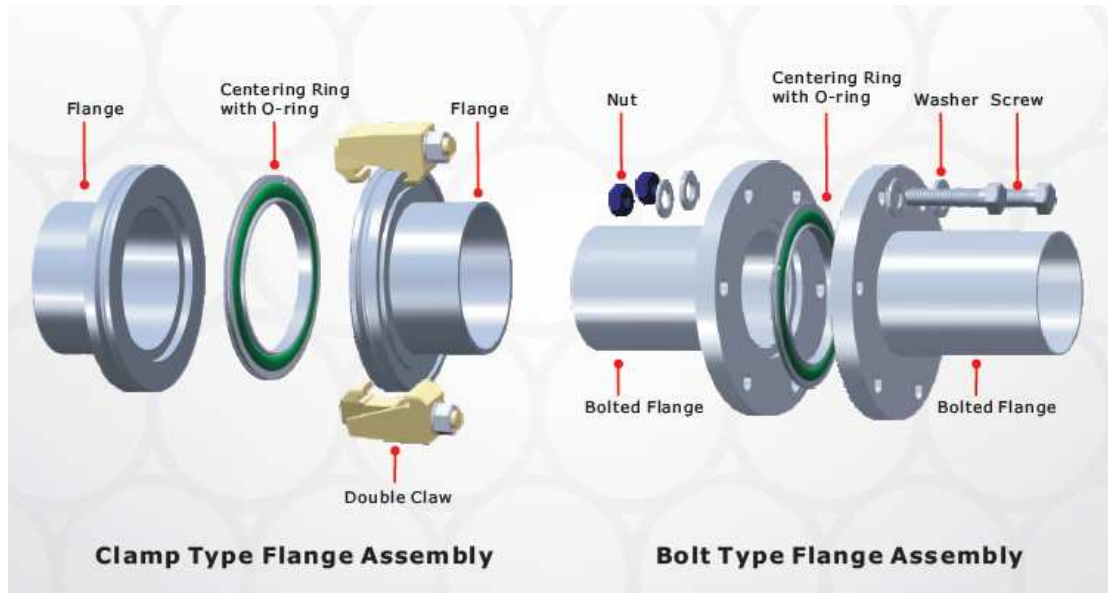


ISO Flange & Components



STANDARD SPECIFICATION

Application:

High Vacuum

Materials:

304, 304L, 316L or aluminum

Flange Sizes:

ISO63~ISO320

Tube Sizes:

$\frac{1}{2}$ " ~ 6.0"

Surface Finish: Bead-blasted
Other finishes are also available.

Vacuum Range:

760 Torr ~ 1×10^{-8} Torr

Gasket Materials:

Viton, Buna-N or Sillcon

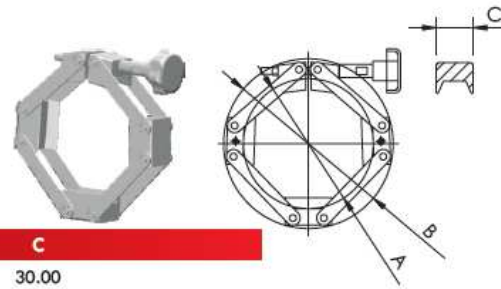
Temperature Range:

$\leq 200^{\circ}\text{C}$ (150°C sustained)

NW CHAIN CLAMPS

*MATERIALS: ALUMINUM

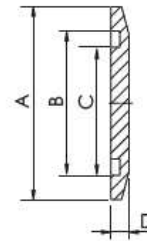
Part Number	Size	A	B	C
2113008-00805	NW80	117.10	153.00	30.00
2113008-01005	NW100	136.50	171.68	30.00



NW BLANK FLANGES

*MATERIALS: 304, 304L, 316L or ALUMINUM

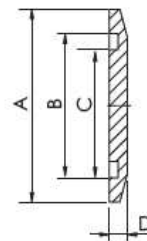
Part Number	Size	A	B	C	D
2116002-0080	NW80	114.00	83.00	73.00	11.00
2116002-0100	NW100	134.00	102.00	92.00	11.00
2116002-0160	NW160	190.00	153.20	143.00	11.00



NW BLANK FLANGES

*MATERIALS: 304, 304L, 316L or ALUMINUM

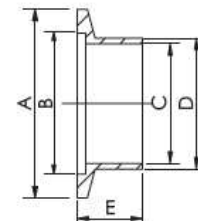
Part Number	Size	A	B	C	D
2116002-0080	NW80	114.00	83.00	73.00	11.00
2116002-0100	NW100	134.00	102.00	92.00	11.00
2116002-0160	NW160	190.00	153.20	143.00	11.00



NW WELD FLANGES

*MATERIALS: 304, 304L, 316L or ALUMINUM

Part Number	Size	A	B	C	D	E	Tube Size
2114011-0080	NW80	114.00	83.10	83.10	89.10	20.00	80A10S
2114006-0080	NW80	114.00	83.10	84.90	89.10	20.00	80A5S
2114011-0100	NW100	134.00	102.00	108.30	114.30	20.00	100A10S
2114006-0100	NW100	134.00	102.00	110.10	114.30	20.00	100A5S
2114011-0160	NW160	190.00	153.20	158.40	165.20	20.00	150A10S



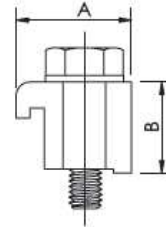
SINGLE CLAWS

*MATERIALS: 304 or ALUMINUM

*BOLT THREAD: METRIC or INCH SIZE



Part Number	Size	A	B	Thread Size
2513005B0-00063	ISO63-ISO100	24.10	22.50	M8 x 35L
2513005B0-00064	ISO63-ISO100	24.10	22.50	5/16"-18
2513005B0-00160	ISO160-ISO250	29.20	23.00	M10 x 35L
2513005B0-00161	ISO160-ISO250	29.20	23.00	5/16"-18
2513005B0-00162	ISO160-ISO250	29.20	23.00	M10 x 50L

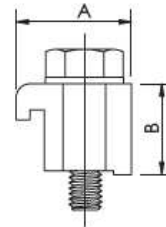


SINGLE CLAWS - Zinc Plated Steel

*BOLT THREAD: METRIC



Part Number	Size	A	B	Thread Size
2513005FD-00063	ISO60-ISO100	24.10	22.50	M8 x 35L
2513005FD-00160	ISO160-ISO250	29.20	23.00	M10 x 35L
2513005FD-00320	ISO320-ISO500	30.00	30.00	M12 x 40L



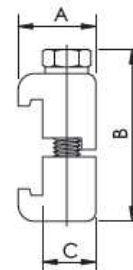
DOUBLE CLAW CLAMPS

*MATERIALS: ALUMINUM

*BOLT THREAD: METRIC or INCH SIZE



Part Number	Size	A	B	C	Thread Size
2513003-02505	ISO63-ISO100	24.10	50.30	15.70	M8x45L
2513003-02515	ISO63-ISO100	24.10	50.30	15.70	5/16"-18
2513003-06005	ISO160-ISO250	27.90	52.10	20.30	M10x45L
2513003-06015	ISO160-ISO250	27.90	52.10	20.30	5/16"-18
2513A03-32515	ISO400-ISO500	34.00	65.00	26.07	M12x57L

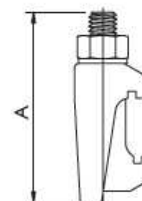


DOUBLE CLAWS

*MATERIALS: 304 or ZINC PLATED STEEL

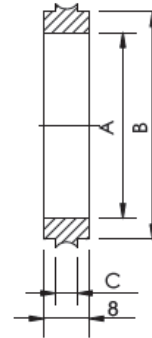


Part Number	Size	A	Bolt Size	Material
2513007B0-00063	ISO63-ISO250	60.00	M10	SS 304
2513007FD-00063	ISO63-ISO250	60.00	M10	Zinc Plated Steel



CENTERING RINGS

*MATERIALS: 304, 316L or ALUMINUM

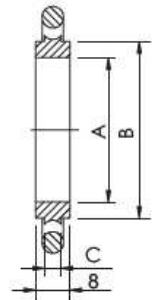


Part Number	Size	A	B	C
2525003-ZZ0063	ISO63	66.80	69.60	3.90
2525003-ZZ0080	ISO80	79.80	82.30	3.90
2525003-ZZ0100	ISO100	98.80	101.30	3.90
2525003-ZZ0160	ISO160	149.90	152.10	3.90
2525003-ZZ0200	ISO200	209.80	212.60	3.90
2525003-ZZ0250	ISO250	258.80	260.70	3.90

CENTERING RING ASSEMBLY

*MATERIALS: 304, 316L or ALUMINUM

*O-RING MATERIALS: VITON, SILICON or BUNA-N



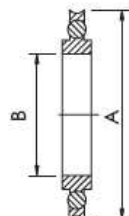
Part Number	Size	A	B	C
2525003-0063	ISO63	66.80	69.60	3.90
2525003-0080	ISO80	79.80	82.30	3.90
2525003-0100	ISO100	98.80	101.30	3.90
2525003-0160	ISO160	149.90	152.10	3.90
2525003-0200	ISO200	209.80	212.60	3.90
2525003-0250	ISO250	258.80	260.70	3.90

CENTERING RING ASSEMBLY with ALUMINUM SPACER RING

*CENTERING RING MATERIALS: 304, 316L or ALUMINUM

*O-RING MATERIALS: VITON, SILICON or BUNA-N

*SPACER MATERIAL: ALUMINUM



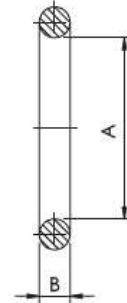
Part Number	Size	A	B
2525002-0063	ISO63	94.00	66.80
2525002-0080	ISO80	109.00	79.80
2525002-0100	ISO100	128.00	98.80
2525002-0160	ISO160	177.00	149.90
2525002-0200	ISO200	239.00	209.80
2525002-0250	ISO250	284.00	258.80

REPLACEMENT O-RINGS

*MATERIALS: VITON, SILICON or BUNA-N



Part Number	Size	A	B
C090002-0336	ISO63	72.40	5.30
C090002-0340	ISO80	85.10	5.30
C090002-0346	ISO100	104.10	5.30
C090002-0361	ISO160	151.90	5.30
C090002-0371	ISO200	215.30	5.30
C090002-0377	ISO250	253.40	5.30

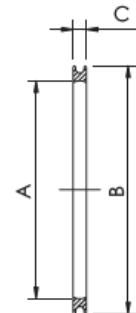


SPACER RINGS

*MATERIAL: ALUMINUM

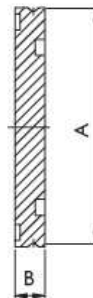


Part Number	Size	A	B	C
2525001-00635	ISO63	85.40	92.60	3.75
2525001-00805	ISO80	98.70	107.80	3.75
2525001-01005	ISO100	116.40	125.60	3.75
2525001-01605	ISO160	167.80	177.00	3.75
2525001-02005	ISO200	227.80	237.00	3.75
2525001-02505	ISO250	275.40	284.60	3.75



BLANK FLANGES

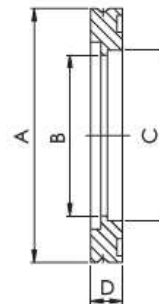
*MATERIALS: 304, 304L, 316L or ALUMINUM



Part Number	Size	A	B
2516001-0250	ISO63	95.00	11.90
2516001-0300	ISO80	110.00	11.90
2516001-0400	ISO100	130.00	11.90
2516001-0600	ISO160	180.00	11.90
2516001-0800	ISO200	240.00	12.00
2516001-1000	ISO250	290.00	12.00

BORED FLANGES

*MATERIALS: 304, 304L, 316L or ALUMINUM

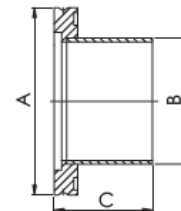


Part Number	Size	A	B	C	D
2514001-0250	ISO63	95.00	60.20	63.80	11.90
2514001-0300	ISO80	110.00	72.90	76.50	11.90
2514001-0400	ISO100	130.00	98.30	101.90	11.90
2514001-0600	ISO160	180.00	149.10	152.90	11.90
2514001-0800	ISO200	240.00	197.10	203.70	11.90
2514001-1000	ISO250	290.00	247.70	254.50	11.90

HALF NIPPLES

*MATERIALS: 304, 304L or 316L

*TUBE FINISH: BEAD BLASTED



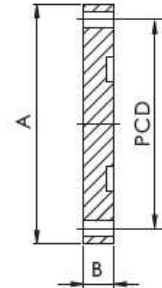
Part Number	Size	A	B	C
2514002-0250	ISO63	95.00	63.50	100.00
2514002-0300	ISO80	110.00	76.20	100.00
2514002-0400	ISO100	130.00	101.60	100.00
2514002-0600	ISO160	180.00	152.40	100.00
2514002-0800	ISO200	240.00	203.20	100.00
2514002-1000	ISO250	290.00	254.00	100.00

BLANK FLANGES, BOLTED

*MATERIALS: 304, 304L, 316L or ALUMINUM



Part Number	Size	A	B	Bolt Holes	PCD
2516005-0063	ISO63	130.00	11.90	4	110
2516005-0080	ISO80	145.00	11.90	8	125
2516005-0100	ISO100	165.00	11.90	8	145
2516005-0160	ISO160	225.00	16.00	8	200
2516005-0200	ISO200	285.00	16.00	12	260
2516005-0250	ISO250	335.00	16.00	12	310

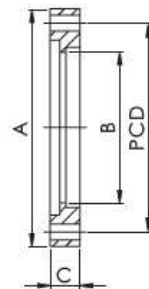


BORED FLANGES, BOLTED

*MATERIALS: 304, 304L, 316L or ALUMINUM



Part Number	Size	A	B	C	Bolt Holes	PCD
2514069-0063	ISO63	130.00	61.90	11.90	4	110
2514069-0080	ISO80	145.00	74.60	11.90	8	125
2514069-0100	ISO100	165.10	99.30	11.90	8	145
2514069-0160	ISO160	225.00	149.20	16.00	8	200
2514069-0200	ISO200	285.00	200.00	16.00	12	260
2514069-0250	ISO250	335.00	250.80	16.00	12	310



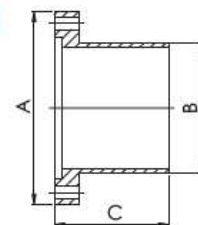
HALF NIPPLES, BOLTED

*MATERIALS: 304, 304L or 316L

*TUBE FINISH: BEAD BLASTED



Part Number	Size	A	B	C
2514070-0063	ISO63	130.00	63.50	100.00
2514070-0080	ISO80	145.00	76.20	100.00
2514070-0100	ISO100	165.10	101.60	100.00
2514070-0160	ISO160	225.00	152.40	100.00
2514070-0200	ISO200	285.00	203.20	100.00
2514070-0250	ISO250	335.00	254.00	100.00



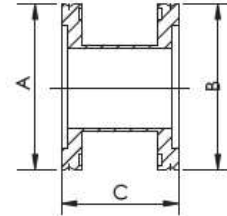
FULL NIPPLES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B	C
2514097-0063	ISO63-6.50"	ISO63	ISO63	165.10
2514052-0063	ISO63-6.92"	ISO63	ISO63	175.80
2514052-0080	ISO80-6.66"	ISO80	ISO80	196.10
2514097-0080	ISO80-7.00"	ISO80	ISO80	177.80
2514097-0100	ISO100-8.25"	ISO100	ISO100	209.80
2514052-0100	ISO100-8.50"	ISO100	ISO100	215.90
2514097-0160	ISO160-10.75"	ISO160	ISO160	273.30
2514052-0160	ISO160-10.85"	ISO160	ISO160	275.80



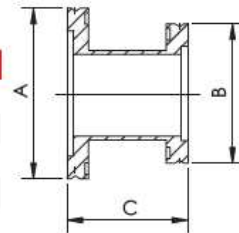
REDUCER NIPPLES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B	C
2505202-08063	ISO80x63	ISO80	ISO63	76.20
2505202-10063	ISO100x63	ISO100	ISO63	76.20
2505202-10080	ISO100x80	ISO100	ISO80	76.20
2505202-16063	ISO160x63	ISO160	ISO63	76.20
2505202-16010	ISO160x100	ISO160	ISO100	76.20



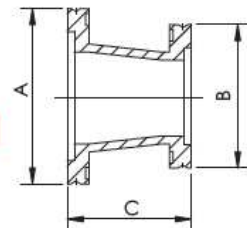
CONICAL REDUCERS

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



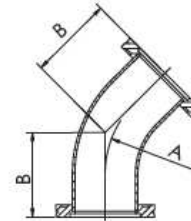
Part Number	Size	A	B	C
2505200-08063	ISO80x63	ISO80	ISO63	104.70
2505200-10063	ISO100x63	ISO100	ISO63	104.70
2505200-10080	ISO100x80	ISO100	ISO80	104.70



45° ELBOWS

*MATERIALS: 304, 304L or 31 6L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED

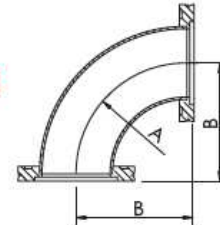


Part Number	Size	A	B
2506301-00063	ISO63	95.25	82.30
2506301-00080	ISO80	114.30	100.00
2506301-00100	ISO100	152.40	128.50

90° ELBOWS

*MATERIALS: 304, 304L or 31 6L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED

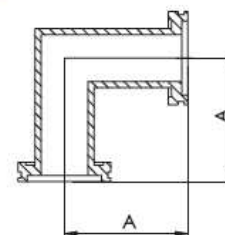


Part Number	Size	A	B
2506200-00063	ISO63	95.25	101.60
2506200-00080	ISO80	114.30	120.60
2506200-00100	ISO100	152.40	158.70

90° MITERED ELBOWS

*MATERIALS: 304, 304L or 31 6L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A
2506303-00063	ISO63	82.60
2506305-00063	ISO63-H	87.93
2506303-00080	ISO80	88.90
2506305-00080	ISO80-H	108.00
2506303-00100	ISO100	104.90
2506305-00100	ISO100-H	108.00
2506305-00160	ISO160	138.00

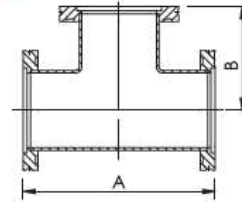
EQUAL TEES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B
2503301-00063	ISO63	165.00	82.50
2503306-00063	ISO63-H	176.00	88.00
2503301-00080	ISO80	177.80	88.90
2503306-00080	ISO80-H	196.00	98.00
2503301-00100	ISO100	209.40	104.70
2503306-00100	ISO100-H	216.00	108.00
2503301-00160	ISO160	266.60	133.30



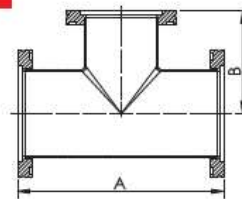
REDUCER TEES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B
2503301-08063	ISO80xISO63	177.70	88.90
2503301-10063	ISO100xISO63	209.70	101.60
2503301-10080	ISO100xISO80	209.70	101.60
2503301-16063	ISO160xISO63	266.60	126.90
2503301-16080	ISO160xISO80	266.60	126.90
2503301-16010	ISO160xISO100	266.20	130.30



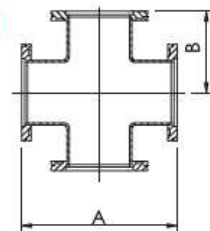
4-WAY CROSSES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B
2504301-00063	ISO63	165.00	82.50
2504301-00080	ISO80	177.80	88.90
2504306-00080	ISO80-H	196.00	98.00
2504301-00100	ISO100	209.40	104.70
2504306-00100	ISO100-H	216.00	108.00
2504301-00160	ISO160	266.60	133.30



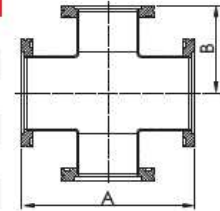
4-WAY REDUCING CROSSES

*MATERIALS: 304, 304L or 316L

*TUBE FINISHES: BEAD BLASTED, TUMBLED or OD POLISHED



Part Number	Size	A	B
2504301-08063	ISO80xISO63	177.70	88.90
2504301-10063	ISO100xISO63	209.70	101.60
2504301-10080	ISO100xISO80	209.70	101.60
2504301-16063	ISO160xISO63	266.60	126.90
2504301-16080	ISO160xISO80	266.60	126.90
2504301-16010	ISO160xISO100	266.20	130.30



PROTECTION PLASTIC CAPS



Part Number	Size	A	B
C514000-0063	ISO63	97.8	95.0
C514000-0080	ISO80	113.0	110.0
C514000-0100	ISO100	133.0	130.0
C514000-0160	ISO160	183.0	179.8
C514000-0200	ISO200	242.0	239.2
C514000-0250	ISO250	292.0	289.0
C514000-0320	ISO320	372.8	370.4

