

VACUUM ISO COMPONENTS

- Clamps and SealsE 03

There are four different configurations to fit together ISO flanges.

Figure 1 illustrates the double claw-clamp assembly which is the most commonly used configuration.

Figure 2 shows the wall clamp assembly where a claw-clamp flange is mounted to a rotatable bolt ring. This assembly combines the claw-clamp flange and bolt flanges with nuts and bolts. The rotatable bolt ring and fixed bolted assembly is shown in figure 3. The rotatable bolt ring consists of a rotatable outer ring and a split retainer ring to hold the claw-clamp in place. Finally configuration 4 shows a bolted fixed flange and a tapped flange, or chamber wall for example.

All four configurations use an O-ring seal held in place by a centering ring. This is effective down to 10^{-7} mbar. With Viton O-ring assemblies bakeable to 200°C (sustained 150°C).

The ISO range of flanges and fittings are manufactured from high quality 316L (1.4404) Stainless Steel*.

All given dimensions are nominal in mm.

*304L (1.4306) available on request.



Figure 1



Figure 2



Figure 3

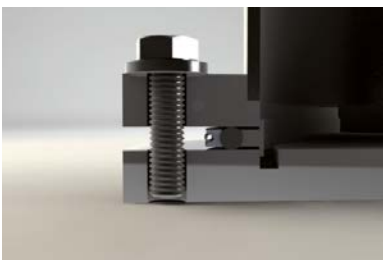
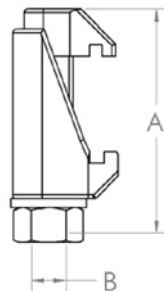


Figure 4

Clamps and Seals

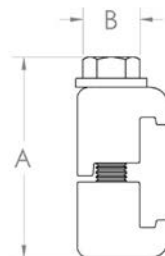
ISO DOUBLE CLAW CLAMPS - STEEL PLATED

P/N	DN	A	B	CLAMPS REQ'D
ISO63/250DC	63-250	60	M10	4
ISO320/500DC	320-500	75	M12	8
ISO630DC	630	85	M12	12



ISO DOUBLE CLAW CLAMPS - ALUMINUM

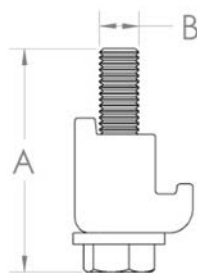
P/N	DN	A	B	CLAMPS REQ'D
ISO63/100DCA	63-100	50	M8	4
ISO160/250DCA	160-250	52	M10	8
ISO320/500DCA	320-500	68	M12	12



ISO WALL CLAMPS - STEEL

P/N	DN	A	B THREAD SIZE	CLAMPS REQ'D
ISO63/100WC	63-100	35	M8	4
ISO160/250WC	160-250	40	M10	8
ISO320/500WC	320-500	50	M12	12

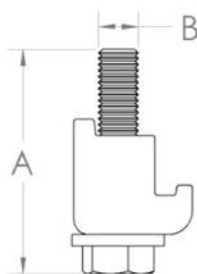
Used with blind tapped holes and centering ring.



ISO WALL CLAMPS - ALUMINUM

P/N	DN	A	B THREAD SIZE	CLAMPS REQ'D
ISO63/100WCA	63-100	35	M8	4
ISO160/250WCA	160-250	40	M10	8
ISO320/500WCA	320-500	50	M12	12

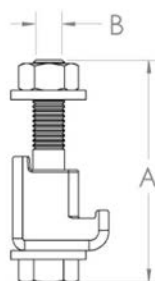
Used with blind tapped holes and centering ring.



ISO WALL CLAMPS, NUT & WASHER - STEEL

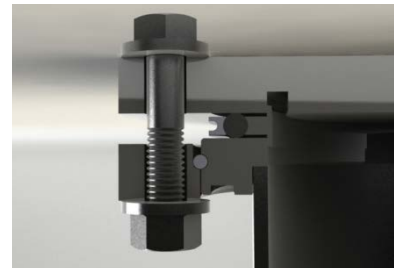
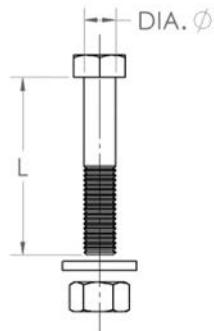
P/N	DN	A	B THREAD SIZE	CLAMPS REQ'D
ISO63/100WCN	63-100	45	M8	4
ISO160/250WCN	160-250	50	M10	8
ISO320/500WCN	320-500	60	M12	12

Used with through bolt holes and centering ring.
Also available with aluminum clamps on request.



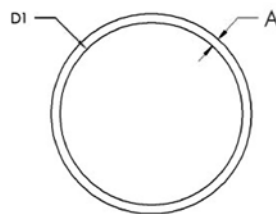
NUT BOLT WASHER SET FOR ISO F FLANGE - STAINLESS STEEL

P/N	DN	DIA	L	SET OF
NBW840	63-100	M8	40	8 PCS
NBW1050	160-250	M10	50	12 PCS
NBW1270	320-500	M12	70	16 PCS
NBW1280	630	M12	80	20 PCS



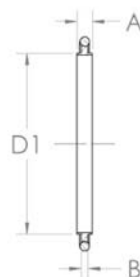
ISO O-RING - VITON / NITRILE

P/N	DN	A	D1	P/N NITRILE
ISO63VR	63	5.3	76	ISO63NR
ISO80VR	80	5.3	88	ISO80NR
ISO100VR	100	5.3	107	ISO100NR
ISO160VR	160	5.3	158	ISO160NR
ISO200VR	200	5.3	221	ISO200NR
ISO250VR	250	5.3	253	ISO250NR
ISO320VR	320	7.0	330	ISO320NR
ISO400VR	400	7.0	405	ISO400NR
ISO500VR	500	7.0	507	ISO500NR
ISO630VR	630	7.0	659	ISO630NR



ISO CENTERING RING

P/N	DN	A	B	D1	O-RING SIZE
ISO63--CR	63	8	3.9	70	5.3
ISO80--CR	80	8	3.9	83	5.3
ISO100--CR	100	8	3.9	102	5.3
ISO160--CR	160	8	3.9	153	5.3
ISO200--CR	200	8	3.9	213	5.3
ISO250--CR	250	8	3.9	261	5.3
ISO320--CR	320	14	5.6	318	7.0
ISO400--CR	400	14	5.6	400	7.0
ISO500--CR	500	14	5.6	501	7.0
ISO630--CR	630	14	5.6	651	7.0



P/N	Materials	Temperature range
SVCR	Stainless Steel 304L / Viton	-10° to 200°C (Sustained 150°C)
SNCR	Stainless Steel 304L / Nitrile	-10 to 100°C

ISO TRAPPED CENTERING RING

P/N	DN	A	B	D1	D2	O-RING SIZE
ISO63--CRT	63	8	3.9	70	94	5.3
ISO80--CRT	80	8	3.9	83	109	5.3
ISO100--CRT	100	8	3.9	102	128	5.3
ISO160--CRT	160	8	3.9	153	179	5.3
ISO200--CRT	200	8	3.9	213	239	5.3
ISO250--CRT	250	8	3.9	261	287	5.3
ISO320--CRT	320	14	5.6	318	358	7.0
ISO400--CRT	400	14	5.6	400	440	7.0
ISO500--CRT	500	14	5.6	501	541	7.0
ISO630--CRT	630	14	5.6	651	691	7.0



P/N	MATERIALS	TEMPERATURE RANGE
SVCRT	Stainless Steel ⁽¹⁾ 304L / Viton	-10 to 200°C (Sustained 150°C)
SNCRT	Stainless Steel ⁽¹⁾ 304L / Nitrile	-10 to 100°C
AVCRT	Aluminum / Viton	-10 to 200°C (Sustained 150°C)
ANCRT	Aluminum / Nitrile	-10 to 100°C

(1) Inner centering ring Stainless Steel, outer Aluminum.

ISO MESH CENTERING RING

P/N	DN	A	B	D1	D2	O-RING SIZE
ISO63MCR-	63	8	3.9	70	86.6	5.3
ISO80MCR-	80	8	3.9	83	98.6	5.3
ISO100MCR-	100	8	3.9	102	117.6	5.3
ISO160MCR-	160	8	3.9	153	168.6	5.3
ISO200MCR-	200	8	3.9	102	231.6	5.3
ISO250MCR-	250	8	3.9	153	263.6	5.3



Stainless Steel centering ring with mesh screen and replacement O-ring.

P/N	MATERIALS	TEMPERATURES
MCRV	Stainless Steel 304L / Viton	-10 to 200°C (Sustained 150°C)
MCRN	Stainless Steel 304L / Nitrile	-10 to 100°C

ISO K SEAL ALUMINUM

P/N	DN	A	B	C	D	E	NUMBER OF	
							CLAWS	WALL CLAWS
ISO63AS	63	85.6	83	69.8	2.6	4.5	4	
ISO100AS	100	116.6	114	101.8	2.6	4.5	6	8
ISO160AS	160	166.6	164	152.8	2.6	4.5	8	8
ISO250AS	250	276.6	274	260.8	2.6	4.5	12	12





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Vacuum E 2013-5

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