

# **vacuum**

---

# SOLUTION

There is always something to do with vacuum tech in life.



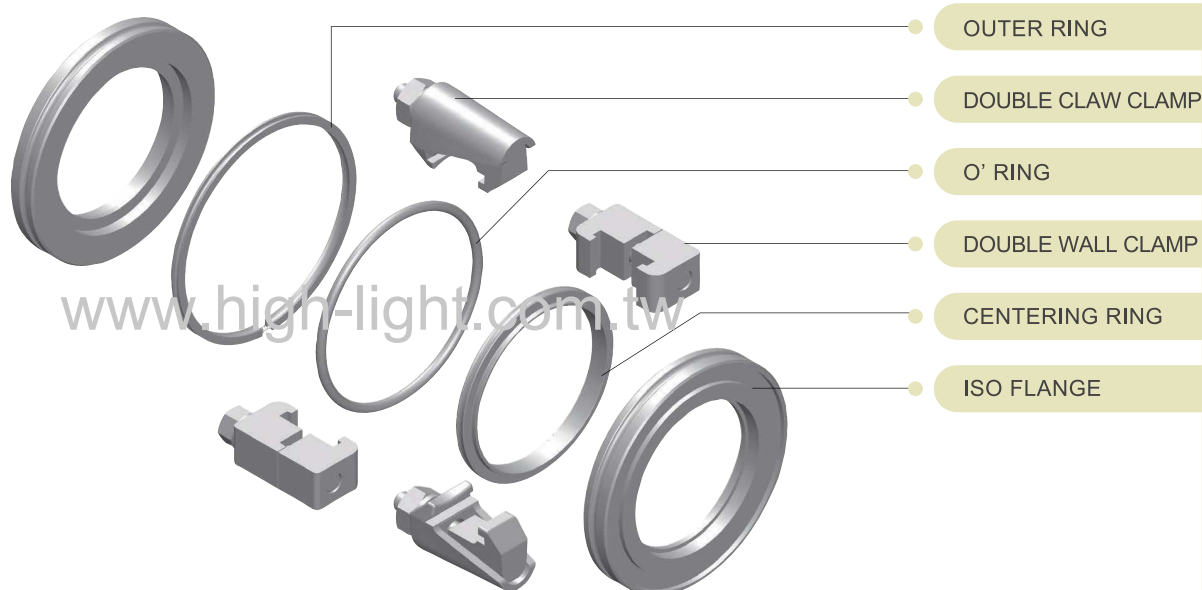
# 02

## SECTION CONTENTS

### ISO SERIES

General Information .....	2- I	Double Claw Clamp .....	2-8
Complete Clamp Assemblies .....	2-II	Cap .....	2-9
Complete Clamp Assemblies .....	2-III	ISO Flexible Hoses .....	2-10
Application for ISO Components .....	2-IV	ISO Compressible Bellows Connections .....	2-11
Connections of ISO-series Fittings .....	2-V	ISO Full Nipples .....	2-12
Center Ring .....	2-VI	ISO 90 Elbows .....	2-12
Blank .....	2-1	ISO Tees .....	2-13
Bored Blank .....	2-1	ISO 4-Way Crosses .....	2-13
Bolted Flange .....	2-2	ISO Centering Ring .....	2-14
Bolted Flange-Tapped .....	2-2	ISO Centering Ring with O'Ring .....	2-16
Rotatable Bolt Ring .....	2-3	ISO Outer Ring Centering Ring, O'Ring .....	2-20
Half Nipple .....	2-4		
Split Retainer Ring .....	2-5		
Single Wall Clamp .....	2-6		
Double Wall Clamp .....	2-7		

## 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 : 10<sup>-8</sup> torr

Larger or special size available upon request

## Complete Clamp Assemblies

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

### ❶ 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.

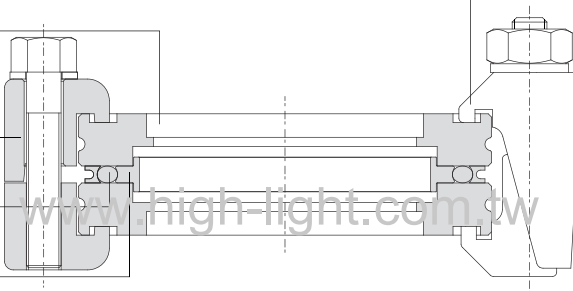
DOUBLE CLAW CLAMP

ISO FLANGE

DOUBLE WALL CLAMP

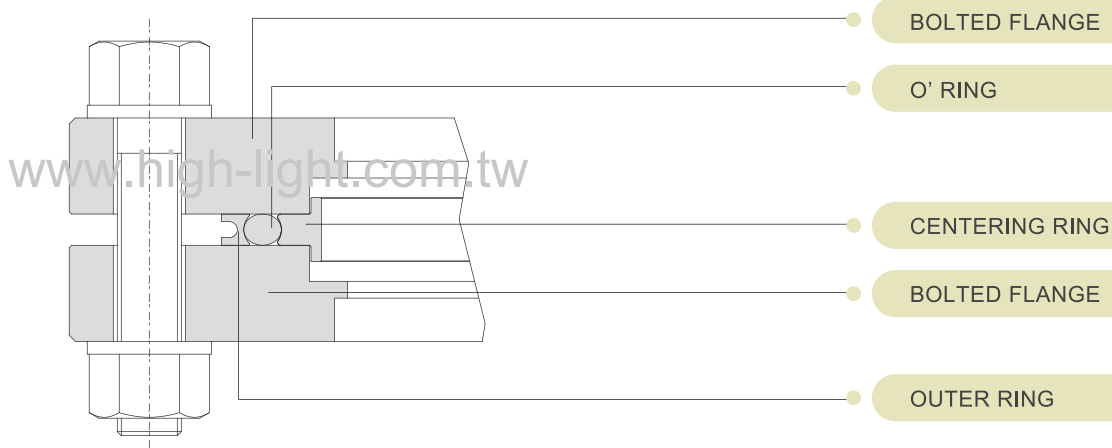
O' RING

CENTERING RING



### ❷ Bolted Nonrotatable

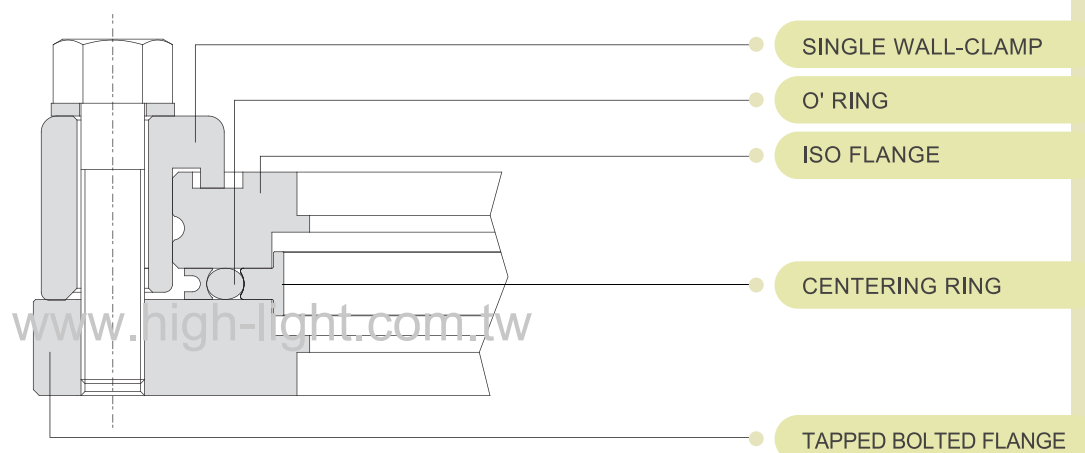
The two bolt flanges connected in the normal way.



## Complete Clamp Assemblies

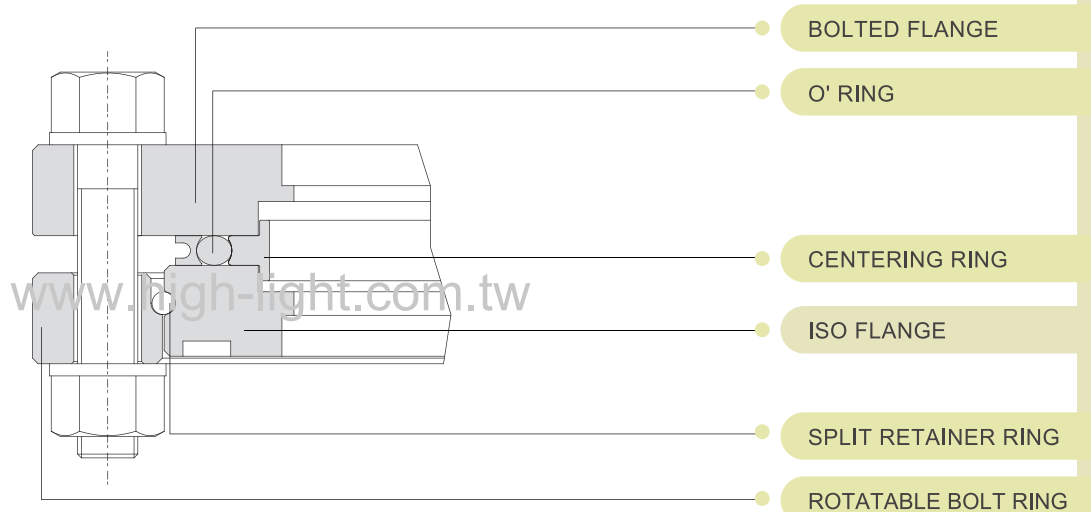
### ③ Single Wall Clamp

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

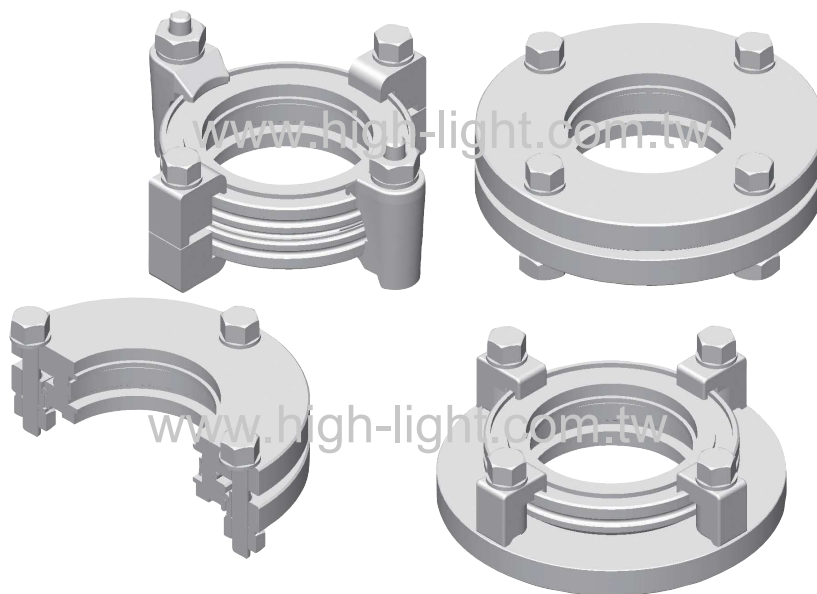


### ④ Bolted Rotatable

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.



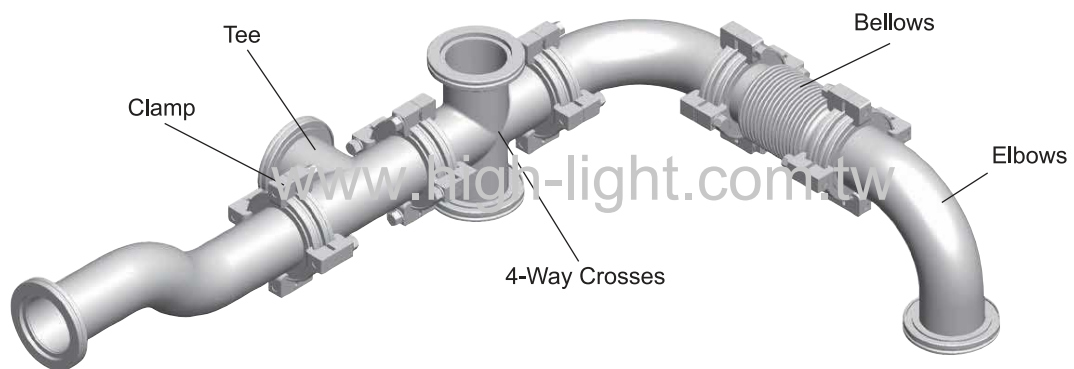
## Applications for ISO Components



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

- 1 Roughing and foreline plumbing for large vacuum system.
- 2 High vacuum, high conductance, inter-connections.
- 3 Modular system which will be modified frequently.
- 4 System requiring frequent cleaning.
- 5 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

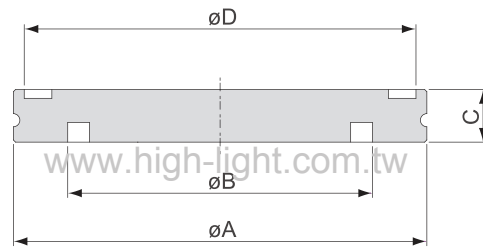
- Centering Ring : 304 S.S. (Other material available upon request)
- O'ring : Viton (Other material available upon request)
- Outer Ring : Aluminum
- Mesh : 304 S.S.
- Temperature Range : 150°C (Viton) 80°C (NBR)
- **Larger or special size available upon request**

### Applications

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

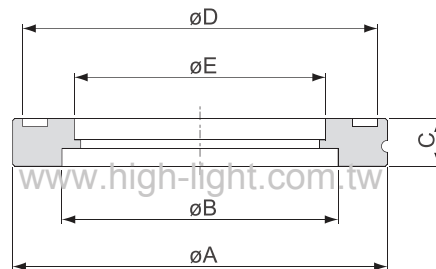


## Blank



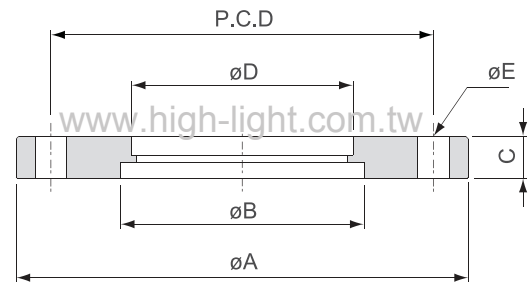
Model No.	Material	A	B	C	D	Parts No.
ISO63B	304 S.S.	95	70	12	90	152107003
ISO80B	304 S.S.	110	83	12	105	152108003
ISO100B	304 S.S.	130	102	12	125	152109003
ISO160B	304 S.S.	180	153	12	175	152112003
ISO200B	304 S.S.	240	213	12	235	152113003
ISO250B	304 S.S.	290	261	12	285	152114003
ISO320B	304 S.S.	370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

## Bored Blank



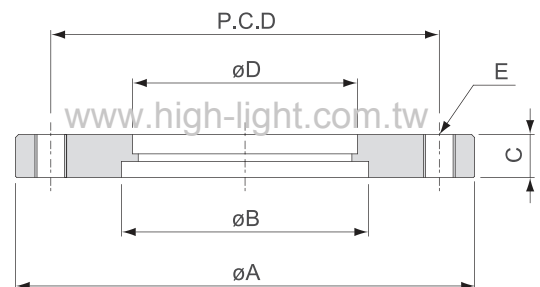
Model No.	Material	A	B	C	D	E	Parts No.
ISO63B63	304 S.S.	95	70	12	90	63.7	152207153
ISO80B76	304 S.S.	110	83	12	105	76.4	152208163
ISO100B102	304 S.S.	130	102	12	125	101.8	152209183
ISO160B153	304 S.S.	180	153	12	175	152.9	152212203
ISO200B204	304 S.S.	240	213	12	235	203.7	152213213
ISO250B255	304 S.S.	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

## Bolted Flange



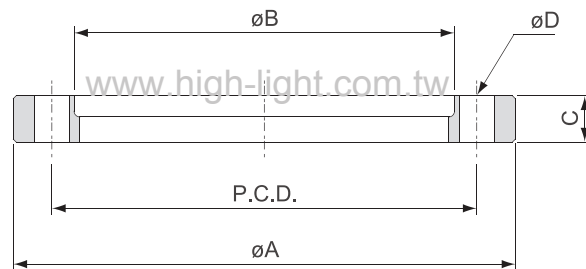
Model No.	Material	A	B	C	D	E *No	P.C.D	Parts No.
ISO63BF	304 S.S.	130	70	12	63.7	9*4	110	152307153
ISO80BF	304 S.S.	145	83	12	76.4	9*8	125	152308163
ISO100BF	304 S.S.	165	102	12	101.8	9*8	145	152309183
ISO160BF	304 S.S.	225	153	16	152.9	11*8	200	152312203
ISO200BF	304 S.S.	285	213	16	203.7	11*12	260	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

## Bolted Flange-Tapped



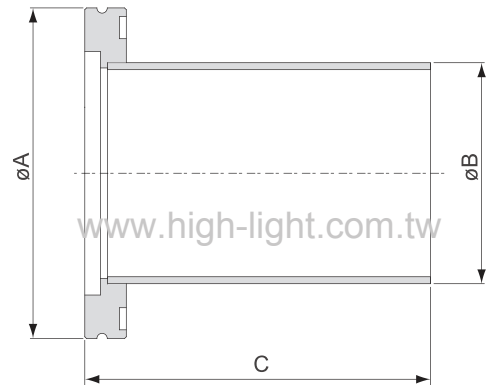
Model No.	Material	A	B	C	D	E *No	P.C.D	Parts No.
ISO63BFTAP	304 S.S.	130	70	12	63.7	M8*4	110	152407153
ISO80BFTAP	304 S.S.	145	83	12	76.4	M8*8	125	152408163
ISO100BFTAP	304 S.S.	165	102	12	101.8	M8*8	145	152409183
ISO160BFTAP	304 S.S.	225	153	16	152.9	M10*8	200	152412203
ISO200BFTAP	304 S.S.	285	213	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

## Rotatable Bolt Ring



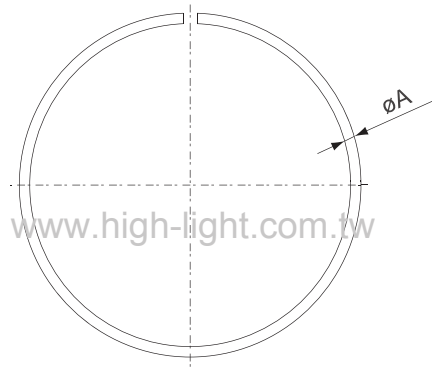
Model No.	Material	A	B	C	D *No	P.C.D	Parts No.
ISO63RBR	304 S.S.	130	98.5	12	9*4	110	152507073
ISO80RBR	304 S.S.	145	113.5	12	9*8	125	152508083
ISO100RBR	304 S.S.	165	133.5	12	9*8	145	152509093
ISO160RBR	304 S.S.	225	185.7	16	11*8	200	152512123
ISO200RBR	304 S.S.	285	245.7	16	11*12	260	152513133
ISO250RBR	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



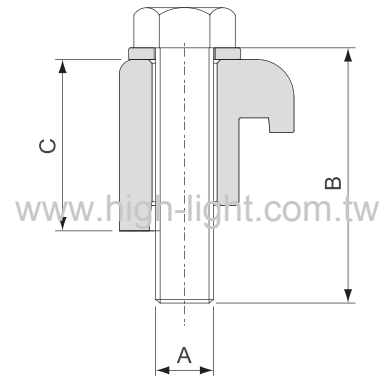
Model No.	Material	A	B	C	Parts No.
ISO63HN	304 S.S.	95	63.5	100	152607153
ISO80HN	304 S.S.	110	76.2	100	152608163
ISO100HN	304 S.S.	130	101.6	100	152609183
ISO160HN	304 S.S.	180	152.4	100	152612203
ISO200HN	304 S.S.	240	203.2	100	152613213
ISO250HN	304 S.S.	290	254	100	152614223
ISO320HN	304 S.S.	370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

## Split Retainer Ring



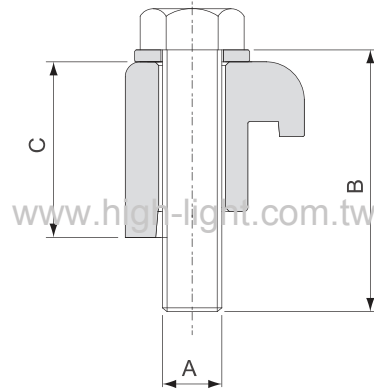
Model No.	Material	A	Fit Flange	Parts No.
ISO63SRR	304 S.S.	3	ISO63	20011041
ISO80SRR	304 S.S.	3	ISO80	20011141
ISO100SRR	304 S.S.	3	ISO100	20011241
ISO160SRR	304 S.S.	4.5	ISO160	20011541
ISO200SRR	304 S.S.	4.5	ISO200	20011641
ISO250SRR	304 S.S.	4.5	ISO250	20011741
ISO320SRR	304 S.S.	4.5	ISO320	20011941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

## Single Wall Clamp



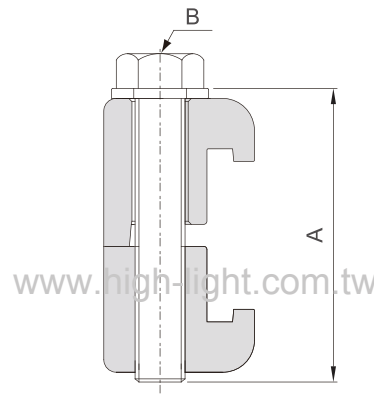
Model No.	Material	A	B	C	Fit Flange	Parts No.
ISO63-100SWC304	304 S.S.	M8	35	23	ISO63	2121A241
					ISO80	
					ISO100	
					ISO160	
ISO160-250SWC304	304 S.S.	M10	35	23	ISO200	2121A441
					ISO250	
					ISO320	
ISO320-500SWC304	304 S.S.	M12	50	30	ISO400	2121A541
					ISO500	
ISO63-100SWC-ZP	Steel+Zn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

## Single Wall Clamp



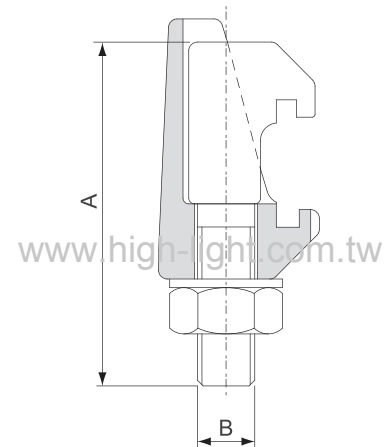
Model No.	Material	A	B	C	Fit Flange	Parts No.
ISO63-100SWCA	Aluminum	M8	35	23.5	ISO63	2121A211
					ISO80	
					ISO100	
					ISO160	
ISO160-250SWCA	Aluminum	M10	35	23.5	ISO200	2121A411
					ISO250	
					ISO320	
ISO320-500SWCA	Aluminum	M12	50	30	ISO400	2121A511
					ISO500	

## 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	
				4	ISO160	
ISO160-250DWCA	Aluminum	45	M10	6	ISO200	2122A411
				6	ISO250	
				8	ISO320	
ISO320-500DWCA	Aluminum	60	M12	8	ISO400	2122A511
				12	ISO500	

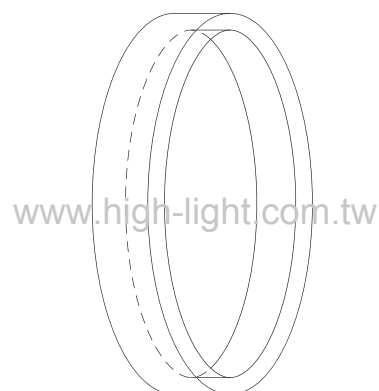
## Double Claw Clamp



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	
				8	ISO320	
				8	ISO400	
ISO320-500DCC316	316 S.S.	76	M12	8	ISO500	2123A561
				12	ISO630	
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	
				8	ISO320	
				8	ISO400	
ISO320-500DCC-ZP	Steel+Zn Plated	76	M12	8	ISO500	2123A531
				12	ISO630	
ISO630DCC-ZP	Steel+Zn Plated	86	M12	12	ISO630	2123A631

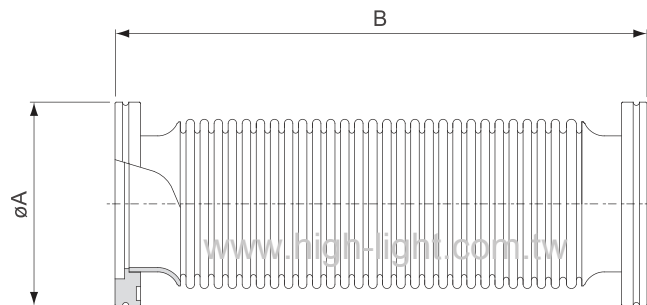


## Cap



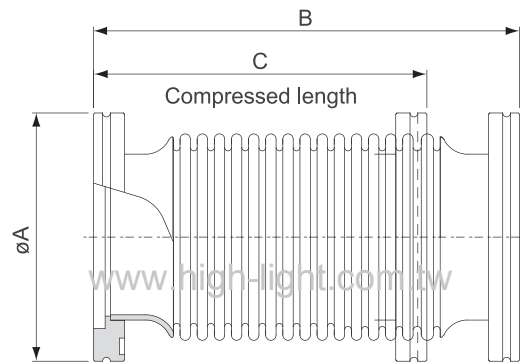
Model No.	Material	Fits Flange	Parts No.
ISO63CAP	Polyethylene	ISO63	5085G9
ISO80CAP	Polyethylene	ISO80	5085GU
ISO100CAP	Polyethylene	ISO100	5085HJ
ISO160CAP	Polyethylene	ISO160	5085JR
ISO200CAP	Polyethylene	ISO200	5085KU
ISO250CAP	Polyethylene	ISO250	5085LE
ISO320CAP	Polyethylene	ISO320	5085MA

## ISO Flexible Hoses



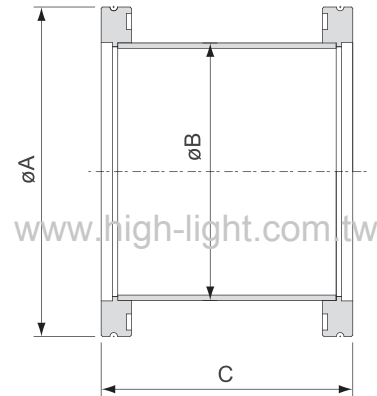
Model No.	Material	A	B	Parts No.
IS063FXC250	304 S.S.	95	250	40310670250BB
IS063FXC500	304 S.S.	95	500	40310670500BB
IS063FXC750	304 S.S.	95	750	40310670750BB
IS063FXC1000	304 S.S.	95	1000	40310671000BB
IS080FXC250	304 S.S.	110	250	40310680250BB
IS080FXC500	304 S.S.	110	500	40310680500BB
IS080FXC750	304 S.S.	110	750	40310680750BB
IS080FXC1000	304 S.S.	110	1000	40310681000BB
IS0100FXC250	304 S.S.	130	250	40310690250BB
IS0100FXC500	304 S.S.	130	500	40310690500BB
IS0100FXC750	304 S.S.	130	750	40310690750BB
IS0100FXC1000	304 S.S.	130	1000	40310691000BB

## ISO Compressible Bellows Connections



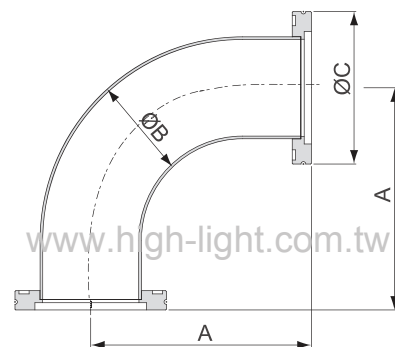
Model No.	Material	A	B	C	Parts No.
Excluding Bellows					
ISO63FXC140	304 S.S.	95	140	125	40310470140BB
ISO80FXC187	304 S.S.	110	187	160	40310480187BB
ISO100FXC187	304 S.S.	130	187	160	40310490187BB

## ISO Full Nipples



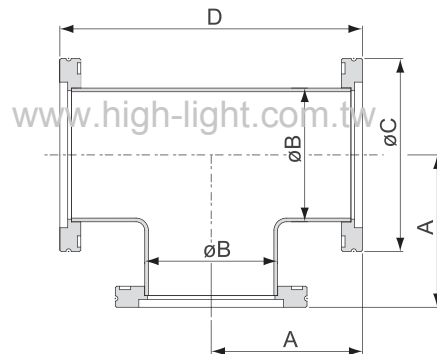
Model No.	Material	A	B	C	Parts No.
ISO63N	304 S.S.	95	63.5	100	16012072074
ISO80N	304 S.S.	110	76.2	100	16012082084
ISO100N	304 S.S.	130	101.6	100	16012092094
ISO160N	304 S.S.	180	152.4	100	16012122124
ISO200N	304 S.S.	240	203.2	100	16012132134
ISO250N	304 S.S.	290	254	100	16012142144
ISO320N	304 S.S.	370	304.8	200	16012162164
ISO400N	304 S.S.	450	406.4	200	16012182184
ISO500N	304 S.S.	550	508	200	16012192194

## ISO 90° Elbows



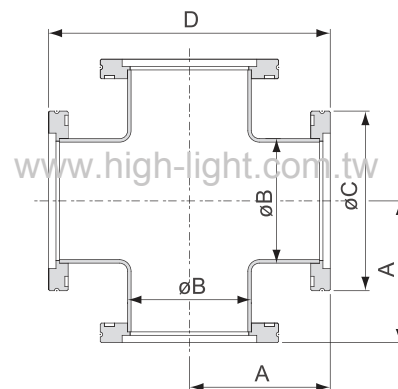
Model No.	Material	A	B	C	Parts No.
ISO63EL90A	304 S.S.	138.4	63.5	95	16032072074
ISO80EL90A	304 S.S.	166.9	76.2	110	16032082084
ISO100EL90A	304 S.S.	217.7	101.6	130	16032092094
ISO160EL90A	304 S.S.	235.2	152.4	180	16032122124

## 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

## ISO 4-Way Crosses



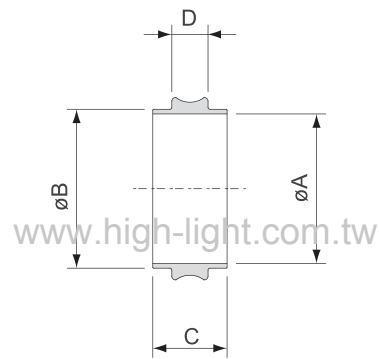
Model No.	Material	A	B	C	D	Parts No.
ISO63XA	304 S.S.	82.8	63.5	95	165.6	16192072074
ISO80XA	304 S.S.	89.15	76.2	110	178.3	16192082084
ISO100XA	304 S.S.	105	101.6	130	210	16192092094
ISO160XA	304 S.S.	133.6	152.4	180	267.2	16192122124

## ISO Centering Ring

Available Area :Europe

C/R' with a notch

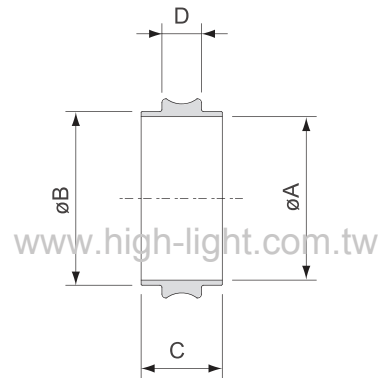
Special sizes available upon request



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
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

## ISO Centering Ring

Available Area :U.S.A



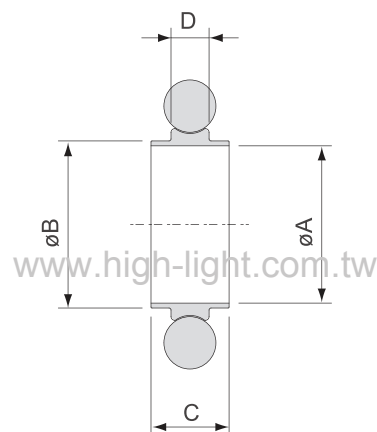
Model No.	Material	A	B	C	D	Parts No.
ISO63CRSA	304 S.S.	67	69.6	8	3.9	191010410
ISO80CRSA	304 S.S.	80	82.6	8	3.9	191011410
ISO100CRSA	304 S.S.	100	101.6	8	3.9	191012410
ISO160CRSA	304 S.S.	150	152.6	8	3.9	191015410
ISO200CRSA	304 S.S.	210	212.6	8	3.9	191016410
ISO250CRSA	304 S.S.	257.5	260.4	8	3.9	191017410
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
ISO63CRAA	Al	67	69.6	8	3.9	191010110
ISO80CRAA	Al	80	82.6	8	3.9	191011110
ISO100CRAA	Al	100	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

## ISO Centering Ring with O'Ring

Available Area :Europe

C/R' with a notch

Special sizes available upon request



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

O'Ring's color is brown, black is available upon request

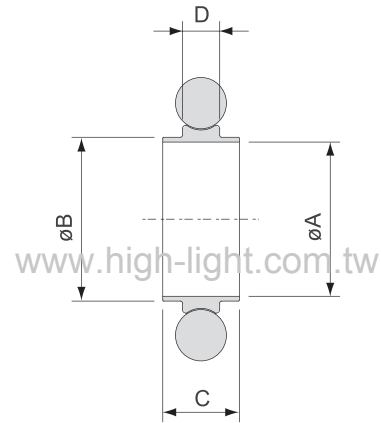


## ISO Centering Ring with O'Ring

Available Area :Europe

C/R' with a notch

Special sizes available upon request

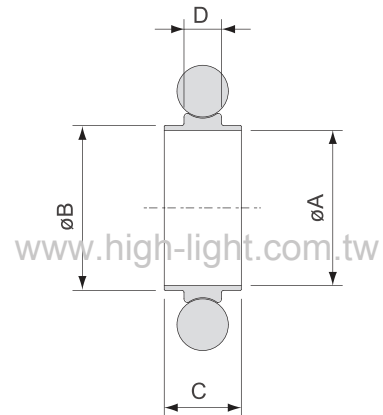


Model No.	Material	O'Ring	A	B	C	D	Parts No.	
	C/R	O'Ring	Size					
ISO63CRNSE	304 S.S.	NBR	AS-337	68	70	8	3.9	191310422
ISO80CRNSE	304 S.S.	NBR	AS-341	81	82.6	8	3.9	191311422
ISO100CRNSE	304 S.S.	NBR	AS-347	100	102	8	3.9	191312422
ISO160CRNSE	304 S.S.	NBR	AS-362	148	153	8	3.9	191315422
ISO200CRNSE	304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

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

## ISO Centering Ring with O'Ring

Available Area :U.S.A

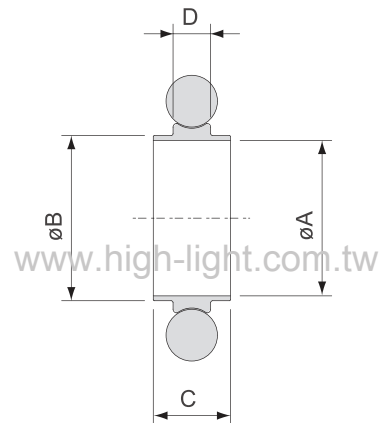


Model No.	Material	O'Ring	A	B	C	D	Parts No.	
	C/R	O'Ring	Size					
ISO63CRVSA	304 S.S.	Viton	AS-337	67	69.6	8	3.9	191110411
ISO80CRVSA	304 S.S.	Viton	AS-341	80	82.6	8	3.9	191111411
ISO100CRVSA	304 S.S.	Viton	AS-347	100	101.6	8	3.9	191112411
ISO160CRVSA	304 S.S.	Viton	AS-362	150	152.6	8	3.9	191115411
ISO200CRVSA	304 S.S.	Viton	AS-371	210	212.6	8	3.9	191116411
ISO250CRVSA	304 S.S.	Viton	AS-378	257.5	260.4	8	3.9	191117411
ISO320CRVSA	304 S.S.	Viton	AS-454	312	317.3	12	5.6	191119411
ISO400CRVSA	304 S.S.	Viton	AS-461	394	399.2	12	5.6	191121411
ISO500CRVSA	304 S.S.	Viton	AS-469	494	500.2	12	5.6	191123411
ISO63CRVAA	Al	Viton	AS-337	67	69.6	8	3.9	191110111
ISO80CRVAA	Al	Viton	AS-341	80	82.6	8	3.9	191111111
ISO100CRVAA	Al	Viton	AS-347	100	101.6	8	3.9	191112111
ISO160CRVAA	Al	Viton	AS-362	150	152.6	8	3.9	191115111
ISO200CRVAA	Al	Viton	AS-371	210	212.6	8	3.9	191116111
ISO250CRVAA	Al	Viton	AS-378	257.5	260.4	8	3.9	191117111
ISO320CRVAA	Al	Viton	AS-454	312	317.3	12	5.6	191119111
ISO400CRVAA	Al	Viton	AS-461	394	399.2	12	5.6	191121111
ISO500CRVAA	Al	Viton	AS-469	494	500.2	12	5.6	191123111

O'Ring's color is brown, black is available upon request

## ISO Centering Ring with O'Ring

Available Area :U.S.A



Model No.	Material	O'Ring	A	B	C	D	Parts No.	
	C/R	O'Ring	Size					
ISO63CRNSA	304 S.S.	NBR	AS-337	67	69.6	8	3.9	191310412
ISO80CRNSA	304 S.S.	NBR	AS-341	80	82.6	8	3.9	191311412
ISO100CRNSA	304 S.S.	NBR	AS-347	100	101.6	8	3.9	191312412
ISO160CRNSA	304 S.S.	NBR	AS-362	150	152.6	8	3.9	191315412
ISO200CRNSA	304 S.S.	NBR	AS-371	210	212.6	8	3.9	191316412
ISO250CRNSA	304 S.S.	NBR	AS-378	257.5	260.4	8	3.9	191317412
ISO320CRNSA	304 S.S.	NBR	AS-454	312	317.3	12	5.6	191319412
ISO400CRNSA	304 S.S.	NBR	AS-461	394	399.2	12	5.6	191321412
ISO500CRNSA	304 S.S.	NBR	AS-469	494	500.2	12	5.6	191323412
ISO63CRNAA	AI	NBR	AS-337	67	69.6	8	3.9	191310112
ISO80CRNAA	AI	NBR	AS-341	80	82.6	8	3.9	191311112
ISO100CRNAA	AI	NBR	AS-347	100	101.6	8	3.9	191312112
ISO160CRNAA	AI	NBR	AS-362	150	152.6	8	3.9	191315112
ISO200CRNAA	AI	NBR	AS-371	210	212.6	8	3.9	191316112
ISO250CRNAA	AI	NBR	AS-378	257.5	260.4	8	3.9	191317112
ISO320CRNAA	AI	NBR	AS-454	312	317.3	12	5.6	191319112
ISO400CRNAA	AI	NBR	AS-461	394	399.2	12	5.6	191321112
ISO500CRNAA	AI	NBR	AS-469	494	500.2	12	5.6	191323112

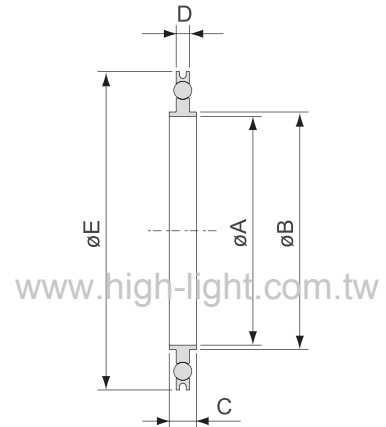
O'Ring color for NBR material is black, brown is available upon request

## ISO Outer Ring Centering Ring, O'Ring

Available Area :Europe

C/R' with a notch

Special sizes available upon request



Model No.	Material		O'Ring	A	B	C	D	E	Parts No.	
	O/R	C/R								O'Ring
ISO63OCRVE	Al	304 S.S.	Viton	AS-337	68	70	8	3.9	94	192110421
ISO80OCRVE	Al	304 S.S.	Viton	AS-341	81	82.6	8	3.9	109	192111421
ISO100OCRVE	Al	304 S.S.	Viton	AS-347	100	102	8	3.9	128	192112421
ISO160OCRVE	Al	304 S.S.	Viton	AS-362	148	153	8	3.9	179	192115421
ISO200OCRVE	Al	304 S.S.	Viton	AS-371	210	213	8	3.9	238	192116421
ISO250OCRVE	Al	304 S.S.	Viton	AS-378	257.5	261	8	3.9	287	192117421
ISO320OCRVE	Al	304 S.S.	Viton	AS-454	312	318	12	5.6	344	192119421
ISO400OCRVE	Al	304 S.S.	Viton	AS-461	394	400	12	5.6	446	192121421
ISO500OCRVE	Al	304 S.S.	Viton	AS-469	494	501	12	5.6	535	192123421
ISO63OCRVAE	Al	Al	Viton	AS-337	68	70	8	3.9	94	192110121
ISO80OCRVAE	Al	Al	Viton	AS-341	81	82.6	8	3.9	109	192111121
ISO100OCRVAE	Al	Al	Viton	AS-347	100	102	8	3.9	128	192112121
ISO160OCRVAE	Al	Al	Viton	AS-362	148	153	8	3.9	179	192115121
ISO200OCRVAE	Al	Al	Viton	AS-371	210	213	8	3.9	238	192116121
ISO250OCRVAE	Al	Al	Viton	AS-378	257.5	261	8	3.9	287	192117121
ISO320OCRVAE	Al	Al	Viton	AS-454	312	318	12	5.6	344	192119121
ISO400OCRVAE	Al	Al	Viton	AS-461	394	400	12	5.6	446	192121121
ISO500OCRVAE	Al	Al	Viton	AS-469	494	501	12	5.6	535	192123121

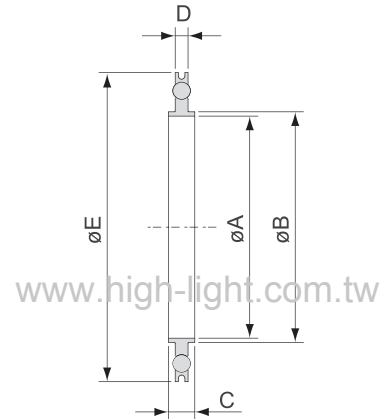
O'Ring's color is brown, black is available upon request

## ISO Outer Ring Centering Ring, O'Ring

Available Area :Europe

C/R' with a notch

Special sizes available upon request

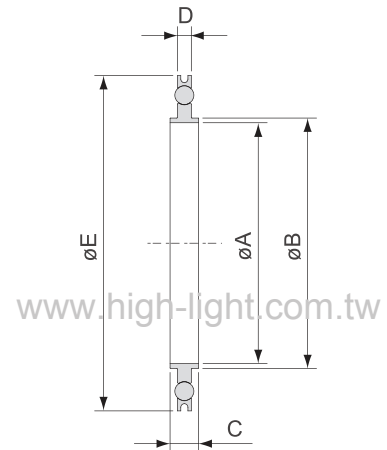


Model No.	Material		O'Ring	AS-Size	A	B	C	D	E	Parts No.
	O/R	C/R			O'Ring	Size				
ISO63OCRNSE	AI	304 S.S.	NBR	AS-337	68	70	8	3.9	94	192310422
ISO80OCRNSE	AI	304 S.S.	NBR	AS-341	81	82.6	8	3.9	109	192311422
ISO100OCRNSE	AI	304 S.S.	NBR	AS-347	100	102	8	3.9	128	192312422
ISO160OCRNSE	AI	304 S.S.	NBR	AS-362	148	153	8	3.9	179	192315422
ISO200OCRNSE	AI	304 S.S.	NBR	AS-371	210	213	8	3.9	238	192316422
ISO250OCRNSE	AI	304 S.S.	NBR	AS-378	257.5	261	8	3.9	287	192317422
ISO320OCRNSE	AI	304 S.S.	NBR	AS-454	312	318	12	5.6	344	192319422
ISO400OCRNSE	AI	304 S.S.	NBR	AS-461	394	400	12	5.6	446	192321422
ISO500OCRNSE	AI	304 S.S.	NBR	AS-469	494	501	12	5.6	535	192323422
ISO63OCRNAE	AI	AI	NBR	AS-337	68	70	8	3.9	94	192310122
ISO80OCRNAE	AI	AI	NBR	AS-341	81	82.6	8	3.9	109	192311122
ISO100OCRNAE	AI	AI	NBR	AS-347	100	102	8	3.9	128	192312122
ISO160OCRNAE	AI	AI	NBR	AS-362	148	153	8	3.9	179	192315122
ISO200OCRNAE	AI	AI	NBR	AS-371	210	213	8	3.9	238	192316122
ISO250OCRNAE	AI	AI	NBR	AS-378	257.5	261	8	3.9	287	192317122
ISO320OCRNAE	AI	AI	NBR	AS-454	312	318	12	5.6	344	192319122
ISO400OCRNAE	AI	AI	NBR	AS-461	394	400	12	5.6	446	192321122
ISO500OCRNAE	AI	AI	NBR	AS-469	494	501	12	5.6	535	192323122

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

## ISO Outer Ring Centering Ring, O'Ring

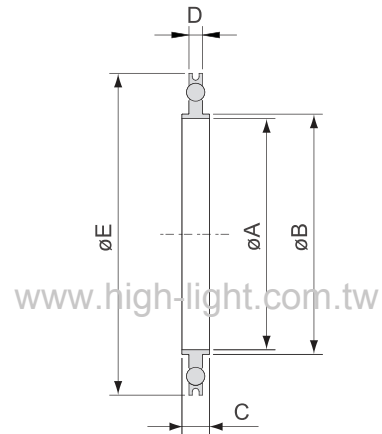
Available Area :U.S.A



Model No.	Material		O'Ring	A	B	C	D	E	Parts No.	
	O/R	C/R	O'Ring	Size						
ISO63OCRVSAA	AI	304 S.S.	Viton	AS-337	67	69.5	8	3.9	94	192110411
ISO80OCRVSAA	AI	304 S.S.	Viton	AS-341	80	82.6	8	3.9	109	192111411
ISO100OCRVSAA	AI	304 S.S.	Viton	AS-347	100	101.6	8	3.9	128	192112411
ISO160OCRVSAA	AI	304 S.S.	Viton	AS-362	150	152.6	8	3.9	179	192115411
ISO200OCRVSAA	AI	304 S.S.	Viton	AS-371	210	212.6	8	3.9	238	192116411
ISO250OCRVSAA	AI	304 S.S.	Viton	AS-378	257.5	260.4	8	3.9	287	192117411
ISO320OCRVSAA	AI	304 S.S.	Viton	AS-454	312	317.3	12	5.6	344	192119411
ISO400OCRVSAA	AI	304 S.S.	Viton	AS-461	394	399.2	12	5.6	446	192121411
ISO500OCRVSAA	AI	304 S.S.	Viton	AS-469	494	500.2	12	5.6	535	192123411
ISO63OCRVA	AI	AI	Viton	AS-337	67	69.5	8	3.9	94	192110111
ISO80OCRVA	AI	AI	Viton	AS-341	80	82.6	8	3.9	109	192111111
ISO100OCRVA	AI	AI	Viton	AS-347	100	101.6	8	3.9	128	192112111
ISO160OCRVA	AI	AI	Viton	AS-362	150	152.6	8	3.9	179	192115111
ISO200OCRVA	AI	AI	Viton	AS-371	210	212.6	8	3.9	238	192116111
ISO250OCRVA	AI	AI	Viton	AS-378	257.5	260.4	8	3.9	287	192117111
ISO320OCRVA	AI	AI	Viton	AS-454	312	317.3	12	5.6	344	192119111
ISO400OCRVA	AI	AI	Viton	AS-461	394	399.2	12	5.6	446	192121111
ISO500OCRVA	AI	AI	Viton	AS-469	494	500.2	12	5.6	535	192123111

O'Ring's color is brown, black is available upon request

## ISO Outer Ring Centering Ring, O'Ring Available Area :U.S.A



Model No.	Material		O'Ring Size	A	B	C	D	E	Parts No.
	O/R	C/R							
ISO63OCRNSA	AI	304 S.S.	NBR AS-337	67	69.5	8	3.9	94	192310412
ISO80OCRNSA	AI	304 S.S.	NBR AS-341	80	82.6	8	3.9	109	192311412
ISO100OCRNSA	AI	304 S.S.	NBR AS-347	100	101.6	8	3.9	128	192312412
ISO160OCRNSA	AI	304 S.S.	NBR AS-362	150	152.6	8	3.9	179	192315412
ISO200OCRNSA	AI	304 S.S.	NBR AS-371	210	212.6	8	3.9	238	192316412
ISO250OCRNSA	AI	304 S.S.	NBR AS-378	257.5	260.4	8	3.9	287	192317412
ISO320OCRNSA	AI	304 S.S.	NBR AS-454	312	317.3	12	5.6	344	192319412
ISO400OCRNSA	AI	304 S.S.	NBR AS-461	394	399.2	12	5.6	446	192321412
ISO500OCRNSA	AI	304 S.S.	NBR AS-469	494	500.2	12	5.6	535	192323412
ISO63OCRNAA	AI	AI	NBR AS-337	67	69.5	8	3.9	94	192310112
ISO80OCRNAA	AI	AI	NBR AS-341	80	82.6	8	3.9	109	192311112
ISO100OCRNAA	AI	AI	NBR AS-347	100	101.6	8	3.9	128	192312112
ISO160OCRNAA	AI	AI	NBR AS-362	150	152.6	8	3.9	179	192315112
ISO200OCRNAA	AI	AI	NBR AS-371	210	212.6	8	3.9	238	192316112
ISO250OCRNAA	AI	AI	NBR AS-378	257.5	260.4	8	3.9	287	192317112
ISO320OCRNAA	AI	AI	NBR AS-454	312	317.3	12	5.6	344	192319112
ISO400OCRNAA	AI	AI	NBR AS-461	394	399.2	12	5.6	446	192321112
ISO500OCRNAA	AI	AI	NBR AS-469	494	500.2	12	5.6	535	192323112

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



**Htc 日揚科技**

[www.high-light.com.tw](http://www.high-light.com.tw)

**總公司 Headquarters**

709 台南市安南區工明南二路106號

No. 106, Gung-Min South Road II, An-Nan Area, Tainan City 709, Taiwan (R.O.C.)

TEL +886-6-2460296 FAX +886-6-2478022

<http://www.high-light.com.tw> Mail: [ec@high-light.com.tw](mailto:ec@high-light.com.tw)

**台南二廠 Tainan Factory II**

709 台南市安南區工明南一路101號

No. 101 Gung-Min South Road 1, An-Nan Area, Tainan City 709, Taiwan (R.O.C.)

TEL +886-6-5116111 FAX +886-6-2564001 +886-6-5105168

**日揚電子科技（上海）有限公司 Shanghai. Highlight Tech Co., Ltd.**

200444 上海市寶山城市工業園區域銀路51號

No. 51, Cheng Yin Rd, Baoshan City Industrial Zone, Shanghai 200444, China

TEL +86-21-36162036 FAX +86-21-36162037

<http://www.high-light.com.cn> Mail: [ec@high-light.com.tw](mailto:ec@high-light.com.tw)

**新竹技術服務中心 HSIN-CHU Technology Service Center**

303 新竹縣湖口鄉鳳山村中華路13號

No. 13, Zhonghua Road, Fengshan Village, Hukou TownShip, Hsinchu County, 303, Taiwan (R.O.C.)

TEL: +886-3-5973325 FAX: +886-3-5973083