN				
010.1BR92	434.00	2.99	3.50	0.10									
010.1BS32	434.00	2.99	4.00	0.10									
010.1BR93	435.00	3.00	3.50	0.10									
010.1BS31	435.00	3.00	4.00	0.10									
010.1BR95	436.00	3.01	3.50	0.10									
010.1BS29	436.00	3.01	4.00	0.10									
010.1BR96	437.00	3.01	3.50	0.10									
010.1BS28	437.00	3.01	4.00	0.10									
010.1B23M	437.00	3.01	7.00	0.15				x	E4370GN				
010.1BR98	438.00	3.02	3.50	0.10									
010.1BS26	438.00	3.02	4.00	0.10									
010.1BR99	439.00	3.02	3.50	0.10									
010.1BS25	439.00	3.02	4.00	0.10									
010.1A714	439.30	3.03	5.70	3.03								x	x
010.1BS01	440.00	3.03	3.50	0.10									
010.1BS23	440.00	3.03	4.00	0.10									
010.1BS22	441.00	3.04	4.00	0.10									
010.1BS20	442.00	3.04	4.00	0.10									
010.1BS17	443.00	3.05	4.00	0.10									
010.44307	443.00	3.05	7.00	0.15				x	E4430GN				
010.1A798	443.36	3.05	6.99	0.15	464	x	x						
010.1BS16	444.00	3.06	4.00	0.10									
010.1BS14	445.00	3.06	4.00	0.10									
010.1BS13	446.00	3.07	4.00	0.10									
010.1B46I	446.00	3.07	6.00	0.13									
010.1BZ29	447.00	3.08	4.00	0.10									
010.1BS11	448.00	3.08	4.00	0.10									
010.1B47I	448.00	3.08	6.00	0.13									
010.1BS10	449.00	3.09	4.00	0.10									
010.1BS08	450.00	3.09	4.00	0.10									
010.1B49I	450.00	3.09	6.00	0.13									
010.1B24M	450.00	3.09	7.00	0.15				x	E4500GN				
010.1BS07	451.00	3.10	4.00	0.10									
010.1BS05	452.00	3.11	4.00	0.10									
010.1BY08	453.00	3.11	4.00	0.10									
010.1B50I	453.00	3.11	6.00	0.13									
010.1BY10	454.00	3.12	4.00	0.10									
010.1BY11	455.00	3.13	4.00	0.10									
010.1BY17	456.00	3.13	4.00	0.10									
010.45607	456.00	3.13	7.00	0.15				x	E4560GN				
010.1A465	456.06	3.13	3.53	0.10	284	x	x						
010.1A622	456.06	3.13	5.33	0.13	387	x	x						

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1A799	456.06	3.13	6.99	0.15	465	x	x						
010.1BY19	457.00	3.14	4.00	0.10									
010.1A810	457.20	3.14	7.00	0.15									
010.1BY20	458.00	3.14	4.00	0.10									
010.1BY22	459.00	3.15	4.00	0.10									
010.1A715	459.30	3.15	5.70	3.15								x	x
010.1BY23	460.00	3.16	4.00	0.10									
010.1BY25	461.00	3.16	4.00	0.10									
010.1BY26	462.00	3.17	4.00	0.10									
010.1B26M	462.00	3.17	7.00	0.15				x	E4620GN				
010.1BY28	463.00	3.18	4.00	0.10									
010.1BY29	464.00	3.18	4.00	0.10									
010.1BY38	465.00	3.19	4.00	0.10									
010.1BY41	466.00	3.19	4.00	0.10									
010.46607	466.00	3.19	7.00	0.15				x	E4660GN				
010.1BY43	467.00	3.20	4.00	0.10									
010.1BY44	468.00	3.21	4.00	0.10									
010.1A800	468.76	3.21	6.99	0.15	466	x	x						
010.1BY46	469.00	3.21	4.00	0.10									
010.1BZ32	470.00	3.22	4.00	0.10									
010.1B52I	470.00	3.22	6.00	0.13									
010.47007	470.00	3.22	7.00	0.15				x	E4700GN				
010.1BY47	471.00	3.23	4.00	0.10									
010.1BY49	472.00	3.23	4.00	0.10									
010.1BY50	473.00	3.24	4.00	0.10									
010.1BY53	474.00	3.24	4.00	0.10									
010.1BY55	475.00	3.25	4.00	0.10									
010.1B29M	475.00	3.25	7.00	0.15				x	E4750GN				
010.47510	475.00	3.25	10.00	0.21							V480		
010.1BY58	476.00	3.26	4.00	0.10									
010.1BY59	477.00	3.26	4.00	0.10									
010.1BY61	478.00	3.27	4.00	0.10									
010.1B53I	478.00	3.27	6.00	0.13									
010.1BY62	479.00	3.28	4.00	0.10									
010.47907	479.00	3.28	7.00	0.15				x	E4790GN				
010.1A716	479.30	3.28	5.70	3.28								x	x
010.1BY64	480.00	3.28	4.00	0.10									
010.1B12H	480.00	3.28	6.00	0.13									
010.1BY65	481.00	3.29	4.00	0.10									
010.1A623	481.41	3.29	5.33	0.13									
010.48153	481.46	3.29	5.33	0.13	388	x	x						
010.1A801	481.46	3.29	6.99	0.15	467	x	x						
010.1BY67	482.00	3.30	4.00	0.10									
010.1BY68	483.00	3.30	4.00	0.10									
010.1B55I	483.00	3.30	6.00	0.13									
010.48307	483.00	3.30	7.00	0.15				x	E4830GN				
010.1BY70	484.00	3.31	4.00	0.10									
010.1BY71	485.00	3.31	4.00	0.10									
010.1BY73	486.00	3.32	4.00	0.10									
010.1B56I	486.00	3.32	6.00	0.13									
010.1BY74	487.00	3.33	4.00	0.10									
010.1B30M	487.00	3.33	7.00	0.15				x	E4870GN				
010.1BY95	488.00	3.33	4.00	0.10									
010.1BY76	489.00	3.34	4.00	0.10									
010.1B58I	489.00	3.34	6.00	0.13									
010.48935	489.30	3.34	5.70	0.13									x
010.1BY79	490.00	3.35	4.00	0.10									
010.1BY80	491.00	3.35	4.00	0.10									
010.1BY82	492.00	3.36	4.00	0.10									
010.1BY83	493.00	3.36	4.00	0.10									
010.49307	493.00	3.36	7.00	0.15				x	E4930GN				
010.1BY85	494.00	3.37	4.00	0.10									
010.1A802	494.16	3.37	6.99	0.15	468	x	x						
010.1A811	494.67	3.37	7.00	0.15									
010.1BY86	495.00	3.38	4.00	0.10									
010.1BY88	496.00	3.38	4.00	0.10									
010.1BY89	497.00	3.39	4.00	0.10									
010.1BY91	498.00	3.40	4.00	0.10									
010.1BY92	499.00	3.40	4.00	0.10									
010.1A717	499.30	3.40	5.70	3.40								x	x
010.1BY94	500.00	3.41	4.00	0.10									
010.1B59I	500.00	3.41	6.00	0.13									
010.1B32M	500.00	3.41	7.00	0.15				x	E5000GN				
010.1B61I	504.00	3.43	6.00	0.13									
010.1B62I	505.00	3.44	6.00	0.13									
010.1A624	506.81	3.45	5.33	0.13									
010.50653	506.86	3.45	5.33	0.13	389	x	x						
010.1A803	506.86	3.45	6.99	0.15	469	x	x						

Part number	Inside diameter		Cross-section		Identification no. according to standards								
	Ød1	Tolerance +/-	Ød2	Tolerance +/-	AS 568A	AS 568A BS 1806	ISO 3601	DIN 3771	NFT 47-501	R'Ring	JIS B2401	SMS 1586	BS 4518
010.1B64I	508.00	3.46	6.00	0.13									
010.50807	508.00	3.46	7.00	0.15				x	E5080GN				
010.1B65I	510.00	3.47	6.00	0.13									
010.1B33M	515.00	3.50	7.00	0.15				x	E5150GN				
010.1B67I	516.00	3.51	6.00	0.13									
010.52307	523.00	3.55	7.00	0.15				x	E5230GN				
010.52410	524.50	3.56	10.00	0.21							V530		
010.1B68I	530.00	3.60	6.00	0.13									
010.1B35M	530.00	3.60	7.00	0.15				x	E5300GN				
010.1A625	532.21	3.61	5.33	0.13									
010.53253	532.26	3.61	5.33	0.13	390	x	x						
010.1A804	532.26	3.61	6.99	0.15	470	x	x						
010.53807	538.00	3.65	7.00	0.15					E5380GN				
010.1B13H	540.00	3.66	6.00	0.13									
010.1B70I	544.00	3.68	6.00	0.13									
010.1B36M	545.00	3.69	7.00	0.15					E5450GN				
010.1A812	545.47	3.69	7.00	0.15									
010.1B71I	549.00	3.71	6.00	0.13									
010.1B73I	552.00	3.73	6.00	0.13									
010.55307	553.00	3.74	7.00	0.15					E5530GN				
010.1B74I	555.00	3.75	6.00	0.13									
010.1A626	557.61	3.77	5.33	0.13									
010.55753	557.66	3.77	5.33	0.13	391	x	x						
010.1A805	557.66	3.77	6.99	0.15	471	x	x						
010.1B76I	560.00	3.78	6.00	0.13									
010.1B38M	560.00	3.78	7.00	0.15					E5600GN				
010.1B77I	569.00	3.84	6.00	0.13									
010.57007	570.00	3.85	7.00	0.15					E5700GN				
010.1B79I	575.00	3.88	6.00	0.13									
010.1B80I	579.00	3.90	6.00	0.13									
010.57910	579.00	3.90	10.00	0.21							V585		
010.1B39M	580.00	3.91	7.00	0.15					E5800GN				
010.1A627	582.68	3.92	5.33	0.13	392	x	x						
010.1A806	582.68	3.92	6.99	0.15	472	x	x						
010.59007	590.00	3.97	7.00	0.15					E5900GN				
010.1A813	596.27	4.01	7.00	0.15									
010.1B41M	600.00	4.03	7.00	0.15					E6000GN				
010.60807	608.00	4.08	7.00	0.15					E6080GN				
010.1A628	608.08	4.08	5.33	0.13	393	x	x						
010.1A807	608.08	4.08	6.99	0.15	473	x	x						
010.1B42M	615.00	4.12	7.00	0.15					E6150GN				
010.62307	623.00	4.17	7.00	0.15					E6230GN				
010.1B47M	630.00	4.22	7.00	0.15					E6300GN				
010.1A629	633.48	4.24	5.33	0.13	394	x	x						
010.1A808	633.48	4.24	6.99	0.15	474	x	x						
010.63310	633.50	4.24	10.00	0.21							V640		
010.64007	640.00	4.28	7.00	0.15					E6400GN				
010.1A814	647.07	4.32	7.00	0.15									
010.1B48M	650.00	4.34	7.00	0.15					E6500GN				
010.1A630	658.88	4.40	5.33	0.13	395	x	x						
010.1A809	658.88	4.40	6.99	0.15	475	x	x						
010.66007	660.00	4.40	7.00	0.15					E6600GN				
010.1B50M	670.00	4.47	7.00	0.15					E6700GN				
010.68310	683.00	4.55	10.00	0.21							V690		
010.73210	732.50	4.85	10.00	0.21							V740		
010.78210	782.00	5.15	10.00	0.21							V790		
010.83610	836.50	5.49	10.00	0.21							V845		
010.94010	940.50	6.12	10.00	0.21							V950		
010.10441	1044.00	6.75	10.00	0.21							V1055		

10. Special O'Rings

10.1 BECA 010 PU - POLYURETHANE O'RINGS



DESCRIPTION

The BECA 010 PU is an O'Ring, a circular ring with a round cross-section, made from polyurethane.

ADVANTAGES

Excellent abrasion and wear resistance

Excellent extrusion resistance; accepts large extrusion gaps

Very good mechanical properties

Low friction

EXAMPLES OF APPLICATION

Heavy-duty environments

Mining machinery

MATERIALS

PU 70 Shore A moulded

PU 93 Shore A injected

PU 95 Shore A machined

PU 96 Shore A injected

Other materials may be used

POLYURETHANE

There are different polyurethanes, Polyester Urethane (AU) and Polyether Urethane (EU). They have excellent mechanical features such as wear resistance, tensile strength, low compression set, very good resistance to cold, excellent shock absorbing properties and a strong resistance to tearing. Polyurethane (AU) offers a better resistance to hydraulic fluids than Polyurethane (EU).

Resistance to chemicals	Aliphatic hydrocarbons (propane, butane) Mineral oils and greases Silicone oils and greases Water (up to max. +50°C for polyether urethane)
Compatibility issue	Ketones, esters, ethers, alcohols and glycols Hot water and steam alkalis, amines, acids

TECHNICAL DATA

Temperature	-30°C / +110°C
Pressure	Up to 60 MPa in static applications without back-up ring (depending on the extrusion gap) Up to 25 MPa in dynamic applications
Speed	In linear applications only, up to 0.2 m/s
Media	Mineral hydraulic oils Greases Air

INSTALLATION DIMENSIONS

Polyurethane seals have the same design rules as rubber seals.

Static sealing

See section 5.1 for installation dimensions - rectangular groove with radial deformation

See section 5.2 for installation dimensions - rectangular groove with axial deformation

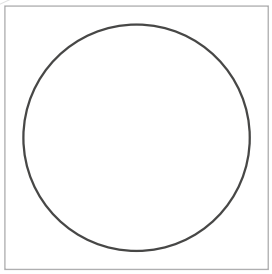
In dynamic sealing

See section 6.1 for installation dimensions - Hydraulic with axial movements - Rectangular groove with radial deformation

EXTRUSION GAPS

Because of their excellent extrusion resistance, polyurethane O'Rings can generally withstand larger extrusion gaps without back-up rings better than standard rubber O'Rings. However, extrusion gaps vary according to the type of material and final application.

10.2 BECA 010 PTFE - PTFE O'RINGS



DESCRIPTION

The BECA 010 PTFE is an O'Ring, a circular ring with a round cross-section, made from virgin PTFE (polytetrafluoroethylene). It is made by machining, which means that any size can be manufactured without having to first produce any kind of tools.

ADVANTAGES

Good chemical resistance

Sensitive to attacks from molten alkaline metals or those in compound or fluorine form

Good dielectric properties independent of the temperature and hygrometry

Non-stick

Resistant to friction wearing

Resistant to loads

Physiological inertia

Resistance to limited wear

Low sensitivity to steam and corrosion

Temperature resistance

EXAMPLES OF APPLICATION

Food & Beverage

Chemical

Medical

Pharmaceutical

MATERIAL

Virgin PTFE

Filled PTFE possible

PTFE (polytetrafluoroethylene)

Virgin PTFE is a non-filled, tetrafluoroethylene-based thermoplastic polymer.

Advantages

Smooth and stain-proof surface
Neutral to temperatures up to +200°C
Very low friction coefficient
Excellent electrical insulation properties
Very good chemical compatibility on contact with the majority of fluids

Limits

High pressure and high temperature liquid alkali metals
Lasting creep deformation under a certain load
Thermal expansion is 10 times greater than for metals
Low thermal conductivity, problematic for heat absorption
Plastic and non-elastic material

TECHNICAL DATA

Temperature	-200°C / +260°C
Pressure	up to 40 MPa
Speed	0 m/s in static applications only
Media	The majority of liquid, gaseous and chemical substances.

DESIGN RECOMMENDATIONS

Considering that PTFE O'Rings have a very low elasticity, the O'Ring dimensions must meet the nominal dimensions to be waterproofed:

Static sealing - inside pressure

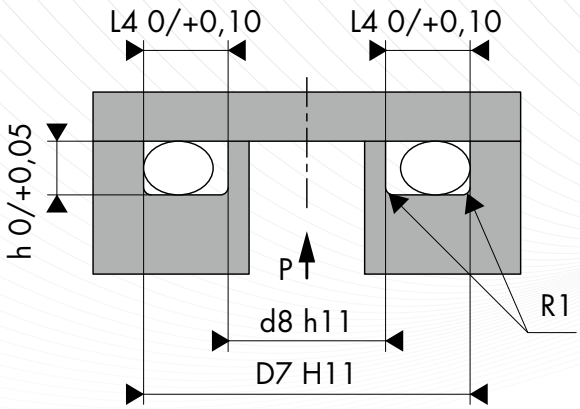
the outside diameter (Ød1 + 2xØd2) of the O'Ring is equal to the outside diameter ØD7 of the groove

Static sealing - outside pressure

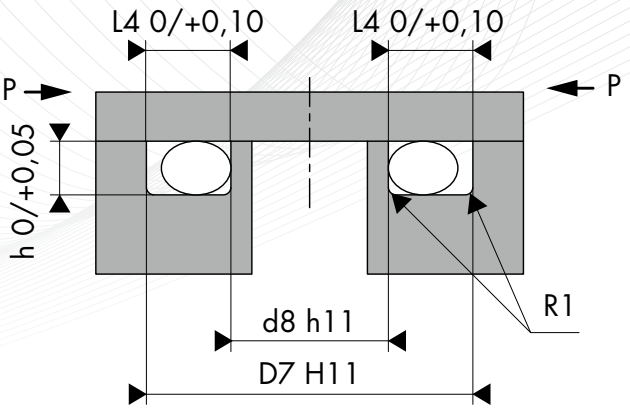
the inside diameter Ød1 of the O'Ring is equal to the inside diameter Ød8 of the groove
We recommend fitting PTFE O'Rings in an open groove only.

INSTALLATION DIMENSIONS

PRESSURE FROM INSIDE



PRESSURE FROM OUTSIDE

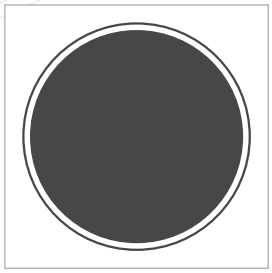


O'Ring cross-section Ød2 in mm	Groove depth h 0/+0.05	Groove width L4 0/+0.10	Radius R1
1.50	1.30	1.70	0.20
1.60	1.40	1.80	0.30
1.78	1.60	2.00	0.40
1.80	1.60	2.00	0.40
2.00	1.80	2.20	0.50
2.40	2.15	2.60	0.50
2.50	2.25	2.80	0.50
2.62	2.35	2.90	0.60
2.65	2.35	2.90	0.60
3.00	2.70	3.30	0.80
3.53	3.15	3.90	1.00
3.55	3.15	3.90	1.00
4.00	3.60	4.40	1.00
5.00	4.50	5.50	1.00
5.30	4.80	5.90	1.20
5.33	4.80	5.90	1.20
5.70	5.10	6.30	1.20
6.00	5.60	6.60	1.20
6.99	6.30	7.70	1.50
7.00	6.30	7.70	1.50
8.00	7.20	8.80	1.50
8.40	7.55	9.20	2.00

CHAMFERS AND RADIUS

O'Ring cross-section Ød2	Radius R1	Max radius R2	Chamfer C	
			15°	20°
1.78 - 1.80	0.30	0.20	2.50	2.00
2.62 - 2.65	0.30	0.20	3.00	2.50
3.53 - 3.55	0.60	0.20	3.50	3.00
5.33 - 5.30	0.60	0.20	4.00	3.50
6.99 - 7.00	1.00	0.20	5.00	4.00
8.40	1.00	0.20	6.00	4.50

10.3 BECA 010 FEP - FEP ENCAPSULATED O'RINGS



DESCRIPTION

The BECA 010 FEP profile is a rubber O'Ring, a circular ring with a round cross-section, wrapped in a FEP impermeable sheath (fluorinated ethylene propylene). Unlike PTFE O'Rings, FEP O'Rings retain their elastic properties, as with standard O'Rings, and have a great chemical resistance thanks to the FEP envelope.

ADVANTAGES

Wide temperature range

Excellent chemical resistance

Low friction coefficient;
no stick-slip effect

EXAMPLES OF APPLICATION

Food & Beverage

Chemical

Cosmetic

Medical

Petrochemical

Pharmaceutical

Water treatment

MATERIALS

FKM with FEP envelope

VMQ with FEP envelope

TECHNICAL DATA

Temperature	FKM base: -20°C / +200°C VMQ base: -60°C / +200°C
Pressure	Up to 25 MPa (combined with a BECA 008 back-up ring from 5 MPa)
Speed	0 m/s in static applications only
Media	The majority of liquid, gaseous and chemical substances.

TOLERANCES APPLIED TO O'RINGS

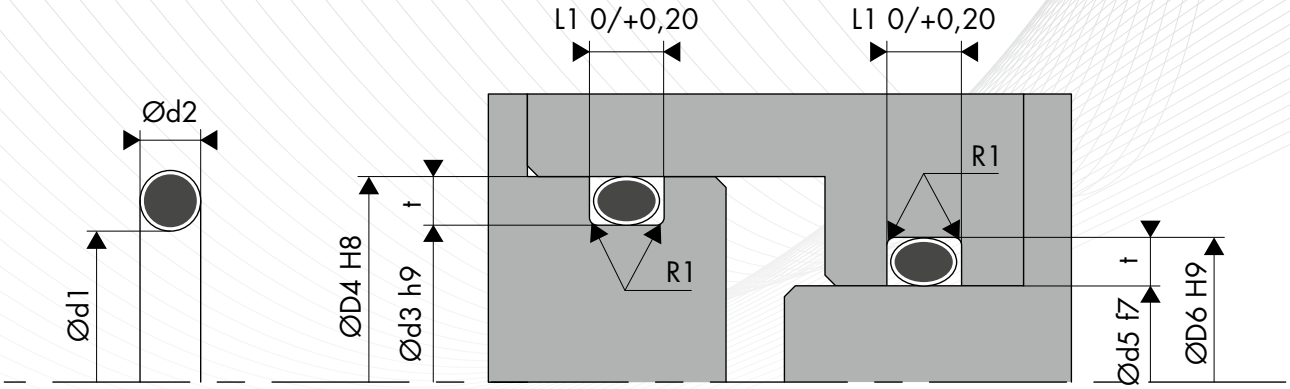
The table below sets out the tolerances applied on the cross-sections Ød2 with a recommended minimum inside diameter of Ød1 for FEP O'Rings.

O'Ring cross-section Ød2	Tolerances ±	Minimum inside diameter Ød1	FEP sheath thickness
1.60	± 0.10	7.60	0.20
1.78		7.64	0.20
2.00		8.00	0.20
2.40		9.30	0.25
2.50		10.00	0.25
2.62		9.19	0.30
2.80		10.50	0.30
3.00	± 0.13	10.00	0.30
3.10		10.00	0.30
3.20		12.00	0.30
3.53		12.00	0.38
3.75		12.00	0.38
4.00	± 0.25	12.00	0.38
4.20		15.00	0.38
4.50		15.00	0.38
4.70		18.00	0.38
5.00		18.00	0.38
5.33		18.42	0.50
5.50		30.00	0.50
5.70		30.00	0.50
6.00	± 0.38	30.00	0.50
6.30		41.00	0.50
6.50		41.00	0.50
7.00		41.00	0.50
7.50		101.60	0.50
8.00		70.00	0.50
8.40		102.00	0.50
9.00	± 0.51	102.00	0.50
9.50		102.00	0.50
10.00		108.00	0.50
10.50		127.00	0.50
11.00		127.00	0.76
12.00		152.40	0.76
12.70		177.80	0.76
13.00		254.00	0.76
14.00		254.00	0.76
15.00		254.00	0.76
16.00		305.00	on request
18.00		422.00	on request
19.00		422.00	on request
20.00		508.00	on request

The table below sets out the tolerances applied on the inside diameters Ød1 for FEP O'Rings.

Inside diameter Ød1	Tolerances ±
Ød1 < 7.64	not available
7.64 ≤ Ød1 ≤ 30.00	± 0.25
30.00 < Ød1 ≤ 130.00	± 0.38
130.00 < Ød1 ≤ 170.00	± 0.51
170.00 < Ød1 ≤ 380.00	± 0.64
380.00 < Ød1 ≤ 650.00	± 0.76
650.00 < Ød1 ≤ 1000.00	± 1.52

INSTALLATION DIMENSIONS - RADIAL STATIC SEALING



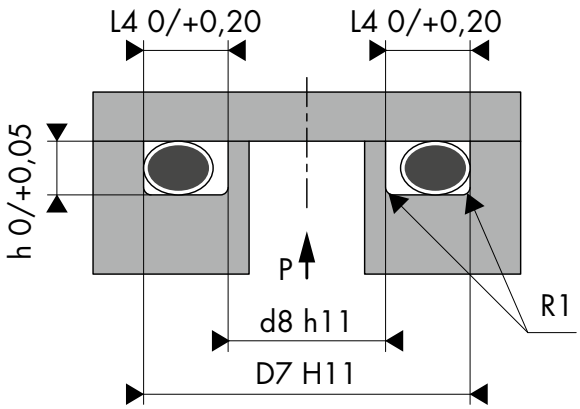
O'Ring cross-section Ød2	t	Tolerance ±	L1	Tolerance ±
1.60	1.20	0.05	2.10	0.20
1.78	1.30	0.05	2.30	0.20
2.00	1.50	0.05	2.60	0.20
2.50	1.90	0.05	3.20	0.20
2.62	2.00	0.05	3.40	0.20
3.00	2.30	0.05	3.90	0.20
3.15	2.50	0.05	4.30	0.20
3.53	2.75	0.05	4.50	0.20
4.00	3.15	0.05	5.20	0.20
4.30	3.38	0.05	5.50	0.20
4.50	3.60	0.05	5.80	0.20
5.00	4.00	0.05	6.50	0.20
5.33	4.30	0.05	6.90	0.20
5.50	4.50	0.05	7.10	0.20
5.70	4.65	0.05	7.40	0.20
6.00	4.95	0.05	7.80	0.20
6.30	5.25	0.05	8.20	0.20
6.99	5.85	0.05	9.10	0.20
8.00	6.75	0.10	10.40	0.20
8.40	7.15	0.10	10.90	0.20
9.00	7.70	0.10	11.70	0.20
9.50	8.20	0.10	12.30	0.20
10.00	8.65	0.10	13.00	0.20
11.00	9.70	0.10	14.30	0.20
12.00	10.60	0.10	15.60	0.20

CHAMFERS AND RADIUS

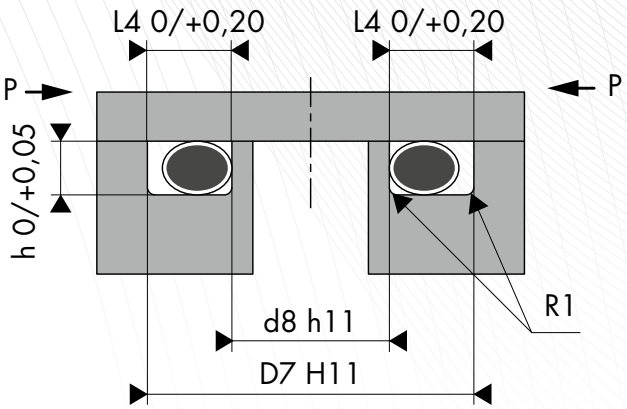
O'Ring cross-section Ød2	Radius R1	Max radius R2	Chamfer C	
			15°	20°
1.78 - 1.80	0.30	0.20	2.50	2.00
2.62 - 2.65	0.30	0.20	3.00	2.50
3.53 - 3.55	0.60	0.20	3.50	3.00
5.33 - 5.30	0.60	0.20	4.00	3.50
6.99 - 7.00	1.00	0.20	5.00	4.00
8.40	1.00	0.20	6.00	4.50

INSTALLATION DIMENSIONS - AXIAL STATIC SEALING

PRESSURE FROM INSIDE

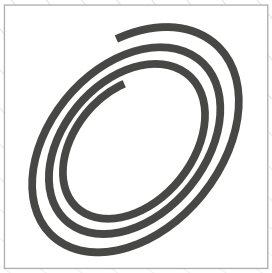


PRESSURE FROM OUTSIDE



O'Ring cross-section Ød2	h	Tolerance ±	L4	Tolerance ±
1.60	1.20	0.02	2.50	0.20
1.78	1.30	0.02	2.70	0.20
2.00	1.40	0.02	3.00	0.20
2.50	1.83	0.03	3.50	0.20
2.62	1.96	0.03	3.75	0.20
3.00	2.25	0.05	4.15	0.20
3.15	2.55	0.05	4.60	0.20
3.53	2.65	0.05	4.95	0.20
4.00	3.05	0.05	5.25	0.20
4.30	3.25	0.05	5.50	0.20
4.50	3.45	0.05	5.80	0.20
5.00	3.85	0.05	6.40	0.20
5.33	4.30	0.05	7.25	0.20
5.50	4.38	0.05	7.30	0.20
5.70	4.45	0.05	7.40	0.20
6.00	4.85	0.05	7.80	0.20
6.30	5.20	0.05	8.20	0.20
6.99	5.75	0.05	9.10	0.20
8.00	6.40	0.07	10.20	0.20
8.40	6.65	0.07	10.90	0.20
9.00	7.30	0.07	11.70	0.20
9.50	7.80	0.10	12.30	0.20
10.00	8.20	0.10	13.00	0.20
11.00	9.20	0.10	14.30	0.20
12.00	10.00	0.10	15.60	0.20

10.4 BECA 001 CD - O'RINGS WITH EXTRUDED CORD



DESCRIPTION

The BECA 001CD profile includes all of the various rubber cords. The cord is manufactured by extrusion and is cut to length.

ADVANTAGES

No dimensional limit

Static sealing only

Economic solution

EXAMPLES OF APPLICATION

Assembly of large tubes

Cover sealing

Lid sealing

MATERIALS

NBR 70 Shore A

EPDM 70 Shore A

FKM 70 Shore A

TECHNICAL DATA

Temperature	-60°C / +200°C
Pressure	*
Speed	0 m/s
Media	The majority of liquids, or gaseous or chemical fluids, depending on the type of material selected. Refer to our fluids-materials compatibility guide.

TOLERANCES APPLIED TO O'RINGS

Tolerance on the inside diameter Ød1

Tolerances on the inside diameter Ød1 of the O'Ring, in line with standard ISO 3601-1:2008. You can find them in the BECA 010 product family.

Tolerance on the cross-section Ød2

The tolerances on standardised cross-sections Ød2 are set out in the table below.

O'Ring cross-section Ød2	Tolerances
0.00 < Ød2 ≤ 1.50	± 0.25
1.50 < Ød2 ≤ 2.50	± 0.35
2.50 < Ød2 ≤ 4.00	± 0.40
4.00 < Ød2 ≤ 6.30	± 0.50
6.30 < Ød2 ≤ 10.00	± 0.70
10.00 < Ød2 ≤ 16.00	± 0.80
16.00 < Ød2 ≤ 25.00	± 1.00
25.00 < Ød2 ≤ 40.00	± 1.30
40.00 < Ød2 ≤ 63.00	± 1.60
63.00 < Ød2 ≤ 100.00	± 2.00

DIMENSIONS

Part number	O'Ring cross-section Ød2	Tolerance
001.BA015	1.50	+0.25
001.BA155	1.55	0.35
001.BA016	1.60	0.35
001.BA018	1.78	0.35
001.BA020	2.00	0.35
001.BA024	2.40	0.35
001.BA025	2.50	0.35
001.BA026	2.62	0.40
001.BA030	3.00	0.40
001.BA031	3.17	0.40
001.BA032	3.20	0.40
001.BA035	3.50	0.40
001.BA350	3.50	0.40
001.BA040	4.00	0.40
001.BA045	4.50	0.50
001.BA050	5.00	0.50
001.BA053	5.33	0.50
001.BA055	5.50	0.50
001.BA057	5.70	0.50
001.BA060	6.00	0.50
001.BA063	6.35	0.70
001.BA065	6.50	0.70
001.BA069	6.99	0.70

Part number	O'Ring cross-section Ød2	Tolerance
001.BA070	7.00	0.70
001.BA075	7.50	0.70
001.BA080	8.00	0.70
001.BA084	8.40	0.70
001.BA085	8.50	0.70
001.BA090	9.00	0.70
001.BA095	9.50	0.70
001.BA100	10.00	0.70
001.BA105	10.50	0.80
001.BA110	11.00	0.80
001.BA120	12.00	0.80
001.BA130	13.00	0.80
001.BA140	14.00	0.80
001.BA150	15.00	0.80
001.BA170	17.00	1.00
001.BA160	18.00	1.00
001.BA180	18.00	1.00
001.BA190	19.00	1.00
001.BA200	20.00	1.00
001.BA220	22.00	1.00
001.BA250	25.00	1.00
001.BA300	30.00	1.30

10.5 BECA 004 - O'RING SETS

To maintain and repair your machinery, you often need to have various O'Rings to hand, so you can to resolve any potential sealing problems quickly. We offer a variety of O'Ring sets, which come in NBR 70 Shore A, NBR 90 Shore A and other quality materials on request.

TYPE A O'RING SETS

340 O'Rings with 30 different dimensions Part number : 004.BOITEA					
20 parts 2.90 x 1.78 ARP/BS 006	**20 parts** 3.68 x 1.78 ARP/BS 007	**20 parts** 4.48 x 1.78 ARP/BS 008	**20 parts** 5.28 x 1.78 ARP/BS 009	**20 parts** 6.07 x 1.78 ARP/BS 010	**20 parts** 7.66 x 1.78 ARP/BS 011
20 parts 9.25 x 1.78 ARP/BS 012	**15 parts** 10.82 x 1.78 ARP/BS 013	**10 parts** 12.42 x 1.78 ARP/BS 014	**10 parts** 14.00 x 1.78 ARP/BS 015	**10 parts** 15.60 x 1.78 ARP/BS 016	**5 parts** 17.16 x 1.78 ARP/BS 017
5 parts 17.77 x 2.62 ARP/BS 018	**15 parts** 9.19 x 2.62 ARP/BS 110	**15 parts** 10.78 x 2.62 ARP/BS 111	**15 parts** 12.37 x 2.62 ARP/BS 112	**15 parts** 13.95 x 2.62 ARP/BS 113	**10 parts** 15.54 x 2.62 ARP/BS 114
10 parts 17.13 x 2.62 ARP/BS 115	**10 parts** 18.72 x 2.62 ARP/BS 116	**5 parts** 20.29 x 2.62 ARP/BS 117	**5 parts** 21.89 x 2.62 ARP/BS 118	**5 parts** 23.47 x 2.62 ARP/BS 119	**5 parts** 18.64 x 3.53 ARP/BS 210
5 parts 20.22 x 3.53 ARP/BS 211	**5 parts** 21.82 x 3.53 ARP/BS 212	**5 parts** 23.40 x 3.53 ARP/BS 213	**5 parts** 24.99 x 3.53 ARP/BS 214	**5 parts** 26.58 x 3.53 ARP/BS 215	**5 parts** 28.17 x 3.53 ARP/BS 216

TYPE B O'RING SETS

275 O'Rings with 24 different dimensions Part number : 004.BOITEB					
15 parts 20.35 x 1.78 ARP/BS 019	**15 parts** 21.95 x 1.78 ARP/BS 020	**15 parts** 25.07 x 2.62 ARP/BS 120	**15 parts** 26.64 x 2.62 ARP/BS 121	**15 parts** 28.25 x 2.62 ARP/BS 122	**15 parts** 29.82 x 2.62 ARP/BS 123
10 parts 31.42 x 2.62 ARP/BS 124	**10 parts** 33.00 x 2.62 ARP/BS 125	**10 parts** 34.59 x 2.62 ARP/BS 126	**15 parts** 29.75 x 3.53 ARP/BS 217	**15 parts** 31.34 x 3.53 ARP/BS 218	**15 parts** 32.92 x 3.53 ARP/BS 219
10 parts 34.52 x 3.53 ARP/BS 220	**10 parts** 36.10 x 3.53 ARP/BS 221	**10 parts** 37.69 x 3.53 ARP/BS 222	**10 parts** 40.87 x 3.53 ARP/BS 223	**10 parts** 44.04 x 3.53 ARP/BS 224	**10 parts** 47.22 x 3.53 ARP/BS 225
10 parts 50.40 x 3.53 ARP/BS 226	**10 parts** 37.47 x 5.33 ARP/BS 325	**10 parts** 40.65 x 5.33 ARP/BS 326	**10 parts** 43.82 x 5.33 ARP/BS 327	**5 parts** 47.00 x 5.33 ARP/BS 328	**5 parts** 50.16 x 5.33 ARP/BS 329

TYPE C O'RING SETS

425 O'Rings with 30 different dimensions Part number : 004.BOITEC				
20 parts 3.00 x 1.50	**20 parts** 5.00 x 1.50	**20 parts** 7.00 x 1.50	**20 parts** 9.00 x 1.50	**20 parts** 11.00 x 1.50
20 parts 6.00 x 2.00	**20 parts** 8.00 x 2.00	**20 parts** 10.00 x 2.00	**20 parts** 12.00 x 2.00	**20 parts** 14.00 x 2.00
15 parts 6.30 x 2.40	**15 parts** 8.30 x 2.40	**15 parts** 11.30 x 2.40	**15 parts** 13.30 x 2.40	**15 parts** 17.30 x 2.40
15 parts 5.00 x 2.50	**15 parts** 7.00 x 2.50	**15 parts** 10.00 x 2.50	**15 parts** 12.00 x 2.50	**15 parts** 15.00 x 2.50
10 parts 10.00 x 3.00	**10 parts** 12.00 x 3.00	**10 parts** 14.00 x 3.00	**10 parts** 16.00 x 3.00	**10 parts** 18.00 x 3.00
5 parts 20.20 x 3.00	**5 parts** 22.20 x 3.00	**5 parts** 24.20 x 3.00	**5 parts** 26.20 x 3.00	**5 parts** 30.20 x 3.00

TYPE D O'RING SETS

285 O'Rings with 24 different dimensions Part number: 004.BOITED					
15 parts 18.00 x 2.00	**15 parts** 20.00 x 2.00	**15 parts** 22.00 x 3.00	**15 parts** 25.00 x 3.00	**15 parts** 28.20 x 3.00	**15 parts** 30.20 x 3.00
10 parts 32.20 x 3.00	**10 parts** 36.20 x 3.00	**15 parts** 25.00 x 4.00	**15 parts** 30.00 x 4.00	**15 parts** 32.00 x 4.00	**15 parts** 34.00 x 4.00
15 parts 36.00 x 4.00	**10 parts** 38.00 x 4.00	**10 parts** 40.00 x 4.00	**10 parts** 44.00 x 4.00	**10 parts** 48.00 x 4.00	**10 parts** 50.00 x 4.00
10 parts 25.00 x 5.00	**10 parts** 30.00 x 5.00	**10 parts** 35.00 x 5.00	**10 parts** 40.00 x 5.00	**5 parts** 45.00 x 5.00	**5 parts** 50.00 x 5.00

TYPE F O'RING SETS

420 O'Rings with 30 different dimensions Part number : 004.BOITEF							
10 parts 2.60 x 1.90 R1	**10 parts** 3.40 x 1.90 R2	**10 parts** 4.20 x 1.90 R3	**10 parts** 4.90 x 1.90 R4	**18 parts** 5.70 x 1.90 R5	**18 parts** 6.40 x 1.90 R5a	**18 parts** 7.20 x 1.90 R6	**18 parts** 8.00 x 1.90 R6a
13 parts 13.60 x 2.70 R11	**13 parts** 12.10 x 2.70 R10	**13 parts** 10.50 x 2.70 R9	**13 parts** 8.90 x 2.70 R8	**15 parts** 8.90 x 1.90 R7	-	-	-
13 parts 15.10 x 2.70 R12	**13 parts** 16.90 x 2.70 R13	**13 parts** 18.40 x 2.70 R14	**10 parts** 18.30 x 3.60 R15	-	-	-	-
10 parts 37.30 x 3.60 R27	**7 parts** 37.47 x 5.33 R28	**7 parts** 40.65 x 5.33 R29	**7 parts** 43.82 x 5.33 R30	-	-	-	-
10 parts 35.60 x 3.60 R26	**10 parts** 34.10 x 3.60 R25	**10 parts** 32.50 x 3.60 R24	**10 parts** 30.80 x 3.60 R23	**10 parts** 29.30 x 3.60 R22	-	-	-
10 parts 19.80 x 3.60 R16	**10 parts** 21.30 x 3.60 R17	**10 parts** 23.00 x 3.60 R18	**10 parts** 24.60 x 3.60 R19	**10 parts** 26.20 x 3.60 R20	**10 parts** 27.80 x 3.60 R21	-	-

TYPE G O'RING SETS

382 O'Rings with 30 different dimensions Part number: 004.BOITEG					
20 parts 2.9 x 1.78 ARP/BS 006	**20 parts** 3.68 x 1.78 ARP/BS 007	**20 parts** 4.48 x 1.78 ARP/BS 008	**20 parts** 5.28 x 1.78 ARP/BS 009	**20 parts** 6.07 x 1.78 ARP/BS 010	**20 parts** 7.66 x 1.78 ARP/BS 011
13 parts 13.95 x 2.62 ARP/BS 113	**13 parts** 12.37 x 2.62 ARP/BS 112	**13 parts** 10.78 x 2.62 ARP/BS 111	**13 parts** 9.19 x 2.62 ARP/BS 110	**20 parts** 9.25 x 1.78 ARP/BS 012	-
13 parts 15.54 x 2.62 ARP/BS 114	**13 parts** 17.13 x 2.62 ARP/BS 115	**13 parts** 18.72 x 2.62 ARP/BS 116	**10 parts** 18.64 x 3.53 ARP/BS 210	-	-
10 parts 37.69 x 3.53 ARP/BS 222	**7 parts** 37.47 x 5.33 ARP/BS 325	**7 parts** 40.65 x 5.33 ARP/BS 326	**7 parts** 43.82 x 5.33 ARP/BS 327	-	-
10 parts 36.10 x 3.53 ARP/BS 221	**10 parts** 34.52 x 3.53 ARP/BS 220	**10 parts** 32.92 x 3.53 ARP/BS 219	**10 parts** 31.34 x 3.53 ARP/BS 218	**10 parts** 29.75 x 3.53 ARP/BS 217	-
10 parts 20.22 x 3.53 ARP/BS 211	**10 parts** 21.82 x 3.53 ARP/BS 212	**10 parts** 23.40 x 3.53 ARP/BS 213	**10 parts** 24.99 x 3.53 ARP/BS 214	**10 parts** 26.58 x 3.53 ARP/BS 215	**10 parts** 28.17 x 3.53 ARP/BS 216

TYPE H O'RING SETS

404 O'Rings with 30 different dimensions Part number : 004.BOITEH					
18 parts 3.00 x 2.00	**18 parts** 4.00 x 2.00	**18 parts** 5.00 x 2.00	**18 parts** 6.00 x 2.00	**17 parts** 7.00 x 2.00	**17 parts** 8.00 x 2.00
14 parts 14.00 x 2.50	**14 parts** 12.00 x 2.50	**14 parts** 11.00 x 2.50	**14 parts** 10.00 x 2.50	**17 parts** 10.00 x 2.00	-
14 parts 16.00 x 2.50	**14 parts** 17.00 x 2.50	**14 parts** 19.00 x 2.50	**12 parts** 19.00 x 3.00	-	-
12 parts 38.00 x 3.00	**9 parts** 38.00 x 4.00	**9 parts** 42.00 x 4.00	**9 parts** 45.00 x 4.00	-	-
12 parts 36.00 x 3.00	**12 parts** 35.00 x 3.00	**12 parts** 33.00 x 3.00	**12 parts** 32.00 x 3.00	**12 parts** 30.00 x 3.00	-
12 parts 20.00 x 3.00	**12 parts** 22.00 x 3.00	**12 parts** 24.00 x 3.00	**12 parts** 25.00 x 3.00	**12 parts** 27.00 x 3.00	**12 parts** 28.00 x 3.00

TYPE K O'RING SETS

407 O'Rings with 32 different dimensions Part number : 004.BOITEK						
20 parts 12.42 x 1.78 ARP/BS 014	**13 parts** 10.78 x 2.62 ARP/BS 111	**13 parts** 13.95 x 2.62 ARP/BS 113	**13 parts** 17.13 x 2.62 ARP/BS 115	**13 parts** 20.29 x 2.62 ARP/BS 117	-	-
20 parts 9.25 x 1.78 ARP/BS 012	**20 parts** 7.66 x 1.78 ARP/BS 011	**20 parts** 6.07 x 1.78 ARP/BS 010	**10 parts** 4.48 x 1.78 ARP/BS 008	**10 parts** 4.48 x 1.78 ARP/BS 008	**10 parts** 2.9 x 1.78 ARP/BS 006	**10 parts** 2.9 x 1.78 ARP/BS 006
13 parts 9.19 x 2.62 ARP/BS 110	**13 parts** 12.37 x 2.62 ARP/BS 112	**13 parts** 15.54 x 2.62 ARP/BS 114	**13 parts** 18.72 x 2.62 ARP/BS 116	**13 parts** 21.89 x 2.62 ARP/BS 118	-	-
10 parts 31.34 x 3.53 ARP/BS 218	**10 parts** 34.52 x 3.53 ARP/BS 220	**10 parts** 37.69 x 3.53 ARP/BS 222	**10 parts** 44.04 x 3.53 APR/BS 224	**10 parts** 50.40 x 3.53 ARP/BS 226	-	-
10 parts 28.17 x 3.53 APR/BS 216	**10 parts** 26.58 x 3.53 ARP/BS 215	**10 parts** 24.99 x 3.53 ARP/BS 214	**10 parts** 23.40 x 3.53 ARP/BS 213	**10 parts** 21.82 x 3.53 ARP/BS 212	**10 parts** 20.22 x 3.53 ARP/BS 211	**10 parts** 18.64 x 3.53 ARP/BS 210
10 parts 29.75 x 3.53 ARP/BS 217	**10 parts** 32.92 x 3.53 ARP/BS 219	**10 parts** 36.10 x 3.53 ARP/BS 221	**10 parts** 40.87 x 3.53 ARP/BS 223	**10 parts** 47.22 x 3.53 ARP/BS 225	-	-

TYPE L O'RING SETS

395 O'Rings with 32 different dimensions Part number: 004.BOITEL						
17 parts 12.00 x 2.00	**17 parts** 11.00 x 2.00	**17 parts** 14.00 x 2.00	**17 parts** 17.00 x 2.00	**17 parts** 20.00 x 2.00	-	-
17 parts 10.00 x 2.00	**17 parts** 8.00 x 2.00	**18 parts** 6.00 x 2.00	**9 parts** 5.00 x 2.00	**17 parts** 4.00 x 1.00	**18 parts** 3.00 x 1.00	**18 parts** 3.00 x 1.00
11 parts 10.00 x 3.00	**11 parts** 12.00 x 3.00	**11 parts** 16.00 x 3.00	**11 parts** 18.00 x 3.00	**11 parts** 22.00 x 3.00	-	-
7 parts 30.00 x 5.00	**9 parts** 34.00 x 4.00	**7 parts** 35.00 x 5.00	**9 parts** 45.00 x 4.00	**9 parts** 50.00 x 4.00	-	-
7 parts 25.00 x 5.00	**7 parts** 25.00 x 5.00	**8 parts** 25.00 x 4.00	**9 parts** 24.00 x 4.00	**9 parts** 22.00 x 4.00	**9 parts** 20.00 x 4.00	**7 parts** 16.00 x 5.00
8 parts 30.00 x 4.00	**7 parts** 32.00 x 5.00	**9 parts** 36.00 x 4.00	**9 parts** 40.00 x 4.00	**8 parts** 47.00 x 4.00	-	-

TYPE S O'RING SETS

407 O'Rings with 32 different dimensions Swedish standard Part number : 004.BOITES					
20 parts 46 5060 8.10 x 1.60	**15 parts** 46 5344 19.10 x 1.60	**20 parts** 46 1547 5.30 x 2.40	**20 parts** 46 4453 12.30 x 2.40	**10 parts** 46 1556 32.20 x 3.00	**10 parts** 46 3730 49.50 x 3.00
20 parts 46 2723 9.10 x 1.60	**15 parts** 46 2301 22.10 x 1.60	**20 parts** 46 4186 6.30 x 2.40	**15 parts** 46 3744 14.30 x 2.40	-	-
20 parts 46 5061 11.10 x 1.60	**15 parts** 46 5242 25.10 x 1.60	**20 parts** 46 1492 7.30 x 2.40	**15 parts** 46 4454 16.30 x 2.40	**10 parts** 46 2047 36.20 x 3.00	**5 parts** 46 1330 44.20 x 5.70
20 parts 46 6020 13.10 x 1.60	**15 parts** 46 3886 29.10 x 1.60	**20 parts** 46 4451 8.30 x 2.40	**10 parts** 46 1377 19.2 x 3.00	-	-
15 parts 46 5062 15.10 x 1.60	**20 parts** 46 1533 3.30 x 2.40	**20 parts** 46 1412 9.30 x 2.40	**10 parts** 46 1378 22.20 x 3.00	**10 parts** 46 1723 42.20 x 3.00	**5 parts** 46 1392 49.20 x 5.70
15 parts 46 5288 17.10 x 1.60	**20 parts** 46 4450 4.30 x 2.40	**20 parts** 46 4452 10.30 x 2.40	**10 parts** 46 1375 24.20 x 3.00	-	-

11. Surface treatments

For numerous more demanding applications, the rubber O'Rings cannot be used as is unless they have had a surface treatment beforehand. We offer several types of coatings with properties that make it easier to manually and automatically fit O'Rings, enabling improved productivity in assembly operations and limiting production line shut-downs caused by seized or obstructed components. The friction loads on seals are also improved, which improves the life span of components.

a. DuriCoat coating

DuriCoat is a clear, dry, PTFE-based coating.

- Applied to the rubber surface
- Elasticity of a preserved seal
- Reduced fitting effort thanks to the reduced friction
- Optimal separation of parts during automatic fitting
- Suitable for slow-speed dynamic applications or for short strokes
- Can be used on all types of rubbers, with the exception of silicones (FVMQ, PVMQ, VMQ)

b. MosCoat coating

MosCoat is a high-purity molybdenum disulphide (MOS_2)-based coating, in the form of a silver-coloured, dry lubricant film.

- Applied to the surface of the rubber using a drum
- Improved separation of parts during automatic assembly
- Reduces friction over a long period by depositing solid particles in the rough areas of contact surfaces in relatively small dynamic applications
- Low resistance to treatment abrasion

c. SiliCoat coating

SiliCoat is a liquid silicone-based oily lubricant film.

- Applied to a rubber surface using a drum
- Can be used on all types of rubbers, with the exception of silicones (FVMQ, PVMQ, VMQ)
- Reduced assembly efforts
- Treatment not suitable for long-term dynamic applications
- Treatment not suitable for automatic assembly (the components have a tendency to stick to each other)

d. TalCoat coating

The talc is a powder coating.

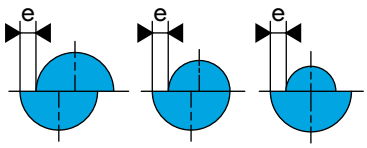
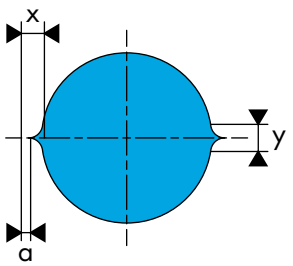
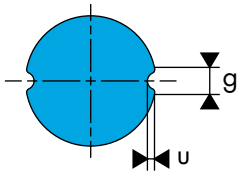
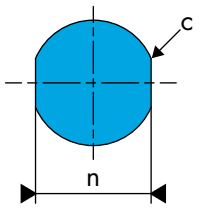
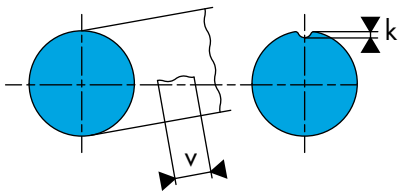
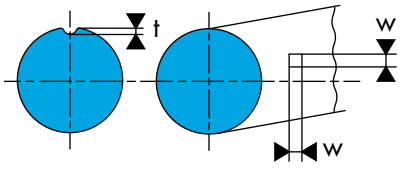
- Applied to the surface of the rubber using a drum
- Ensures components do not stick together after packaging
- Treatment not suitable for dynamic applications

Treatment	Base	Rubbers	Appearance	Non-stick (packaging)	Reduced assembly effort	Automatic assembly (separation)	Dynamic applications
DuriCoat	PTFE	Except silicones	Dry Glossy Smooth	1	1	1	1
MosCoat	MOS_2	All	Dry Glossy Smooth	1	1	2	3
SiliCoat	Silicone	Except silicones	Oily Glossy Smooth	3	1	3	3
TalcCoat	Talc	All	Dry Powder	1	3	2	3

1. Very good 2. Good 3. Satisfactory

12. Range of quality issues

The table below sets out the maximum limits for O'Ring appearance defects, in line with standard ISO 3601-3.

Type of surface defect	Schematic presentation	Dimension limits	Maximum limits for defects on the O'Ring cross-section Ød2				
			> 0.8[b] ≤ 2.25	> 2.25 ≤ 3.15	> 3.15 ≤ 4.50	> 4.50 ≤ 6.30	> 6.30 ≤ 8.40[b]
Offset		*e*	0.08	0.10	0.13	0.15	0.15
Flash		*x*	0.10	0.12	0.14	0.16	0.18
		y	0.10	0.12	0.14	0.16	0.18
		a	When the flash can be differentiated, it must not be greater than 0.07 mm.				
Backrind		*g*	0.18	0.27	0.36	0.53	0.70
		u	0.08	0.08	0.10	0.10	0.13
Area of excessive trimming (radial tool marks not allowed)		*n*	Trimming is allowed if the dimension*n* is not less than the minimum cross-section Ød2.				
Flow marks (radial orientation is not permitted)		*v*	1.50[a]	1.50[a]	6.50[a]	6.50[a]	6.50[a]
		k	0.08	0.08	0.08	0.08	0.08
Lack of material and tearing (including tearing on the mating surface)		*w*	0.60	0.80	1.00	1.30	1.70
		t	0.08	0.08	0.10	0.10	0.13

a : Or 0.05 times the inside diameter Ød1 of the O'Ring, taking the largest of the two values.
b: The scope of imperfections for sections < 0.8 mm or > 8.40 mm must be agreed between the manufacturer and the customer.
c : Rounded corners.

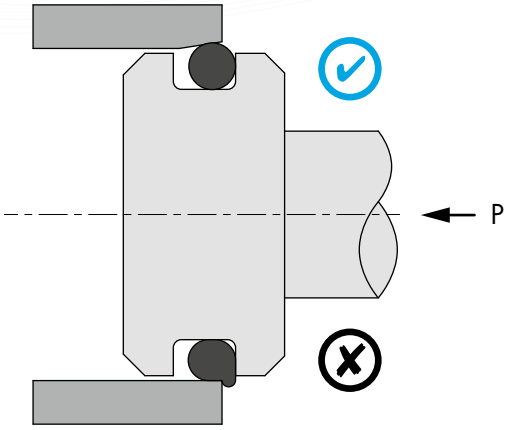
13. Assembly recommendations

a. General recommendations

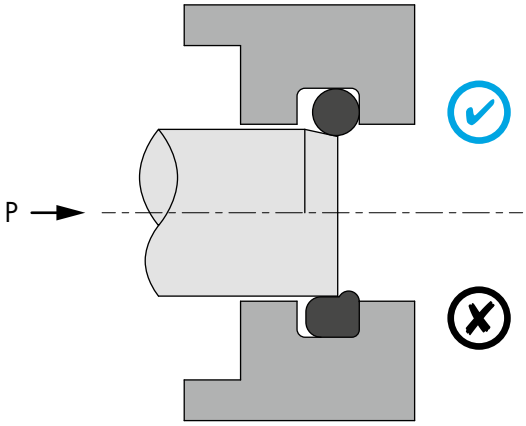
Several essential rules must be followed before fitting the O'Rings:

- **Check that the mechanical parts (rod and bore parts) have a chamfer length that is in line with our recommendations,**
- **Remove the flash and chamfer or round off the sharp edges and holes; cover the threaded parts,**
- **Remove the machining shavings and all impurities and other foreign bodies**
- **Clean all mechanical parts carefully**
- **Grease or oil the O'Ring and mechanical parts to facilitate assembly. To to this, ensure beforehand that the lubricants are compatible with the O'Ring materials. Avoid greases containing solid additives (molybdenum disulphide or zinc sulphide)**
- **If using installation tools, check that they are clean and do not have sharp edges.**

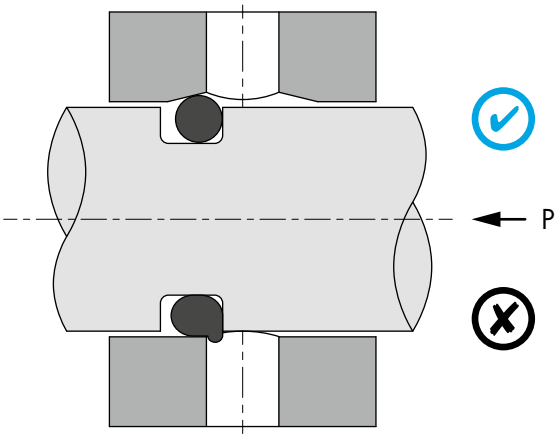
PISTON MOUNTING
WITH O'RING



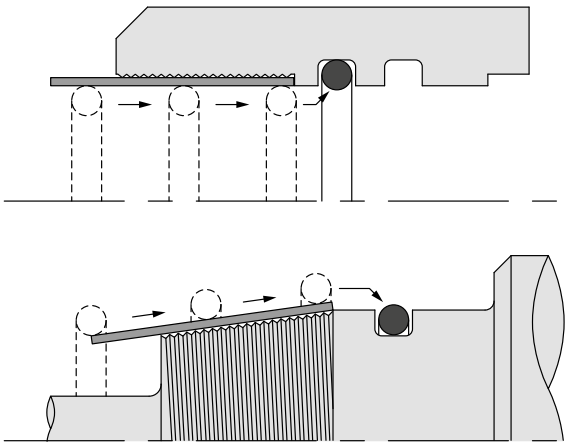
ROD MOUNTING
WITH O'RING



O'RING MOUNTING
WITH TRANSVERSE HOLES



O'RING MOUNTING
WITH THREADED PARTS



b. Automatic assembly

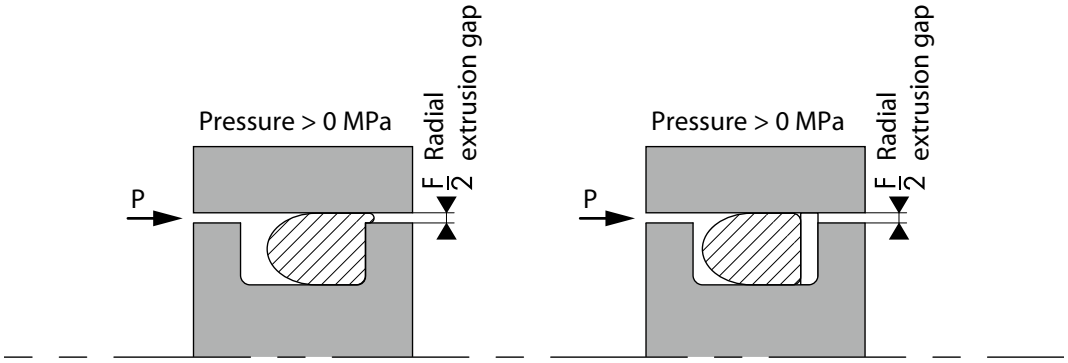
The O'Rings may benefit from specific packaging conditions that guarantee seal flatness during handling and storage, in the interest of improving the supply to the assembly machinery.

We offer several surface treatments that facilitate the automatic fitting of O'Rings. Specific processes prevent the components from sticking to each other after packaging, which prevents any production line shut-downs during automatic O'Ring fitting (see section 10.6).

SECTION 2
BACK-UP RINGS

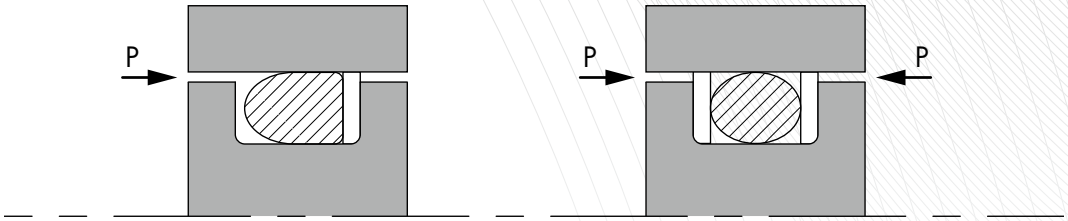
1. General points

Under increased pressures and with significant operational play, the O'Ring is at risk from significant degradation that can sometimes lead to its extrusion in the operating mechanical play. To prevent this irreversible event, one or more back-up rings must be combined with the O'Ring, depending on the direction of pressure.



The back-up rings do not strictly perform any sealing functions. The job of these components is to support and protect the O'Rings when they are subjected to high pressures (even pulsating and changing pressures). More precisely, they prevent any potential seal extrusion in the interstitial space formed by the mechanical play from the side opposite the pressure.

When the pressure is from a single direction, the back-up ring must be mounted on the side opposite the pressure just behind the O'Ring. If the pressure comes from both directions, a back-up ring must be mounted on each side of the O'Ring as shown in the following diagram.



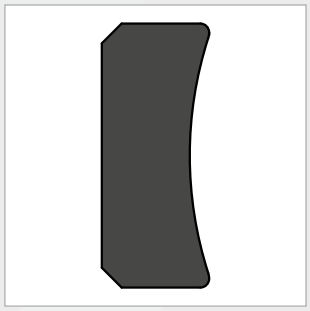
We generally recommend fitting the back-up rings under the following conditions:

- Pressures above 5.0 MPa for the inside diameters Ød1 of O'Rings > 50.00 mm
- Pressures above 10.0 MPa for the inside diameters Ød1 of O'Rings ≤ 50.00 mm

2. Materials

In the majority of cases, back-up rings are made from virgin PTFE, however, they can also be made from filled PTFE (fibreglass, carbon, bronze, etc.), which offers the best mechanical features for heavy-duty applications. Other types of materials, such as thermoplastics, can also be used to resist higher pressures. Back-up rings can also be moulded, particularly in NBR 90 Shore A as standard or in FKM 90 Shore A, which meets high production needs at a very reasonable cost. The table below sets out all of the materials that may be considered for making back-up rings.

Materials	Code France Joint	BECA 008	BECA 008 P	BECA 011	BECA 012
NBR 90 Shore A	Y0	x			
FKM 90 Shore A	G0	x			
Virgin PTFE	P		x	x	x
Fibreglass-filled PTFE	V		x	x	x
Carbon-filled PTFE	C		x	x	x
Bronze-filled PTFE	B		x	x	x
Polyurethane - PU	U		x	x	
PEEK	T		x	x	
Polyoxymethylene (POM)	H		x	x	
Polyamide (PA)	D		x	x	



BECA 008

Concave back-up ring in line with standard AS 568A

DESCRIPTION

The BECA 008 profile is an uncut back-up ring with a concave shape that allows it to fit snugly against the O'Ring. The ring is systematically assembled in tandem with an O'Ring and an X'Ring.

ADVANTAGES

Preferable for use in static applications

May be used for alternating movement applications

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Easy assembly by deformation

Its production method makes it an economic solution

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

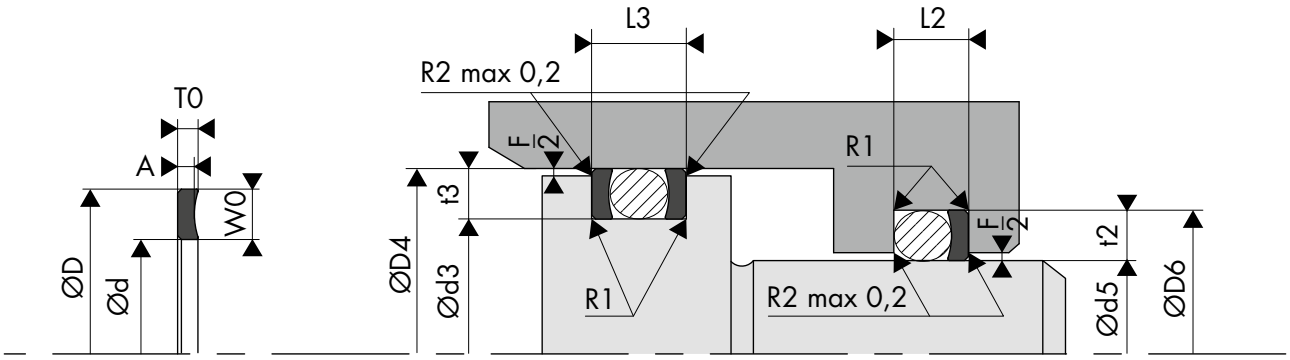
NBR 90 Shore A as standard

FKM 90 Shore A to deal with temperature and chemical compatibility issues

Other materials can be used for special applications

TECHNICAL DATA

Temperature	-30°C / +200°C depending on the material selected
Pressure	Up to 60 MPa in static applications depending on the extrusion gap Up to 25 MPa in dynamic applications
Speed	Mainly for static applications; only up to 0.2 m/s for linear applications
Media	Mineral hydraulic oils Greases Air



INSTALLATION DIMENSIONS ACCORDING TO STANDARD AS 568A IN STATIC APPLICATIONS, OUTSIDE SEALING (PISTON) AND INSIDE SEALING (ROD)

Series	O'Ring	Back-up ring			Housing dimensions					
					Groove diameter		Groove width		Radius	Diametral clearance
	Cross-section Ød2	Radial height W0	Thickness T0	Thickness A	Piston sealing Ød3 0/-0.10	Rod sealing ØD6 +0.10/0	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	F
004 - 050	1.78	1.35	1.24	1.14	D4 - 2.90	d5 + 2.90	3.60	5.00	0.25	0.12
102 - 178	2.62	2.18	1.35	1.14	D4 - 4.50	d5 + 4.50	4.50	5.90	0.25	0.12
201 - 284	3.53	3.00	1.27	1.02	D4 - 6.20	d5 + 6.20	5.60	7.00	0.25	0.15
309 - 395	5.33	4.65	1.93	1.52	D4 - 9.40	d5 + 9.40	7.90	9.60	0.25	0.15
425 - 475	6.99	5.99	2.97	2.44	D4 - 12.20	d5 + 12.20	10.70	13.20	0.25	0.20

EXAMPLE OF CODIFICATION

STANDARD CODIFICATION

Materials _____ : NBR 90 Shore A – Code Y0
Rod diameter _____ : Ød1 = 20.00 mm
Groove diameter __ : ØD1 = 22.90 mm
Part number_____ : 008.1A057Y0

Part number - 008. 1A057 Y0

Family
Series code
Back-up ring material*

* The codes that define the materials are set out in the materials table, section 2 - chapter 2.

PREFERENTIAL DIMENSIONS FOR STATIC APPLICATIONS, OUTSIDE SEALING (PISTON) AND INSIDE SEALING (ROD)

Part number	Series	Rod diameter	Bore diameter	Groove width		Radius	Back-up ring dimensions	O'Ring part number	O'Ring dimensions
		Ød5 f7	ØD4 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	Ød x ØD x W0 x T0 x r1		Ød1 x Ød2
008.1A037	8-004	2.00	5.20	3.60	5.00	0.25	2.44 x 5.14 x 1.35 x 1.14 x 2.21	010.1A037	1.78 x 1.78
008.1A038	8-005	2.50	6.00	3.60	5.00	0.25	3.23 x 5.93 x 1.35 x 1.14 x 2.21	010.1A038	2.57 x 1.78
008.1A039	8-006	3.00	6.50	3.60	5.00	0.25	3.56 x 6.26 x 1.35 x 1.14 x 2.21	010.1A039	2.9 x 1.78
008.1A040	8-007	4.00	7.00	3.60	5.00	0.25	4.34 x 7.04 x 1.35 x 1.14 x 2.21	010.1A040	3.68 x 1.78
008.1A041	8-008	5.00	8.00	3.60	5.00	0.25	5.13 x 7.83 x 1.35 x 1.14 x 2.21	010.1A041	4.47 x 1.78
008.1A042	8-009	5.50	9.00	3.60	5.00	0.25	5.94 x 8.64 x 1.35 x 1.14 x 2.21	010.1A042	5.28 x 1.78
008.1A043	8-010	6.50	10.00	3.60	5.00	0.25	6.73 x 9.43 x 1.35 x 1.14 x 2.21	010.1A043	6.07 x 1.78
008.1A046	8-011	8.00	11.00	3.60	5.00	0.25	8.31 x 11.01 x 1.35 x 1.14 x 2.21	010.1A046	7.65 x 1.78
008.1A048	8-012	9.50	13.00	3.60	5.00	0.25	9.91 x 12.61 x 1.35 x 1.14 x 2.21	010.1A048	9.25 x 1.78
008.1A050	8-013	11.00	14.00	3.60	5.00	0.25	11.56 x 14.26 x 1.35 x 1.14 x 2.21	010.1A050	10.82 x 1.78
008.1A052	8-014	13.00	16.00	3.60	5.00	0.25	13.16 x 15.86 x 1.35 x 1.14 x 2.21	010.1A052	12.42 x 1.78
008.1A053	8-015	14.00	17.00	3.60	5.00	0.25	14.73 x 17.43 x 1.35 x 1.14 x 2.21	010.1A053	14.00 x 1.78
008.1A054	8-016	16.00	19.00	3.60	5.00	0.25	16.33 x 19.03 x 1.35 x 1.14 x 2.21	010.1A054	15.60 x 1.78
008.1A055	8-017	17.00	21.00	3.60	5.00	0.25	17.91 x 20.61 x 1.35 x 1.14 x 2.21	010.1A055	17.17 x 1.78
008.1A056	8-018	19.00	22.00	3.60	5.00	0.25	19.51 x 22.21 x 1.35 x 1.14 x 2.21	010.1A056	18.77 x 1.78
008.1A057	8-019	20.00	24.00	3.60	5.00	0.25	21.08 x 23.78 x 1.35 x 1.14 x 2.21	010.1A057	20.35 x 1.78
008.1A058	8-020	22.00	25.00	3.60	5.00	0.25	22.68 x 25.38 x 1.35 x 1.14 x 2.21	010.1A058	21.95 x 1.78
008.1A059	8-021	24.00	27.00	3.60	5.00	0.25	24.26 x 26.96 x 1.35 x 1.14 x 2.21	010.1A059	23.52 x 1.78
008.1A060	8-022	25.00	29.00	3.60	5.00	0.25	25.86 x 28.56 x 1.35 x 1.14 x 2.21	010.1A060	25.12 x 1.78
008.1A061	8-023	27.00	30.00	3.60	5.00	0.25	27.43 x 30.13 x 1.35 x 1.14 x 2.21	010.1A061	26.70 x 1.78
008.1A062	8-024	29.00	32.00	3.60	5.00	0.25	29.03 x 31.73 x 1.35 x 1.14 x 2.21	010.1A062	28.30 x 1.78
008.1A063	8-025	30.00	33.00	3.60	5.00	0.25	30.61 x 33.31 x 1.35 x 1.14 x 2.21	010.1A063	29.87 x 1.78
008.1A064	8-026	32.00	35.00	3.60	5.00	0.25	32.21 x 34.91 x 1.35 x 1.14 x 2.21	010.1A064	31.47 x 1.78
008.1A065	8-027	33.00	36.50	3.60	5.00	0.25	33.78 x 36.48 x 1.35 x 1.14 x 2.21	010.1A065	33.05 x 1.78
008.1A066	8-028	35.00	38.00	3.60	5.00	0.25	35.58 x 38.28 x 1.35 x 1.14 x 2.21	010.1A066	34.65 x 1.78
008.1A067	8-029	38.00	41.00	3.60	5.00	0.25	38.56 x 41.26 x 1.35 x 1.14 x 2.21	010.1A067	37.82 x 1.78
008.1A068	8-030	41.00	44.50	3.60	5.00	0.25	41.73 x 44.43 x 1.35 x 1.14 x 2.21	010.1A068	41.00 x 1.78
008.1A069	8-031	44.50	48.00	3.60	5.00	0.25	44.91 x 47.61 x 1.35 x 1.14 x 2.21	010.1A069	44.17 x 1.78
008.1A070	8-032	48.00	51.00	3.60	5.00	0.25	48.08 x 50.78 x 1.35 x 1.14 x 2.21	010.1A070	47.35 x 1.78
008.1A071	8-033	51.00	54.00	3.60	5.00	0.25	51.26 x 53.96 x 1.35 x 1.14 x 2.21	010.1A071	50.52 x 1.78
008.1A072	8-034	54.00	57.00	3.60	5.00	0.25	54.43 x 57.13 x 1.35 x 1.14 x 2.21	010.1A072	53.70 x 1.78
008.1A073	8-035	57.00	60.00	3.60	5.00	0.25	57.61 x 60.31 x 1.35 x 1.14 x 2.21	010.1A073	56.87 x 1.78
008.1A074	8-036	60.00	63.50	3.60	5.00	0.25	60.78 x 63.48 x 1.35 x 1.14 x 2.21	010.1A074	60.05 x 1.78
008.1A075	8-037	63.00	67.00	3.60	5.00	0.25	63.96 x 66.66 x 1.35 x 1.14 x 2.21	010.1A075	63.22 x 1.78
008.1A076	8-038	67.00	70.00	3.60	5.00	0.25	67.13 x 69.83 x 1.35 x 1.14 x 2.21	010.1A076	66.40 x 1.78
008.1A077	8-039	70.00	73.00	3.60	5.00	0.25	70.31 x 73.01 x 1.35 x 1.14 x 2.21	010.1A077	69.57 x 1.78
008.1A078	8-040	73.00	76.00	3.60	5.00	0.25	73.48 x 76.18 x 1.35 x 1.14 x 2.21	010.1A078	72.75 x 1.78
008.1A079	8-041	76.00	80.00	3.60	5.00	0.25	76.66 x 79.36 x 1.35 x 1.14 x 2.21	010.1A079	75.92 x 1.78
008.1A080	8-042	83.00	86.00	3.60	5.00	0.25	83.01 x 85.71 x 1.35 x 1.14 x 2.21	010.1A080	82.27 x 1.78
008.1A081	8-043	89.00	92.00	3.60	5.00	0.25	89.36 x 92.06 x 1.35 x 1.14 x 2.21	010.1A081	88.62 x 1.78
008.1A082	8-044	95.00	99.00	3.60	5.00	0.25	95.71 x 98.10 x 1.35 x 1.14 x 2.21	010.1A082	94.97 x 1.78
008.1A083	8-045	102.00	105.00	3.60	5.00	0.25	102.06 x 104.76 x 1.35 x 1.14 x 2.21	010.1A083	101.32 x 1.78
008.1A084	8-046	108.00	111.00	3.60	5.00	0.25	108.41 x 111.11 x 1.35 x 1.14 x 2.21	010.1A084	107.67 x 1.78
008.1A085	8-047	114.00	118.00	3.60	5.00	0.25	114.76 x 117.46 x 1.35 x 1.14 x 2.21	010.1A085	114.02 x 1.78
008.1A086	8-048	121.00	124.00	3.60	5.00	0.25	121.11 x 123.81 x 1.35 x 1.14 x 2.21	010.1A086	120.37 x 1.78
008.1A087	8-049	127.00	130.00	3.60	5.00	0.25	127.46 x 130.16 x 1.35 x 1.14 x 2.21	010.1A087	126.72 x 1.78
008.1A088	8-050	133.00	137.00	3.60	5.00	0.25	133.81 x 136.51 x 1.35 x 1.14 x 2.21	010.1A088	133.07 x 1.78
008.1A179	8-102	1.60	6.30	4.50	5.90	0.25	1.96 x 6.32 x 2.18 x 1.14 x 3.28	010.1A179	1.24 x 2.62
008.1A180	8-103	2.50	7.00	4.50	5.90	0.25	2.77 x 7.13 x 2.18 x 1.14 x 3.28	010.1A180	2.06 x 2.62
008.1A181	8-104	3.00	8.00	4.50	5.90	0.25	3.56 x 7.92 x 2.18 x 1.14 x 3.28	010.1A181	2.84 x 2.62
008.1A182	8-105	4.00	9.00	4.50	5.90	0.25	4.34 x 8.70 x 2.18 x 1.14 x 3.28	010.1A182	3.63 x 2.62
008.1A183	8-106	5.00	9.50	4.50	5.90	0.25	5.13 x 9.49 x 2.18 x 1.14 x 3.28	010.1A183	4.42 x 2.62
008.1A184	8-107	5.50	10.00	4.50	5.90	0.25	5.94 x 10.3 x 2.18 x 1.14 x 3.28	010.1A184	5.23 x 2.62
008.1A185	8-108	6.50	11.00	4.50	5.90	0.25	6.73 x 11.91 x 2.18 x 1.14 x 3.28	010.1A185	6.02 x 2.62
008.1A186	8-109	8.00	13.00	4.50	5.90	0.25	8.31 x 12.67 x 2.18 x 1.14 x 3.28	010.1A186	7.59 x 2.62
008.1A266	8-110	9.50	14.00	4.50	5.90	0.25	9.91 x 14.27 x 2.18 x 1.14 x 3.28	010.1A266	9.19 x 2.62
008.1A267	8-111	11.00	16.00	4.50	5.90	0.25	11.48 x 15.84 x 2.18 x 1.14 x 3.28	010.1A267	10.77 x 2.62

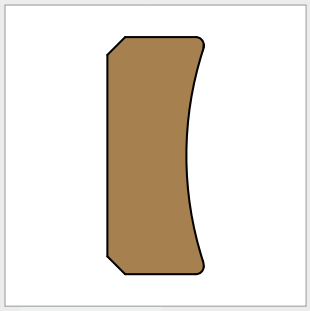
Part number	Series	Rod diameter	Bore diameter	Groove width		Radius	Back-up ring dimensions	O'Ring part number	O'Ring dimensions
		Ød5 f7	ØD4 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	Ød x ØD x W0 x T0 x r1		Ød1 x Ød2
008.1A268	8-112	13.00	17.00	4.50	5.90	0.25	13.08 x 17.44 x 2.18 x 1.14 x 3.28	010.1A268	12.37 x 2.62
008.1A269	8-113	14.00	19.00	4.50	5.90	0.25	14.66 x 19.02 x 2.18 x 1.14 x 3.28	010.1A269	13.94 x 2.62
008.1A270	8-114	16.00	21.00	4.50	5.90	0.25	16.26 x 20.62 x 2.18 x 1.14 x 3.28	010.1A270	15.54 x 2.62
008.1A271	8-115	17.00	22.00	4.50	5.90	0.25	17.83 x 22.19 x 2.18 x 1.14 x 3.28	010.1A271	17.12 x 2.62
008.1A272	8-116	19.00	24.00	4.50	5.90	0.25	19.43 x 23.79 x 2.18 x 1.14 x 3.28	010.1A272	18.72 x 2.62
008.1A201	8-117	20.00	25.00	4.50	5.90	0.25	21.11 x 25.47 x 2.18 x 1.14 x 3.28	010.1A201	20.29 x 2.62
008.1A203	8-118	22.00	27.00	4.50	5.90	0.25	22.68 x 27.04 x 2.18 x 1.14 x 3.28	010.1A203.	21.89 x 2.62
008.1A205	8-119	24.00	29.00	4.50	5.90	0.25	24.28 x 28.64 x 2.18 x 1.14 x 3.28	010.1A205	23.47 x 2.62
008.1A207	8-120	25.00	30.00	4.50	5.90	0.25	25.86 x 30.22 x 2.18 x 1.14 x 3.28	010.1A207	25.07 x 2.62
008.1A208	8-121	27.00	32.00	4.50	5.90	0.25	27.64 x 31.82 x 2.18 x 1.14 x 3.28	010.1A208	26.64 x 2.62
008.1A209	8-122	29.00	33.00	4.50	5.90	0.25	29.03 x 33.39 x 2.18 x 1.14 x 3.28	010.1A209	28.24 x 2.62
008.1A210	8-123	30.00	35.00	4.50	5.90	0.25	30.63 x 34.99 x 2.18 x 1.14 x 3.28	010.1A210	29.82 x 2.62
008.1A211	8-124	32.00	36.50	4.50	5.90	0.25	32.21 x 36.57 x 2.18 x 1.14 x 3.28	010.1A211	31.42 x 2.62
008.1A212	8-125	33.00	38.00	4.50	5.90	0.25	33.81 x 38.17 x 2.18 x 1.14 x 3.28	010.1A212	32.99 x 2.62
008.1A213	8-126	35.00	40.00	4.50	5.90	0.25	35.58 x 39.94 x 2.18 x 1.14 x 3.28	010.1A213	34.59 x 2.62
008.1A214	8-127	36.50	41.00	4.50	5.90	0.25	37.08 x 41.36 x 2.18 x 1.14 x 3.28	010.1A214	36.17 x 2.62
008.1A215	8-128	38.00	43.00	4.50	5.90	0.25	38.56 x 42.92 x 2.18 x 1.14 x 3.28	010.1A215	37.77 x 2.62
008.1A216	8-129	40.00	44.50	4.50	5.90	0.25	40.16 x 44.52 x 2.18 x 1.14 x 3.28	010.1A216	39.34 x 2.62
008.1A217	8-130	41.00	46.00	4.50	5.90	0.25	41.70 x 46.09 x 2.18 x 1.14 x 3.28	010.1A217	40.94 x 2.62
008.1A218	8-131	43.00	48.00	4.50	5.90	0.25	43.33 x 47.69 x 2.18 x 1.14 x 3.28	010.1A218	42.52 x 2.62
008.1A219	8-132	44.50	50.00	4.50	5.90	0.25	44.91 x 49.27 x 2.18 x 1.14 x 3.28	010.1A219	44.12 x 2.62
008.1A220	8-133	46.00	51.00	4.50	5.90	0.25	46.51 x 50.87 x 2.18 x 1.14 x 3.28	010.1A220	45.69 x 2.62
008.1A221	8-134	48.00	52.00	4.50	5.90	0.25	48.08 x 52.44 x 2.18 x 1.14 x 3.28	010.1A221	47.29 x 2.62
008.1A222	8-135	49.00	54.00	4.50	5.90	0.25	49.68 x 54.04 x 2.18 x 1.14 x 3.28	010.1A222	48.90 x 2.62
008.1A223	8-136	51.00	55.50	4.50	5.90	0.25	51.26 x 55.62 x 2.18 x 1.14 x 3.28	010.1A223	50.47 x 2.62
008.1A224	8-137	52.00	57.00	4.50	5.90	0.25	52.86 x 57.22 x 2.18 x 1.14 x 3.28	010.1A224	52.07 x 2.62
008.1A225	8-138	54.00	58.00	4.50	5.90	0.25	54.43 x 58.79 x 2.18 x 1.14 x 3.28	010.1A225	53.64 x 2.62
008.1A226	8-139	55.00	60.00	4.50	5.90	0.25	56.03 x 60.39 x 2.18 x 1.14 x 3.28	010.1A226	55.25 x 2.62
008.1A227	8-140	57.00	62.00	4.50	5.90	0.25	57.61 x 61.97 x 2.18 x 1.14 x 3.28	010.1A227	56.82 x 2.62
008.1A228	8-141	59.00	63.50	4.50	5.90	0.25	59.21 x 63.57 x 2.18 x 1.14 x 3.28	010.1A228	58.42 x 2.62
008.1A229	8-142	60.00	65.00	4.50	5.90	0.25	60.78 x 65.14 x 2.18 x 1.14 x 3.28	010.1A229	59.99 x 2.62
008.1A230	8-143	62.00	67.00	4.50	5.90	0.25	62.38 x 66.74 x 2.18 x 1.14 x 3.28	010.1A230	61.60 x 2.62
008.1A231	8-144	63.00	68.00	4.50	5.90	0.25	63.96 x 68.32 x 2.18 x 1.14 x 3.28	010.1A231	63.17 x 2.62
008.1A232	8-145	65.00	70.00	4.50	5.90	0.25	65.56 x 69.92 x 2.18 x 1.14 x 3.28	010.1A232	64.77 x 2.62
008.1A233	8-146	67.00	71.00	4.50	5.90	0.25	67.13 x 71.49 x 2.18 x 1.14 x 3.28	010.1A233	66.34 x 2.62
008.1A234	8-147	68.00	73.00	4.50	5.90	0.25	68.73 x 73.09 x 2.18 x 1.14 x 3.28	010.1A234	67.95 x 2.62
008.1A235	8-148	70.00	75.00	4.50	5.90	0.25	70.31 x 74.67 x 2.18 x 1.14 x 3.28	010.1A235	69.52 x 2.62
008.1A236	8-149	71.00	76.00	4.50	5.90	0.25	71.91 x 76.27 x 2.18 x 1.14 x 3.28	010.1A236	71.12 x 2.62
008.1A237	8-150	73.00	78.00	4.50	5.90	0.25	73.48 x 77.84 x 2.18 x 1.14 x 3.28	010.1A237	72.69 x 2.62
008.1A238	8-151	76.00	81.00	4.50	5.90	0.25	76.66 x 81.02 x 2.18 x 1.14 x 3.28	010.1A238	75.87 x 2.62
008.1A239	8-152	83.00	87.00	4.50	5.90	0.25	83.01 x 87.37 x 2.18 x 1.14 x 3.28	010.1A239	82.22 x 2.62
008.1A240	8-153	89.00	94.00	4.50	5.90	0.25	89.36 x 93.72 x 2.18 x 1.14 x 3.28	010.1A240	88.57 x 2.62
008.1A241	8-154	95.00	100.00	4.50	5.90	0.25	95.71 x 100.7 x 2.18 x 1.14 x 3.28	010.1A241	94.92 x 2.62
008.1A242	8-155	102.00	106.00	4.50	5.90	0.25	102.06 x 106.42 x 2.18 x 1.14 x 3.28	010.1A242	101.27 x 2.62
008.1A243	8-156	108.00	113.00	4.50	5.90	0.25	108.41 x 112.77 x 2.18 x 1.14 x 3.28	010.1A243	107.62 x 2.62
008.1A244	8-157	114.00	119.00	4.50	5.90	0.25	114.76 x 119.12 x 2.18 x 1.14 x 3.28	010.1A244	113.97 x 2.62
008.1A245	8-158	121.00	125.00	4.50	5.90	0.25	121.11 x 125.47 x 2.18 x 1.14 x 3.28	010.1A245	120.32 x 2.62
008.1A246	8-159	127.00	132.00	4.50	5.90	0.25	127.46 x 131.82 x 2.18 x 1.14 x 3.28	010.1A246	126.67 x 2.62
008.1A247	8-160	133.00	138.00	4.50	5.90	0.25	133.81 x 138.17 x 2.18 x 1.14 x 3.28	010.1A247	133.02 x 2.62
008.1A248	8-161	140.00	144.00	4.50	5.90	0.25	140.16 x 144.52 x 2.18 x 1.14 x 3.28	010.1A248	139.37 x 2.62
008.1A249	8-162	146.00	151.00	4.50	5.90	0.25	146.51 x 150.87 x 2.18 x 1.14 x 3.28	010.1A249	145.72 x 2.62
008.1A250	8-163	152.00	157.00	4.50	5.90	0.25	152.86 x 157.22 x 2.18 x 1.14 x 3.28	010.1A250	152.07 x 2.62
008.1A251	8-164	159.00	164.00	4.50	5.90	0.25	159.21 x 163.57 x 2.18 x 1.14 x 3.28	010.1A251	158.42 x 2.62
008.1A252	8-165	165.00	170.00	4.50	5.90	0.25	165.56 x 169.92 x 2.18 x 1.14 x 3.28	010.1A252	164.77 x 2.62
008.1A253	8-166	172.00	176.00	4.50	5.90	0.25	171.91 x 176.27 x 2.18 x 1.14 x 3.28	010.1A253	171.12 x 2.62
008.1A254	8-167	178.00	183.00	4.50	5.90	0.25	178.26 x 182.62 x 2.18 x 1.14 x 3.28	010.1A254	177.47 x 2.62
008.1A255	8-168	184.00	189.00	4.50	5.90	0.25	184.61 x 188.97 x 2.18 x 1.14 x 3.28	010.1A255	183.82 x 2.62
008.1A256	8-169	190.00	195.00	4.50	5.90	0.25	190.96 x 194.99 x 2.18 x 1.14 x 3.28	010.1A256	190.17 x 2.62
008.1A257	8-170	197.00	202.00	4.50	5.90	0.25	197.31 x 201.67 x 2.18 x 1.14 x 3.28	010.1A257	196.52 x 2.62
008.1A258	8-171	203.00	208.00	4.50	5.90	0.25	203.66 x 208.02 x 2.18 x 1.14 x 3.28	010.1A258	202.87 x 2.62
008.1A259	8-172	210.00	214.00	4.50	5.90	0.25	210.01 x 222.39 x 2.18 x 1.14 x 3.28	010.1A259	209.22 x 2.62
008.1A260	8-173	216.00	221.00	4.50	5.90	0.25	216.36 x 220.72 x 2.18 x 1.14 x 3.28	010.1A260	215.57 x 2.62
008.1A261	8-174	222.00	227.00	4.50	5.90	0.25	222.71 x 227.07 x 2.18 x 1.14 x 3.28	010.1A261	221.92 x 2.62
008.1A262	8-175	229.00	233.00	4.50	5.90	0.25	229.06 x 233.42 x 2.18 x 1.14 x 3.28	010.1A262	228.27 x 2.62
008.1A263	8-176	235.00	240.00	4.50	5.90	0.25	235.41 x 239.88 x 2.18 x 1.14 x 3.28	010.1A263	234.62 x 2.62
008.1A264	8-177	241.00	246.00	4.50	5.90	0.25	241.76 x 246.12 x 2.18 x 1.14 x 3.28	010.1A264	240.97 x 2.62
008.1A265	8-178	248.00	252.00	4.50	5.90	0.25	248.11 x 252.47 x 2.18 x 1.14 x 3.28	010.1A265	247.32 x 2.62
008.1A358	8-201	5.00	11.00	5.60	7.00	0.25	5.13 x 11.13 x 3.00 x 1.02 x 4.42	010.1A358	4.34 x 3.53
008.1A359	8-202	6.50	13.00	5.60	7.00	0.25	6.73 x 12.73 x 3.00 x 1.02 x 4.42	010.1A359	5.94 x 3.53
008.1A360	8-203	8.00	14.00	5.60	7.00	0.25	8.00 x 14.30 x 3.00 x 1.02 x 4.42	010.1A360	7.52 x 3.53
008.1A361	8-204	9.50	16.00	5.60	7.00	0.25	9.90 x 15.90 x 3.00 x 1.02 x 4.42	010.1A361	9.12 x 3.53
008.1A362	8-205	11.00	17.00	5.60	7.00	0.25	11.56 x 17.56 x 3.00 x 1.02 x 4.42	010.1A362	10.69 x 3.53
008.1A363	8-206	13.00	19.00	5.60	7.00	0.25	13.16 x 20.16 x 3.00 x 1.02 x 4.42	010.1A363	12.29 x 3.53

Part number	Series	Rod diameter	Bore diameter	Groove width		Radius	Back-up ring dimensions	O'Ring part number	O'Ring dimensions
		Ød5 f7	ØD4 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	Ød x ØD x W0 x T0 x r1		Ød1 x Ød2
008.1A364	8-207	14.00	21.00	5.60	7.00	0.25	14.73 x 20.73 x 3.00 x 1.02 x 4.42	010.1A364	13.87 x 3.53
008.1A365	8-208	16.00	22.00	5.60	7.00	0.25	16.33 x 22.33 x 3.00 x 1.02 x 4.42	010.1A365	15.47 x 3.53
008.1A366	8-209	17.00	24.00	5.60	7.00	0.25	17.90 x 23.90 x 3.00 x 1.02 x 4.42	010.1A366	17.04 x 3.53
008.1A466	8-210	19.00	25.00	5.60	7.00	0.25	19.46 x 25.46 x 3.00 x 1.02 x 4.42	010.1A466	18.64 x 3.53
008.1A467	8-211	20.00	27.00	5.60	7.00	0.25	21.03 x 27.03 x 3.00 x 1.02 x 4.42	010.1A467	20.22 x 3.53
008.1A468	8-212	22.00	29.00	5.60	7.00	0.25	22.63 x 28.63 x 3.00 x 1.02 x 4.42	010.1A468	21.82 x 3.53
008.1A469	8-213	24.00	30.00	5.60	7.00	0.25	24.21 x 30.21 x 3.00 x 1.02 x 4.42	010.1A469	23.39 x 3.53
008.1A470	8-214	25.00	32.00	5.60	7.00	0.25	25.81 x 31.81 x 3.00 x 1.02 x 4.42	010.1A470	25.00 x 3.53
008.1A471	8-215	27.00	33.00	5.60	7.00	0.25	27.38 x 33.38 x 3.00 x 1.02 x 4.42	010.1A471	26.57 x 3.53
008.1A472	8-216	29.00	35.00	5.60	7.00	0.25	28.98 x 34.98 x 3.00 x 1.02 x 4.42	010.1A472	28.17 x 3.53
008.1A473	8-217	30.00	36.50	5.60	7.00	0.25	30.56 x 36.56 x 3.00 x 1.02 x 4.42	010.1A473	29.74 x 3.53
008.1A474	8-218	32.00	38.00	5.60	7.00	0.25	32.16 x 38.16 x 3.00 x 1.02 x 4.42	010.1A474	31.34 x 3.53
008.1A475	8-219	33.00	40.00	5.60	7.00	0.25	33.88 x 39.88 x 3.00 x 1.02 x 4.42	010.1A475	32.92 x 3.53
008.1A476	8-220	35.00	41.00	5.60	7.00	0.25	35.48 x 41.58 x 3.00 x 1.02 x 4.42	010.1A476	34.52 x 3.53
008.1A477	8-221	36.00	43.00	5.60	7.00	0.25	37.06 x 43.06 x 3.00 x 1.02 x 4.42	010.1A477	36.09 x 3.53
008.1A478	8-222	38.00	44.50	5.60	7.00	0.25	38.66 x 44.66 x 3.00 x 1.02 x 4.42	010.1A478	37.69 x 3.53
008.1A382	8-223	41.00	48.00	5.60	7.00	0.25	41.83 x 47.83 x 3.00 x 1.02 x 4.42	010.1A382	40.87 x 3.53
008.1A385	8-224	44.50	51.00	5.60	7.00	0.25	45.01 x 51.01 x 3.00 x 1.02 x 4.42	010.1A385	44.04 x 3.53
008.1A388	8-225	48.00	54.00	5.60	7.00	0.25	48.18 x 54.18 x 3.00 x 1.02 x 4.42	010.1A388	47.22 x 3.53
008.1A391	8-226	51.00	57.00	5.60	7.00	0.25	51.36 x 57.36 x 3.00 x 1.02 x 4.42	010.1A391	50.39 x 3.53
008.1A394	8-227	54.00	60.00	5.60	7.00	0.25	54.43 x 60.53 x 3.00 x 1.02 x 4.42	010.1A394	53.57 x 3.53
008.1A397	8-228	57.00	63.50	5.60	7.00	0.25	57.71 x 63.71 x 3.00 x 1.02 x 4.42	010.1A397	56.74 x 3.53
008.1A400	8-229	60.00	67.00	5.60	7.00	0.25	60.66 x 66.88 x 3.00 x 1.02 x 4.42	010.1A400	59.92 x 3.53
008.1A403	8-230	63.50	70.00	5.60	7.00	0.25	64.06 x 70.06 x 3.00 x 1.02 x 4.42	010.1A403	63.09 x 3.53
008.1A406	8-231	67.00	73.00	5.60	7.00	0.25	66.83 x 72.83 x 3.00 x 1.02 x 4.42	010.1A406	66.27 x 3.53
008.1A409	8-232	70.00	76.00	5.60	7.00	0.25	70.00 x 76.00 x 3.00 x 1.02 x 4.42	010.1A409	69.44 x 3.53
008.1A412	8-233	73.00	79.00	5.60	7.00	0.25	73.18 x 79.18 x 3.00 x 1.02 x 4.42	010.1A412	72.62 x 3.53
008.1A414	8-234	76.00	83.00	5.60	7.00	0.25	76.35 x 82.35 x 3.00 x 1.02 x 4.42	010.1A414	75.79 x 3.53
008.1A416	8-235	79.50	86.00	5.60	7.00	0.25	79.53 x 85.53 x 3.00 x 1.02 x 4.42	010.1A416	78.97 x 3.53
008.1A417	8-236	83.00	89.00	5.60	7.00	0.25	82.70 x 88.70 x 3.00 x 1.02 x 4.42	010.1A417	82.14 x 3.53
008.1A418	8-237	86.00	92.00	5.60	7.00	0.25	85.88 x 91.88 x 3.00 x 1.02 x 4.42	010.1A418	85.32 x 3.53
008.1A419	8-238	90.00	95.00	5.60	7.00	0.25	89.05 x 95.05 x 3.00 x 1.02 x 4.42	010.1A419	88.49 x 3.53
008.1A420	8-239	92.00	98.00	5.60	7.00	0.25	92.23 x 98.23 x 3.00 x 1.02 x 4.42	010.1A420	91.67 x 3.53
008.1A421	8-240	95.00	102.00	5.60	7.00	0.25	95.40 x 101.40 x 3.00 x 1.02 x 4.42	010.1A421	94.84 x 3.53
008.1A422	8-241	98.00	105.00	5.60	7.00	0.25	98.58 x 104.58 x 3.00 x 1.02 x 4.42	010.1A422	98.02 x 3.53
008.1A423	8-242	102.00	108.00	5.60	7.00	0.25	101.75 x 107.75 x 3.00 x 1.02 x 4.42	010.1A423	101.19 x 3.53
008.1A424	8-243	105.00	111.00	5.60	7.00	0.25	104.93 x 110.93 x 3.00 x 1.02 x 4.42	010.1A424	104.37 x 3.53
008.1A425	8-244	108.00	114.00	5.60	7.00	0.25	108.10 x 114.10 x 3.00 x 1.02 x 4.42	010.1A425	107.54 x 3.53
008.1A426	8-245	111.00	118.00	5.60	7.00	0.25	111.28 x 117.28 x 3.00 x 1.02 x 4.42	010.1A426	110.72 x 3.53
008.1A427	8-246	114.00	121.00	5.60	7.00	0.25	114.45 x 120.45 x 3.00 x 1.02 x 4.42	010.1A427	113.89 x 3.53
008.1A428	8-247	118.00	124.00	5.60	7.00	0.25	117.63 x 123.63 x 3.00 x 1.02 x 4.42	010.1A428	117.07 x 3.53
008.1A429	8-248	121.00	127.00	5.60	7.00	0.25	121.11 x 127.11 x 3.00 x 1.02 x 4.42	010.1A429	120.24 x 3.53
008.1A430	8-249	124.00	130.00	5.60	7.00	0.25	124.28 x 130.28 x 3.00 x 1.02 x 4.42	010.1A430	123.42 x 3.53
008.1A431	8-250	127.00	133.00	5.60	7.00	0.25	127.46 x 133.46 x 3.00 x 1.02 x 4.42	010.1A431	126.59 x 3.53
008.1A432	8-251	130.00	136.50	5.60	7.00	0.25	130.63 x 136.63 x 3.00 x 1.02 x 4.42	010.1A432	129.77 x 3.53
008.1A433	8-252	133.00	140.00	5.60	7.00	0.25	133.81 x 139.81 x 3.00 x 1.02 x 4.42	010.1A433	132.94 x 3.53
008.1A434	8-253	136.50	143.00	5.60	7.00	0.25	136.98 x 142.98 x 3.00 x 1.02 x 4.42	010.1A434	136.12 x 3.53
008.1A435	8-254	140.00	146.00	5.60	7.00	0.25	140.16 x 146.16 x 3.00 x 1.02 x 4.42	010.1A435	139.29 x 3.53
008.1A436	8-255	143.00	150.00	5.60	7.00	0.25	143.33 x 149.33 x 3.00 x 1.02 x 4.42	010.1A436	142.47 x 3.53
008.1A437	8-256	146.00	152.00	5.60	7.00	0.25	146.51 x 152.21 x 3.00 x 1.02 x 4.42	010.1A437	145.64 x 3.53
008.1A438	8-257	149.00	156.00	5.60	7.00	0.25	149.68 x 155.68 x 3.00 x 1.02 x 4.42	010.1A438	148.82 x 3.53
008.1A439	8-258	152.00	159.00	5.60	7.00	0.25	152.86 x 158.86 x 3.00 x 1.02 x 4.42	010.1A439	151.99 x 3.53
008.1A440	8-259	159.00	165.00	5.60	7.00	0.25	159.21 x 165.21 x 3.00 x 1.02 x 4.42	010.1A440	158.34 x 3.53
008.1A441	8-260	165.00	172.00	5.60	7.00	0.25	165.56 x 171.56 x 3.00 x 1.02 x 4.42	010.1A441	164.69 x 3.53
008.1A442	8-261	172.00	178.00	5.60	7.00	0.25	171.91 x 177.91 x 3.00 x 1.02 x 4.42	010.1A442	171.04 x 3.53
008.1A443	8-262	178.00	184.00	5.60	7.00	0.25	178.26 x 184.26 x 3.00 x 1.02 x 4.42	010.1A443	177.39 x 3.53
008.1A444	8-263	184.00	190.50	5.60	7.00	0.25	184.61 x 170.81 x 3.00 x 1.02 x 4.42	010.1A444	183.74 x 3.53
008.1A445	8-264	190.50	197.00	5.60	7.00	0.25	190.96 x 196.96 x 3.00 x 1.02 x 4.42	010.1A445	190.09 x 3.53
008.1A446	8-265	197.00	203.00	5.60	7.00	0.25	197.31 x 203.31 x 3.00 x 1.92 x 4.42	010.1A446	196.44 x 3.53
008.1A447	8-266	203.00	210.00	5.60	7.00	0.25	203.66 x 209.66 x 3.00 x 1.02 x 4.42	010.1A447	202.79 x 3.53
008.1A448	8-267	210.00	215.90	5.60	7.00	0.25	210.01 x 216.01 x 3.00 x 1.02 x 4.42	010.1A448	209.14 x 3.53
008.1A449	8-268	215.90	222.30	5.60	7.00	0.25	216.36 x 222.36 x 3.00 x 1.02 x 4.42	010.1A449	215.49 x 3.53
008.1A450	8-269	222.30	229.00	5.60	7.00	0.25	222.71 x 228.71 x 3.00 x 1.02 x 4.42	010.1A450	221.84 x 3.53
008.1A451	8-270	228.60	235.00	5.60	7.00	0.25	229.06 x 135.06 x 3.00 x 1.02 x 4.42	010.1A451	228.19 x 3.53
008.1A452	8-271	235.00	241.00	5.60	7.00	0.25	235.41 x 241.41 x 3.00 x 1.02 x 4.42	010.1A452	234.54 x 3.53
008.1A453	8-272	241.00	248.00	5.60	7.00	0.25	241.76 x 147.76 x 3.00 x 1.02 x 4.42	010.1A453	240.89 x 3.53
008.1A454	8-273	248.00	254.00	5.60	7.00	0.25	248.11 x 254.11 x 3.00 x 1.02 x 4.42	010.1A454	247.24 x 3.53
008.1A455	8-274	254.00	260.00	5.60	7.00	0.25	254.46 x 260.46 x 3.00 x 1.02 x 4.42	010.1A455	253.59 x 3.53
008.1A456	8-275	267.00	273.00	5.60	7.00	0.25	267.16 x 283.16 x 3.00 x 1.02 x 4.42	010.1A456	266.29 x 3.53
008.1A457	8-276	280.00	286.00	5.60	7.00	0.25	279.86 x 285.86 x 3.00 x 1.02 x 4.42	010.1A457	278.99 x 3.53
008.1A458	8-277	292.00	299.00	5.60	7.00	0.25	292.56 x 298.56 x 3.00 x 1.02 x 4.42	010.1A458	291.69 x 3.53
008.1A459	8-278	305.00	311.00	5.60	7.00	0.25	305.26 x 311.26 x 3.00 x 1.02 x 4.42	010.1A459	304.39 x 3.53
008.1A460	8-279	330.00	336.00	5.60	7.00	0.25	330.66 x 336.66 x 3.00 x 1.02 x 4.42	010.1A460	329.79 x 3.53

Part number	Series	Rod diameter	Bore diameter	Groove width		Radius	Back-up ring dimensions	O'Ring part number	O'Ring dimensions
		Ød5 f7	ØD4 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	Ød x ØD x W0 x T0 x r1		Ød1 x Ød2
008.1A461	8-280	356.00	362.00	5.60	7.00	0.25	356.06 x 362.06 x 3.00 x 1.02 x 4.42	010.1A461	355.19 x 3.53
008.1A462	8-281	381.00	387.00	5.60	7.00	0.25	381.46 x 387.46 x 3.00 x 1.02 x 4.42	010.1A462	380.59 x 3.53
008.1A463	8-282	406.00	413.00	5.60	7.00	0.25	406.12 x 415.12 x 3.00 x 1.02 x 4.42	010.1A463	405.26 x 3.53
008.1A464	8-283	432.00	438.00	5.60	7.00	0.25	431.52 x 437.12 x 3.00 x 1.02 x 4.42	010.1A464	430.66 x 3.53
008.1A465	8-284	457.00	464.00	5.60	7.00	0.25	456.92 x 462.92 x 3.00 x 1.02 x 4.42	010.1A465	456.06 x 3.53
008.1A528	8-309	11.00	21.00	7.90	9.60	0.25	11.43 x 20.73 x 4.65 x 1.52 x 6.65	010.1A528	10.46 x 5.33
008.1A529	8-310	13.00	22.00	7.90	9.60	0.25	13.03 x 22.33 x 4.65 x 1.52 x 6.65	010.1A529	12.07 x 5.33
008.1A530	8-311	14.00	24.00	7.90	9.60	0.25	14.60 x 23.90 x 4.65 x 1.52 x 6.65	010.1A530	13.64 x 5.33
008.1A531	8-312	16.00	25.00	7.90	9.60	0.25	16.20 x 25.50 x 4.65 x 1.52 x 6.65	010.1A531	15.24 x 5.33
008.1A532	8-313	17.00	27.00	7.90	9.60	0.25	17.78 x 27.08 x 4.65 x 1.52 x 6.65	010.1A532	16.81 x 5.33
008.1A533	8-314	19.00	29.00	7.90	9.60	0.25	19.38 x 28.68 x 4.65 x 1.52 x 6.65	010.1A533	18.42 x 5.33
008.1A534	8-315	20.00	30.00	7.90	9.60	0.25	20.96 x 30.26 x 4.65 x 1.52 x 6.65	010.1A534	19.99 x 5.33
008.1A535	8-316	22.00	32.00	7.90	9.60	0.25	22.56 x 31.86 x 4.65 x 1.52 x 6.65	010.1A535	21.59 x 5.33
008.1A536	8-317	24.00	33.00	7.90	9.60	0.25	24.13 x 33.43 x 4.65 x 1.52 x 6.65	010.1A536	23.16 x 5.33
008.1A537	8-318	25.00	35.00	7.90	9.60	0.25	25.73 x 35.03 x 4.65 x 1.52 x 6.65	010.1A537	24.77 x 5.33
008.1A538	8-319	27.00	36.50	7.90	9.60	0.25	27.31 x 36.61 x 4.65 x 1.52 x 6.65	010.1A538	26.34 x 5.33
008.1A539	8-320	29.00	38.00	7.90	9.60	0.25	28.91 x 38.21 x 4.65 x 1.52 x 6.65	010.1A539	27.94 x 5.33
008.1A540	8-321	30.00	40.00	7.90	9.60	0.25	30.42 x 39.72 x 4.65 x 1.52 x 6.65	010.1A540	29.51 x 5.33
008.1A541	8-322	32.00	41.00	7.90	9.60	0.25	32.08 x 41.38 x 4.65 x 1.52 x 6.65	010.1A541	31.12 x 5.33
008.1A542	8-323	33.00	43.00	7.90	9.60	0.25	33.43 x 42.72 x 4.65 x 1.52 x 6.65	010.1A542	32.69 x 5.33
008.1A543	8-324	35.00	44.50	7.90	9.60	0.25	35.26 x 44.56 x 4.65 x 1.52 x 6.65	010.1A543	34.29 x 5.33
008.1A544	8-325	38.00	48.00	7.90	9.60	0.25	38.43 x 47.73 x 4.65 x 1.52 x 6.65	010.1A544	37.47 x 5.33
008.1A545	8-326	41.00	51.00	7.90	9.60	0.25	41.61 x 50.91 x 4.65 x 1.52 x 6.65	010.1A545	40.64 x 5.33
008.1A546	8-327	44.50	54.00	7.90	9.60	0.25	44.78 x 54.08 x 4.65 x 1.52 x 6.65	010.1A546	43.82 x 5.33
008.1A547	8-328	48.00	57.00	7.90	9.60	0.25	47.96 x 57.26 x 4.65 x 1.52 x 6.65	010.1A547	46.99 x 5.33
008.1A548	8-329	51.00	60.00	7.90	9.60	0.25	51.13 x 60.43 x 4.65 x 1.52 x 6.65	010.1A548	50.17 x 5.33
008.1A549	8-330	54.00	63.50	7.90	9.60	0.25	54.31 x 63.61 x 4.65 x 1.52 x 6.65	010.1A549	53.34 x 5.33
008.1A550	8-331	57.00	67.00	7.90	9.60	0.25	57.61 x 66.91 x 4.65 x 1.52 x 6.65	010.1A550	56.52 x 5.33
008.1A551	8-332	60.00	70.00	7.90	9.60	0.25	60.78 x 70.08 x 4.65 x 1.52 x 6.65	010.1A551	59.69 x 5.33
008.1A552	8-333	64.00	73.00	7.90	9.60	0.25	63.96 x 73.26 x 4.65 x 1.52 x 6.65	010.1A552	62.87 x 5.33
008.1A553	8-334	67.00	76.00	7.90	9.60	0.25	67.13 x 76.43 x 4.65 x 1.52 x 6.65	010.1A553	66.04 x 5.33
008.1A554	8-335	70.00	80.00	7.90	9.60	0.25	70.31 x 79.61 x 4.65 x 1.52 x 6.65	010.1A554	69.22 x 5.33
008.1A555	8-336	73.00	83.00	7.90	9.60	0.25	73.48 x 82.78 x 4.65 x 1.52 x 6.65	010.1A555	72.39 x 5.33
008.1A557	8-337	76.00	86.00	7.90	9.60	0.25	76.66 x 85.96 x 4.65 x 1.52 x 6.65	010.1A557	75.57 x 5.33
008.1A558	8-338	80.00	89.00	7.90	9.60	0.25	79.83 x 89.13 x 4.65 x 1.52 x 6.65	010.1A558	78.74 x 5.33
008.1A560	8-339	83.00	92.00	7.90	9.60	0.25	83.13 x 92.43 x 4.65 x 1.52 x 6.65	010.1A560	81.92 x 5.33
008.1A561	8-340	86.00	95.00	7.90	9.60	0.25	86.31 x 95.61 x 4.65 x 1.52 x 6.65	010.1A561	85.09 x 5.33
008.1A562	8-341	90.00	98.00	7.90	9.60	0.25	89.48 x 98.78 x 4.65 x 1.52 x 6.65	010.1A562	88.27 x 5.33
008.1A564	8-342	92.00	102.00	7.90	9.60	0.25	92.66 x 101.96 x 4.65 x 1.52 x 6.65	010.1A564	91.44 x 5.33
008.1A565	8-343	95.00	105.00	7.90	9.60	0.25	95.83 x 105.13 x 4.65 x 1.52 x 6.65	010.1A565	94.62 x 5.33
008.1A566	8-344	98.00	108.00	7.90	9.60	0.25	99.01 x 108.31 x 4.65 x 1.52 x 6.65	010.1A566	97.79 x 5.33
008.1A568	8-345	102.00	111.00	7.90	9.60	0.25	102.31 x 111.61 x 4.65 x 1.52 x 6.65	010.1A568	100.97 x 5.33
008.1A569	8-346	105.00	114.00	7.90	9.60	0.25	105.49 x 114.79 x 4.65 x 1.52 x 6.65	010.1A569	104.14 x 5.33
008.1A570	8-347	108.00	118.00	7.90	9.60	0.25	108.66 x 117.96 x 4.65 x 1.52 x 6.65	010.1A570	107.32 x 5.33
008.1A572	8-348	111.00	121.00	7.90	9.60	0.25	111.84 x 121.14 x 4.65 x 1.52 x 6.65	010.1A572	110.49 x 5.33
008.1A573	8-349	114.00	124.00	7.90	9.60	0.25	115.01 x 124.31 x 4.65 x 1.52 x 6.65	010.1A573	113.67 x 5.33
008.1A574	8-350	115.00	130.00	7.90	9.60	0.25	118.19 x 127.49 x 4.65 x 1.52 x 6.65	010.1A574	120.02 x 5.33
008.1A576	8-351	118.00	127.00	7.90	9.60	0.25	121.36 x 130.66 x 4.65 x 1.52 x 6.65	010.1A576	116.84 x 5.33
008.1A578	8-352	124.00	133.00	7.90	9.60	0.25	124.54 x 133.84 x 4.65 x 1.52 x 6.65	010.1A578	123.19 x 5.33
008.1A580	8-353	127.00	137.00	7.90	9.60	0.25	127.71 x 137.01 x 4.65 x 1.52 x 6.65	010.1A580	126.37 x 5.33
008.1A582	8-354	130.00	140.00	7.90	9.60	0.25	130.89 x 149.19 x 4.65 x 1.52 x 6.65	010.1A582	129.54 x 5.33
008.1A584	8-355	134.00	143.00	7.90	9.60	0.25	134.06 x 143.36 x 4.65 x 1.52 x 6.65	010.1A584	132.72 x 5.33
008.1A586	8-356	137.00	146.00	7.90	9.60	0.25	137.24 x 146.54 x 4.65 x 1.52 x 6.65	010.1A586	135.89 x 5.33
008.1A588	8-357	140.00	150.00	7.90	9.60	0.25	140.41 x 149.71 x 4.65 x 1.52 x 6.65	010.1A588	139.07 x 5.33
008.1A590	8-358	143.00	152.00	7.90	9.60	0.25	143.59 x 152.89 x 4.65 x 1.52 x 6.65	010.1A590	142.24 x 5.33
008.1A592	8-359	146.00	156.00	7.90	9.60	0.25	146.76 x 156.06 x 4.65 x 1.52 x 6.65	010.1A592	145.42 x 5.33
008.1A594	8-360	150.00	159.00	7.90	9.60	0.25	149.94 x 159.24 x 4.65 x 1.52 x 6.65	010.1A594	148.49 x 5.33
008.1A596	8-361	152.00	162.00	7.90	9.60	0.25	153.11 x 162.41 x 4.65 x 1.52 x 6.65	010.1A596	151.77 x 5.33
008.1A597	8-362	159.00	168.00	7.90	9.60	0.25	159.46 x 168.76 x 4.65 x 1.52 x 6.65	010.1A597	158.12 x 5.33
008.1A598	8-363	165.00	175.00	7.90	9.60	0.25	165.81 x 175.11 x 4.65 x 1.52 x 6.65	010.1A598	164.47 x 5.33
008.1A599	8-364	172.00	181.00	7.90	9.60	0.25	172.16 x 181.46 x 4.65 x 1.52 x 6.65	010.1A599	170.82 x 5.33
008.1A600	8-365	178.00	187.00	7.90	9.60	0.25	178.51 x 187.81 x 4.65 x 1.52 x 6.65	010.1A600	177.17 x 5.33
008.1A601	8-366	184.00	194.00	7.90	9.60	0.25	184.86 x 194.16 x 4.65 x 1.52 x 6.65	010.1A601	183.52 x 5.33
008.1A602	8-367	191.00	200.00	7.90	9.60	0.25	191.21 x 200.51 x 4.65 x 1.52 x 6.65	010.1A602	189.87 x 5.33
008.1A603	8-368	197.00	206.00	7.90	9.60	0.25	197.56 x 206.86 x 4.65 x 1.52 x 6.65	010.1A603	196.22 x 5.33
008.1A604	8-369	203.00	213.00	7.90	9.60	0.25	203.91 x 213.21 x 4.65 x 1.52 x 6.65	010.1A604	202.57 x 5.33
008.1A605	8-370	210.00	220.00	7.90	9.60	0.25	210.26 x 219.56 x 4.65 x 1.52 x 6.65	010.1A605	208.92 x 5.33
008.1A606	8-371	216.00	225.00	7.90	9.60	0.25	216.61 x 225.91 x 4.65 x 1.52 x 6.65	010.1A606	215.27 x 5.33
008.1A607	8-372	222.00	232.00	7.90	9.60	0.25	222.96 x 232.26 x 4.65 x 1.52 x 6.65	010.1A607	221.62 x 5.33
008.1A608	8-373	229.00	238.00	7.90	9.60	0.25	229.31 x 238.61 x 4.65 x 1.52 x 6.65	010.1A608	227.97 x 5.33
008.1A609	8-374	235.00	244.50	7.90	9.60	0.25	235.66 x 244.96 x 4.65 x 1.52 x 6.65	010.1A609	234.32 x 5.33
008.1A610	8-375	241.00	251.00	7.90	9.60	0.25	242.01 x 251.31 x 4.65 x 1.52 x 6.65	010.1A610	240.67 x 5.33
008.1A611	8-376	248.00	257.00	7.90	9.60	0.25	248.36 x 257.66 x 4.65 x 1.52 x 6.65	010.1A611	247.02 x 5.33

Part number	Series	Rod diameter	Bore diameter	Groove width		Radius	Back-up ring dimensions	O'Ring part number	O'Ring dimensions
		Ød5 f7	ØD4 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20	Ød x ØD x W0 x T0 x r1		Ød1 x Ød2
008.1A612	8-377	254.00	264.00	7.90	9.60	0.25	254.71 x 264.01 x 4.65 x 1.52 x 6.65	010.1A612	253.37 x 5.33
008.1A613	8-378	267.00	276.00	7.90	9.60	0.25	267.41 x 276.71 x 4.65 x 1.52 x 6.65	010.1A613	266.07 x 5.33
008.1A614	8-379	280.00	290.00	7.90	9.60	0.25	280.11 x 289.41 x 4.65 x 1.52 x 6.65	010.1A614	278.77 x 5.33
008.1A615	8-380	292.00	302.00	7.90	9.60	0.25	292.81 x 302.11 x 4.65 x 1.52 x 6.65	010.1A615	291.47 x 5.33
008.1A616	8-381	305.00	315.00	7.90	9.60	0.25	305.51 x 314.81 x 4.65 x 1.52 x 6.65	010.1A616	304.17 x 5.33
008.1A617	8-382	330.00	340.00	7.90	9.60	0.25	330.91 x 340.21 x 4.65 x 1.52 x 6.65	010.1A617	329.57 x 5.33
008.1A618	8-383	356.00	366.00	7.90	9.60	0.25	356.31 x 365.61 x 4.65 x 1.52 x 6.65	010.1A618	354.97 x 5.33
008.1A619	8-384	381.00	390.50	7.90	9.60	0.25	381.71 x 391.01 x 4.65 x 1.52 x 6.65	010.1A619	380.37 x 5.33
008.1A620	8-385	407.00	416.00	7.90	9.60	0.25	406.60 x 415.90 x 4.65 x 1.52 x 6.65	010.1A620	405.26 x 5.33
008.1A621	8-386	432.00	441.00	7.90	9.60	0.25	432.00 x 441.30 x 4.65 x 1.52 x 6.65	010.1A621	430.66 x 5.33
008.1A622	8-387	457.00	467.00	7.90	9.60	0.25	457.40 x 466.70 x 4.65 x 1.52 x 6.65	010.1A622	456.06 x 5.33
008.1A623	8-388	483.00	492.00	7.90	9.60	0.25	482.75 x 492.05 x 4.65 x 1.52 x 6.65	010.1A623	481.38 x 5.33
008.1A624	8-389	508.00	518.00	7.90	9.60	0.25	508.15 x 517.45 x 4.65 x 1.52 x 6.65	010.1A624	506.78 x 5.33
008.1A625	8-390	533.00	543.00	7.90	9.60	0.25	533.55 x 542.85 x 4.65 x 1.52 x 6.65	010.1A625	532.18 x 5.33
008.1A626	8-391	559.00	568.00	7.90	9.60	0.25	558.95 x 568.25 x 4.65 x 1.52 x 6.65	010.1A626	557.58 x 5.33
008.1A627	8-392	584.00	593.00	7.90	9.60	0.25	584.02 x 593.32 x 4.65 x 1.52 x 6.65	010.1A627	582.68 x 5.33
008.1A628	8-393	610.00	619.00	7.90	9.60	0.25	609.42 x 618.72 x 4.65 x 1.52 x 6.65	010.1A628	608.08 x 5.33
008.1A629	8-394	635.00	644.00	7.90	9.60	0.25	634.82 x 644.12 x 4.65 x 1.52 x 6.65	010.1A629	633.48 x 5.33
008.1A630	8-395	660.00	670.00	7.90	9.60	0.25	660.22 x 669.52 x 4.65 x 1.52 x 6.65	010.1A630	658.88 x 5.33
008.1A738	8-425	114.00	128.00	10.70	13.20	0.25	115.60 x 127.58 x 5.99 x 2.44 x 8.74	010.1A738	113.67 x 6.99
008.1A740	8-426	118.00	131.00	10.70	13.20	0.25	118.77 x 130.75 x 5.99 x 2.44 x 8.74	010.1A740	116.84 x 6.99
008.1A741	8-427	121.00	134.00	10.70	13.20	0.25	121.95 x 133.93 x 5.99 x 2.44 x 8.74	010.1A741	120.02 x 6.99
008.1A742	8-428	124.00	137.00	10.70	13.20	0.25	125.20 x 137.18 x 5.99 x 2.44 x 8.74	010.1A742	123.19 x 6.99
008.1A744	8-429	127.00	140.00	10.70	13.20	0.25	128.30 x 140.28 x 5.99 x 2.44 x 8.74	010.1A744	126.37 x 6.99
008.1A745	8-430	130.00	143.00	10.70	13.20	0.25	131.47 x 143.45 x 5.99 x 2.44 x 8.74	010.1A745	129.54 x 6.99
008.1A746	8-431	134.00	147.00	10.70	13.20	0.25	134.65 x 146.63 x 5.99 x 2.44 x 8.74	010.1A746	132.72 x 6.99
008.1A748	8-432	137.00	150.00	10.70	13.20	0.25	137.82 x 149.80 x 5.99 x 2.44 x 8.74	010.1A748	135.89 x 6.99
008.1A749	8-433	140.00	152.00	10.70	13.20	0.25	141.00 x 152.98 x 5.99 x 2.44 x 8.74	010.1A749	139.07 x 6.99
008.1A750	8-434	143.00	156.00	10.70	13.20	0.25	144.17 x 156.15 x 5.99 x 2.44 x 8.74	010.1A750	142.24 x 6.99
008.1A751	8-435	146.00	159.00	10.70	13.20	0.25	147.35 x 159.35 x 5.99 x 2.44 x 8.74	010.1A751	145.42 x 6.99
008.1A752	8-436	150.00	162.00	10.70	13.20	0.25	150.52 x 162.50 x 5.99 x 2.44 x 8.74	010.1A752	148.59 x 6.99
008.1A753	8-437	153.00	165.00	10.70	13.20	0.25	153.70 x 165.68 x 5.99 x 2.44 x 8.74	010.1A753	151.77 x 6.99
008.1A755	8-438	159.00	172.00	10.70	13.20	0.25	159.36 x 171.34 x 5.99 x 2.44 x 8.74	010.1A755	158.12 x 6.99
008.1A758	8-439	165.00	178.00	10.70	13.20	0.25	165.71 x 177.69 x 5.99 x 2.44 x 8.74	010.1A758	164.47 x 6.99
008.1A761	8-440	172.00	184.00	10.70	13.20	0.25	172.06 x 184.04 x 5.99 x 2.44 x 8.74	010.1A761	170.82 x 6.99
008.1A763	8-441	178.00	190.50	10.70	13.20	0.25	178.41 x 190.39 x 5.99 x 2.44 x 8.74	010.1A763	177.17 x 6.99
008.1A765	8-442	185.00	197.00	10.70	13.20	0.25	184.76 x 196.74 x 5.99 x 2.44 x 8.74	010.1A765	183.52 x 6.99
008.1A767	8-443	190.00	203.00	10.70	13.20	0.25	191.11 x 203.09 x 5.99 x 2.44 x 8.74	010.1A767	189.87 x 6.99
008.1A769	8-444	197.00	210.00	10.70	13.20	0.25	197.46 x 209.44 x 5.99 x 2.44 x 8.74	010.1A769	196.22 x 6.99
008.1A771	8-445	203.00	216.00	10.70	13.20	0.25	203.81 x 215.79 x 5.99 x 2.44 x 8.74	010.1A771	202.57 x 6.99
008.1A773	8-446	216.00	229.00	10.70	13.20	0.25	216.51 x 228.49 x 5.99 x 2.44 x 8.74	010.1A773	215.27 x 6.99
008.1A775	8-447	229.00	241.00	10.70	13.20	0.25	229.21 x 241.19 x 5.99 x 2.44 x 8.74	010.1A775	227.97 x 6.99
008.1A777	8-448	241.00	254.00	10.70	13.20	0.25	241.91 x 253.90 x 5.99 x 2.44 x 8.74	010.1A777	240.67 x 6.99
008.1A779	8-449	254.00	267.00	10.70	13.20	0.25	254.61 x 266.59 x 5.99 x 2.44 x 8.74	010.1A779	253.37 x 6.99
008.1A781	8-450	267.00	280.00	10.70	13.20	0.25	267.31 x 279.29 x 5.99 x 2.44 x 8.74	010.1A781	266.07 x 6.99
008.1A783	8-451	280.00	292.00	10.70	13.20	0.25	280.01 x 292.99 x 5.99 x 2.44 x 8.74	010.1A783	278.77 x 6.99
008.1A785	8-452	292.00	305.00	10.70	13.20	0.25	292.71 x 304.71 x 5.99 x 2.44 x 8.74	010.1A785	291.47 x 6.99
008.1A787	8-453	305.00	218.00	10.70	13.20	0.25	305.41 x 317.39 x 5.99 x 2.44 x 8.74	010.1A787	304.17 x 6.99
008.1A788	8-454	318.00	330.00	10.70	13.20	0.25	318.11 x 330.09 x 5.99 x 2.44 x 8.74	010.1A788	316.87 x 6.99
008.1A789	8-455	330.00	343.00	10.70	13.20	0.25	330.81 x 342.79 x 5.99 x 2.44 x 8.74	010.1A789	329.57 x 6.99
008.1A790	8-456	343.00	356.00	10.70	13.20	0.25	343.51 x 355.51 x 5.99 x 2.44 x 8.74	010.1A790	342.47 x 6.99
008.1A791	8-457	356.00	368.00	10.70	13.20	0.25	356.21 x 368.19 x 5.99 x 2.44 x 8.74	010.1A791	354.97 x 6.99
008.1A792	8-458	368.00	381.00	10.70	13.20	0.25	368.90 x 380.88 x 5.99 x 2.44 x 8.74	010.1A792	367.67 x 6.99
008.1A793	8-459	381.00	394.00	10.70	13.20	0.25	381.61 x 393.59 x 5.99 x 2.44 x 8.74	010.1A793	380.37 x 6.99
008.1A794	8-460	394.00	406.00	10.70	13.20	0.25	394.31 x 406.19 x 5.99 x 2.44 x 8.74	010.1A794	393.07 x 6.99
008.1A795	8-461	407.00	419.00	10.70	13.20	0.25	406.50 x 418.48 x 5.99 x 2.44 x 8.74	010.1A795	405.26 x 6.99
008.1A796	8-462	420.00	432.00	10.70	13.20	0.25	419.20 x 431.18 x 5.99 x 2.44 x 8.74	010.1A796	417.96 x 6.99
008.1A797	8-463	432.00	444.50	10.70	13.20	0.25	431.90 x 443.88 x 5.99 x 2.44 x 8.74	010.1A797	430.66 x 6.99
008.1A798	8-464	445.00	457.00	10.70	13.20	0.25	444.60 x 456.58 x 5.99 x 2.44 x 8.74	010.1A798	443.36 x 6.99
008.1A799	8-465	458.00	470.00	10.70	13.20	0.25	457.30 x 469.28 x 5.99 x 2.44 x 8.74	010.1A799	456.06 x 6.99
008.1A800	8-466	470.00	483.00	10.70	13.20	0.25	470.00 x 481.98 x 5.99 x 2.44 x 8.74	010.1A800	468.76 x 6.99
008.1A801	8-467	483.00	495.00	10.70	13.20	0.25	482.70 x 494.68 x 5.99 x 2.44 x 8.74	010.1A801	481.38 x 6.99
008.1A802	8-468	495.00	508.00	10.70	13.20	0.25	495.40 x 507.38 x 5.99 x 2.44 x 8.74	010.1A802	494.16 x 6.99
008.1A803	8-469	508.00	521.00	10.70	13.20	0.25	508.10 x 520.08 x 5.99 x 2.44 x 8.74	010.1A803	506.86 x 6.99
008.1A804	8-470	533.00	546.00	10.70	13.20	0.25	533.50 x 545.48 x 5.99 x 2.44 x 8.74	010.1A804	532.26 x 6.99
008.1A805	8-471	559.00	572.00	10.70	13.20	0.25	558.90 x 570.88 x 5.99 x 2.44 x 8.74	010.1A805	557.66 x 6.99
008.1A806	8-472	584.00	597.00	10.70	13.20	0.25	584.30 x 596.28 x 5.99 x 2.44 x 8.74	010.1A806	582.68 x 6.99
008.1A807	8-473	610.00	622.00	10.70	13.20	0.25	609.70 x 621.68 x 5.99 x 2.44 x 8.74	010.1A807	608.08 x 6.99
008.1A808	8-474	635.00	648.00	10.70	13.20	0.25	635.10 x 647.08 x 5.99 x 2.44 x 8.74	010.1A808	633.48 x 6.99
008.1A809	8-475	660.00	673.00	10.70	13.20	0.25	660.50 x 672.48 x 5.99 x 2.44 x 8.74	010.1A809	658.88 x 6.99

Other intermediate sizes can be provided.



BECA **008** P Piston

Concave back-up ring

DESCRIPTION

The BECA 008P Piston profile is back-up ring cut at 30° with a concave shape that allows it to fit snugly against the O'Ring. The ring is systematically assembled in tandem with an O'Ring and an X'Ring. An uncut version of this profile can be made.

ADVANTAGES

Used in static and dynamic applications

May be used for alternating movement applications

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembly in a closed groove for profiles cut at 30°

Assembly in open groove for uncut profiles

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

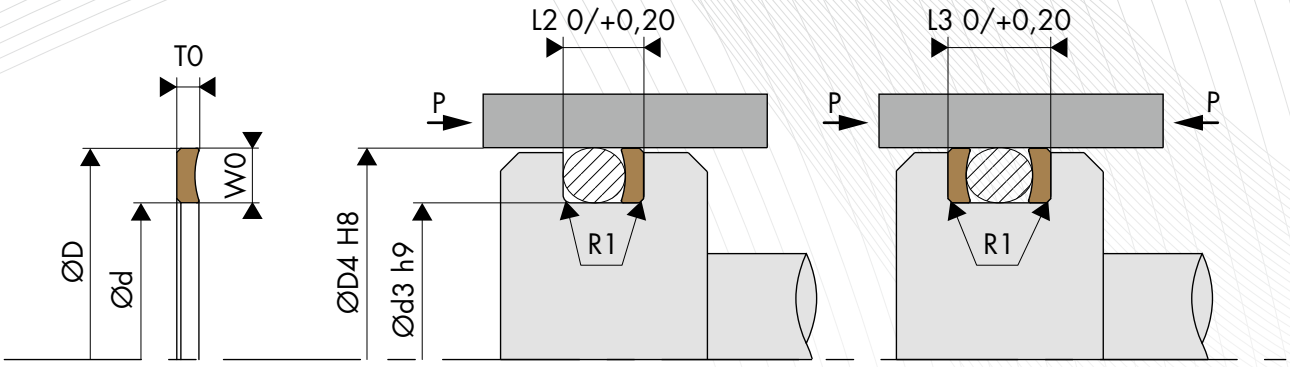
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, OUTSIDE SEALING (PISTON)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W0		Thickness	Groove diameter Ød3 h9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	T0	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	D4 - 2.20	D4 - 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	D4 - 2.30	D4 - 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	D4 - 3.00	D4 - 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	D4 - 3.60	D4 - 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	D4 - 3.80	D4 - 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	D4 - 4.00	D4 - 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	D4 - 4.00	D4 - 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	D4 - 4.60	D4 - 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	D4 - 5.40	D4 - 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	D4 - 5.40	D4 - 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	D4 - 6.20	D4 - 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	D4 - 8.00	D4 - 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	D4 - 9.20	D4 - 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	D4 - 9.80	D4 - 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	D4 - 11.60	D4 - 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	D4 - 13.40	D4 - 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	D4 - 14.20	D4 - 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE OUTSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Bore diameter ____ : ØD4 = 18.00 mm
Groove diameter __ : Ød3 = 15.40 mm
Groove width _____ : 4.10 mm
Part number_____ : 008.018154B

Part number - 008. 018 154 B

Family
Bore diameter
Groove diameter 15.40 x 10 **
Back-up ring material*

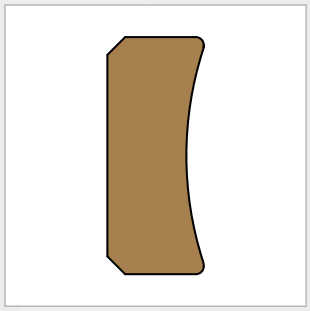
* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR STATIC APPLICATIONS, OUTSIDE SEALING (PISTON)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W0 x T0	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
008.006034	6.0 x 1.3 x 1.4	6.00	3.40	4.10	5.50	0.25	010.1A039	2.90 x 1.78
008.006038	6.0 x 1.1 x 1.0	6.00	3.80	3.20	4.20	0.25	010.1B165	3.50 x 1.50
008.008058	8.0 x 1.1 x 1.0	8.00	5.80	3.20	4.20	0.25	010.1B180	5.50 x 1.50
008.010078	10.0 x 1.1 x 1.0	10.00	7.80	3.20	4.20	0.25	010.1B189	7.50 x 1.50
008.012009	12.0 x 1.5 x 1.4	12.00	9.00	4.30	5.70	0.25	010.1B487	8.50 x 2.00
008.012094	12.0 x 1.3 x 1.4	12.00	9.40	4.10	5.50	0.25	010.1A048	9.25 x 1.78
008.014011	14.0 x 1.5 x 1.4	14.00	11.00	4.30	5.70	0.25	010.1B492	10.00 x 2.00
008.014114	14.0 x 1.3 x 1.4	14.00	11.40	4.10	5.50	0.25	010.1A050	10.82 x 1.78
008.015124	15.0 x 1.3 x 1.4	15.00	12.40	4.10	5.50	0.25	010.1A052	12.42 x 1.78
008.016013	16.0 x 1.5 x 1.4	16.00	13.00	4.30	5.70	0.25	010.1B498	12.00 x 2.00
008.016134	16.0 x 1.3 x 1.4	16.00	13.40	4.10	5.50	0.25	010.1A053	14.00 x 1.78
008.018154	18.0 x 1.3 x 1.4	18.00	15.40	4.10	5.50	0.25	010.1A054	15.60 x 1.78
008.020017	20.0 x 1.5 x 1.4	20.00	17.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
008.020174	20.0 x 1.3 x 1.4	20.00	17.40	4.10	5.50	0.25	010.1A055	17.17 x 1.78
008.022019	22.0 x 1.5 x 1.4	22.00	19.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
008.022194	22.0 x 1.3 x 1.4	22.00	19.40	4.10	5.50	0.25	010.1A056	18.77 x 1.78
008.025022	25.0 x 1.5 x 1.4	25.00	22.00	4.30	5.70	0.25	010.1B534	21.00 x 2.00
008.025224	25.0 x 1.3 x 1.4	25.00	22.40	4.10	5.50	0.25	010.1A058	21.95 x 1.78
008.028234	28.0 x 2.3 x 1.4	28.00	23.40	5.90	7.30	0.25	010.1BE19	22.00 x 3.00
008.028024	28.0 x 2.0 x 1.4	28.00	24.00	5.00	6.40	0.25	010.1A205	23.47 x 2.62
008.030254	30.0 x 1.5 x 1.4	30.00	25.40	4.30	5.70	0.25	010.1B543	24.00 x 2.00
008.030026	30.0 x 2.0 x 1.4	30.00	26.00	5.00	6.40	0.25	010.1A207	25.07 x 2.62
008.032274	32.0 x 2.3 x 1.4	32.00	27.40	5.90	7.30	0.25	010.1BE34	26.00 x 3.00
008.035304	35.0 x 2.3 x 1.4	35.00	30.40	5.90	7.30	0.25	010.1A294	29.20 x 3.00
008.035031	35.0 x 2.0 x 1.4	35.00	31.00	5.00	6.40	0.25	010.1A210	29.82 x 2.62
008.040354	40.0 x 2.3 x 1.4	40.00	35.40	5.90	7.30	0.25	010.1BE73	34.00 x 3.00
008.042374	42.0 x 2.3 x 1.4	42.00	37.40	5.90	7.30	0.25	010.1A304	36.00 x 3.00
008.042038	42.0 x 2.0 x 1.4	42.00	38.00	5.00	6.40	0.25	010.1A214	36.17 x 2.62
008.045040	45.0 x 2.3 x 1.4	45.00	40.00	5.90	7.30	0.25	010.1BE94	39.00 x 3.00
008.045041	45.0 x 2.0 x 1.4	45.00	41.00	5.00	6.40	0.25	010.1A216	39.34 x 2.62
008.048418	48.0 x 3.1 x 1.7	48.00	41.80	7.30	9.00	0.25	010.1BS39	40.00 x 4.00
008.048426	48.0 x 2.7 x 1.4	48.00	42.60	6.50	7.90	0.25	010.1A382	40.87 x 3.53
008.050438	50.0 x 3.1 x 1.7	50.00	43.80	7.30	9.00	0.25	010.1BS45	42.00 x 4.00
008.050446	50.0 x 2.7 x 1.4	50.00	44.60	6.50	7.90	0.25	010.1A385	44.04 x 3.53
008.052458	52.0 x 3.1 x 1.7	52.00	45.80	7.30	9.00	0.25	010.1BS51	44.00 x 4.00
008.052466	52.0 x 2.7 x 1.4	52.00	46.60	6.50	7.90	0.25	010.1A385	44.04 x 3.53
008.055488	55.0 x 3.1 x 1.7	55.00	48.80	7.30	9.00	0.25	010.1BS60	47.00 x 4.00
008.055496	55.0 x 2.7 x 1.4	55.00	49.60	6.50	7.90	0.25	010.1A388	47.22 x 3.53
008.060538	60.0 x 3.1 x 1.7	60.00	53.80	7.30	9.00	0.25	010.1BS72	52.00 x 4.00
008.060546	60.0 x 2.7 x 1.4	60.00	54.60	6.50	7.90	0.25	010.1A394	53.57 x 3.53
008.063568	63.0 x 3.1 x 1.7	63.00	56.80	7.30	9.00	0.25	010.1A480	55.00 x 4.00
008.063576	63.0 x 2.7 x 1.4	63.00	57.60	6.50	7.90	0.25	010.1A397	56.74 x 3.53
008.065588	65.0 x 3.1 x 1.7	65.00	58.80	7.30	9.00	0.25	010.1BS87	57.00 x 4.00
008.065596	65.0 x 2.7 x 1.4	65.00	59.60	6.50	7.90	0.25	010.1A397	56.74 x 3.53
008.070638	70.0 x 3.1 x 1.7	70.00	63.80	7.30	9.00	0.25	010.1BT02	62.00 x 4.00
008.070646	70.0 x 2.7 x 1.4	70.00	64.60	6.50	7.90	0.25	010.1A403	63.09 x 3.53
008.075688	75.0 x 3.1 x 1.7	75.00	68.80	7.30	9.00	0.25	010.1BT14	67.00 x 4.00

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W0 x T0	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
008.075696	75.0 x 2.7 x 1.4	75.00	69.60	6.50	7.90	0.25	010.1A406	66.27 x 3.53
008.080738	80.0 x 3.1 x 1.7	80.00	73.80	7.30	9.00	0.25	010.1BT26	72.00 x 4.00
008.080746	80.0 x 2.7 x 1.4	80.00	74.60	6.50	7.90	0.25	010.1A412	72.62 x 3.53
008.085788	85.0 x 3.1 x 1.7	85.00	78.80	7.30	9.00	0.25	010.1BT41	77.00 x 4.00
008.085796	85.0 x 2.7 x 1.4	85.00	79.60	6.50	7.90	0.25	010.1A416	78.97 x 3.53
008.090814	90.0 x 4.3 x 1.7	90.00	81.40	8.80	10.50	0.25	010.1A558	78.74 x 5.33
008.090082	90.0 x 4.0 x 1.7	90.00	82.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
008.095864	95.0 x 4.3 x 1.7	95.00	86.40	8.80	10.50	0.25	010.1A561	85.09 x 5.33
008.095087	95.0 x 4.0 x 1.7	95.00	87.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
008.100914	100.0 x 4.3 x 1.7	100.00	91.40	8.80	10.50	0.25	010.1A564	91.44 x 5.33
008.100092	100.0 x 4.0 x 1.7	100.00	92.00	8.40	10.10	0.25	010.1BK68	90.00 x 5.00
008.105964	105.0 x 4.3 x 1.7	105.00	96.40	8.80	10.50	0.25	010.1A565	94.62 x 5.33
008.105097	105.0 x 4.0 x 1.7	105.00	97.00	8.40	10.10	0.25	010.1BK77	95.00 x 5.00
008.110101	110.0 x 4.3 x 1.7	110.00	101.40	8.80	10.50	0.25	010.1A568	100.97 x 5.33
008.110102	110.0 x 4.0 x 1.7	110.00	102.00	8.40	10.10	0.25	010.1BK86	100.00 x 5.00
008.115106	115.0 x 4.3 x 1.7	115.00	106.40	8.80	10.50	0.25	010.1A569	104.14 x 5.33
008.115107	115.0 x 4.0 x 1.7	115.00	107.00	8.40	10.10	0.25	010.1BK98	105.00 x 5.00
008.120111	120.0 x 4.3 x 1.7	120.00	111.40	8.80	10.50	0.25	010.1A572	110.49 x 5.33
008.120112	120.0 x 4.0 x 1.7	120.00	112.00	8.40	10.10	0.25	010.1BW07	110.00 x 5.00
008.125116	125.0 x 4.3 x 1.7	125.00	116.40	8.80	10.50	0.25	010.1A573	113.67 x 5.33
008.125117	125.0 x 4.0 x 1.7	125.00	117.00	8.40	10.10	0.25	010.1BW16	115.00 x 5.00
008.130121	130.0 x 4.3 x 1.7	130.00	121.40	8.80	10.50	0.25	010.1A576	120.02 x 5.33
008.130122	130.0 x 4.0 x 1.7	130.00	122.00	8.40	10.10	0.25	010.1A489	120.00 x 5.00
008.135123	135.0 x 5.8 x 2.5	135.00	123.40	11.80	14.30	0.25	010.1A741	120.02 x 6.99
008.140128	140.0 x 5.8 x 2.5	140.00	128.40	11.80	14.30	0.25	010.1A744	126.37 x 6.99
008.150138	150.0 x 5.8 x 2.5	150.00	138.40	11.80	14.30	0.25	010.1A748	135.89 x 6.99
008.160148	160.0 x 5.8 x 2.5	160.00	148.40	11.80	14.30	0.25	010.1A751	145.42 x 6.99
008.170158	170.0 x 5.8 x 2.5	170.00	158.40	11.80	14.30	0.25	010.1A755	158.12 x 6.99
008.180168	180.0 x 5.8 x 2.5	180.00	168.40	11.80	14.30	0.25	010.1A758	164.47 x 6.99
008.190178	190.0 x 5.8 x 2.5	190.00	178.40	11.80	14.30	0.25	010.1A763	177.17 x 6.99
008.200188	200.0 x 5.8 x 2.5	200.00	188.40	11.80	14.30	0.25	010.1A765	183.52 x 6.99
008.210198	210.0 x 5.8 x 2.5	210.00	198.40	11.80	14.30	0.25	010.1A769	196.22 x 6.99
008.220208	220.0 x 5.8 x 2.5	220.00	208.40	11.80	14.30	0.25	010.1A771	202.57 x 6.99
008.230218	230.0 x 5.8 x 2.5	230.00	218.40	11.80	14.30	0.25	010.1A773	215.27 x 6.99
008.240228	240.0 x 5.8 x 2.5	240.00	228.40	11.80	14.30	0.25	010.1A775	227.97 x 6.99
008.250238	250.0 x 5.8 x 2.5	250.00	238.40	11.80	14.30	0.25	010.1A777	240.67 x 6.99
008.280268	280.0 x 5.8 x 2.5	280.00	268.40	11.80	14.30	0.25	010.1A781	266.07 x 6.99
008.300288	300.0 x 5.8 x 2.5	300.00	288.40	11.80	14.30	0.25	010.1A783	278.77 x 6.99
008.320308	320.0 x 5.8 x 2.5	320.00	308.40	11.80	14.30	0.25	010.1A787	304.17 x 6.99
008.350338	350.0 x 5.8 x 2.5	350.00	338.40	11.80	14.30	0.25	010.1A789	329.57 x 6.99
008.400388	400.0 x 5.8 x 2.5	400.00	388.40	11.80	14.30	0.25	010.1A793	380.37 x 6.99
008.420408	420.0 x 5.8 x 2.5	420.00	408.40	11.80	14.30	0.25	010.1A795	405.26 x 6.99
008.450438	450.0 x 5.8 x 2.5	450.00	438.40	11.80	14.30	0.25	010.1A797	430.66 x 6.99
008.480468	480.0 x 5.8 x 2.5	480.00	468.40	11.80	14.30	0.25	010.1A799	456.06 x 6.99
008.500488	500.0 x 5.8 x 2.5	500.00	488.40	11.80	14.30	0.25	010.1A801	481.46 x 6.99

Other intermediate sizes can be provided.



BECA **008** P Rod

Concave back-up ring

DESCRIPTION

The BECA 008P Rod profile is back-up ring cut at 30° with a concave shape that allows it to fit snugly against the O'Ring. The ring is systematically assembled in tandem with an O'Ring and an X'Ring. An uncut version of this profile can be made.

ADVANTAGES

Used in static and dynamic applications

May be used for alternating movement applications

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembly in a closed groove for profiles cut at 30°

Assembly in open groove for uncut profiles

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

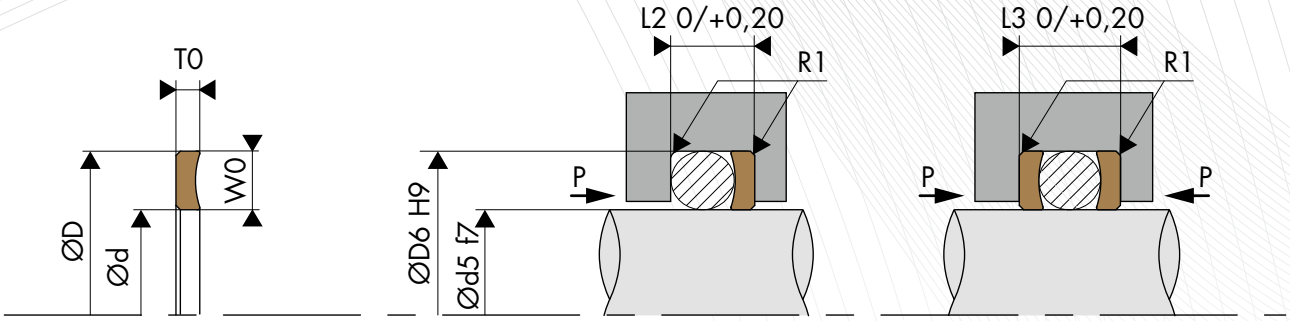
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, INSIDE SEALING (ROD)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W0		Thickness	Groove diameter ØD6 H9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	T0	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	d5 + 2.20	d5 + 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	d5 + 2.30	d5 + 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	d5 + 3.00	d5 + 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	d5 + 3.60	d5 + 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	d5 + 3.80	d5 + 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	d5 + 4.00	d5 + 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	d5 + 4.00	d5 + 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	d5 + 4.60	d5 + 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	d5 + 5.40	d5 + 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	d5 + 5.40	d5 + 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	d5 + 6.20	d5 + 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	d5 + 8.00	d5 + 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	d5 + 9.20	d5 + 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	d5 + 9.80	d5 + 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	d5 + 11.60	d5 + 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	d5 + 13.40	d5 + 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	d5 + 14.20	d5 + 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE INSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Rod diameter _____ : Ød5 = 18.00 mm
Groove diameter __ : ØD6 = 20.60 mm
Groove width _____ : 4.10 mm
Part number_____ : 008.018206B

Part number - 008. 018 206 B

Family
Rod diameter
Groove diameter 20.60 x 10 **
Back-up ring material*

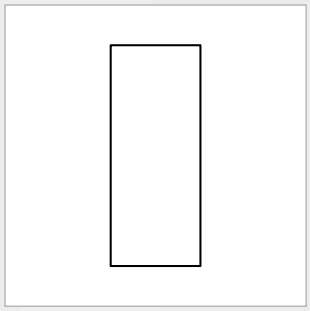
* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR STATIC APPLICATIONS, INSIDE SEALING (ROD)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W0 x T0	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
008.004062	4.0 x 1.1 x 1.0	4.00	6.20	3.20	4.20	0.25	010.1B171	4.00 x 1.50
008.004066	4.0 x 1.3 x 1.4	4.00	6.60	4.10	5.50	0.25	010.1A040	3.68 x 1.78
008.005072	5.0 x 1.1 x 1.0	5.00	7.20	3.20	4.20	0.25	010.1B177	5.00 x 1.50
008.005076	5.0 x 1.3 x 1.4	5.00	7.60	4.10	5.50	0.25	010.1A041	4.47 x 1.78
008.006082	6.0 x 1.1 x 1.0	6.00	8.20	3.20	4.20	0.25	010.1B183	6.00 x 1.50
008.006086	6.0 x 1.3 x 1.4	6.00	8.60	4.10	5.50	0.25	010.1A043	6.07 x 1.78
008.008106	8.0 x 1.3 x 1.4	8.00	10.60	4.10	5.50	0.25	010.1A046	7.65 x 1.78
008.008011	8.0 x 1.5 x 1.4	8.00	11.00	4.30	5.70	0.25	010.1B486	8.00 x 2.00
008.010126	10.0 x 1.3 x 1.4	10.00	12.60	4.10	5.50	0.25	010.1A050	10.82 x 1.78
008.010013	10.0 x 1.5 x 1.4	10.00	13.00	4.30	5.70	0.25	010.1B492	10.00 x 2.00
008.012146	12.0 x 1.3 x 1.4	12.00	14.60	4.10	5.50	0.25	010.1A052	12.42 x 1.78
008.012015	12.0 x 1.5 x 1.4	12.00	15.00	4.30	5.70	0.25	010.1B498	12.00 x 2.00
008.014166	14.0 x 1.3 x 1.4	14.00	16.60	4.10	5.50	0.25	010.1A053	14.00 x 1.78
008.014017	14.0 x 1.5 x 1.4	14.00	17.00	4.30	5.70	0.25	010.1B510	14.00 x 2.00
008.015176	15.0 x 1.3 x 1.4	15.00	17.60	4.10	5.50	0.25	010.1A054	15.60 x 1.78
008.015018	15.0 x 1.5 x 1.4	15.00	18.00	4.30	5.70	0.25	010.1B516	15.00 x 2.00
008.016186	16.0 x 1.3 x 1.4	16.00	18.60	4.10	5.50	0.25	010.1A054	15.60 x 1.78
008.016019	16.0 x 1.5 x 1.4	16.00	19.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
008.018206	18.0 x 1.3 x 1.4	18.00	20.60	4.10	5.50	0.25	010.1A056	18.77 x 1.78
008.018021	18.0 x 1.5 x 1.4	18.00	21.00	4.30	5.70	0.25	010.1B525	18.00 x 2.00
008.020226	20.0 x 1.3 x 1.4	20.00	22.60	4.10	5.50	0.25	010.1A057	20.35 x 1.78
008.020023	20.0 x 1.5 x 1.4	20.00	23.00	4.30	5.70	0.25	010.1B531	20.00 x 2.00
008.022026	22.0 x 2.0 x 1.4	22.00	26.00	5.00	6.40	0.25	010.1A203	21.89 x 2.62
008.022266	22.0 x 2.3 x 1.4	22.00	26.60	5.90	7.30	0.25	010.1BE19	22.00 x 3.00
008.025029	25.0 x 2.0 x 1.4	25.00	29.00	5.00	6.40	0.25	010.1A207	25.07 x 2.62
008.025296	25.0 x 2.3 x 1.4	25.00	29.60	5.90	7.30	0.25	010.1A289	25.00 x 3.00
008.028032	28.0 x 2.0 x 1.4	28.00	32.00	5.00	6.40	0.25	010.1A209	28.24 x 2.62
008.028326	28.0 x 1.5 x 1.4	28.00	32.60	4.30	5.70	0.25	010.1B555	28.00 x 2.00
008.030034	30.0 x 2.0 x 1.4	30.00	34.00	5.00	6.40	0.25	010.1A210	29.82 x 2.62
008.030346	30.0 x 2.3 x 1.4	30.00	34.60	5.90	7.30	0.25	010.1A296	30.00 x 3.00
008.032036	32.0 x 2.0 x 1.4	32.00	36.00	5.00	6.40	0.25	010.1A211	31.42 x 2.62
008.032366	32.0 x 2.3 x 1.4	32.00	36.60	5.90	7.30	0.25	010.1BE67	32.00 x 3.00
008.035039	35.0 x 2.0 x 1.4	35.00	39.00	5.00	6.40	0.25	010.1A213	34.59 x 2.62
008.035396	35.0 x 2.3 x 1.4	35.00	39.60	5.90	7.30	0.25	010.1A303	35.00 x 3.00
008.036040	36.0 x 2.0 x 1.4	36.00	40.00	5.00	6.40	0.25	010.1A214	36.17 x 2.62
008.036406	36.0 x 2.3 x 1.4	36.00	40.60	5.90	7.30	0.25	010.1A304	36.00 x 3.00
008.040454	40.0 x 2.7 x 1.4	40.00	45.40	6.50	7.90	0.25	010.1A382	40.87 x 3.53
008.040461	40.0 x 3.1 x 1.7	40.00	46.10	7.30	9.00	0.25	010.1BS39	40.00 x 4.00
008.042474	42.0 x 2.7 x 1.4	42.00	47.40	6.50	7.90	0.25	010.1A382	40.87 x 3.53
008.042482	42.0 x 3.1 x 1.7	42.00	48.20	7.30	9.00	0.25	010.1BS45	42.00 x 4.00
008.045504	45.0 x 2.7 x 1.4	45.00	50.40	6.50	7.90	0.25	010.1A385	44.04 x 3.53
008.045512	45.0 x 3.1 x 1.7	45.00	51.20	7.30	9.00	0.25	010.1BS54	45.00 x 4.00
008.048534	48.0 x 2.7 x 1.4	48.00	53.40	6.50	7.90	0.25	010.1A388	47.22 x 3.53
008.048542	48.0 x 3.1 x 1.7	48.00	54.20	7.30	9.00	0.25	010.1BS63	48.00 x 4.00

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W0 x T0	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
008.050554	50.0 x 2.7 x 1.4	50.00	55.40	6.50	7.90	0.25	010.1A391	50.39 x 3.53
008.050562	50.0 x 3.1 x 1.7	50.00	56.20	7.30	9.00	0.25	010.1BS66	50.00 x 4.00
008.052574	52.0 x 2.7 x 1.4	52.00	57.40	6.50	7.90	0.25	010.1A391	50.39 x 3.53
008.052582	52.0 x 3.1 x 1.7	52.00	58.20	7.30	9.00	0.25	010.1BS72	52.00 x 4.00
008.055604	55.0 x 2.7 x 1.4	55.00	60.40	6.50	7.90	0.25	010.1A394	53.57 x 3.53
008.055612	55.0 x 3.1 x 1.7	55.00	61.20	7.30	9.00	0.25	010.1A480	55.00 x 4.00
008.056614	56.0 x 2.7 x 1.4	56.00	61.40	6.50	7.90	0.25	010.1A397	56.74 x 3.53
008.056622	56.0 x 3.1 x 1.7	56.00	62.20	7.30	9.00	0.25	010.1BS84	56.00 x 4.00
008.060654	60.0 x 2.7 x 1.4	60.00	65.40	6.50	7.90	0.25	010.1A400	59.92 x 3.53
008.060662	60.0 x 3.1 x 1.7	60.00	66.20	7.30	9.00	0.25	010.1A481	60.00 x 4.00
008.063684	63.0 x 2.7 x 1.4	63.00	68.40	6.50	7.90	0.25	010.1A403	63.09 x 3.53
008.063692	63.0 x 3.1 x 1.7	63.00	69.20	7.30	9.00	0.25	010.1A481	60.00 x 4.00
008.065704	65.0 x 2.7 x 1.4	65.00	70.40	6.50	7.90	0.25	010.1A406	66.27 x 3.53
008.065712	65.0 x 3.1 x 1.7	65.00	71.20	7.30	9.00	0.25	010.06544	65.40 x 4.00
008.070754	70.0 x 2.7 x 1.4	70.00	75.40	6.50	7.90	0.25	010.1A409	69.44 x 3.53
008.070762	70.0 x 3.1 x 1.7	70.00	76.20	7.30	9.00	0.25	010.1A484	70.00 x 4.00
008.075804	75.0 x 2.7 x 1.4	75.00	80.40	6.50	7.90	0.25	010.1A415	75.79 x 3.53
008.075812	75.0 x 3.1 x 1.7	75.00	81.20	7.30	9.00	0.25	010.1A485	75.00 x 4.00
008.080088	80.0 x 4.0 x 1.7	80.00	88.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
008.080936	80.0 x 4.3 x 1.7	80.00	93.60	8.80	10.50	0.25	010.1A560	81.92 x 5.33
008.085886	85.0 x 4.0 x 1.7	85.00	88.60	8.40	10.10	0.25	010.1BK59	85.00 x 5.00
008.085093	85.0 x 4.3 x 1.7	85.00	93.00	8.80	10.50	0.25	010.1A561	85.09 x 5.33
008.090098	90.0 x 4.0 x 1.7	90.00	98.00	8.40	10.10	0.25	010.1BK68	90.00 x 5.00
008.090986	90.0 x 4.3 x 1.7	90.00	98.60	8.80	10.50	0.25	010.1A564	91.44 x 5.33
008.095103	95.0 x 4.0 x 1.7	95.00	103.00	8.40	10.10	0.25	010.1BK77	95.00 x 5.00
008.095104	95.0 x 4.3 x 1.7	95.00	103.60	8.80	10.50	0.25	010.1A565	94.62 x 5.33
008.100108	100.0 x 4.0 x 1.7	100.00	108.00	8.40	10.10	0.25	010.1BK86	100.00 x 5.00
008.100109	100.0 x 4.3 x 1.7	100.00	108.60	8.80	10.50	0.25	010.1A568	100.97 x 5.33
008.105113	105.0 x 4.0 x 1.7	105.00	113.00	8.40	10.10	0.25	010.1BK98	105.00 x 5.00
008.105114	105.0 x 4.3 x 1.7	105.00	113.60	8.80	10.50	0.25	010.1A569	104.14 x 5.33
008.110118	110.0 x 4.0 x 1.7	110.00	118.00	8.40	10.10	0.25	010.1BW07	110.00 x 5.00
008.110119	110.0 x 4.3 x 1.7	110.00	118.60	8.80	10.50	0.25	010.1A572	110.49 x 5.33
008.115123	115.0 x 4.0 x 1.7	115.00	123.00	8.40	10.10	0.25	010.1BW16	115.00 x 5.00
008.115124	115.0 x 4.3 x 1.7	115.00	123.60	8.80	10.50	0.25	010.1A573	113.67 x 5.33
008.120128	120.0 x 4.0 x 1.7	120.00	128.00	8.40	10.10	0.25	010.1A489	120.00 x 5.00
008.120129	120.0 x 4.3 x 1.7	120.00	128.60	8.80	10.50	0.25	010.1A576	120.02 x 5.33
008.125133	125.0 x 4.0 x 1.7	125.00	133.00	8.40	10.10	0.25	010.1A490	125.00 x 5.00
008.125134	125.0 x 4.3 x 1.7	125.00	133.60	8.80	10.50	0.25	010.1A580	126.37 x 5.33
008.130138	130.0 x 4.0 x 1.7	130.00	138.00	8.40	10.10	0.25	010.1A491	130.00 x 5.00
008.130139	130.0 x 4.3 x 1.7	130.00	138.60	8.80	10.50	0.25	010.1A582	129.54 x 5.33
008.135146	135.0 x 5.8 x 2.5	135.00	146.60	11.80	14.30	0.25	010.1A748	135.89 x 6.99
008.140151	140.0 x 5.8 x 2.5	140.00	151.60	11.80	14.30	0.25	010.1A749	139.07 x 6.99
008.150161	150.0 x 5.8 x 2.5	150.00	161.60	11.80	14.30	0.25	010.1A753	151.77 x 6.99
008.160171	160.0 x 5.8 x 2.5	160.00	171.60	11.80	14.30	0.25	010.1A755	158.12 x 6.99
008.170181	170.0 x 5.8 x 2.5	170.00	181.60	11.80	14.30	0.25	010.1A761	170.82 x 6.99
008.180191	180.0 x 5.8 x 2.5	180.00	191.60	11.80	14.30	0.25	010.1A765	183.52 x 6.99
008.190201	190.0 x 5.8 x 2.5	190.00	201.60	11.80	14.30	0.25	010.1A767	189.87 x 6.99
008.200211	200.0 x 5.8 x 2.5	200.00	211.60	11.80	14.30	0.25	010.1A771	202.57 x 6.99
008.210221	210.0 x 5.8 x 2.5	210.00	221.60	11.80	14.30	0.25	010.1A773	215.27 x 6.99
008.220231	220.0 x 5.8 x 2.5	220.00	231.60	11.80	14.30	0.25	010.1A773	215.27 x 6.99
008.230241	230.0 x 5.8 x 2.5	230.00	241.60	11.80	14.30	0.25	010.1A775	227.97 x 6.99
008.240251	240.0 x 5.8 x 2.5	240.00	251.60	11.80	14.30	0.25	010.1A777	240.67 x 6.99
008.250261	250.0 x 5.8 x 2.5	250.00	261.60	11.80	14.30	0.25	010.1A779	253.37 x 6.99
008.280291	280.0 x 5.8 x 2.5	280.00	291.60	11.80	14.30	0.25	010.1A783	278.77 x 6.99
008.300311	300.0 x 5.8 x 2.5	300.00	311.60	11.80	14.30	0.25	010.1A787	304.17 x 6.99
008.320331	320.0 x 5.8 x 2.5	320.00	331.60	11.80	14.30	0.25	010.1A788	316.87 x 6.99
008.350361	350.0 x 5.8 x 2.5	350.00	361.60	11.80	14.30	0.25	010.1A791	354.97 x 6.99
008.360371	360.0 x 5.8 x 2.5	360.00	371.60	11.80	14.30	0.25	010.1A791	354.97 x 6.99
008.400411	400.0 x 5.8 x 2.5	400.00	411.60	11.80	14.30	0.25	010.1A795	405.26 x 6.99

Other intermediate sizes can be provided.



BECA **011** Piston

Back-up ring

DESCRIPTION

The BECA 011 Piston profile is a back-up ring cut at 30° with a rectangular profile. The ring is systematically assembled in tandem with an O'Ring and an X'Ring. An uncut version of this profile can be made.

ADVANTAGES

Used in static and dynamic applications

May be used for alternating and rotating applications

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembly in a closed groove for profiles cut at 30°

Assembly in open groove for uncut profiles

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

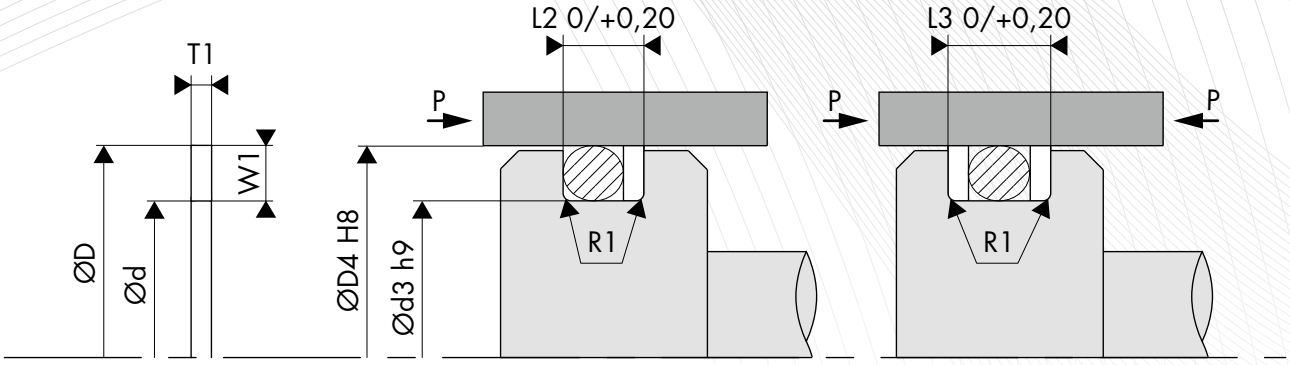
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, OUTSIDE SEALING (PISTON)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W1		Thickness	Groove diameter Ød3 h9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	T1	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	D4 - 2.20	D4 - 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	D4 - 2.30	D4 - 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	D4 - 3.00	D4 - 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	D4 - 3.60	D4 - 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	D4 - 3.80	D4 - 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	D4 - 4.00	D4 - 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	D4 - 4.00	D4 - 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	D4 - 4.60	D4 - 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	D4 - 5.40	D4 - 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	D4 - 5.40	D4 - 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	D4 - 6.20	D4 - 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	D4 - 8.00	D4 - 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	D4 - 9.20	D4 - 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	D4 - 9.80	D4 - 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	D4 - 11.60	D4 - 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	D4 - 13.40	D4 - 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	D4 - 14.20	D4 - 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE OUTSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Bore diameter ____ : ØD4 = 18.00 mm
Groove diameter __ : Ød3 = 15.40 mm
Groove width _____ : 4.10 mm
Part number_____ : 011.018154B

Part number - 011. 018 154 B

Family
Bore diameter
Groove diameter 15.40 x 10 **
Back-up ring material*

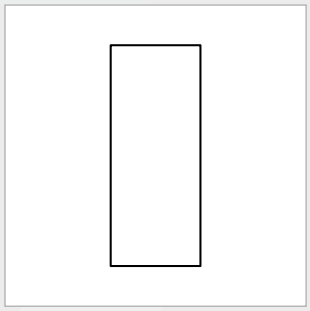
* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR STATIC APPLICATIONS, OUTSIDE SEALING (PISTON)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W1 x T1	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
011.006034	6.0 x 1.3 x 1.4	6.00	3.40	4.10	5.50	0.25	010.1A039	2.90 x 1.78
011.006038	6.0 x 1.1 x 1.0	6.00	3.80	3.20	4.20	0.25	010.1B165	3.50 x 1.50
011.008058	8.0 x 1.1 x 1.0	8.00	5.80	3.20	4.20	0.25	010.1B180	5.50 x 1.50
011.010078	10.0 x 1.1 x 1.0	10.00	7.80	3.20	4.20	0.25	010.1B189	7.50 x 1.50
011.012009	12.0 x 1.5 x 1.4	12.00	9.00	4.30	5.70	0.25	010.1B487	8.50 x 2.00
011.012094	12.0 x 1.3 x 1.4	12.00	9.40	4.10	5.50	0.25	010.1A048	9.25 x 1.78
011.014011	14.0 x 1.5 x 1.4	14.00	11.00	4.30	5.70	0.25	010.1B492	10.00 x 2.00
011.014114	14.0 x 1.3 x 1.4	14.00	11.40	4.10	5.50	0.25	010.1A050	10.82 x 1.78
011.015124	15.0 x 1.3 x 1.4	15.00	12.40	4.10	5.50	0.25	010.1A052	12.42 x 1.78
011.016013	16.0 x 1.5 x 1.4	16.00	13.00	4.30	5.70	0.25	010.1B498	12.00 x 2.00
011.016134	16.0 x 1.3 x 1.4	16.00	13.40	4.10	5.50	0.25	010.1A053	14.00 x 1.78
011.018154	18.0 x 1.3 x 1.4	18.00	15.40	4.10	5.50	0.25	010.1A054	15.60 x 1.78
011.020017	20.0 x 1.5 x 1.4	20.00	17.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
011.020174	20.0 x 1.3 x 1.4	20.00	17.40	4.10	5.50	0.25	010.1A055	17.17 x 1.78
011.022019	22.0 x 1.5 x 1.4	22.00	19.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
011.022194	22.0 x 1.3 x 1.4	22.00	19.40	4.10	5.50	0.25	010.1A056	18.77 x 1.78
011.025022	25.0 x 1.5 x 1.4	25.00	22.00	4.30	5.70	0.25	010.1B534	21.00 x 2.00
011.025224	25.0 x 1.3 x 1.4	25.00	22.40	4.10	5.50	0.25	010.1A058	21.95 x 1.78
011.028234	28.0 x 2.3 x 1.4	28.00	23.40	5.90	7.30	0.25	010.1BE19	22.00 x 3.00
011.028024	28.0 x 2.0 x 1.4	28.00	24.00	5.00	6.40	0.25	010.1A205	23.47 x 2.62
011.030254	30.0 x 1.5 x 1.4	30.00	25.40	4.30	5.70	0.25	010.1B543	24.00 x 2.00
011.030026	30.0 x 2.0 x 1.4	30.00	26.00	5.00	6.40	0.25	010.1A207	25.07 x 2.62
011.032274	32.0 x 2.3 x 1.4	32.00	27.40	5.90	7.30	0.25	010.1BE34	26.00 x 3.00
011.035304	35.0 x 2.3 x 1.4	35.00	30.40	5.90	7.30	0.25	010.1A294	29.20 x 3.00
011.035031	35.0 x 2.0 x 1.4	35.00	31.00	5.00	6.40	0.25	010.1A210	29.82 x 2.62
011.040354	40.0 x 2.3 x 1.4	40.00	35.40	5.90	7.30	0.25	010.1BE73	34.00 x 3.00
011.042374	42.0 x 2.3 x 1.4	42.00	37.40	5.90	7.30	0.25	010.1A304	36.00 x 3.00
011.042038	42.0 x 2.0 x 1.4	42.00	38.00	5.00	6.40	0.25	010.1A214	36.17 x 2.62
011.045040	45.0 x 2.3 x 1.4	45.00	40.00	5.90	7.30	0.25	010.1BE94	39.00 x 3.00
011.045041	45.0 x 2.0 x 1.4	45.00	41.00	5.00	6.40	0.25	010.1A216	39.34 x 2.62
011.048418	48.0 x 3.1 x 1.7	48.00	41.80	7.30	9.00	0.25	010.1BS39	40.00 x 4.00
011.048426	48.0 x 2.7 x 1.4	48.00	42.60	6.50	7.90	0.25	010.1A382	40.87 x 3.53
011.050438	50.0 x 3.1 x 1.7	50.00	43.80	7.30	9.00	0.25	010.1BS45	42.00 x 4.00
011.050446	50.0 x 2.7 x 1.4	50.00	44.60	6.50	7.90	0.25	010.1A385	44.04 x 3.53
011.052458	52.0 x 3.1 x 1.7	52.00	45.80	7.30	9.00	0.25	010.1BS51	44.00 x 4.00
011.052466	52.0 x 2.7 x 1.4	52.00	46.60	6.50	7.90	0.25	010.1A385	44.04 x 3.53
011.055488	55.0 x 3.1 x 1.7	55.00	48.80	7.30	9.00	0.25	010.1BS60	47.00 x 4.00
011.055496	55.0 x 2.7 x 1.4	55.00	49.60	6.50	7.90	0.25	010.1A388	47.22 x 3.53
011.060538	60.0 x 3.1 x 1.7	60.00	53.80	7.30	9.00	0.25	010.1BS72	52.00 x 4.00
011.060546	60.0 x 2.7 x 1.4	60.00	54.60	6.50	7.90	0.25	010.1A394	53.57 x 3.53
011.063568	63.0 x 3.1 x 1.7	63.00	56.80	7.30	9.00	0.25	010.1A480	55.00 x 4.00
011.063576	63.0 x 2.7 x 1.4	63.00	57.60	6.50	7.90	0.25	010.1A397	56.74 x 3.53
011.065588	65.0 x 3.1 x 1.7	65.00	58.80	7.30	9.00	0.25	010.1BS87	57.00 x 4.00
011.065596	65.0 x 2.7 x 1.4	65.00	59.60	6.50	7.90	0.25	010.1A397	56.74 x 3.53
011.070638	70.0 x 3.1 x 1.7	70.00	63.80	7.30	9.00	0.25	010.1BT02	62.00 x 4.00
011.070646	70.0 x 2.7 x 1.4	70.00	64.60	6.50	7.90	0.25	010.1A403	63.09 x 3.53
011.075688	75.0 x 3.1 x 1.7	75.00	68.80	7.30	9.00	0.25	010.1BT14	67.00 x 4.00

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W1 x T1	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
011.075696	75.0 x 2.7 x 1.4	75.00	69.60	6.50	7.90	0.25	010.1A406	66.27 x 3.53
011.080738	80.0 x 3.1 x 1.7	80.00	73.80	7.30	9.00	0.25	010.1BT26	72.00 x 4.00
011.080746	80.0 x 2.7 x 1.4	80.00	74.60	6.50	7.90	0.25	010.1A412	72.62 x 3.53
011.085788	85.0 x 3.1 x 1.7	85.00	78.80	7.30	9.00	0.25	010.1BT41	77.00 x 4.00
011.085796	85.0 x 2.7 x 1.4	85.00	79.60	6.50	7.90	0.25	010.1A416	78.97 x 3.53
011.090814	90.0 x 4.3 x 1.7	90.00	81.40	8.80	10.50	0.25	010.1A558	78.74 x 5.33
011.090082	90.0 x 4.0 x 1.7	90.00	82.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
011.095864	95.0 x 4.3 x 1.7	95.00	86.40	8.80	10.50	0.25	010.1A561	85.09 x 5.33
011.095087	95.0 x 4.0 x 1.7	95.00	87.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
011.100914	100.0 x 4.3 x 1.7	100.00	91.40	8.80	10.50	0.25	010.1A564	91.44 x 5.33
011.100092	100.0 x 4.0 x 1.7	100.00	92.00	8.40	10.10	0.25	010.1BK68	90.00 x 5.00
011.105964	105.0 x 4.3 x 1.7	105.00	96.40	8.80	10.50	0.25	010.1A565	94.62 x 5.33
011.105097	105.0 x 4.0 x 1.7	105.00	97.00	8.40	10.10	0.25	010.1BK77	95.00 x 5.00
011.110101	110.0 x 4.3 x 1.7	110.00	101.40	8.80	10.50	0.25	010.1A568	100.97 x 5.33
011.110102	110.0 x 4.0 x 1.7	110.00	102.00	8.40	10.10	0.25	010.1BK86	100.00 x 5.00
011.115106	115.0 x 4.3 x 1.7	115.00	106.40	8.80	10.50	0.25	010.1A569	104.14 x 5.33
011.115107	115.0 x 4.0 x 1.7	115.00	107.00	8.40	10.10	0.25	010.1BK98	105.00 x 5.00
011.120111	120.0 x 4.3 x 1.7	120.00	111.40	8.80	10.50	0.25	010.1A572	110.49 x 5.33
011.120112	120.0 x 4.0 x 1.7	120.00	112.00	8.40	10.10	0.25	010.1BW07	110.00 x 5.00
011.125116	125.0 x 4.3 x 1.7	125.00	116.40	8.80	10.50	0.25	010.1A573	113.67 x 5.33
011.125117	125.0 x 4.0 x 1.7	125.00	117.00	8.40	10.10	0.25	010.1BW16	115.00 x 5.00
011.130121	130.0 x 4.3 x 1.7	130.00	121.40	8.80	10.50	0.25	010.1A576	120.02 x 5.33
011.130122	130.0 x 4.0 x 1.7	130.00	122.00	8.40	10.10	0.25	010.1A489	120.00 x 5.00
011.135123	135.0 x 5.8 x 2.5	135.00	123.40	11.80	14.30	0.25	010.1A741	120.02 x 6.99
011.140128	140.0 x 5.8 x 2.5	140.00	128.40	11.80	14.30	0.25	010.1A744	126.37 x 6.99
011.150138	150.0 x 5.8 x 2.5	150.00	138.40	11.80	14.30	0.25	010.1A748	135.89 x 6.99
011.160148	160.0 x 5.8 x 2.5	160.00	148.40	11.80	14.30	0.25	010.1A751	145.42 x 6.99
011.170158	170.0 x 5.8 x 2.5	170.00	158.40	11.80	14.30	0.25	010.1A755	158.12 x 6.99
011.180168	180.0 x 5.8 x 2.5	180.00	168.40	11.80	14.30	0.25	010.1A758	164.47 x 6.99
011.190178	190.0 x 5.8 x 2.5	190.00	178.40	11.80	14.30	0.25	010.1A763	177.17 x 6.99
011.200188	200.0 x 5.8 x 2.5	200.00	188.40	11.80	14.30	0.25	010.1A765	183.52 x 6.99
011.210198	210.0 x 5.8 x 2.5	210.00	198.40	11.80	14.30	0.25	010.1A769	196.22 x 6.99
011.220208	220.0 x 5.8 x 2.5	220.00	208.40	11.80	14.30	0.25	010.1A771	202.57 x 6.99
011.230218	230.0 x 5.8 x 2.5	230.00	218.40	11.80	14.30	0.25	010.1A773	215.27 x 6.99
011.240228	240.0 x 5.8 x 2.5	240.00	228.40	11.80	14.30	0.25	010.1A775	227.97 x 6.99
011.250238	250.0 x 5.8 x 2.5	250.00	238.40	11.80	14.30	0.25	010.1A777	240.67 x 6.99
011.280268	280.0 x 5.8 x 2.5	280.00	268.40	11.80	14.30	0.25	010.1A781	266.07 x 6.99
011.300288	300.0 x 5.8 x 2.5	300.00	288.40	11.80	14.30	0.25	010.1A783	278.77 x 6.99
011.320308	320.0 x 5.8 x 2.5	320.00	308.40	11.80	14.30	0.25	010.1A787	304.17 x 6.99
011.350338	350.0 x 5.8 x 2.5	350.00	338.40	11.80	14.30	0.25	010.1A789	329.57 x 6.99
011.400388	400.0 x 5.8 x 2.5	400.00	388.40	11.80	14.30	0.25	010.1A793	380.37 x 6.99
011.420408	420.0 x 5.8 x 2.5	420.00	408.40	11.80	14.30	0.25	010.1A795	405.26 x 6.99
011.450438	450.0 x 5.8 x 2.5	450.00	438.40	11.80	14.30	0.25	010.1A797	430.66 x 6.99
011.480468	480.0 x 5.8 x 2.5	480.00	468.40	11.80	14.30	0.25	010.1A799	456.06 x 6.99
011.500488	500.0 x 5.8 x 2.5	500.00	488.40	11.80	14.30	0.25	010.1A801	481.46 x 6.99

Other intermediate sizes can be provided.



BECA **011** Rod

Back-up ring

DESCRIPTION

The BECA 011 Rod profile is a back-up ring cut at 30° with a rectangular profile. The ring is systematically assembled in tandem with an O'Ring and an X'Ring. An uncut version of this profile can be made.

ADVANTAGES

Used in static and dynamic applications

May be used for alternating and rotating applications

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembly in a closed groove for profiles cut at 30°

Assembly in open groove for uncut profiles

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

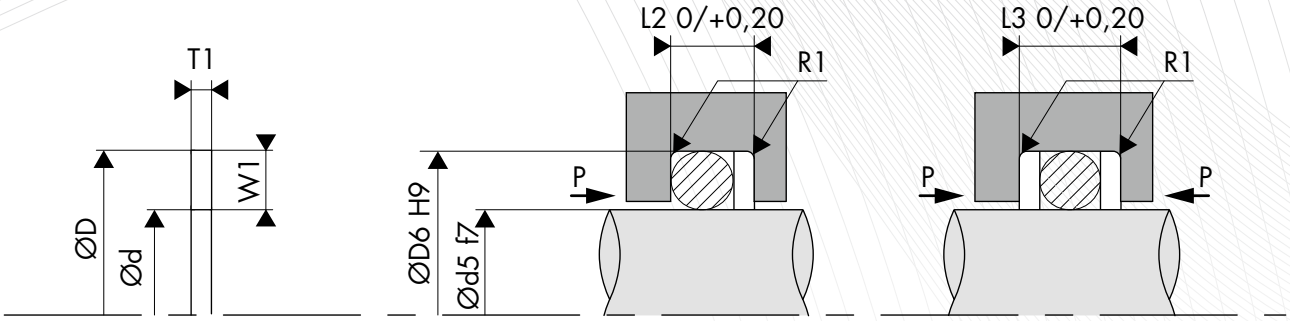
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, INSIDE SEALING (ROD)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W1		Thickness	Groove diameter ØD6 H9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	T1	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	d5 + 2.20	d5 + 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	d5 + 2.30	d5 + 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	d5 + 3.00	d5 + 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	d5 + 3.60	d5 + 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	d5 + 3.80	d5 + 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	d5 + 4.00	d5 + 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	d5 + 4.00	d5 + 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	d5 + 4.60	d5 + 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	d5 + 5.40	d5 + 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	d5 + 5.40	d5 + 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	d5 + 6.20	d5 + 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	d5 + 8.00	d5 + 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	d5 + 9.20	d5 + 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	d5 + 9.80	d5 + 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	d5 + 11.60	d5 + 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	d5 + 13.40	d5 + 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	d5 + 14.20	d5 + 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE INSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Rod diameter _____ : Ød5 = 18.00 mm
Groove diameter __ : ØD6 = 20.60 mm
Groove width _____ : 4.10 mm
Part number_____ : 011.018206B

Part number - 011. 018 206 B

Family
Rod diameter
Groove diameter 20.60 x 10 **
Back-up ring material*

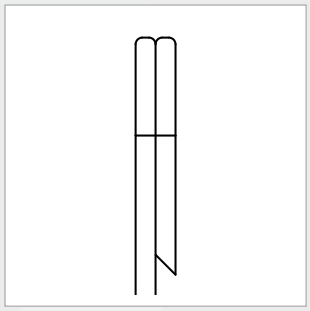
* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR STATIC APPLICATIONS, INSIDE SEALING (ROD)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W1 x T1	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
011.004062	4.0 x 1.1 x 1.0	4.00	6.20	3.20	4.20	0.25	010.1B171	4.00 x 1.50
011.004066	4.0 x 1.3 x 1.4	4.00	6.60	4.10	5.50	0.25	010.1A040	3.68 x 1.78
011.005072	5.0 x 1.1 x 1.0	5.00	7.20	3.20	4.20	0.25	010.1B177	5.00 x 1.50
011.005076	5.0 x 1.3 x 1.4	5.00	7.60	4.10	5.50	0.25	010.1A041	4.47 x 1.78
011.006082	6.0 x 1.1 x 1.0	6.00	8.20	3.20	4.20	0.25	010.1B183	6.00 x 1.50
011.006086	6.0 x 1.3 x 1.4	6.00	8.60	4.10	5.50	0.25	010.1A043	6.07 x 1.78
011.008106	8.0 x 1.3 x 1.4	8.00	10.60	4.10	5.50	0.25	010.1A046	7.65 x 1.78
011.008011	8.0 x 1.5 x 1.4	8.00	11.00	4.30	5.70	0.25	010.1B486	8.00 x 2.00
011.010126	10.0 x 1.3 x 1.4	10.00	12.60	4.10	5.50	0.25	010.1A050	10.82 x 1.78
011.010013	10.0 x 1.5 x 1.4	10.00	13.00	4.30	5.70	0.25	010.1B492	10.00 x 2.00
011.012146	12.0 x 1.3 x 1.4	12.00	14.60	4.10	5.50	0.25	010.1A052	12.42 x 1.78
011.012015	12.0 x 1.5 x 1.4	12.00	15.00	4.30	5.70	0.25	010.1B498	12.00 x 2.00
011.014166	14.0 x 1.3 x 1.4	14.00	16.60	4.10	5.50	0.25	010.1A053	14.00 x 1.78
011.014017	14.0 x 1.5 x 1.4	14.00	17.00	4.30	5.70	0.25	010.1B510	14.00 x 2.00
011.015176	15.0 x 1.3 x 1.4	15.00	17.60	4.10	5.50	0.25	010.1A054	15.60 x 1.78
011.015018	15.0 x 1.5 x 1.4	15.00	18.00	4.30	5.70	0.25	010.1B516	15.00 x 2.00
011.016186	16.0 x 1.3 x 1.4	16.00	18.60	4.10	5.50	0.25	010.1A054	15.60 x 1.78
011.016019	16.0 x 1.5 x 1.4	16.00	19.00	4.30	5.70	0.25	010.1B519	16.00 x 2.00
011.018206	18.0 x 1.3 x 1.4	18.00	20.60	4.10	5.50	0.25	010.1A056	18.77 x 1.78
011.018021	18.0 x 1.5 x 1.4	18.00	21.00	4.30	5.70	0.25	010.1B525	18.00 x 2.00
011.020226	20.0 x 1.3 x 1.4	20.00	22.60	4.10	5.50	0.25	010.1A057	20.35 x 1.78
011.020023	20.0 x 1.5 x 1.4	20.00	23.00	4.30	5.70	0.25	010.1B531	20.00 x 2.00
011.022026	22.0 x 2.0 x 1.4	22.00	26.00	5.00	6.40	0.25	010.1A203	21.89 x 2.62
011.022266	22.0 x 2.3 x 1.4	22.00	26.60	5.90	7.30	0.25	010.1BE19	22.00 x 3.00
011.025029	25.0 x 2.0 x 1.4	25.00	29.00	5.00	6.40	0.25	010.1A207	25.07 x 2.62
011.025296	25.0 x 2.3 x 1.4	25.00	29.60	5.90	7.30	0.25	010.1A289	25.00 x 3.00
011.028032	28.0 x 2.0 x 1.4	28.00	32.00	5.00	6.40	0.25	010.1A209	28.24 x 2.62
011.028326	28.0 x 1.5 x 1.4	28.00	32.60	4.30	5.70	0.25	010.1B555	28.00 x 2.00
011.030034	30.0 x 2.0 x 1.4	30.00	34.00	5.00	6.40	0.25	010.1A210	29.82 x 2.62
011.030346	30.0 x 2.3 x 1.4	30.00	34.60	5.90	7.30	0.25	010.1A296	30.00 x 3.00
011.032036	32.0 x 2.0 x 1.4	32.00	36.00	5.00	6.40	0.25	010.1A211	31.42 x 2.62
011.032366	32.0 x 2.3 x 1.4	32.00	36.60	5.90	7.30	0.25	010.1BE67	32.00 x 3.00
011.035039	35.0 x 2.0 x 1.4	35.00	39.00	5.00	6.40	0.25	010.1A213	34.59 x 2.62
011.035396	35.0 x 2.3 x 1.4	35.00	39.60	5.90	7.30	0.25	010.1A303	35.00 x 3.00
011.036040	36.0 x 2.0 x 1.4	36.00	40.00	5.00	6.40	0.25	010.1A214	36.17 x 2.62
011.036406	36.0 x 2.3 x 1.4	36.00	40.60	5.90	7.30	0.25	010.1A304	36.00 x 3.00
011.040454	40.0 x 2.7 x 1.4	40.00	45.40	6.50	7.90	0.25	010.1A382	40.87 x 3.53
011.040461	40.0 x 3.1 x 1.7	40.00	46.10	7.30	9.00	0.25	010.1BS39	40.00 x 4.00
011.042474	42.0 x 2.7 x 1.4	42.00	47.40	6.50	7.90	0.25	010.1A382	40.87 x 3.53
011.042482	42.0 x 3.1 x 1.7	42.00	48.20	7.30	9.00	0.25	010.1BS45	42.00 x 4.00
011.045504	45.0 x 2.7 x 1.4	45.00	50.40	6.50	7.90	0.25	010.1A385	44.04 x 3.53
011.045512	45.0 x 3.1 x 1.7	45.00	51.20	7.30	9.00	0.25	010.1BS54	45.00 x 4.00
011.048534	48.0 x 2.7 x 1.4	48.00	53.40	6.50	7.90	0.25	010.1A388	47.22 x 3.53
011.048542	48.0 x 3.1 x 1.7	48.00	54.20	7.30	9.00	0.25	010.1BS63	48.00 x 4.00

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W1 x T1	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
011.050554	50.0 x 2.7 x 1.4	50.00	55.40	6.50	7.90	0.25	010.1A391	50.39 x 3.53
011.050562	50.0 x 3.1 x 1.7	50.00	56.20	7.30	9.00	0.25	010.1BS66	50.00 x 4.00
011.052574	52.0 x 2.7 x 1.4	52.00	57.40	6.50	7.90	0.25	010.1A391	50.39 x 3.53
011.052582	52.0 x 3.1 x 1.7	52.00	58.20	7.30	9.00	0.25	010.1BS72	52.00 x 4.00
011.055604	55.0 x 2.7 x 1.4	55.00	60.40	6.50	7.90	0.25	010.1A394	53.57 x 3.53
011.055612	55.0 x 3.1 x 1.7	55.00	61.20	7.30	9.00	0.25	010.1A480	55.00 x 4.00
011.056614	56.0 x 2.7 x 1.4	56.00	61.40	6.50	7.90	0.25	010.1A397	56.74 x 3.53
011.056622	56.0 x 3.1 x 1.7	56.00	62.20	7.30	9.00	0.25	010.1BS84	56.00 x 4.00
011.060654	60.0 x 2.7 x 1.4	60.00	65.40	6.50	7.90	0.25	010.1A400	59.92 x 3.53
011.060662	60.0 x 3.1 x 1.7	60.00	66.20	7.30	9.00	0.25	010.1A481	60.00 x 4.00
011.063684	63.0 x 2.7 x 1.4	63.00	68.40	6.50	7.90	0.25	010.1A403	63.09 x 3.53
011.063692	63.0 x 3.1 x 1.7	63.00	69.20	7.30	9.00	0.25	010.1A481	60.00 x 4.00
011.065704	65.0 x 2.7 x 1.4	65.00	70.40	6.50	7.90	0.25	010.1A406	66.27 x 3.53
011.065712	65.0 x 3.1 x 1.7	65.00	71.20	7.30	9.00	0.25	010.06544	65.40 x 4.00
011.070754	70.0 x 2.7 x 1.4	70.00	75.40	6.50	7.90	0.25	010.1A409	69.44 x 3.53
011.070762	70.0 x 3.1 x 1.7	70.00	76.20	7.30	9.00	0.25	010.1A484	70.00 x 4.00
011.075804	75.0 x 2.7 x 1.4	75.00	80.40	6.50	7.90	0.25	010.1A415	75.79 x 3.53
011.075812	75.0 x 3.1 x 1.7	75.00	81.20	7.30	9.00	0.25	010.1A485	75.00 x 4.00
011.080088	80.0 x 4.0 x 1.7	80.00	88.00	8.40	10.10	0.25	010.1BK53	80.00 x 5.00
011.080936	80.0 x 4.3 x 1.7	80.00	93.60	8.80	10.50	0.25	010.1A560	81.92 x 5.33
011.085886	85.0 x 4.0 x 1.7	85.00	88.60	8.40	10.10	0.25	010.1BK59	85.00 x 5.00
011.085093	85.0 x 4.3 x 1.7	85.00	93.00	8.80	10.50	0.25	010.1A561	85.09 x 5.33
011.090098	90.0 x 4.0 x 1.7	90.00	98.00	8.40	10.10	0.25	010.1BK68	90.00 x 5.00
011.090986	90.0 x 4.3 x 1.7	90.00	98.60	8.80	10.50	0.25	010.1A564	91.44 x 5.33
011.095103	95.0 x 4.0 x 1.7	95.00	103.00	8.40	10.10	0.25	010.1BK77	95.00 x 5.00
011.095104	95.0 x 4.3 x 1.7	95.00	103.60	8.80	10.50	0.25	010.1A565	94.62 x 5.33
011.100108	100.0 x 4.0 x 1.7	100.00	108.00	8.40	10.10	0.25	010.1BK86	100.00 x 5.00
011.100109	100.0 x 4.3 x 1.7	100.00	108.60	8.80	10.50	0.25	010.1A568	100.97 x 5.33
011.105113	105.0 x 4.0 x 1.7	105.00	113.00	8.40	10.10	0.25	010.1BK98	105.00 x 5.00
011.105114	105.0 x 4.3 x 1.7	105.00	113.60	8.80	10.50	0.25	010.1A569	104.14 x 5.33
011.110118	110.0 x 4.0 x 1.7	110.00	118.00	8.40	10.10	0.25	010.1BW07	110.00 x 5.00
011.110119	110.0 x 4.3 x 1.7	110.00	118.60	8.80	10.50	0.25	010.1A572	110.49 x 5.33
011.115123	115.0 x 4.0 x 1.7	115.00	123.00	8.40	10.10	0.25	010.1BW16	115.00 x 5.00
011.115124	115.0 x 4.3 x 1.7	115.00	123.60	8.80	10.50	0.25	010.1A573	113.67 x 5.33
011.120128	120.0 x 4.0 x 1.7	120.00	128.00	8.40	10.10	0.25	010.1A489	120.00 x 5.00
011.120129	120.0 x 4.3 x 1.7	120.00	128.60	8.80	10.50	0.25	010.1A576	120.02 x 5.33
011.125133	125.0 x 4.0 x 1.7	125.00	133.00	8.40	10.10	0.25	010.1A490	125.00 x 5.00
011.125134	125.0 x 4.3 x 1.7	125.00	133.60	8.80	10.50	0.25	010.1A580	126.37 x 5.33
011.130138	130.0 x 4.0 x 1.7	130.00	138.00	8.40	10.10	0.25	010.1A491	130.00 x 5.00
011.130139	130.0 x 4.3 x 1.7	130.00	138.60	8.80	10.50	0.25	010.1A582	129.54 x 5.33
011.135146	135.0 x 5.8 x 2.5	135.00	146.60	11.80	14.30	0.25	010.1A748	135.89 x 6.99
011.140151	140.0 x 5.8 x 2.5	140.00	151.60	11.80	14.30	0.25	010.1A749	139.07 x 6.99
011.150161	150.0 x 5.8 x 2.5	150.00	161.60	11.80	14.30	0.25	010.1A753	151.77 x 6.99
011.160171	160.0 x 5.8 x 2.5	160.00	171.60	11.80	14.30	0.25	010.1A755	158.12 x 6.99
011.170181	170.0 x 5.8 x 2.5	170.00	181.60	11.80	14.30	0.25	010.1A761	170.82 x 6.99
011.180191	180.0 x 5.8 x 2.5	180.00	191.60	11.80	14.30	0.25	010.1A765	183.52 x 6.99
011.190201	190.0 x 5.8 x 2.5	190.00	201.60	11.80	14.30	0.25	010.1A767	189.87 x 6.99
011.200211	200.0 x 5.8 x 2.5	200.00	211.60	11.80	14.30	0.25	010.1A771	202.57 x 6.99
011.210221	210.0 x 5.8 x 2.5	210.00	221.60	11.80	14.30	0.25	010.1A773	215.27 x 6.99
011.220231	220.0 x 5.8 x 2.5	220.00	231.60	11.80	14.30	0.25	010.1A773	215.27 x 6.99
011.230241	230.0 x 5.8 x 2.5	230.00	241.60	11.80	14.30	0.25	010.1A775	227.97 x 6.99
011.240251	240.0 x 5.8 x 2.5	240.00	251.60	11.80	14.30	0.25	010.1A777	240.67 x 6.99
011.250261	250.0 x 5.8 x 2.5	250.00	261.60	11.80	14.30	0.25	010.1A779	253.37 x 6.99
011.280291	280.0 x 5.8 x 2.5	280.00	291.60	11.80	14.30	0.25	010.1A783	278.77 x 6.99
011.300311	300.0 x 5.8 x 2.5	300.00	311.60	11.80	14.30	0.25	010.1A787	304.17 x 6.99
011.320331	320.0 x 5.8 x 2.5	320.00	331.60	11.80	14.30	0.25	010.1A788	316.87 x 6.99
011.350361	350.0 x 5.8 x 2.5	350.00	361.60	11.80	14.30	0.25	010.1A791	354.97 x 6.99
011.360371	360.0 x 5.8 x 2.5	360.00	371.60	11.80	14.30	0.25	010.1A791	354.97 x 6.99
011.400411	400.0 x 5.8 x 2.5	400.00	411.60	11.80	14.30	0.25	010.1A795	405.26 x 6.99

Other intermediate sizes can be provided.



BECA **012** Piston

Coiled back-up ring

DESCRIPTION

The BECA 012 Piston profile is a coiled back-up ring with a rectangular profile. The ring is systematically assembled in tandem with an O'Ring and an X'Ring.

ADVANTAGES

Used in static and dynamic applications

Only for alternating movements

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembled in a closed groove

Suitable for non-standard dimensions as the back-up ring can be shortened and then adjusted

Compensates for the effects caused by significant thermal variations and tolerances, as at least one coil in the spiral rests on each point of the circumference to support the O'Ring against play

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

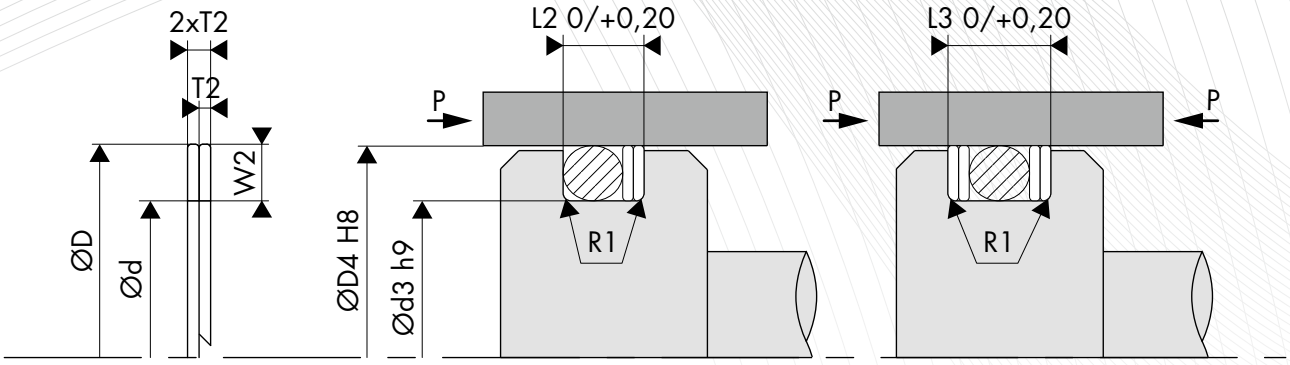
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, OUTSIDE SEALING (PISTON)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W2		Thickness	Groove diameter Ød3 h9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	2xT2	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	D4 - 2.20	D4 - 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	D4 - 2.30	D4 - 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	D4 - 2.60	D4 - 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	D4 - 3.00	D4 - 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	D4 - 3.60	D4 - 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	D4 - 3.80	D4 - 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	D4 - 4.00	D4 - 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	D4 - 4.00	D4 - 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	D4 - 4.60	D4 - 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	D4 - 5.40	D4 - 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	D4 - 5.40	D4 - 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	D4 - 6.20	D4 - 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	D4 - 8.00	D4 - 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	D4 - 8.60	D4 - 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	D4 - 9.20	D4 - 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	D4 - 9.80	D4 - 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	D4 - 11.60	D4 - 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	D4 - 13.40	D4 - 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	D4 - 14.20	D4 - 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE OUTSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Bore diameter ____ : ØD4 = 18.00 mm
Groove diameter __ : Ød3 = 15.30 mm
Groove width _____ : 4.00 mm
Part number_____ : 012.018153B

Part number - 012. 018 153 B

Family
Bore diameter
Groove diameter 15.30 x 10 **
Back-up ring material*

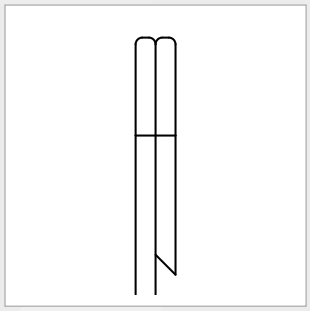
* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR DYNAMIC APPLICATIONS, OUTSIDE SEALING (PISTON)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W2 x T2	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
012.006033	6.0 x 1.35 x 0.70	6.00	3.30	4.00	5.40	0.25	010.1A039	2.90 x 1.78
012.006038	6.0 x 1.10 x 0.50	6.00	3.80	3.25	4.25	0.25	010.1B162	3.00 x 1.50
012.008053	8.0 x 1.35 x 0.70	8.00	5.30	4.00	5.40	0.25	010.1A041	4.47 x 1.78
012.008058	8.0 x 1.10 x 0.50	8.00	5.80	3.25	4.25	0.25	010.1B177	5.00 x 1.50
012.010073	10.0 x 1.35 x 0.70	10.00	7.30	4.00	5.40	0.25	010.1A046	7.65 x 1.78
012.010078	10.0 x 1.10 x 0.50	10.00	7.80	3.25	4.25	0.25	010.1B188	7.00 x 1.50
012.012089	12.0 x 1.55 x 0.70	12.00	8.90	4.20	5.60	0.25	010.1B486	8.00 x 2.00
012.012093	12.0 x 1.35 x 0.70	12.00	9.30	4.00	5.40	0.25	010.1A048	9.25 x 1.78
012.014109	14.0 x 1.55 x 0.70	14.00	10.90	4.20	5.60	0.25	010.1B492	10.00 x 2.00
012.014113	14.0 x 1.35 x 0.70	14.00	11.30	4.00	5.40	0.25	010.1A050	10.82 x 1.78
012.015119	15.0 x 1.55 x 0.70	15.00	11.90	4.20	5.60	0.25	010.1B495	11.00 x 2.00
012.015123	15.0 x 1.35 x 0.70	15.00	12.30	4.00	5.40	0.25	010.1A052	12.42 x 1.78
012.016129	16.0 x 1.55 x 0.70	16.00	12.90	4.20	5.60	0.25	010.1B498	12.00 x 2.00
012.016133	16.0 x 1.35 x 0.70	16.00	13.30	4.00	5.40	0.25	010.1A053	14.00 x 1.78
012.018149	18.0 x 1.55 x 0.70	18.00	14.90	4.20	5.60	0.25	010.1B510	14.00 x 2.00
012.018153	18.0 x 1.35 x 0.70	18.00	15.30	4.00	5.40	0.25	010.1A054	15.60 x 1.78
012.020169	20.0 x 1.55 x 0.70	20.00	16.90	4.20	5.60	0.25	010.1B519	16.00 x 2.00
012.020173	20.0 x 1.35 x 0.70	20.00	17.30	4.00	5.40	0.25	010.1A055	17.17 x 1.78
012.022189	22.0 x 1.55 x 0.70	22.00	18.90	4.20	5.60	0.25	010.1B525	18.00 x 2.00
012.022193	22.0 x 1.35 x 0.70	22.00	19.30	4.00	5.40	0.25	010.1A056	18.77 x 1.78
012.025219	25.0 x 1.55 x 0.70	25.00	21.90	4.20	5.60	0.25	010.1B534	21.00 x 2.00
012.025223	25.0 x 1.35 x 0.70	25.00	22.30	4.00	5.40	0.25	010.1A058	21.95 x 1.78
012.028232	28.0 x 2.40 x 0.70	28.00	23.20	5.70	7.10	0.25	010.1BE19	22.00 x 3.00
012.028239	28.0 x 2.05 x 0.70	28.00	23.90	4.90	6.30	0.25	010.1A205	23.47 x 2.62
012.030252	30.0 x 2.40 x 0.70	30.00	25.20	5.70	7.10	0.25	010.1A285	24.00 x 3.00
012.030259	30.0 x 2.05 x 0.70	30.00	25.90	4.90	6.30	0.25	010.1A207	25.07 x 2.62
012.032279	32.0 x 2.65 x 0.70	32.00	27.90	4.90	6.30	0.25	010.1A208	26.64 x 2.62
012.035302	35.0 x 2.40 x 0.70	35.00	30.20	5.70	7.10	0.25	010.1BE52	29.00 x 3.00
012.035309	35.0 x 2.05 x 0.70	35.00	30.90	4.90	6.30	0.25	010.1A210	29.82 x 2.62
012.040352	40.0 x 2.40 x 0.70	40.00	35.20	5.70	7.10	0.25	010.1BE73	34.00 x 3.00
012.040359	40.0 x 2.05 x 0.70	40.00	35.90	4.90	6.30	0.25	010.1A213	34.59 x 2.62
012.042372	42.0 x 2.40 x 0.70	42.00	37.20	5.70	7.10	0.25	010.1A304	36.00 x 3.00
012.042379	42.0 x 2.05 x 0.70	42.00	37.90	4.90	6.30	0.25	010.1A214	36.17 x 2.62
012.045402	45.0 x 2.40 x 0.70	45.00	40.20	5.70	7.10	0.25	010.1BE94	39.00 x 3.00
012.045409	45.0 x 2.05 x 0.70	45.00	40.90	4.90	6.30	0.25	010.1A216	39.34 x 2.62
012.048415	48.0 x 3.25 x 0.85	48.00	41.50	7.10	8.80	0.25	010.1BS39	40.00 x 4.00
012.048423	48.0 x 2.85 x 0.70	48.00	42.30	6.30	7.70	0.25	010.1A382	40.87 x 3.53
012.050435	50.0 x 3.25 x 0.85	50.00	43.50	7.10	8.80	0.25	010.1BS45	42.00 x 4.00
012.050443	50.0 x 2.85 x 0.70	50.00	44.30	6.30	7.70	0.25	010.1A385	44.04 x 3.53
012.052463	52.0 x 2.85 x 0.70	52.00	46.30	6.30	7.70	0.25	010.1A385	44.04 x 3.53
012.055493	55.0 x 2.85 x 0.70	55.00	49.30	6.30	7.70	0.25	010.1A388	47.22 x 3.53
012.060535	60.0 x 3.25 x 0.85	60.00	53.50	7.10	8.80	0.25	010.1BS72	52.00 x 4.00
012.060543	60.0 x 2.85 x 0.70	60.00	54.30	6.30	7.70	0.25	010.1A394	53.57 x 3.53
012.063573	63.0 x 2.85 x 0.70	63.00	57.30	6.30	7.70	0.25	010.1A397	56.74 x 3.53
012.065585	65.0 x 3.25 x 0.85	65.00	58.50	7.10	8.80	0.25	010.1BS87	57.00 x 4.00
012.065593	65.0 x 2.85 x 0.70	65.00	59.30	6.30	7.70	0.25	010.1A397	56.74 x 3.53
012.070643	70.0 x 2.85 x 0.70	70.00	64.30	6.30	7.70	0.25	010.1A403	63.09 x 3.53

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Bore diameter	Groove diameter	Groove width		Radius		
	ØD x W2 x T2	ØD4 H8	Ød3 h9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
012.075685	75.0 x 3.25 x 0.85	75.00	68.50	7.10	8.80	0.25	010.1BT14	67.00 x 4.00
012.075693	75.0 x 2.85 x 0.70	75.00	69.30	6.30	7.70	0.25	010.1A406	66.27 x 3.53
012.080735	80.0 x 3.25 x 0.85	80.00	73.50	7.10	8.80	0.25	010.1BT26	72.00 x 4.00
012.080743	80.0 x 2.85 x 0.70	80.00	74.30	6.30	7.70	0.25	010.1A412	72.62 x 3.53
012.085785	85.0 x 3.25 x 0.85	85.00	78.50	7.10	8.80	0.25	010.1BT41	77.00 x 4.00
012.085793	85.0 x 2.85 x 0.70	85.00	79.30	6.30	7.70	0.25	010.1A416	78.97 x 3.53
012.090812	90.0 x 4.40 x 0.85	90.00	81.20	8.50	10.20	0.25	010.1A558	78.74 x 5.33
012.090818	90.0 x 4.10 x 0.85	90.00	81.80	8.30	10.00	0.25	010.1BK53	80.00 x 5.00
012.095862	95.0 x 4.40 x 0.85	95.00	86.20	8.50	10.20	0.25	010.1A561	85.09 x 5.33
012.095868	95.0 x 4.10 x 0.85	95.00	86.80	8.30	10.00	0.25	010.1BK59	85.00 x 5.00
012.100912	100.0 x 4.40 x 0.85	100.00	91.20	8.50	10.20	0.25	010.1A564	91.44 x 5.33
012.100918	100.0 x 4.10 x 0.85	100.00	91.80	8.30	10.00	0.25	010.1BK68	90.00 x 5.00
012.105962	105.0 x 4.40 x 0.85	105.00	96.20	8.50	10.20	0.25	010.1A565	94.62 x 5.33
012.105968	105.0 x 4.10 x 0.85	105.00	96.80	8.30	10.00	0.25	010.1BK77	95.00 x 5.00
012.110101	110.0 x 4.40 x 0.85	110.00	101.20	8.50	10.20	0.25	010.1A568	100.97 x 5.33
012.110102	110.0 x 4.10 x 0.85	110.00	101.80	8.30	10.00	0.25	010.1BK86	100.00 x 5.00
012.115106	115.0 x 4.40 x 0.85	115.00	106.20	8.50	10.20	0.25	010.1A569	104.14 x 5.33
012.115107	115.0 x 4.10 x 0.85	115.00	106.80	8.30	10.00	0.25	010.1BK98	105.00 x 5.00
012.120111	120.0 x 4.40 x 0.85	120.00	111.20	8.50	10.20	0.25	010.1A572	110.49 x 5.33
012.120112	120.0 x 4.10 x 0.85	120.00	111.80	8.30	10.00	0.25	010.1BW07	110.00 x 5.00
012.125116	125.0 x 4.40 x 0.85	125.00	116.20	8.50	10.20	0.25	010.1A573	113.67 x 5.33
012.125117	125.0 x 4.10 x 0.85	125.00	116.80	8.30	10.00	0.25	010.1BW16	115.00 x 5.00
012.130121	130.0 x 4.40 x 0.85	130.00	121.20	8.50	10.20	0.25	010.1A576	120.02 x 5.33
012.130122	130.0 x 4.10 x 0.85	130.00	121.80	8.30	10.00	0.25	010.1A489	120.00 x 5.00
012.135123	135.0 x 5.90 x 1.25	135.00	123.20	11.70	14.20	0.25	010.1A741	120.02 x 6.99
012.140128	140.0 x 5.90 x 1.25	140.00	128.20	11.70	14.20	0.25	010.1A744	126.37 x 6.99
012.150138	150.0 x 5.90 x 1.25	150.00	138.20	11.70	14.20	0.25	010.1A748	135.89 x 6.99
012.160148	160.0 x 5.90 x 1.25	160.00	148.20	11.70	14.20	0.25	010.1A751	145.42 x 6.99
012.170158	170.0 x 5.90 x 1.25	170.00	158.20	11.70	14.20	0.25	010.1A755	158.12 x 6.99
012.180168	180.0 x 5.90 x 1.25	180.00	168.20	11.70	14.20	0.25	010.1A758	164.47 x 6.99
012.190178	190.0 x 5.90 x 1.25	190.00	178.20	11.70	14.20	0.25	010.1A763	177.17 x 6.99
012.200188	200.0 x 5.90 x 1.25	200.00	188.20	11.70	14.20	0.25	010.1A765	183.52 x 6.99
012.210198	210.0 x 5.90 x 1.25	210.00	198.20	11.70	14.20	0.25	010.1A769	196.22 x 6.99
012.220208	220.0 x 5.90 x 1.25	220.00	208.20	11.70	14.20	0.25	010.1A771	202.57 x 6.99
012.230218	230.0 x 5.90 x 1.25	230.00	218.20	11.70	14.20	0.25	010.1A773	215.27 x 6.99
012.240228	240.0 x 5.90 x 1.25	240.00	228.20	11.70	14.20	0.25	010.1A775	227.97 x 6.99
012.250238	250.0 x 5.90 x 1.25	250.00	238.20	11.70	14.20	0.25	010.1A777	240.67 x 6.99
012.280268	280.0 x 5.90 x 1.25	280.00	268.20	11.70	14.20	0.25	010.1A781	266.07 x 6.99
012.300288	300.0 x 5.90 x 1.25	300.00	288.20	11.70	14.20	0.25	010.1A783	278.77 x 6.99
012.320308	320.0 x 5.90 x 1.25	320.00	308.20	11.70	14.20	0.25	010.1A787	304.17 x 6.99
012.350338	350.0 x 5.90 x 1.25	350.00	338.20	11.70	14.20	0.25	010.1A789	329.57 x 6.99
012.400388	400.0 x 5.90 x 1.25	400.00	388.20	11.70	14.20	0.25	010.1A793	380.37 x 6.99
012.420408	420.0 x 5.90 x 1.25	420.00	408.20	11.70	14.20	0.25	010.1A795	405.26 x 6.99
012.450438	450.0 x 5.90 x 1.25	450.00	438.20	11.70	14.20	0.25	010.1A797	430.66 x 6.99

Other intermediate sizes can be provided.



BECA **012** Rod

Coiled back-up ring

DESCRIPTION

The BECA 012 Rod profile is a coiled back-up ring with a rectangular profile. The ring is systematically assembled in tandem with an O'Ring and an X'Ring.

ADVANTAGES

Used in static and dynamic applications

Only for alternating movements

Large contact surface area, which protects the O'Ring from deformation caused by pulsating pressures

Preferred assembled in a closed groove

Suitable for non-standard dimensions as the back-up ring can be shortened and then adjusted

Compensates for the effects caused by significant thermal variations and tolerances, as at least one coil in the spiral rests on each point of the circumference to support the O'Ring against play

EXAMPLES OF APPLICATIONS

Automotive

Hydraulic equipment

Mobile machinery

Machine tools

Injection presses

Valves

Hydraulic cylinders

MATERIALS

Standard virgin PTFE

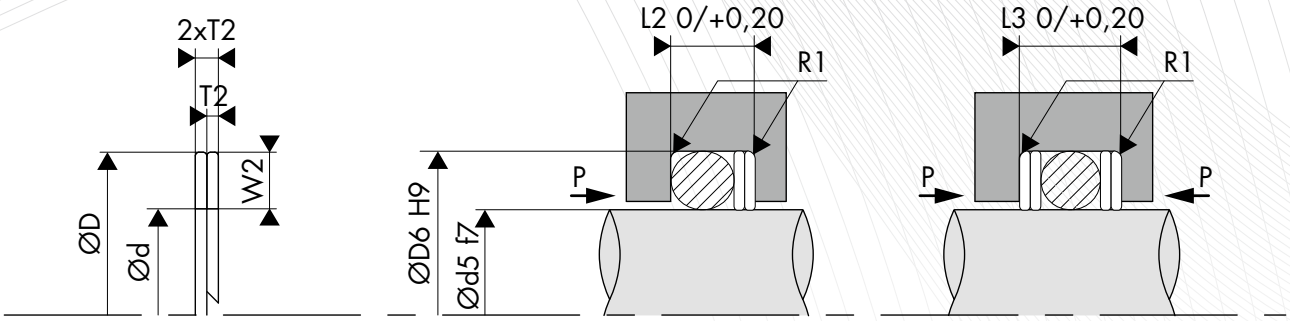
Filled PTFE (fibreglass, carbon, bronze, etc.) for special applications

Other materials may be used

TECHNICAL DATA

Temperature	-200°C / +260°C depending on the material selected	
Pressure	Static application:	up to 250 MPa depending on the material selected
	Dynamic application:	up to 40 MPa in linear applications up to 15 MPa in oscillating/rotating applications
Speed	2 m/s in linear or rotating applications depending on the material selected	

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.



INSTALLATION DIMENSIONS IN STATIC AND DYNAMIC APPLICATIONS, INSIDE SEALING (ROD)

O'Ring	Back-up ring dimensions			Housing dimensions						
Cross-section Ød2	Radial height W2		Thickness	Groove diameter ØD6 H9		Groove width				Radius
						Static		Dynamic		
	Static	Dynamic	2xT2	Static	Dynamic	L2 0/+0.20	L3 0/+0.20	L2 0/+0.20	L3 0/+0.20	R1 ±0.20
1.50	1.10	1.10	1.00	d5 + 2.20	d5 + 2.20	3.20	4.20	3.25	4.25	0.25
1.60	1.15	1.20	1.00	d5 + 2.30	d5 + 2.40	3.50	4.50	3.40	4.40	0.25
1.78	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
1.80	1.30	1.35	1.40	d5 + 2.60	d5 + 2.70	4.10	5.50	4.00	5.40	0.25
2.00	1.50	1.55	1.40	d5 + 3.00	d5 + 3.10	4.30	5.70	4.20	5.60	0.25
2.40	1.80	1.90	1.40	d5 + 3.60	d5 + 3.80	4.80	6.20	4.60	6.00	0.25
2.50	1.90	1.95	1.40	d5 + 3.80	d5 + 3.90	4.90	6.30	4.80	6.20	0.25
2.62	2.00	2.05	1.40	d5 + 4.00	d5 + 4.10	5.00	6.40	4.90	6.30	0.25
2.65	2.00	2.10	1.40	d5 + 4.00	d5 + 4.20	5.10	6.50	4.90	6.30	0.25
3.00	2.30	2.40	1.40	d5 + 4.60	d5 + 4.80	5.90	7.30	5.70	7.10	0.25
3.53	2.70	2.85	1.40	d5 + 5.40	d5 + 5.70	6.50	7.90	6.30	7.70	0.25
3.55	2.70	2.90	1.40	d5 + 5.40	d5 + 5.80	6.60	8.00	6.30	7.70	0.25
4.00	3.10	3.25	1.40	d5 + 6.20	d5 + 6.50	7.00	8.40	6.80	8.20	0.25
5.00	4.00	4.10	1.70	d5 + 8.00	d5 + 8.20	8.40	10.10	8.30	10.00	0.25
5.30	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.60	10.30	8.50	10.20	0.25
5.33	4.30	4.40	1.70	d5 + 8.60	d5 + 8.80	8.80	10.50	8.50	10.20	0.25
5.70	4.60	4.80	1.70	d5 + 9.20	d5 + 9.60	9.10	10.80	8.80	10.50	0.25
6.00	4.90	5.10	1.70	d5 + 9.80	d5 + 10.20	9.50	11.20	9.10	10.80	0.25
6.99	5.80	5.90	2.50	d5 + 11.60	d5 + 11.80	11.80	14.30	11.70	14.20	0.25
8.00	6.70	7.00	2.50	d5 + 13.40	d5 + 14.00	12.70	15.20	12.40	14.90	0.25
8.40	7.10	7.30	2.50	d5 + 14.20	d5 + 14.60	13.00	15.50	12.80	15.30	0.25

EXAMPLE OF CODIFICATION

CODIFICATION ON THE INSIDE SEALING

Materials _____ : Bronze-filled PTFE – Code B
Rod diameter _____ : Ød5 = 18.00 mm
Groove diameter __ : ØD6 = 20.70 mm
Groove width _____ : 4.00 mm
Part number_____ : 012.018207B

Part number - 012. 018 207 B

Family
Rod diameter
Groove diameter 20.70 x 10 **
Back-up ring material*

* The codes that define the materials are set out in the materials table, section 2 - chapter 2.
** Dimensions with a decimal point are to be multiplied by 10, unlike the whole numbers

PREFERENTIAL DIMENSIONS FOR DYNAMIC APPLICATIONS, INSIDE SEALING (ROD)

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W2 x T2	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
012.004062	4.0 x 1.10 x 0.50	4.00	6.20	3.25	4.25	0.25	010.1B171	4.00 x 1.50
012.004067	4.0 x 1.35 x 0.70	4.00	6.70	4.00	5.40	0.25	010.1A040	3.68 x 1.78
012.005072	5.0 x 1.10 x 0.50	5.00	7.20	3.25	4.25	0.25	010.1B177	5.00 x 1.50
012.005077	5.0 x 1.35 x 0.70	5.00	7.70	4.00	5.40	0.25	010.1A041	4.47 x 1.78
012.006082	6.0 x 1.10 x 0.50	6.00	8.20	3.25	4.25	0.25	010.1B183	6.00 x 1.50
012.006087	6.0 x 1.35 x 0.70	6.00	8.70	4.00	5.40	0.25	010.1A043	6.07 x 1.78
012.008107	8.0 x 1.35 x 0.70	8.00	10.70	4.00	5.40	0.25	010.1A046	7.65 x 1.78
012.008111	8.0 x 1.55 x 0.70	8.00	11.10	4.20	5.60	0.25	010.1B486	8.00 x 2.00
012.010127	10.0 x 1.35 x 0.70	10.00	12.70	4.00	5.40	0.25	010.1A050	10.82 x 1.78
012.010131	10.0 x 1.55 x 0.70	10.00	13.10	4.20	5.60	0.25	010.1B492	10.00 x 2.00
012.012147	12.0 x 1.35 x 0.70	12.00	14.70	4.00	5.40	0.25	010.1A052	12.42 x 1.78
012.012151	12.0 x 1.55 x 0.70	12.00	15.10	4.20	5.60	0.25	010.1B498	12.00 x 2.00
012.014167	14.0 x 1.35 x 0.70	14.00	16.70	4.00	5.40	0.25	010.1A053	14.00 x 1.78
012.014171	14.0 x 1.55 x 0.70	14.00	17.10	4.20	5.60	0.25	010.1B510	14.00 x 2.00
012.015177	15.0 x 1.35 x 0.70	15.00	17.70	4.00	5.40	0.25	010.1A054	15.60 x 1.78
012.015181	15.0 x 1.55 x 0.70	15.00	18.10	4.20	5.60	0.25	010.1B516	15.00 x 2.00
012.016187	16.0 x 1.35 x 0.70	16.00	18.70	4.00	5.40	0.25	010.1A054	15.60 x 1.78
012.016191	16.0 x 1.55 x 0.70	16.00	19.10	4.20	5.60	0.25	010.1B519	16.00 x 2.00
012.018207	18.0 x 1.35 x 0.70	18.00	20.70	4.00	5.40	0.25	010.1A056	18.77 x 1.78
012.018211	18.0 x 1.55 x 0.70	18.00	21.10	4.20	5.60	0.25	010.1B525	18.00 x 2.00
012.020227	20.0 x 1.35 x 0.70	20.00	22.70	4.00	5.40	0.25	010.1A057	20.35 x 1.78
012.020231	20.0 x 1.55 x 0.70	20.00	23.10	4.20	5.60	0.25	010.1B531	20.00 x 2.00
012.022261	22.0 x 2.05 x 0.70	22.00	26.10	4.90	6.30	0.25	010.1A203	21.89 x 2.62
012.022268	22.0 x 2.40 x 0.70	22.00	26.80	5.70	7.10	0.25	010.1BE19	22.00 x 3.00
012.025291	25.0 x 2.05 x 0.70	25.00	29.10	4.90	6.30	0.25	010.1A207	25.07 x 2.62
012.025298	25.0 x 2.40 x 0.70	25.00	29.80	5.70	7.10	0.25	010.1A289	25.00 x 3.00
012.028321	28.0 x 2.05 x 0.70	28.00	32.10	4.90	6.30	0.25	010.1A209	28.24 x 2.62
012.028328	28.0 x 2.40 x 0.70	28.00	32.80	5.70	7.10	0.25	010.1BE46	28.00 x 3.00
012.030341	30.0 x 2.05 x 0.70	30.00	34.10	4.90	6.30	0.25	010.1A210	29.82 x 2.62
012.030348	30.0 x 2.40 x 0.70	30.00	34.80	5.70	7.10	0.25	010.1A296	30.00 x 3.00
012.032361	32.0 x 2.05 x 0.70	32.00	36.10	4.90	6.30	0.25	010.1A211	31.42 x 2.62
012.032368	32.0 x 2.40 x 0.70	32.00	36.80	5.70	7.10	0.25	010.1BE67	32.00 x 3.00
012.035391	35.0 x 2.05 x 0.70	35.00	39.10	4.90	6.30	0.25	010.1A206	223.81 x 2.62
012.035398	35.0 x 2.40 x 0.70	35.00	39.80	5.70	7.10	0.25	010.1A303	35.00 x 3.00
012.036401	36.0 x 2.05 x 0.70	36.00	40.10	4.90	6.30	0.25	010.1A214	36.17 x 2.62
012.036408	36.0 x 2.40 x 0.70	36.00	40.80	5.70	7.10	0.25	010.1A304	36.00 x 3.00
012.040457	40.0 x 2.85 x 0.70	40.00	45.70	6.30	7.70	0.25	010.1A382	40.87 x 3.53
012.040465	40.0 x 3.25 x 0.85	40.00	46.50	7.10	8.80	0.25	010.1BS39	40.00 x 4.00
012.042477	42.0 x 2.85 x 0.70	42.00	47.70	6.30	7.70	0.25	010.1A382	40.87 x 3.53
012.042451	42.0 x 1.55 x 0.70	42.00	45.10	4.20	5.60	0.25	010.1B600	42.00 x 2.00
012.045507	45.0 x 2.85 x 0.70	45.00	50.70	6.30	7.70	0.25	010.1A385	44.04 x 3.53
012.045515	45.0 x 3.25 x 0.85	45.00	51.50	7.10	8.80	0.25	010.1BS54	45.00 x 4.00
012.048537	48.0 x 2.85 x 0.70	48.00	53.70	6.30	7.70	0.25	010.1A388	47.22 x 3.53
012.048545	48.0 x 3.25 x 0.85	48.00	54.50	7.10	8.80	0.25	010.1BS63	48.00 x 4.00

Part number	Back-up ring dimensions	Housing dimensions					O'Ring part number	O'Ring dimensions
		Rod diameter	Groove diameter	Groove width		Radius		
	Ød x W2 x T2	Ød5 f7	ØD6 H9	L2 0/+0.20	L3 0/+0.20	R1 ±0.20		Ød1 x Ød2
012.050557	50.0 x 2.85 x 0.70	50.00	55.70	6.30	7.70	0.25	010.1A391	50.39 x 3.53
012.050565	50.0 x 3.25 x 0.85	50.00	56.50	7.10	8.80	0.25	010.1BS66	50.00 x 4.00
012.052577	52.0 x 2.85 x 0.70	52.00	57.70	6.30	7.70	0.25	010.1A391	50.39 x 3.53
012.052585	52.0 x 3.25 x 0.85	52.00	58.50	7.10	8.80	0.25	010.1BS72	52.00 x 4.00
012.055607	55.0 x 2.85 x 0.70	55.00	60.70	6.30	7.70	0.25	010.1A394	53.57 x 3.53
012.055615	55.0 x 3.25 x 0.85	55.00	61.50	7.10	8.80	0.25	010.1A480	55.00 x 4.00
012.056617	56.0 x 2.85 x 0.70	56.00	61.70	6.30	7.70	0.25	010.1A397	56.74 x 3.53
012.056625	56.0 x 3.25 x 0.85	56.00	62.50	7.10	8.80	0.25	010.1BS84	56.00 x 4.00
012.060657	60.0 x 2.85 x 0.70	60.00	65.70	6.30	7.70	0.25	010.1A400	59.92 x 3.53
012.060665	60.0 x 3.25 x 0.85	60.00	66.50	7.10	8.80	0.25	010.1A481	60.00 x 4.00
012.063687	63.0 x 2.85 x 0.70	63.00	68.70	6.30	7.70	0.25	010.1A403	63.09 x 3.53
012.063695	63.0 x 3.25 x 0.85	63.00	69.50	7.10	8.80	0.25	010.1A482	63.00 x 4.00
012.065707	65.0 x 2.85 x 0.70	65.00	70.70	6.30	7.70	0.25	010.1A406	66.27 x 3.53
012.065715	65.0 x 3.25 x 0.85	65.00	71.50	7.10	8.80	0.25	010.1A483	65.00 x 4.00
012.070757	70.0 x 2.85 x 0.70	70.00	75.70	6.30	7.70	0.25	010.1A409	69.44 x 3.53
012.070765	70.0 x 3.25 x 0.85	70.00	76.50	7.10	8.80	0.25	010.1A484	70.00 x 4.00
012.075807	75.0 x 2.85 x 0.70	75.00	80.70	6.30	7.70	0.25	010.1A415	75.79 x 3.53
012.075815	75.0 x 3.25 x 0.85	75.00	81.50	7.10	8.80	0.25	010.1A485	75.00 x 4.00
012.080882	80.0 x 4.10 x 0.85	80.00	88.20	8.30	10.00	0.25	010.1BK53	80.00 x 5.00
012.080888	80.0 x 4.40 x 0.85	80.00	88.80	8.50	10.20	0.25	010.1A560	81.92 x 5.33
012.085932	85.0 x 4.10 x 0.85	85.00	93.20	8.30	10.00	0.25	010.1BK59	85.00 x 5.00
012.085938	85.0 x 4.40 x 0.85	85.00	93.80	8.50	10.20	0.25	010.1A561	85.09 x 5.33
012.090982	90.0 x 4.10 x 0.85	90.00	98.20	8.30	10.00	0.25	010.1BK68	90.00 x 5.00
012.090988	90.0 x 4.40 x 0.85	90.00	98.80	8.50	10.20	0.25	010.1A564	91.44 x 5.33
012.095103	95.0 x 4.10 x 0.85	95.00	103.20	8.30	10.00	0.25	010.1BK77	95.00 x 5.00
012.095104	95.0 x 4.40 x 0.85	95.00	103.80	8.50	10.20	0.25	010.1A565	94.62 x 5.33
012.100108	100.0 x 4.10 x 0.85	100.00	108.20	8.30	10.00	0.25	010.1BK86	100.00 x 5.00
012.100109	100.0 x 4.40 x 0.85	100.00	108.80	8.50	10.20	0.25	010.1A568	100.97 x 5.33
012.105113	105.0 x 4.10 x 0.85	105.00	113.20	8.30	10.00	0.25	010.1BK98	105.00 x 5.00
012.105114	105.0 x 4.40 x 0.85	105.00	113.80	8.50	10.20	0.25	010.1A569	104.14 x 5.33
012.110118	110.0 x 4.10 x 0.85	110.00	118.20	8.30	10.00	0.25	010.1BW07	110.00 x 5.00
012.110119	110.0 x 4.40 x 0.85	110.00	118.80	8.50	10.20	0.25	010.1A572	110.49 x 5.33
012.115123	115.0 x 4.10 x 0.85	115.00	123.20	8.30	10.00	0.25	010.1BW16	115.00 x 5.00
012.115124	115.0 x 4.40 x 0.85	115.00	123.80	8.50	10.20	0.25	010.1A573	113.67 x 5.33
012.120128	120.0 x 4.10 x 0.85	120.00	128.20	8.30	10.00	0.25	010.1A489	120.00 x 5.00
012.120129	120.0 x 4.40 x 0.85	120.00	128.80	8.50	10.20	0.25	010.1A576	120.02 x 5.33
012.125133	125.0 x 4.10 x 0.85	125.00	133.20	8.30	10.00	0.25	010.1A490	125.00 x 5.00
012.125134	125.0 x 4.40 x 0.85	125.00	133.80	8.50	10.20	0.25	010.1A580	126.37 x 5.33
012.130138	130.0 x 4.10 x 0.85	130.00	138.20	8.30	10.00	0.25	010.1A491	130.00 x 5.00
012.130139	130.0 x 4.40 x 0.85	130.00	138.80	8.50	10.20	0.25	010.1A582	129.54 x 5.33
012.135146	135.0 x 5.90 x 1.25	135.00	146.80	11.70	14.20	0.25	010.1A748	135.89 x 6.99
012.140151	140.0 x 5.90 x 1.25	140.00	151.80	11.70	14.20	0.25	010.1A749	139.07 x 6.99
012.150161	150.0 x 5.90 x 1.25	150.00	161.80	11.70	14.20	0.25	010.1A753	151.77 x 6.99
012.160171	160.0 x 5.90 x 1.25	160.00	171.80	11.70	14.20	0.25	010.1A755	158.12 x 6.99
012.170181	170.0 x 5.90 x 1.25	170.00	181.80	11.70	14.20	0.25	010.1A761	170.82 x 6.99
012.180191	180.0 x 5.90 x 1.25	180.00	191.80	11.70	14.20	0.25	010.1A765	183.52 x 6.99
012.190201	190.0 x 5.90 x 1.25	190.00	201.80	11.70	14.20	0.25	010.1A767	189.87 x 6.99
012.200211	200.0 x 5.90 x 1.25	200.00	211.80	11.70	14.20	0.25	010.1A771	202.57 x 6.99
012.210221	210.0 x 5.90 x 1.25	210.00	221.80	11.70	14.20	0.25	010.1A773	215.27 x 6.99
012.220231	220.0 x 5.90 x 1.25	220.00	231.80	11.70	14.20	0.25	010.1A773	215.27 x 6.99
012.230241	230.0 x 5.90 x 1.25	230.00	241.80	11.70	14.20	0.25	010.1A775	227.97 x 6.99
012.240251	240.0 x 5.90 x 1.25	240.00	251.80	11.70	14.20	0.25	010.1A777	240.67 x 6.99
012.250261	250.0 x 5.90 x 1.25	250.00	261.80	11.70	14.20	0.25	010.1A779	253.37 x 6.99
012.280291	280.0 x 5.90 x 1.25	280.00	291.80	11.70	14.20	0.25	010.1A783	278.77 x 6.99
012.300311	300.0 x 5.90 x 1.25	300.00	311.80	11.70	14.20	0.25	010.1A787	304.17 x 6.99
012.320331	320.0 x 5.90 x 1.25	320.00	331.80	11.70	14.20	0.25	010.1A788	316.87 x 6.99
012.350361	350.0 x 5.90 x 1.25	350.00	361.80	11.70	14.20	0.25	010.1A791	354.97 x 6.99
012.360371	360.0 x 5.90 x 1.25	360.00	371.80	11.70	14.20	0.25	010.1A791	354.97 x 6.99
012.400411	400.0 x 5.90 x 1.25	400.00	411.80	11.70	14.20	0.25	010.1A795	405.26 x 6.99

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