

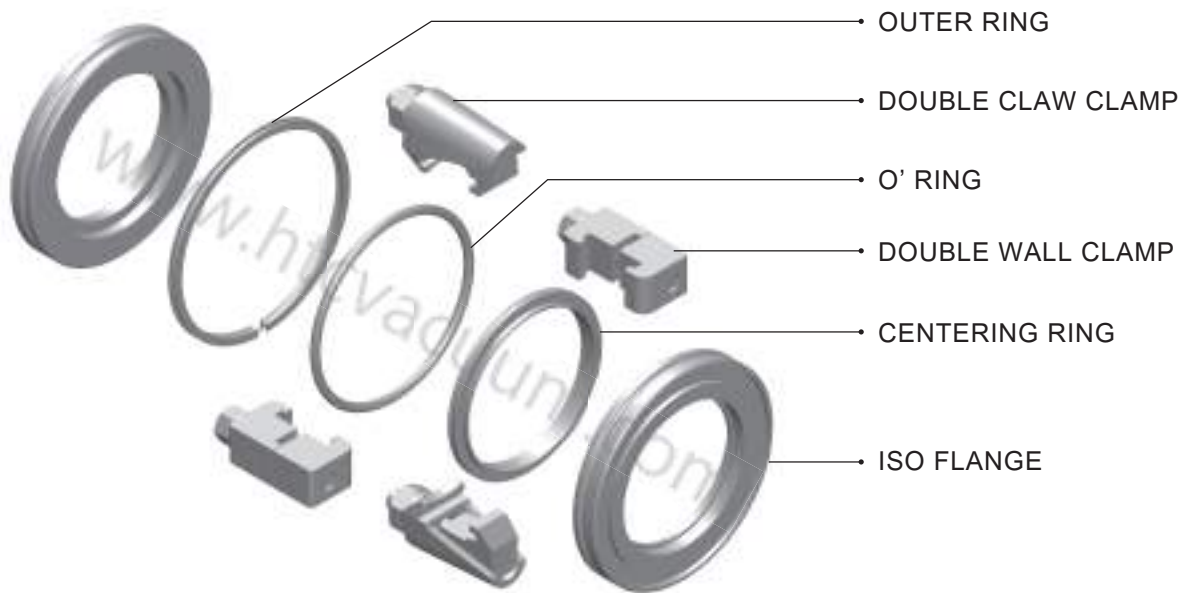
02 ISO SERIES

General Information	2-2
Complete Clamp Assemblies	2-3
Application for ISO Components	2-5
Connections of ISO series Fittings	2-5
Center Ring	2-6
Blank	2-7
Bored Blank	2-7
ISO Bolted Blank	2-8
Bolted Flange	2-8
Bolted Flange-Tapped	2-9
Rotatable Bolt Ring	2-9
Half Nipple	2-10
Split Retainer Ring	2-10
Single Wall Clamp	2-11,12
Double Wall Clamp	2-12
Double Claw Clamp	2-13
Cap	2-14
ISO Flexible Hoses	2-15
ISO Compressible Bellows Connections	2-15
ISO Teflon Bellows	2-16
ISO Full Nipples	2-17
ISO 90° Elbows	2-17
ISO Tees	2-18
ISO 4-Way Crosses	2-18
ISO Five-Way Crosses	2-19
ISO Six-Way Crosses	2-19
ISO Centering Ring-Europe	2-20
ISO Centering Ring-USA	2-21
ISO Centering Ring with Viton O'Ring	2-22
ISO Centering Ring with NBR O'Ring	2-23
ISO Centering Ring with Viton O'Ring	2-24
ISO Centering Ring with NBR O'Ring	2-25
ISO Outer Ring Centering Ring & Viton O'Ring	2-26
ISO Outer Ring Centering Ring & NBR O'Ring	2-27
ISO Outer Ring Centering Ring & Viton O'Ring	2-28
ISO Outer Ring Centering Ring & NBR O'Ring	2-29



ISO SERIES

➤ General Information



Features

- The components of ISO universal flange system are defined by the International Standards Organization (ISO).
- The construction of ISO flange series includes two smooth-faced sexless flanges clamped together with a combination metal centering ring and elastomeric O-ring between them.
- ISO components are reusable and changeable with other ISO dimension components of the same size.

Specifications

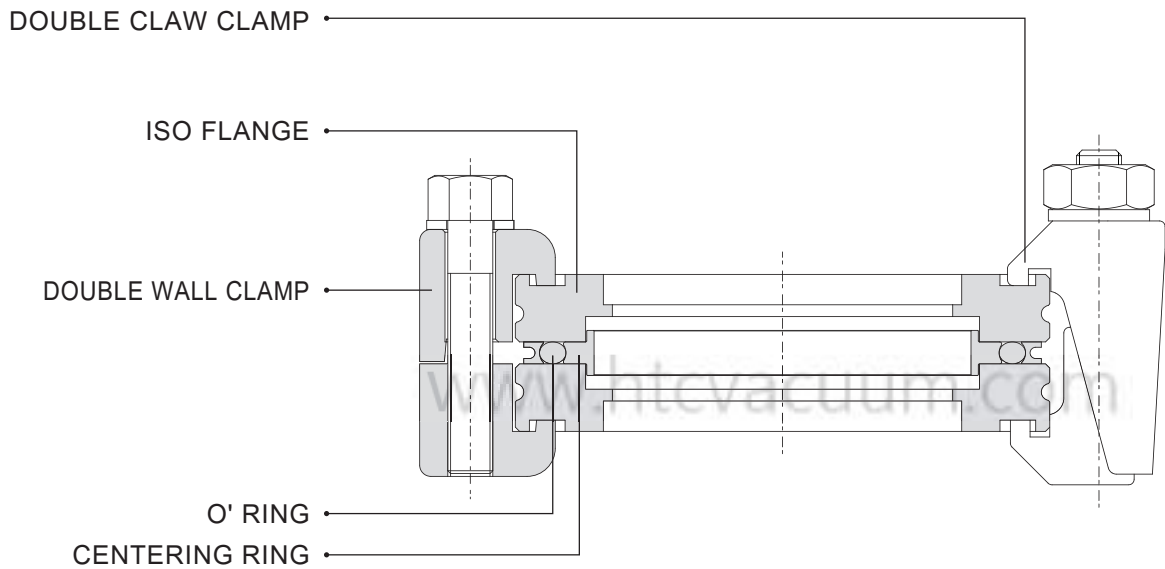
- Blanks & Flanges : 304 S.S. (Other material available upon request)
- Retainer Rings : 304 S.S. (Other material available upon request)
- Centering Rings : 304 S.S. (Other material available upon request)
- Outer Rings : Aluminum
- Clamps : Aluminum, Stainless steel, Steel plated
- Fastening torque : 1~1.4kg-m
- O'ring material : Viton or NBR
- Temperature Range : 150°C (Viton) 80°C (NBR)
- Vacuum Rate : 1×10^{-8} mbar

➤ Complete Clamp Assemblies

The system is versatile because of the many ways in which components can be assembled.

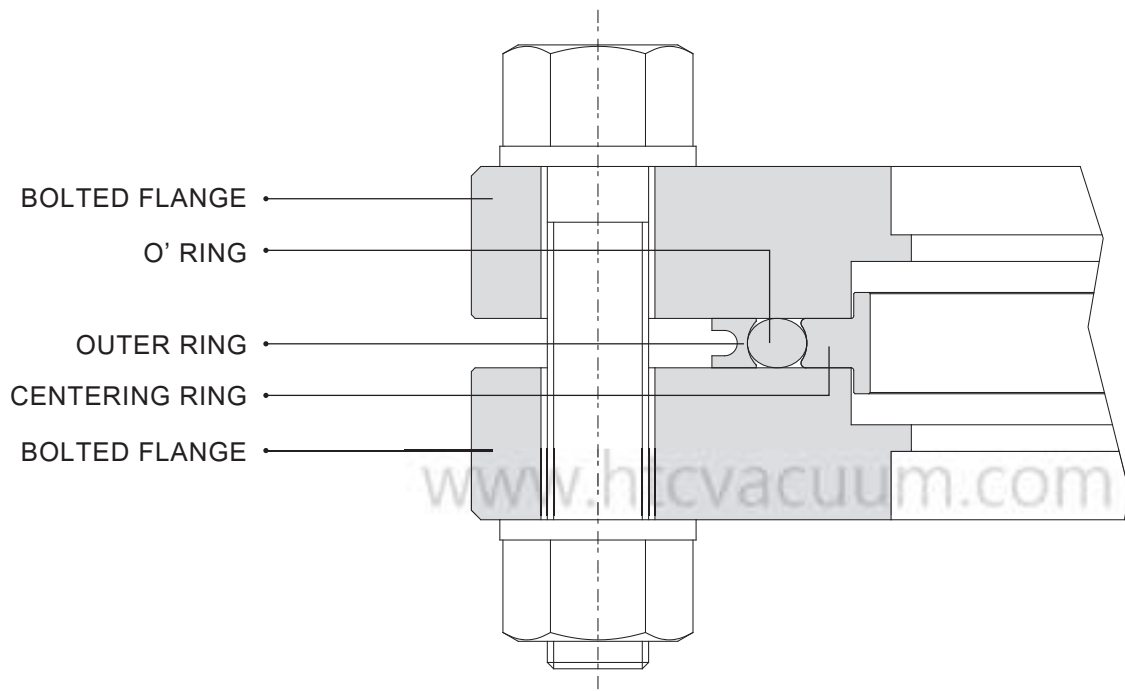
1 Double Wall-Clamp or Double Claw Clamp

Illustrates the double wall (claw) clamp assembly to connect pairs of ISO flanges. Ease of use and economic make this the most commonly used configuration.



2 Bolted Nonrotatable

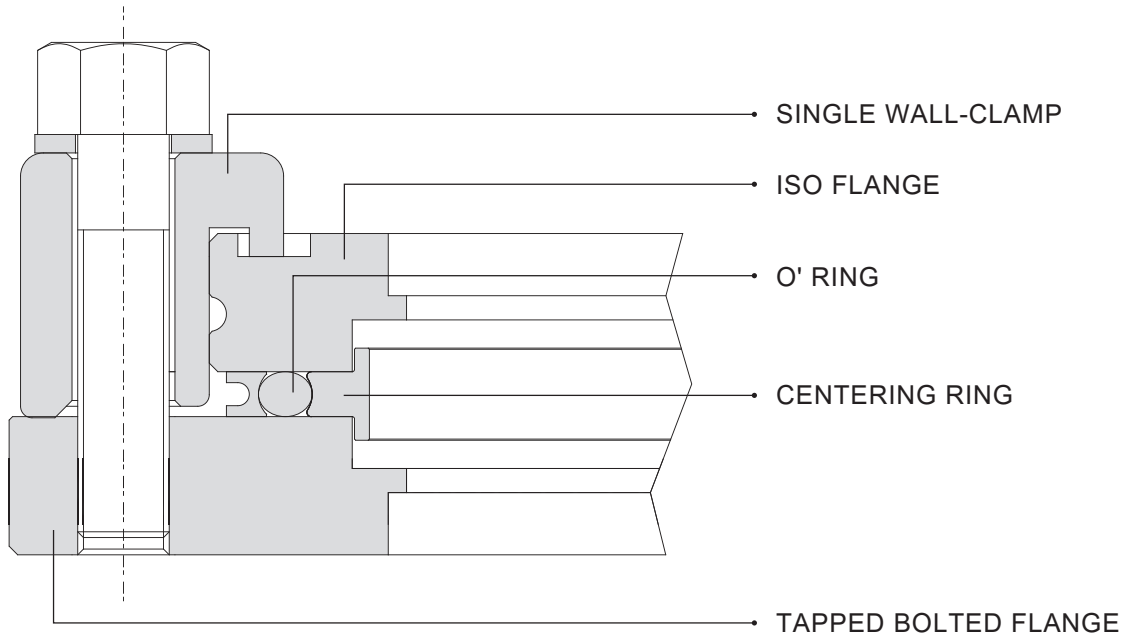
The two bolt flanges connected in the normal way.



➤ Complete Clamp Assemblies

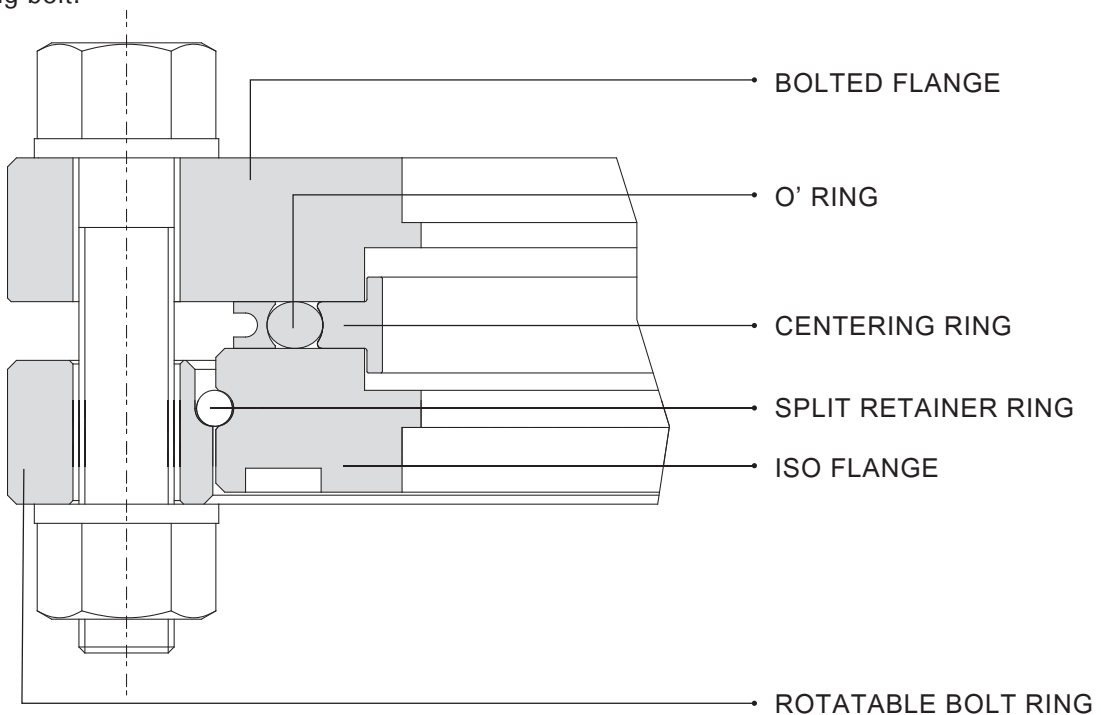
③ Single Wall Clamp

Single wall clamps are used to join an ISO flange to a tapped flange on a pump, chamber or gate valve.



④ Bolted Rotatable

This fastening method allows the ISO flange to be rotated for ease of component alignment. Additionally, a rotatable bolt ring can be used to fasten an ISO flange to a non-rotatable flange using bolt.



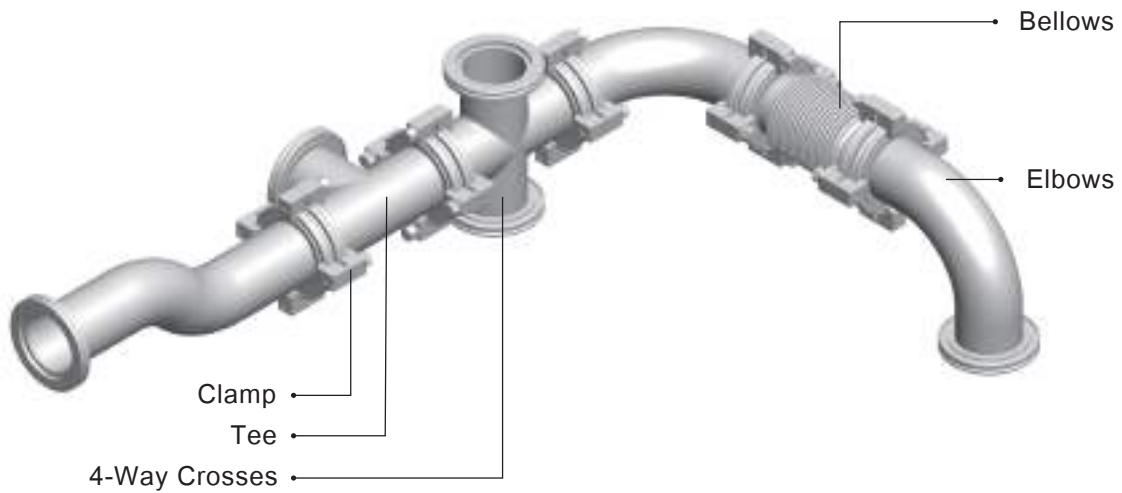
➤ Application for ISO Components



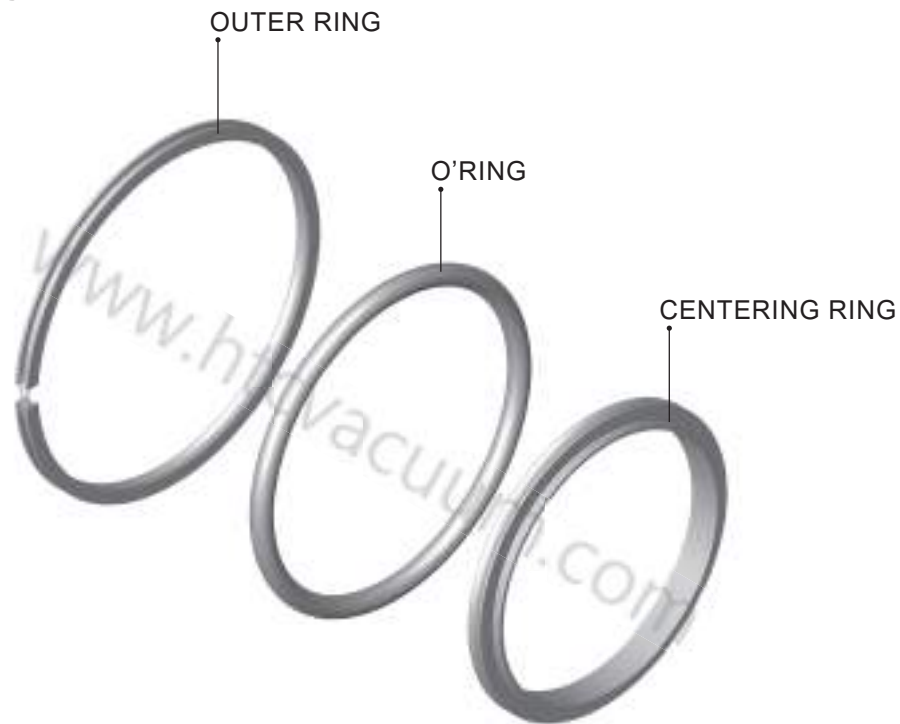
Applications for this system are as varied as the imagination can make them. Some examples are:

- ➊ Roughing and foreline plumbing for large vacuum system.
- ➋ High vacuum, high conductance, inter-connections.
- ➌ Modular system which will be modified frequently.
- ➍ System requiring frequent cleaning.
- ➎ Experimental system in research laboratories.

➤ Connections of ISO-series Fittings



Center Ring



Features

- Viton O'ring bakeable to 200°C intermittently, sustained use to 150°C.
- Vacuum seal of KF-series: O'ring compression by uniform pressure application around the 15° outer flange surface.
- The vacuum seal of ISO-series is made by compressing the O'ring between the mating flanges. This done by alternately wrench-tightening opposing pairs of clamps or bolts until the first metal-to-metal contact is made between the inner surfaces of the flanges and the spacing lips of the centering ring.

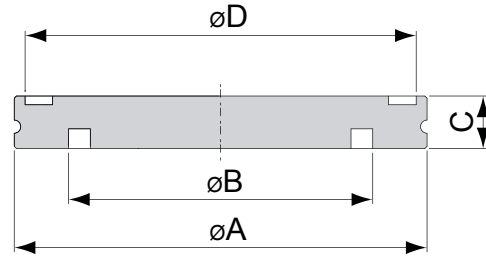
Specifications

- Centering Ring : 304 S.S. (Other material available upon request)
- O'ring : Viton (Other material available upon request)
- Outer Ring : Aluminum
- Mesh : 304 S.S.
- Temperature Range : 150°C (Viton) 80°C (NBR)
- Larger or special size available upon request

Applications

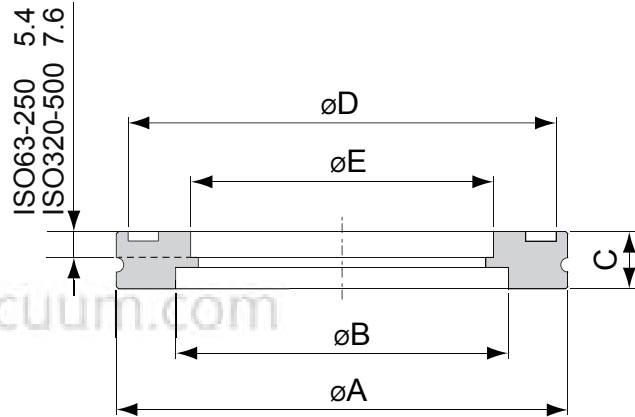
- The O'ring is considered a universal sealing device. Used as static, dynamic, radial or face seals.
- Vacuum seal.

Blank



Model No.	Material	A	B	C	D	Parts No.
ISO63B	304 S.S.	95	70	12	90	152107003
ISO80B	304 S.S.	110	83	12	105	152108003
ISO100B	304 S.S.	130	102	12	125	152109003
ISO160B	304 S.S.	180	153	12	175	152112003
ISO200B	304 S.S.	240	213	12	235	152113003
ISO250B	304 S.S.	290	261	12	285	152114003
ISO320B	304 S.S.	370	318	17	365	152116003
ISO400B	304 S.S.	450	400	17	445	152118003
ISO500B	304 S.S.	550	501	17	545	152120003
ISO630B	304 S.S.	690	651	22	685	152122003

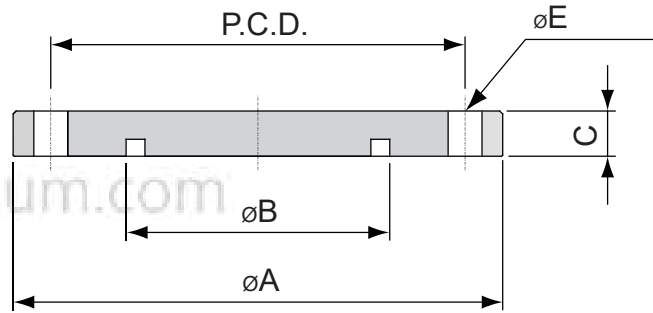
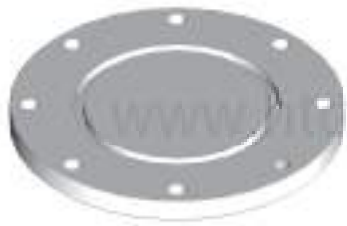
Bored Blank



Model No.	Material	A	B	C	D	E	Parts No.
ISO63B63	304 S.S.	95	70	12	90	63.7	152207153
ISO80B76	304 S.S.	110	83	12	105	76.8	152208163
ISO100B102	304 S.S.	130	102	12	125	102.2	152209183
ISO160B153	304 S.S.	180	153	12	175	152.9	152212203
ISO200B204	304 S.S.	240	213	12	235	203.7	152213213
ISO250B255	304 S.S.	290	261	12	285	254.5	152214223
ISO320B305	304 S.S.	370	318	17	365	305.3	152216233
ISO400B407	304 S.S.	450	400	17	445	406.9	152218253
ISO500B509	304 S.S.	550	501	17	545	508.8	152220273

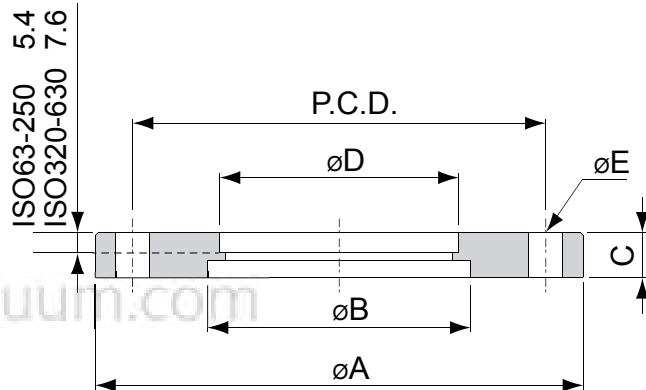


➔ **ISO Bolted Blank**



Model No.	Material	A	B	C	E*No	P.C.D.	Parts No.
ISO63BB	304 S.S.	130	70	12	9*4	110	152307003
ISO80BB	304 S.S.	145	83	12	9*8	125	152308003
ISO100BB	304 S.S.	165	102	12	9*8	145	152309003
ISO160BB	304 S.S.	225	153	16	11*8	200	152312003
ISO200BB	304 S.S.	285	213	16	11*12	260	152313003
ISO250BB	304 S.S.	335	261	16	11*12	310	152314003
ISO320BB	304 S.S.	425	318	20	14*12	395	152316003
ISO400BB	304 S.S.	510	400	20	14*16	480	152318003
ISO500BB	304 S.S.	610	501	20	14*16	580	152320003
ISO630BB	304 S.S.	750	651	24	14*20	720	152322003

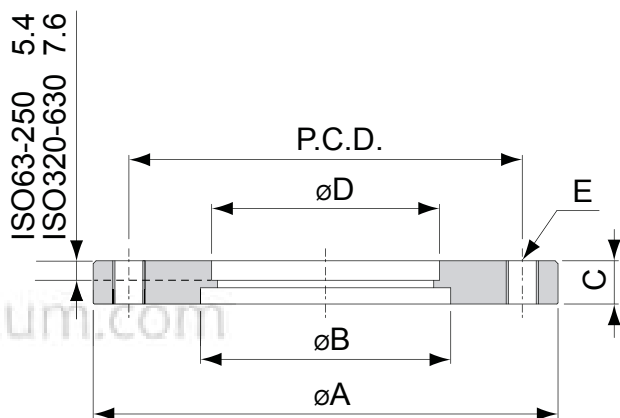
➔ **Bolted Flange**



Model No.	Material	A	B	C	D	E*No.	P.C.D.	Parts No.
ISO63BF	304 S.S.	130	70	12	63.7	9*4	110	152307153
ISO80BF	304 S.S.	145	83	12	76.8	9*8	125	152308163
ISO100BF	304 S.S.	165	102	12	102.2	9*8	145	152309183
ISO160BF	304 S.S.	225	153	16	152.9	11*8	200	152312203
ISO200BF	304 S.S.	285	213	16	203.7	11*12	260	152313213
ISO250BF	304 S.S.	335	261	16	254.5	11*12	310	152314223
ISO320BF	304 S.S.	425	318	20	305.3	14*12	395	152316233
ISO400BF	304 S.S.	510	400	20	406.9	14*16	480	152318253
ISO500BF	304 S.S.	610	501	20	508.8	14*16	580	152320273
ISO630BF	304 S.S.	750	651	24	610.4	14*20	720	152322293

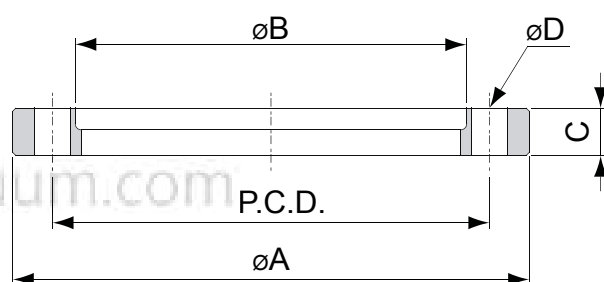


➤ Bolted Flange-Tapped



Model No.	Material	A	B	C	D	E*No.	P.C.D.	Parts No.
ISO63BFTAP	304 S.S.	130	70	12	63.7	M8*4	110	152407153
ISO80BFTAP	304 S.S.	145	83	12	76.8	M8*8	125	152408163
ISO100BFTAP	304 S.S.	165	102	12	102.2	M8*8	145	152409183
ISO160BFTAP	304 S.S.	225	153	16	152.9	M10*8	200	152412203
ISO200BFTAP	304 S.S.	285	213	16	203.7	M10*12	260	152413213
ISO250BFTAP	304 S.S.	335	261	16	254.5	M10*12	310	152414223
ISO320BFTAP	304 S.S.	425	318	20	305.3	M12*12	395	152416233
ISO400BFTAP	304 S.S.	510	400	20	406.9	M12*16	480	152418253
ISO500BFTAP	304 S.S.	610	501	20	508.8	M12*16	580	152420273
ISO630BFTAP	304 S.S.	750	651	24	610.4	M12*20	720	152422293

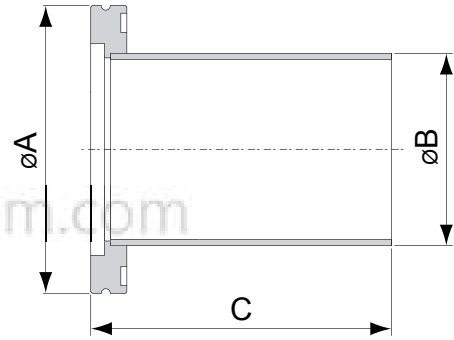
➤ Rotatable Bolt Ring



Model No.	Material	A	B	C	D*No.	P.C.D.	Parts No.
ISO63RBR	304 S.S.	130	98.5	12	9*4	110	152507073
ISO80RBR	304 S.S.	145	113.5	12	9*8	125	152508083
ISO100RBR	304 S.S.	165	133.5	12	9*8	145	152509093
ISO160RBR	304 S.S.	225	185.7	16	11*8	200	152512123
ISO200RBR	304 S.S.	285	245.7	16	11*12	260	152513133
ISO250RBR	304 S.S.	335	295.7	16	11*12	310	152514143
ISO320RBR	304 S.S.	425	375.8	20	14*12	395	152516163
ISO400RBR	304 S.S.	510	458.8	20	14*16	480	152518183
ISO500RBR	304 S.S.	610	558.8	20	14*16	580	152520203



➤ Half Nipple

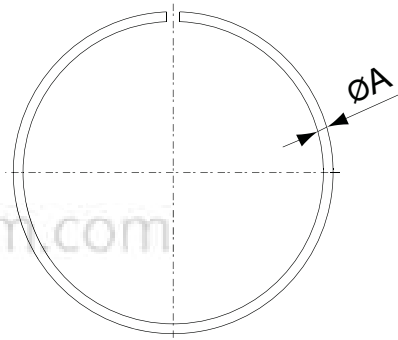


Model No.	Material	A	B	C	Parts No.
ISO63HN	304 S.S.	95	63.5	100	152607153
ISO80HN	304 S.S.	110	76.2	100	152608163
ISO100HN	304 S.S.	130	101.6	100	152609183
ISO160HN	304 S.S.	180	152.4	100	152612203
ISO200HN	304 S.S.	240	203.2	100	152613213
ISO250HN	304 S.S.	290	254	100	152614223
ISO320HN	304 S.S.	370	304.8	100	152616233
ISO400HN	304 S.S.	450	406.8	100	152618253
ISO500HN	304 S.S.	550	508	100	152620273

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface

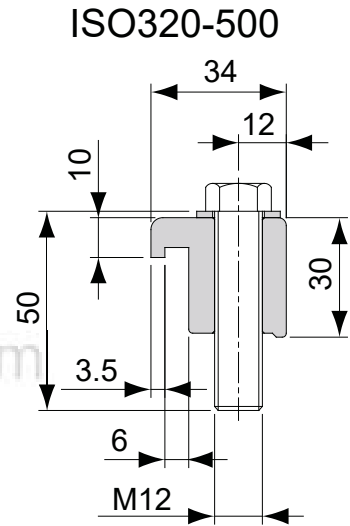
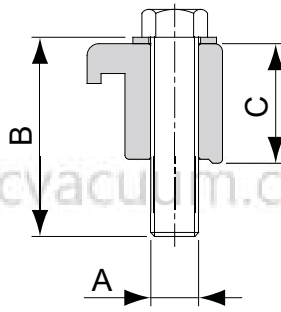
➤ Split Retainer Ring



Model No.	Material	A	Fit Flange	Parts No.
ISO63SRR	304 S.S.	3	ISO63	20011041
ISO80SRR	304 S.S.	3	ISO80	20011141
ISO100SRR	304 S.S.	3	ISO100	20011241
ISO160SRR	304 S.S.	4.5	ISO160	20011541
ISO200SRR	304 S.S.	4.5	ISO200	20011641
ISO250SRR	304 S.S.	4.5	ISO250	20011741
ISO320SRR	304 S.S.	4.5	ISO320	20011941
ISO400SRR	304 S.S.	8	ISO400	20012141
ISO500SRR	304 S.S.	8	ISO500	20012341

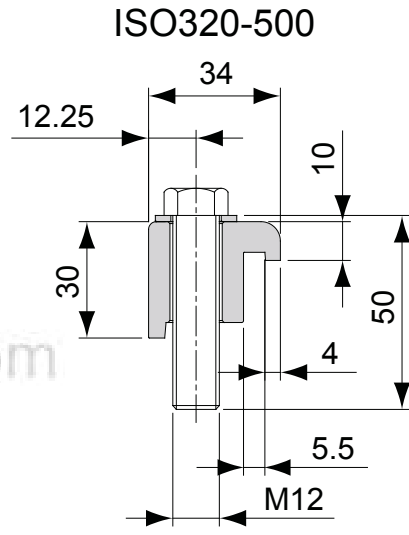
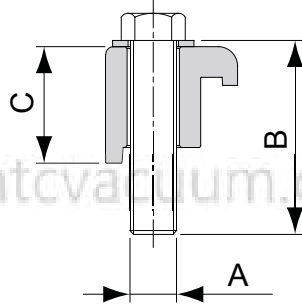


Single Wall Clamp



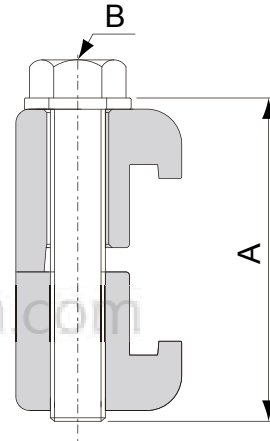
Model No.	Material	A	B	C	Fit Flange	Parts No.
ISO63-100SWC304	304 S.S.	M8	35	23	ISO63	2121A241
					ISO80	
					ISO100	
ISO160-250SWC304	304 S.S.	M10	35	23	ISO160	2121A441
					ISO200	
					ISO250	
					ISO320	
ISO320-500SWC304	304 S.S.	M12	50	30	ISO400	2121A541
					ISO500	
ISO63-100SWC-ZP	Steel+Zn Plated	M8	35	23	ISO63	2121A231
					ISO80	
					ISO100	
ISO160-250SWC-ZP	Steel+Zn Plated	M10	35	23	ISO160	2121A431
					ISO200	
					ISO250	
					ISO320	
ISO320-500SWC-ZP	Steel+Zn Plated	M12	50	30	ISO400	2121A531
					ISO500	

➤ Single Wall Clamp



Model No.	Material	A	B	C	Fit Flange	Parts No.
ISO63-100SWCA	Aluminum	M8	35	23.5	ISO63	2121A211
					ISO80	
					ISO100	
ISO160-250SWCA	Aluminum	M10	35	23.5	ISO160	2121A411
					ISO200	
					ISO250	
ISO320-500SWCA	Aluminum	M12	50	30	ISO320	2121A511
					ISO400	
					ISO500	

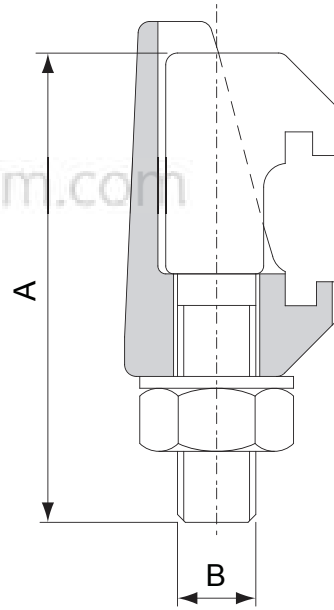
➤ Double Wall Clamp



Model No.	Material	A	B	Min. Quantity	Fit Flange	Parts No.
ISO63-100DWCA	Aluminum	45	M8	4	ISO63	2122A211
				4	ISO80	
				4	ISO100	
ISO160-250DWCA	Aluminum	45	M10	4	ISO160	2122A411
				6	ISO200	
				6	ISO250	
ISO320-500DWCA	Aluminum	60	M12	8	ISO320	2122A511
				8	ISO400	
				12	ISO500	



➤ Double Claw Clamp



Model No.	Material	A	B	Min. Quantity	Fit Flange	Parts No.
ISO63-250DCC316	316 S.S.	61.5	M10	4	ISO63	2123A361
				4	ISO80	
				4	ISO100	
				4	ISO160	
				6	ISO200	
				6	ISO250	
ISO320-500DCC316	316 S.S.	76	M12	8	ISO320	2123A561
				8	ISO400	
				12	ISO500	
ISO630DCC316	316 S.S.	86	M12	12	ISO630	2123A661
ISO63-250DCC-ZP	Steel+Zn Plated	61.5	M10	4	ISO63	2123A331
				4	ISO80	
				4	ISO100	
				4	ISO160	
				6	ISO200	
				6	ISO250	
ISO320-500DCC-ZP	Steel+Zn Plated	76	M12	8	ISO320	2123A531
				8	ISO400	
				12	ISO500	
ISO630DCC-ZP	Steel+Zn Plated	86	M12	12	ISO630	2123A631

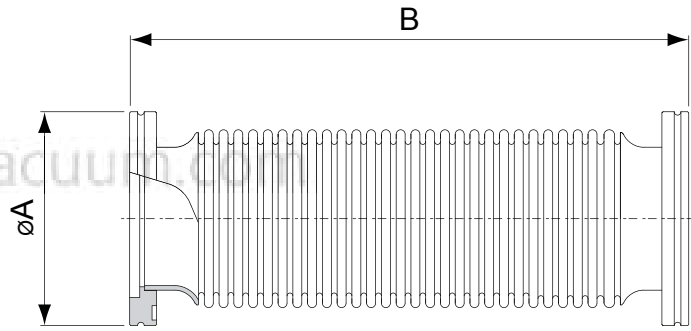


Cap



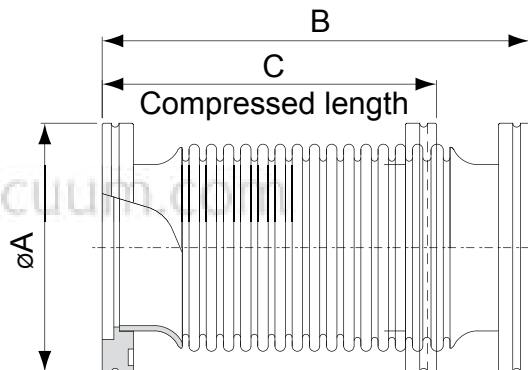
Model No.	Material	Fit Flange	Parts No.
ISO63CAP	Polyethylene	ISO63	5085G9
ISO80CAP	Polyethylene	ISO80	5085GU
ISO100CAP	Polyethylene	ISO100	5085HJ
ISO160CAP	Polyethylene	ISO160	5085JR
ISO200CAP	Polyethylene	ISO200	5085KU
ISO250CAP	Polyethylene	ISO250	5085LE
ISO320CAP	Polyethylene	ISO320	5085MA

ISO Flexible Hoses



Model No.	Material	A	Fit Flange	Parts No.
ISO63FXC250	304 S.S.	95	250	40310670250BB
ISO63FXC500	304 S.S.	95	500	40310670500BB
ISO63FXC750	304 S.S.	95	750	40310670750BB
ISO63FXC1000	304 S.S.	95	1000	40310671000BB
ISO80FXC250	304 S.S.	110	250	40310680250BB
ISO80FXC500	304 S.S.	110	500	40310680500BB
ISO80FXC750	304 S.S.	110	750	40310680750BB
ISO80FXC1000	304 S.S.	110	1000	40310681000BB
ISO100FXC250	304 S.S.	130	250	40310690250BB
ISO100FXC500	304 S.S.	130	500	40310690500BB
ISO100FXC750	304 S.S.	130	750	40310690750BB
ISO100FXC1000	304 S.S.	130	1000	40310691000BB

ISO Compressible Bellows Connections

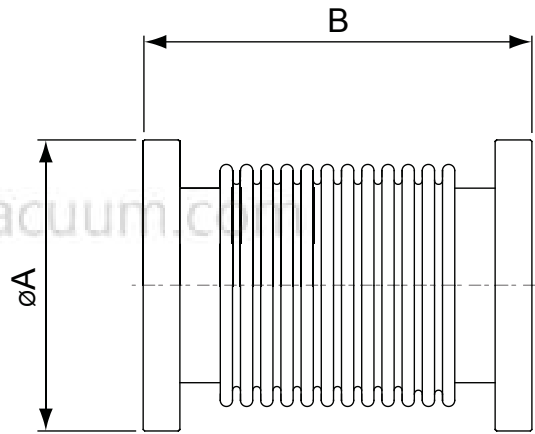


Model No.	Material	A	B	C	Parts No.
ISO63FXC140	304 S.S.	95	140	125	40310470140BB
ISO80FXC187	304 S.S.	110	187	160	40310480187BB
ISO100FXC187	304 S.S.	130	187	160	40310490187BB



➔ **ISO Flexible Hoses**

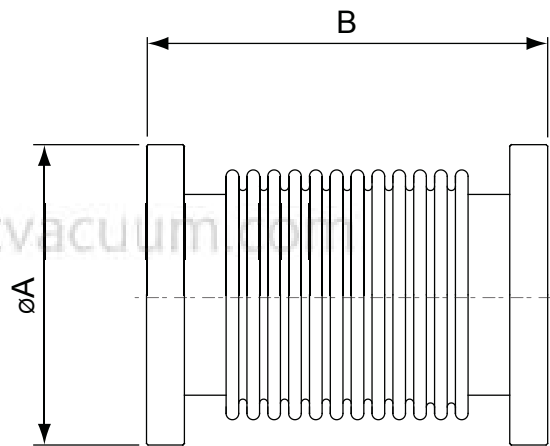
Teflon Bellows



Model No.	Material	A	B	Parts No.
ISO80FX150T	TEFLON	110	150	42001700150BB

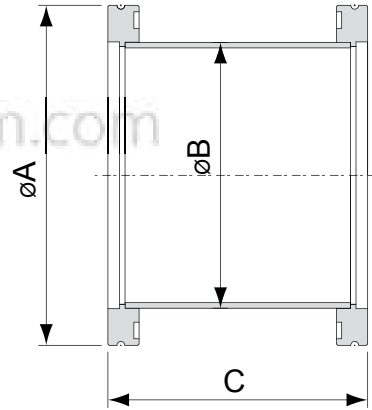
➔ **ISO Flexible Hoses**

ISO Teflon bellows with Metal flange frame



Model No.	Material	A	B	Parts No.
ISO80FX180TS	TEFLON	110	180	42021700180BB

ISO Full Nipples

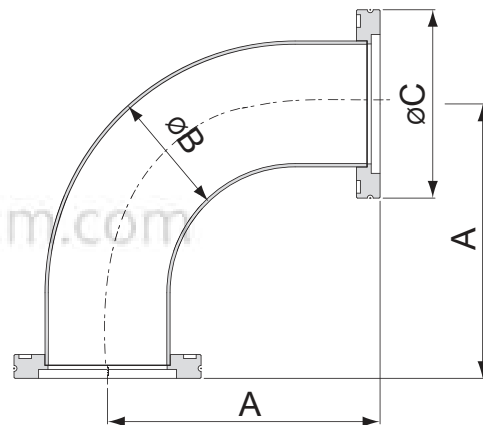


Model No.	Material	A	B	C	Parts No.
ISO63N100	304 S.S.	95	63.5	100	160120720701004
ISO80N100	304 S.S.	110	76.2	100	160120820801004
ISO100N100	304 S.S.	130	101.6	100	160120920901004
ISO160N100	304 S.S.	180	152.4	100	160121221201004
ISO200N100	304 S.S.	240	203.2	100	160121321301004
ISO250N100	304 S.S.	290	254	100	160121421401004
ISO320N200	304 S.S.	370	304.8	200	160121621602004
ISO400N200	304 S.S.	450	406.4	200	160121821802004
ISO500N200	304 S.S.	550	508	200	160121921902004

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface

ISO 90° Elbows



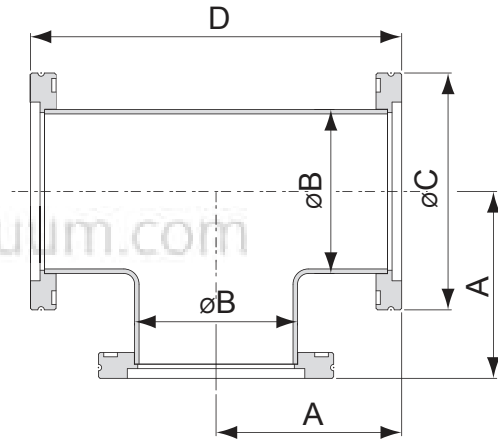
Model No.	Material	A	B	C	Parts No.
ISO63EL90A	304 S.S.	138.4	63.5	95	16032072074
ISO80EL90A	304 S.S.	166.9	76.2	110	16032082084
ISO100EL90A	304 S.S.	217.7	101.6	130	16032092094
ISO160EL90A	304 S.S.	235.2	152.4	180	16032122124

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface



ISO Tees

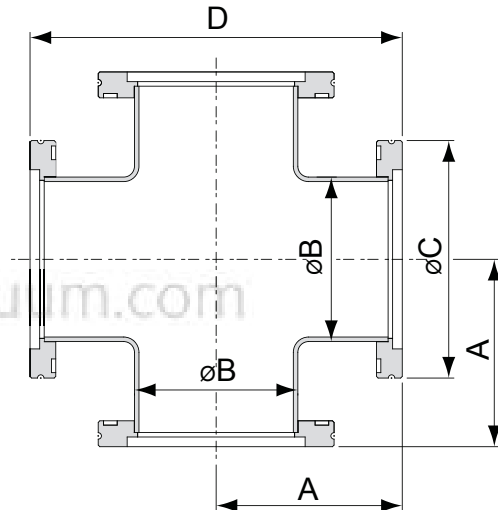


Model No.	Material	A	B	C	D	Parts No.
ISO63TA	304 S.S.	82.8	63.5	95	165.6	16152072074
ISO80TA	304 S.S.	89.15	76.2	110	178.3	16152082084
ISO100TA	304 S.S.	105	101.6	130	210	16152092094
ISO160TA	304 S.S.	133.6	152.4	180	267.2	16152122124

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface

ISO 4-Way Crosses



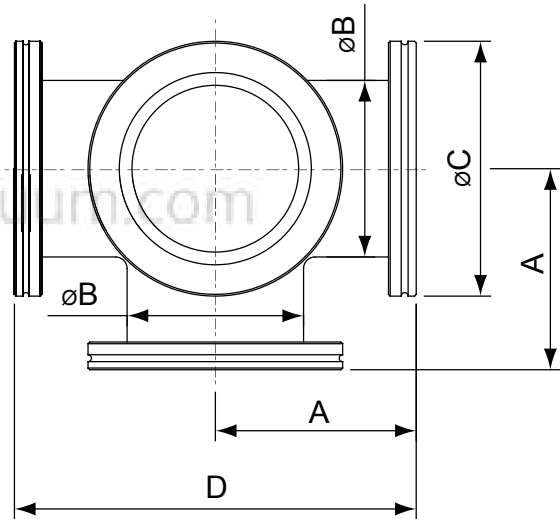
Model No.	Material	A	B	C	D	Parts No.
ISO63XA	304 S.S.	82.8	63.5	95	165.6	16192072074
ISO80XA	304 S.S.	89.15	76.2	110	178.3	16192082084
ISO100XA	304 S.S.	105	101.6	130	210	16192092094
ISO160XA	304 S.S.	133.6	152.4	180	267.2	16192122124

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface



ISO Five-Way Crosses

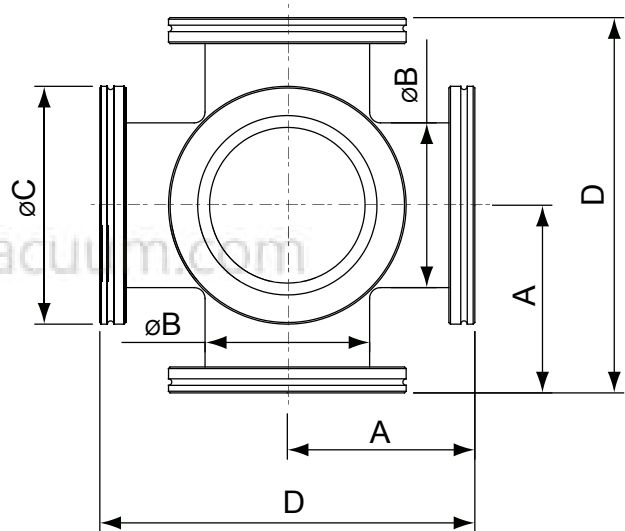


Model No.	Material	A	B	C	D	Parts No.
ISO63FXA	304 S.S.	82.8	63.5	95	165.6	16262072074
ISO80FXA	304 S.S.	89.15	76.2	110	178.3	16262082084
ISO100FXA	304 S.S.	105	101.6	130	210	16262092094
ISO160FXA	304 S.S.	133.6	152.4	180	267.2	16262122124

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface

ISO Six-Way Crosses



Model No.	Material	A	B	C	D	Parts No.
ISO63SXA	304 S.S.	82.8	63.5	95	165.6	16282072074
ISO80SXA	304 S.S.	89.15	76.2	110	178.3	16282082084
ISO100SXA	304 S.S.	105	101.6	130	210	16282092094
ISO160SXA	304 S.S.	133.6	152.4	180	267.2	16282122124

* Part number plus "K" for sand blasting surface

* Part number plus "L" for polished surface

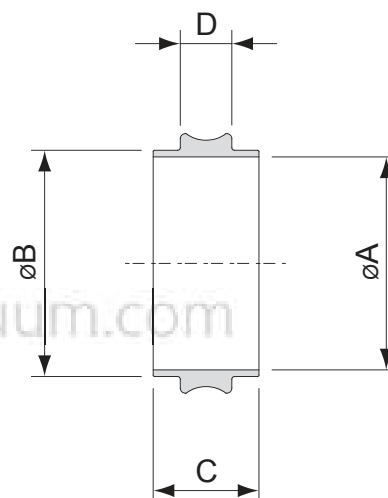


ISO Centering Ring

Available Area : Europe

C/R' with a notch

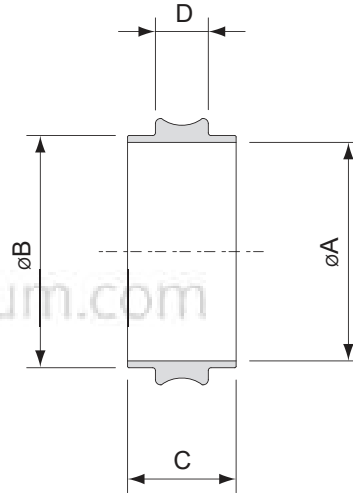
Special sizes available upon request



Model No.	Material	A	B	C	D	Parts No.
ISO63CRSE	304 S.S.	68	70	8	3.9	191010420
ISO80CRSE	304 S.S.	81	82.6	8	3.9	191011420
ISO100CRSE	304 S.S.	100	102	8	3.9	191012420
ISO160CRSE	304 S.S.	148	153	8	3.9	191015420
ISO200CRSE	304 S.S.	210	213	8	3.9	191016420
ISO250CRSE	304 S.S.	257.5	261	8	3.9	191017420
ISO320CRSE	304 S.S.	312	318	12	5.6	191019420
ISO400CRSE	304 S.S.	394	400	12	5.6	191021420
ISO500CRSE	304 S.S.	494	501	12	5.6	191023420
ISO630CRSE	304 S.S.	644.5	650.5	12	5.6	191025420
ISO63CRAE	Al	68	70	8	3.9	191010120
ISO80CRAE	Al	81	82.6	8	3.9	191011120
ISO100CRAE	Al	100	102	8	3.9	191012120
ISO160CRAE	Al	148	153	8	3.9	191015120
ISO200CRAE	Al	210	213	8	3.9	191016120
ISO250CRAE	Al	257.5	261	8	3.9	191017120
ISO320CRAE	Al	312	318	12	5.6	191019120
ISO400CRAE	Al	394	400	12	5.6	191021120
ISO500CRAE	Al	494	501	12	5.6	191023120
ISO630CRAE	Al	644.5	650.5	12	5.6	191025120

ISO Centering Ring

Available Area : U.S.A.



Model No.	Material	A	B	C	D	Parts No.
ISO63CRSA	304 S.S.	67	69.6	8	3.9	191010410
ISO80CRSA	304 S.S.	80	82.6	8	3.9	191011410
ISO100CRSA	304 S.S.	99	101.6	8	3.9	191012410
ISO160CRSA	304 S.S.	150	152.6	8	3.9	191015410
ISO200CRSA	304 S.S.	210	212.6	8	3.9	191016410
ISO250CRSA	304 S.S.	257.5	260.4	8	3.9	191017410
ISO320CRSA	304 S.S.	312	317.3	12	5.6	191019410
ISO400CRSA	304 S.S.	394	399.2	12	5.6	191021410
ISO500CRSA	304 S.S.	494	500.2	12	5.6	191023410
ISO630CRSA	304 S.S.	644.5	650.5	12	5.6	191025410
ISO63CRAA	Al	67	69.6	8	3.9	191010110
ISO80CRAA	Al	80	82.6	8	3.9	191011110
ISO100CRAA	Al	99	101.6	8	3.9	191012110
ISO160CRAA	Al	150	152.6	8	3.9	191015110
ISO200CRAA	Al	210	212.6	8	3.9	191016110
ISO250CRAA	Al	257.5	260.4	8	3.9	191017110
ISO320CRAA	Al	312	317.3	12	5.6	191019110
ISO400CRAA	Al	394	399.2	12	5.6	191021110
ISO500CRAA	Al	494	500.2	12	5.6	191023110
ISO630CRAA	Al	644.5	650.5	12	5.6	191025110

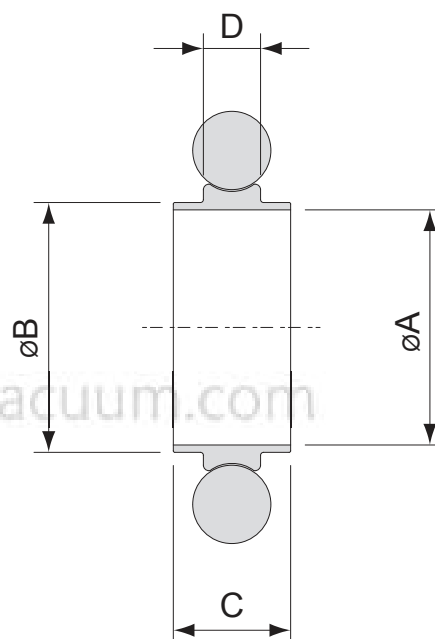


ISO Centering Ring with Viton O'Ring

Available Area : Europe

C/R' with a notch

Special sizes available upon request



Model No.	Material C/R	Material O'Ring	A	B	C	D	O'Ring Size	Parts No.
ISO63CRVSE	304 S.S.	Viton	68	70	8	3.9	AS-337	191110421
ISO80CRVSE	304 S.S.	Viton	81	82.6	8	3.9	AS-341	191111421
ISO100CRVSE	304 S.S.	Viton	100	102	8	3.9	AS-347	191112421
ISO160CRVSE	304 S.S.	Viton	148	153	8	3.9	AS-362	191115421
ISO200CRVSE	304 S.S.	Viton	210	213	8	3.9	AS-371	191116421
ISO250CRVSE	304 S.S.	Viton	257.5	261	8	3.9	AS-378	191117421
ISO320CRVSE	304 S.S.	Viton	312	318	12	5.6	AS-454	191119421
ISO400CRVSE	304 S.S.	Viton	394	400	12	5.6	AS-461	191121421
ISO500CRVSE	304 S.S.	Viton	494	501	12	5.6	AS-469	191123421
ISO630CRVSE	304 S.S.	Viton	644.5	650.5	12	5.6	AS-475	191125421
ISO63CRVAE	Al	Viton	68	70	8	3.9	AS-337	191110121
ISO80CRVAE	Al	Viton	81	82.6	8	3.9	AS-341	191111121
ISO100CRVAE	Al	Viton	100	102	8	3.9	AS-347	191112121
ISO160CRVAE	Al	Viton	148	153	8	3.9	AS-362	191115121
ISO200CRVAE	Al	Viton	210	213	8	3.9	AS-371	191116121
ISO250CRVAE	Al	Viton	257.5	261	8	3.9	AS-378	191117121
ISO320CRVAE	Al	Viton	312	318	12	5.6	AS-454	191119121
ISO400CRVAE	Al	Viton	394	400	12	5.6	AS-461	191121121
ISO500CRVAE	Al	Viton	494	501	12	5.6	AS-469	191123121
ISO630CRVAE	Al	Viton	644.5	650.5	12	5.6	AS-475	191125121

The color of O'Ring is brown, black is available upon request

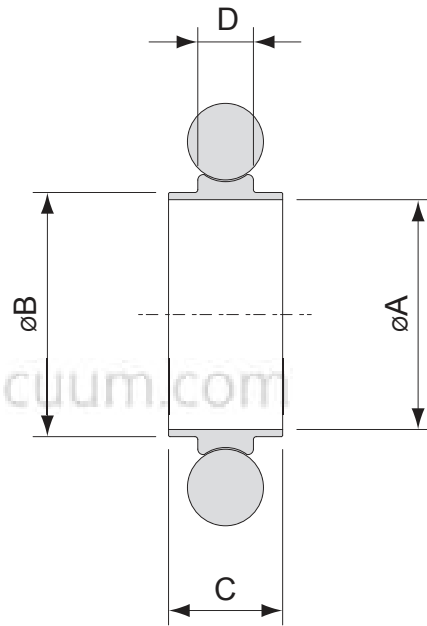


ISO Centering Ring with NBR O'Ring

Available Area : Europe

C/R' with a notch

Special sizes available upon request



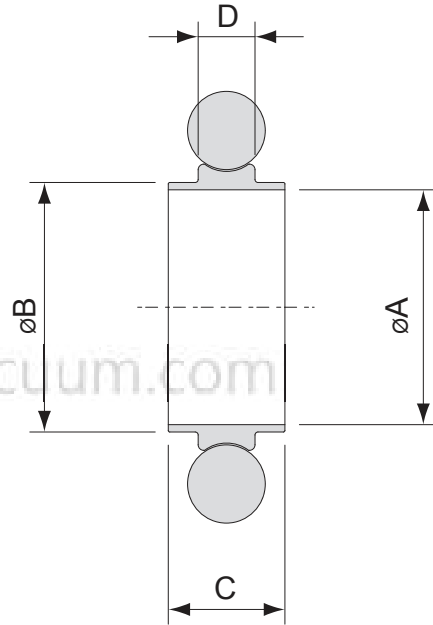
Model No.	Material C/R	Material O'Ring	A	B	C	D	O'Ring Size	Parts No.
ISO63CRNSE	304 S.S.	NBR	68	70	8	3.9	AS-337	191310422
ISO80CRNSE	304 S.S.	NBR	81	82.6	8	3.9	AS-341	191311422
ISO100CRNSE	304 S.S.	NBR	100	102	8	3.9	AS-347	191312422
ISO160CRNSE	304 S.S.	NBR	148	153	8	3.9	AS-362	191315422
ISO200CRNSE	304 S.S.	NBR	210	213	8	3.9	AS-371	191316422
ISO250CRNSE	304 S.S.	NBR	257.5	261	8	3.9	AS-378	191317422
ISO320CRNSE	304 S.S.	NBR	312	318	12	5.6	AS-454	191319422
ISO400CRNSE	304 S.S.	NBR	394	400	12	5.6	AS-461	191321422
ISO500CRNSE	304 S.S.	NBR	494	501	12	5.6	AS-469	191323422
ISO630CRNSE	304 S.S.	NBR	644.5	650.5	12	5.6	AS-475	191325422
ISO63CRNAE	Al	NBR	68	70	8	3.9	AS-337	191310122
ISO80CRNAE	Al	NBR	81	82.6	8	3.9	AS-341	191311122
ISO100CRNAE	Al	NBR	100	102	8	3.9	AS-347	191312122
ISO160CRNAE	Al	NBR	148	153	8	3.9	AS-362	191315122
ISO200CRNAE	Al	NBR	210	213	8	3.9	AS-371	191316122
ISO250CRNAE	Al	NBR	257.5	261	8	3.9	AS-378	191317122
ISO320CRNAE	Al	NBR	312	318	12	5.6	AS-454	191319122
ISO400CRNAE	Al	NBR	394	400	12	5.6	AS-461	191321122
ISO500CRNAE	Al	NBR	494	501	12	5.6	AS-469	191323122
ISO630CRNAE	Al	NBR	644.5	650.5	12	5.6	AS-475	191325122

O'Ring color for NBR material is black, brown is available upon request



ISO Centering Ring with Viton O'Ring

Available Area: U.S.A.



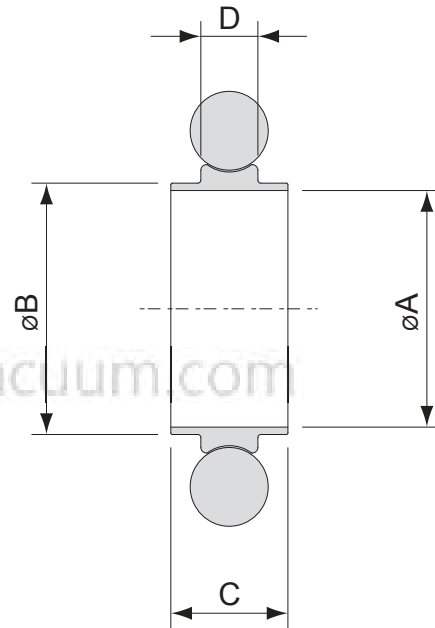
Model No.	Material C/R	Material O'Ring	A	B	C	D	O'Ring Size	Parts No.
ISO63CRVSA	304 S.S.	Viton	67	69.6	8	3.9	AS-337	191110411
ISO80CRVSA	304 S.S.	Viton	80	82.6	8	3.9	AS-341	191111411
ISO100CRVSA	304 S.S.	Viton	99	101.6	8	3.9	AS-347	191112411
ISO160CRVSA	304 S.S.	Viton	150	152.6	8	3.9	AS-362	191115411
ISO200CRVSA	304 S.S.	Viton	210	212.6	8	3.9	AS-371	191116411
ISO250CRVSA	304 S.S.	Viton	257.5	260.4	8	3.9	AS-378	191117411
ISO320CRVSA	304 S.S.	Viton	312	317.3	12	5.6	AS-454	191119411
ISO400CRVSA	304 S.S.	Viton	394	399.2	12	5.6	AS-461	191121411
ISO500CRVSA	304 S.S.	Viton	494	500.2	12	5.6	AS-469	191123411
ISO630CRVSA	304 S.S.	Viton	644.5	650.5	12	5.6	AS-475	191125411
ISO63CRVAA	Al	Viton	67	69.6	8	3.9	AS-337	191110111
ISO80CRVAA	Al	Viton	80	82.6	8	3.9	AS-341	191111111
ISO100CRVAA	Al	Viton	99	101.6	8	3.9	AS-347	191112111
ISO160CRVAA	Al	Viton	150	152.6	8	3.9	AS-362	191115111
ISO200CRVAA	Al	Viton	210	212.6	8	3.9	AS-371	191116111
ISO250CRVAA	Al	Viton	257.5	260.4	8	3.9	AS-378	191117111
ISO320CRVAA	Al	Viton	312	317.3	12	5.6	AS-454	191119111
ISO400CRVAA	Al	Viton	394	399.2	12	5.6	AS-461	191121111
ISO500CRVAA	Al	Viton	494	500.2	12	5.6	AS-469	191123111
ISO630CRVAA	Al	Viton	644.5	650.5	12	5.6	AS-475	191125111

The color of O'Ring is brown, black is available upon request



ISO Centering Ring with NBR O'Ring

Available Area: U.S.A.



Model No.	Material C/R	Material O'Ring	A	B	C	D	O'Ring Size	Parts No.
ISO63CRNSA	304 S.S.	NBR	67	69.6	8	3.9	AS-337	191310412
ISO80CRNSA	304 S.S.	NBR	80	82.6	8	3.9	AS-341	191311412
ISO100CRNSA	304 S.S.	NBR	99	101.6	8	3.9	AS-347	191312412
ISO160CRNSA	304 S.S.	NBR	150	152.6	8	3.9	AS-362	191315412
ISO200CRNSA	304 S.S.	NBR	210	212.6	8	3.9	AS-371	191316412
ISO250CRNSA	304 S.S.	NBR	257.5	260.4	8	3.9	AS-378	191317412
ISO320CRNSA	304 S.S.	NBR	312	317.3	12	5.6	AS-454	191319412
ISO400CRNSA	304 S.S.	NBR	394	399.2	12	5.6	AS-461	191321412
ISO500CRNSA	304 S.S.	NBR	494	500.2	12	5.6	AS-469	191323412
ISO630CRNSA	304 S.S.	NBR	644.5	650.5	12	5.6	AS-475	191325412
ISO63CRNAA	Al	NBR	67	69.6	8	3.9	AS-337	191310112
ISO80CRNAA	Al	NBR	80	82.6	8	3.9	AS-341	191311112
ISO100CRNAA	Al	NBR	99	101.6	8	3.9	AS-347	191312112
ISO160CRNAA	Al	NBR	150	152.6	8	3.9	AS-362	191315112
ISO200CRNAA	Al	NBR	210	212.6	8	3.9	AS-371	191316112
ISO250CRNAA	Al	NBR	257.5	260.4	8	3.9	AS-378	191317112
ISO320CRNAA	Al	NBR	312	317.3	12	5.6	AS-454	191319112
ISO400CRNAA	Al	NBR	394	399.2	12	5.6	AS-461	191321112
ISO500CRNAA	Al	NBR	494	500.2	12	5.6	AS-469	191323112
ISO630CRNAA	Al	NBR	644.5	650.5	12	5.6	AS-475	191325112

O'Ring color for NBR material is black, brown is available upon request

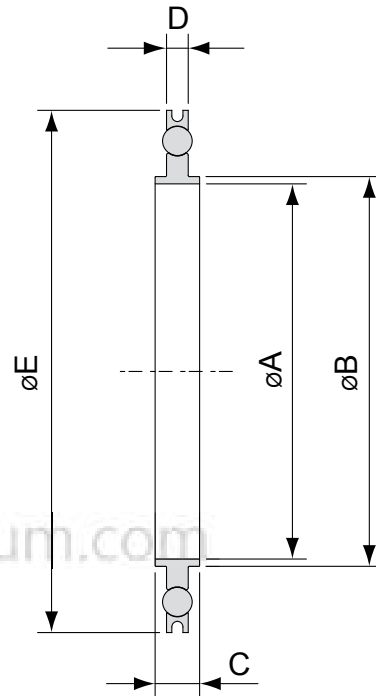


ISO Outer Ring Centering Ring & Viton O'Ring

Available Area: Europe

C/R' with a notch

Special sizes available upon request



Model No.	Material C/R	Material O'Ring	A	B	C	D	E	Material O/R	O'Ring Size	Parts No.
ISO630CRVSE	304 S.S.	Viton	68	70	8	3.9	94	Al	AS-337	192110421
ISO800CRVSE	304 S.S.	Viton	81	82.6	8	3.9	109	Al	AS-341	192111421
ISO1000CRVSE	304 S.S.	Viton	100	102	8	3.9	128	Al	AS-347	192112421
ISO1600CRVSE	304 S.S.	Viton	148	153	8	3.9	179	Al	AS-362	192115421
ISO2000CRVSE	304 S.S.	Viton	210	213	8	3.9	238	Al	AS-371	192116421
ISO2500CRVSE	304 S.S.	Viton	257.5	261	8	3.9	287	Al	AS-378	192117421
ISO3200CRVSE	304 S.S.	Viton	312	318	12	5.6	344	Al	AS-454	192119421
ISO4000CRVSE	304 S.S.	Viton	394	400	12	5.6	446	Al	AS-461	192121421
ISO5000CRVSE	304 S.S.	Viton	494	501	12	5.6	535	Al	AS-469	192123421
ISO6300CRVSE	304 S.S.	Viton	644.5	650.5	12	5.6	684.8	Al	AS-475	192125421

ISO630CRVAE	Al	Viton	68	70	8	3.9	94	Al	AS-337	192110121
ISO800CRVAE	Al	Viton	81	82.6	8	3.9	109	Al	AS-341	192111121
ISO1000CRVAE	Al	Viton	100	102	8	3.9	128	Al	AS-347	192112121
ISO1600CRVAE	Al	Viton	148	153	8	3.9	179	Al	AS-362	192115121
ISO2000CRVAE	Al	Viton	210	213	8	3.9	238	Al	AS-371	192116121
ISO2500CRVAE	Al	Viton	257.5	261	8	3.9	287	Al	AS-378	192117121
ISO3200CRVAE	Al	Viton	312	318	12	5.6	344	Al	AS-454	192119121
ISO4000CRVAE	Al	Viton	394	400	12	5.6	446	Al	AS-461	192121121
ISO5000CRVAE	Al	Viton	494	501	12	5.6	535	Al	AS-469	192123121
ISO6300CRVAE	Al	Viton	644.5	650.5	12	5.6	684.8	Al	AS-475	192125121

The color of O'Ring is brown, black is available upon request

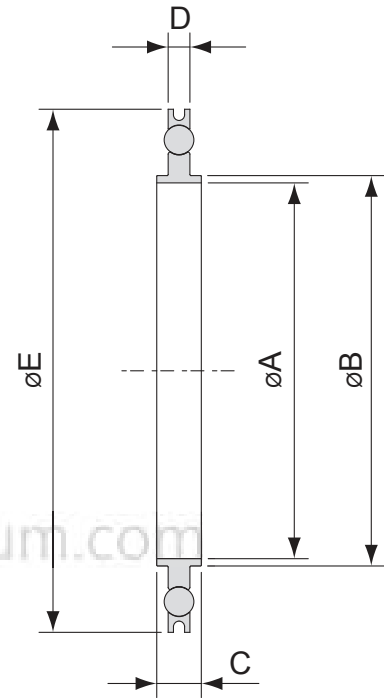


ISO Outer Ring Centering Ring & NBR O'Ring

Available Area: Europe

C/R' with a notch

Special sizes available upon request



Model No.	Material C/R	Material O'Ring	A	B	C	D	E	Material O/R	O'Ring Size	Parts No.
ISO630CRNSE	304 S.S.	NBR	68	70	8	3.9	94	Al	AS-337	192310422
ISO800CRNSE	304 S.S.	NBR	81	82.6	8	3.9	109	Al	AS-341	192311422
ISO1000CRNSE	304 S.S.	NBR	100	102	8	3.9	128	Al	AS-347	192312422
ISO1600CRNSE	304 S.S.	NBR	148	153	8	3.9	179	Al	AS-362	192315422
ISO2000CRNSE	304 S.S.	NBR	210	213	8	3.9	238	Al	AS-371	192316422
ISO2500CRNSE	304 S.S.	NBR	257.5	261	8	3.9	287	Al	AS-378	192317422
ISO3200CRNSE	304 S.S.	NBR	312	318	12	5.6	344	Al	AS-454	192319422
ISO4000CRNSE	304 S.S.	NBR	394	400	12	5.6	446	Al	AS-461	192321422
ISO5000CRNSE	304 S.S.	NBR	494	501	12	5.6	535	Al	AS-469	192323422
ISO6300CRNSE	304 S.S.	NBR	644.5	650.5	12	5.6	684.8	Al	AS-475	192325422

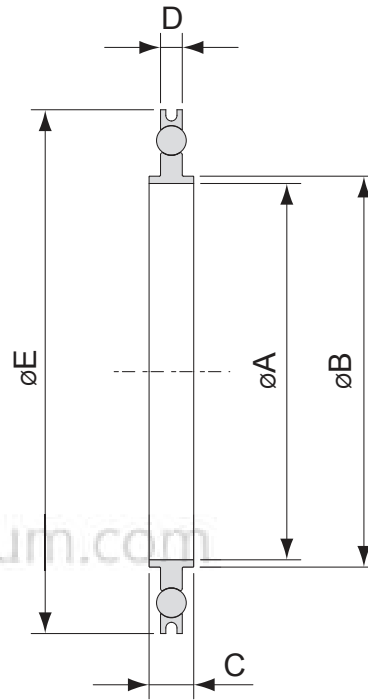
ISO630CRNAE	Al	NBR	68	70	8	3.9	94	Al	AS-337	192310122
ISO800CRNAE	Al	NBR	81	82.6	8	3.9	109	Al	AS-341	192311122
ISO1000CRNAE	Al	NBR	100	102	8	3.9	128	Al	AS-347	192312122
ISO1600CRNAE	Al	NBR	148	153	8	3.9	179	Al	AS-362	192315122
ISO2000CRNAE	Al	NBR	210	213	8	3.9	238	Al	AS-371	192316122
ISO2500CRNAE	Al	NBR	257.5	261	8	3.9	287	Al	AS-378	192317122
ISO3200CRNAE	Al	NBR	312	318	12	5.6	344	Al	AS-454	192319122
ISO4000CRNAE	Al	NBR	394	400	12	5.6	446	Al	AS-461	192321122
ISO5000CRNAE	Al	NBR	494	501	12	5.6	535	Al	AS-469	192323122
ISO6300CRNAE	Al	NBR	644.5	650.5	12	5.6	684.8	Al	AS-475	192325122

O'Ring color for NBR material is black, brown is available upon request



ISO Outer Ring Centering Ring & Viton O'Ring

Available Area: U.S.A.



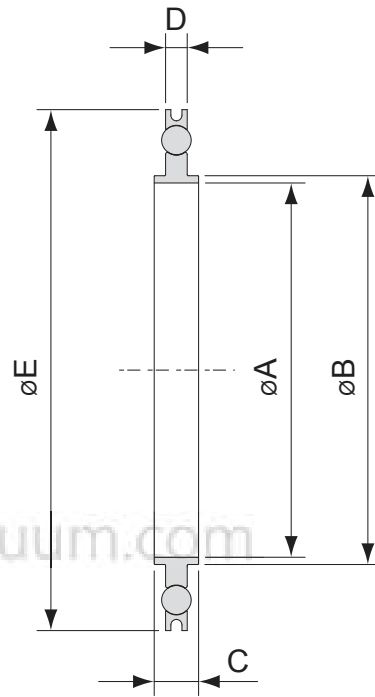
Model No.	Material C/R	Material O'Ring	A	B	C	D	E	Material O/R	O'Ring Size	Parts No.
ISO630CRVSA	304 S.S.	Viton	67	69.6	8	3.9	94	Al	AS-337	192110411
ISO800CRVSA	304 S.S.	Viton	80	82.6	8	3.9	109	Al	AS-341	192111411
ISO1000CRVSA	304 S.S.	Viton	99	101.6	8	3.9	128	Al	AS-347	192112411
ISO1600CRVSA	304 S.S.	Viton	150	152.6	8	3.9	179	Al	AS-362	192115411
ISO2000CRVSA	304 S.S.	Viton	210	212.6	8	3.9	238	Al	AS-371	192116411
ISO2500CRVSA	304 S.S.	Viton	257.5	260.4	8	3.9	287	Al	AS-378	192117411
ISO3200CRVSA	304 S.S.	Viton	312	317.3	12	5.6	344	Al	AS-454	192119411
ISO4000CRVSA	304 S.S.	Viton	394	399.2	12	5.6	446	Al	AS-461	192121411
ISO5000CRVSA	304 S.S.	Viton	494	500.2	12	5.6	535	Al	AS-469	192123411
ISO6300CRVSA	304 S.S.	Viton	644.5	650.5	12	5.6	684.8	Al	AS-475	192125411
ISO630CRVAA	Al	Viton	67	69.6	8	3.9	94	Al	AS-337	192110111
ISO800CRVAA	Al	Viton	80	82.6	8	3.9	109	Al	AS-341	192111111
ISO1000CRVAA	Al	Viton	99	101.6	8	3.9	128	Al	AS-347	192112111
ISO1600CRVAA	Al	Viton	150	152.6	8	3.9	179	Al	AS-362	192115111
ISO2000CRVAA	Al	Viton	210	212.6	8	3.9	238	Al	AS-371	192116111
ISO2500CRVAA	Al	Viton	257.5	260.4	8	3.9	287	Al	AS-378	192117111
ISO3200CRVAA	Al	Viton	312	317.3	12	5.6	344	Al	AS-454	192119111
ISO4000CRVAA	Al	Viton	394	399.2	12	5.6	446	Al	AS-461	192121111
ISO5000CRVAA	Al	Viton	494	500.2	12	5.6	535	Al	AS-469	192123111
ISO6300CRVAA	Al	Viton	644.5	650.5	12	5.6	684.8	Al	AS-475	192125111

The color of O'Ring is brown, black is available upon request



ISO Outer Ring Centering Ring & NBR O'Ring

Available Area: U.S.A.



Model No.	Material C/R	Material O'Ring	A	B	C	D	E	Material O/R	O'Ring Size	Parts No.
ISO630CRNSA	304 S.S.	NBR	67	69.6	8	3.9	94	Al	AS-337	192310412
ISO800CRNSA	304 S.S.	NBR	80	82.6	8	3.9	109	Al	AS-341	192311412
ISO1000CRNSA	304 S.S.	NBR	99	101.6	8	3.9	128	Al	AS-347	192312412
ISO1600CRNSA	304 S.S.	NBR	150	152.6	8	3.9	179	Al	AS-362	192315412
ISO2000CRNSA	304 S.S.	NBR	210	212.6	8	3.9	238	Al	AS-371	192316412
ISO2500CRNSA	304 S.S.	NBR	257.5	260.4	8	3.9	287	Al	AS-378	192317412
ISO3200CRNSA	304 S.S.	NBR	312	317.3	12	5.6	344	Al	AS-454	192319412
ISO4000CRNSA	304 S.S.	NBR	394	399.2	12	5.6	446	Al	AS-461	192321412
ISO5000CRNSA	304 S.S.	NBR	494	500.2	12	5.6	535	Al	AS-469	192323412
ISO6300CRNSA	304 S.S.	NBR	644.5	650.5	12	5.6	684.8	Al	AS-475	192325412

ISO630CRNAA	Al	NBR	67	69.6	8	3.9	94	Al	AS-337	192310112
ISO800CRNAA	Al	NBR	80	82.6	8	3.9	109	Al	AS-341	192311112
ISO1000CRNAA	Al	NBR	99	101.6	8	3.9	128	Al	AS-347	192312112
ISO1600CRNAA	Al	NBR	150	152.6	8	3.9	179	Al	AS-362	192315112
ISO2000CRNAA	Al	NBR	210	212.6	8	3.9	238	Al	AS-371	192316112
ISO2500CRNAA	Al	NBR	257.5	260.4	8	3.9	287	Al	AS-378	192317112
ISO3200CRNAA	Al	NBR	312	317.3	12	5.6	344	Al	AS-454	192319112
ISO4000CRNAA	Al	NBR	394	399.2	12	5.6	446	Al	AS-461	192321112
ISO5000CRNAA	Al	NBR	494	500.2	12	5.6	535	Al	AS-469	192323112
ISO6300CRNAA	Al	NBR	644.5	650.5	12	5.6	684.8	Al	AS-475	192325112

O'Ring color for NBR material is black, brown is available upon request



