

ISO & NW Flanges & Fittings



ISO Flanges & Fittings

AdvanTorr ISO flanges are designed to fit tubes sizes with an OD above 2 inches and comply with the International Standards Organization specifications so are 100% compatible with other manufacturers' flange design. There are two types of flange assemblies, claw clamp type and bolt flange type and both utilize an O-ring which is held in place by a centering ring to achieve a vacuum seal up to 1×10^{-8} Torr.

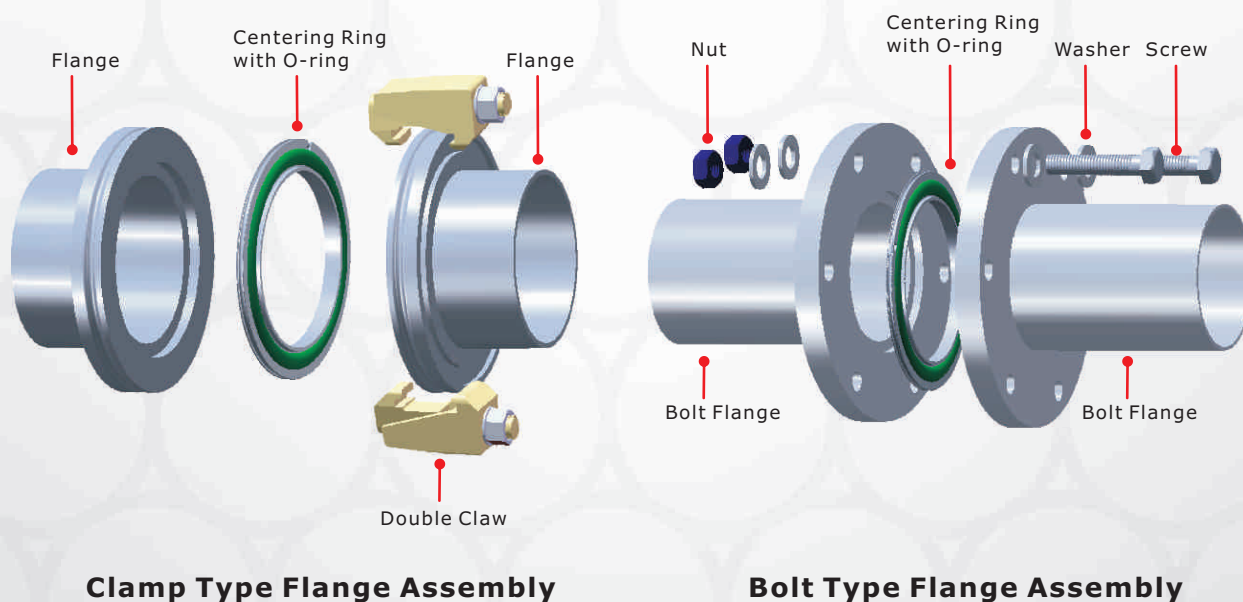
The bolt type flanges are assembled by using a set of bolts to fix the position of the mating flanges, whereas the claw clamp flanges use double claw clamps to hold two flanges together. In addition, the use of the claw clamps means that mating flanges can be connected together in any orientation. A wide range of adaptors for connection to CF or KF flanges can be found in the Adaptor section.

STANDARD SPECIFICATION

Vacuum Rate:	High Vacuum
Material:	SS 304L, SS 316L or Aluminum
Flange Sizes:	ISO63~ISO630
Tube Sizes:	2.5" ~ 26.0" Surface Finish: Bead-blast and Polished.
Vacuum Range:	760 Torr ~ 1×10^{-8} Torr
Gasket Material:	FKM, FFKM
Temperature Range:	$\leq 200^{\circ}\text{C}$ (150°C sustained)

Cleaning and Packaging

All products with weld joints are 100% helium leak tested to assure leak free operation prior to use. In addition, to ensure the cleanliness of **AdvanTorr** products, all parts are ultrasonically cleaned to HV standards using de-ionized water and packaged in contamination free, class 10,000 clean room conditions. Each bag is affixed with a barcode label identifying the component's part number, heat number and batch number for full traceability.



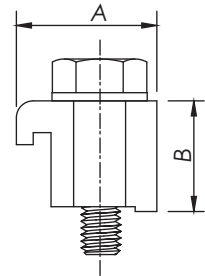
-All dimensions are in millimeters unless otherwise specified.

ISO Hardware & Seals

ISO-K SINGLE CLAW

*Material: SS 304

*Bolt Thread: Metric

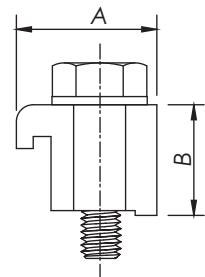


Part Number	Size	A	B	Thread Size
ISOK-SC-63100M	ISO63-ISO100	24.10	22.50	M8 x 35L
ISOK-SC-160250M	ISO160-ISO250	29.20	23.00	M10 x 35L
ISOK-SC-320500M	ISO320-ISO500	30.00	30.00	M12 x 50L
ISOK-SC-630M	ISO630	37.00	41.50	M12 x 50L

ISO-K SINGLE CLAW

*Material: Aluminum

*Bolt Thread: Metric or Inch size

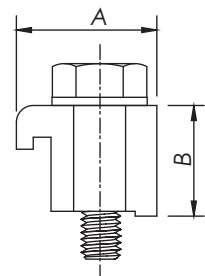


Part Number	Size	A	B	Thread Size
ISOK-SC-63100M-AL	ISO63-ISO100	24.10	22.50	M8 x 35L
ISOK-SC-63100-AL	ISO63-ISO100	24.10	22.50	5/16-18x38L
ISOK-SC-160250M-AL	ISO160-ISO250	27.50	23.50	M10 x 35L
ISOK-SC-160250-AL	ISO160-ISO250	27.50	23.50	5/16-18x38L
ISOK-SC-320500M-AL	ISO320-ISO500	30.00	30.00	M12x50L
ISOK-SC-320500-AL	ISO320-ISO500	30.00	30.00	7/16-14x50L

ISO-K SINGLE CLAW

*Bolt Thread: Metric

*Material: Zinc Plated Steel



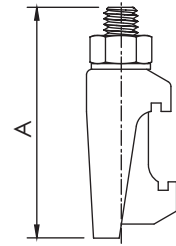
Part Number	Size	A	B	Thread Size
ISOK-SC-63100M-ZP	ISO63-ISO100	24.10	22.50	M8 x 35L
ISOK-SC-160250M-ZP	ISO160-ISO250	27.50	23.50	M10 x 35L
ISOK-SC-320500M-ZP	ISO320-ISO500	30.00	30.00	M12 x 50L

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ISO-K DOUBLE CLAW

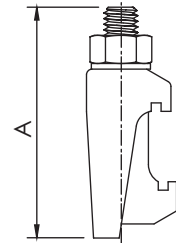
*Material: SS 304



Part Number	Size	A	Bolt Size
ISOK-DC-63250M	ISO63-ISO250	60.00	M10
ISOK-DC-320500M	ISO320-ISO500	76.50	M12

ISO-K DOUBLE CLAW

*Material: Zinc Plated Steel

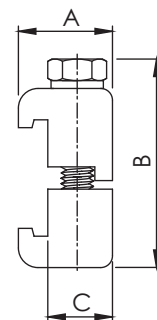


Part Number	Size	A	Bolt Size
ISOK-DC-63250M-ZP	ISO63-ISO250	60.00	M10
ISOK-DC-320500M-ZP	ISO320-ISO500	76.50	M12

ISO-K DOUBLE CLAW

*Material: Aluminum

*Bolt Thread: Metric or Inch size



Part Number	Size	A	B	C	Thread Size
ISOK-DC-63100M-AL	ISO63-ISO100	24.00	50.00	16.50	M8x45L
ISOK-DC-63100-AL	ISO63-ISO100	24.00	50.00	16.50	5/16-18x45L
ISOK-DC-160250M-AL	ISO160-ISO250	27.50	51.60	20.00	M10x45L
ISOK-DC-160250-AL	ISO160-ISO250	27.50	51.60	20.00	5/16-18x45L
ISOK-DC-320500M-AL	ISO320-ISO500	34.00	65.00	26.07	M12x60L

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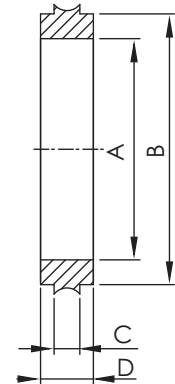
ISO Hardware & Seals

ISO CENTERING RINGS

*Material: SS 304 / Aluminum



Part Number (SS 304)	Part Number (Aluminum)	Size	A	B	C	D
ISO-CR-63	ISO-CR-63-AL	ISO63	68.00	70.00	3.90	8
ISO-CR-80	ISO-CR-80-AL	ISO80	81.00	83.00	3.90	8
ISO-CR-100	ISO-CR-100-AL	ISO100	100.00	102.00	3.90	8
ISO-CR-160	ISO-CR-160-AL	ISO160	151.00	153.00	3.90	8
ISO-CR-200	ISO-CR-200-AL	ISO200	210.00	213.00	3.90	8
ISO-CR-250	ISO-CR-250-AL	ISO250	256.00	261.00	3.90	8
ISO-CR-320	ISO-CR-320-AL	ISO320	311.15	316.48	5.50	14
ISO-CR-400	ISO-CR-400-AL	ISO400	392.93	398.02	5.50	14



*Note: SS 316L Material Available on Request.

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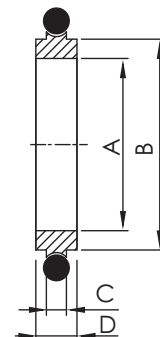
ISO CENTERING RINGS with O-RINGS

*Centering Ring Material: SS 304

*O-Ring Material: FKM / NBR



Part Number (FKM)	Part Number (NBR)	Size	A	B	C	D
ISO-CRO-63	ISO-CRO-63-NB	ISO63	68.00	70.00	3.90	8
ISO-CRO-80	ISO-CRO-80-NB	ISO80	81.00	83.00	3.90	8
ISO-CRO-100	ISO-CRO-100-NB	ISO100	100.00	102.00	3.90	8
ISO-CRO-160	ISO-CRO-160-NB	ISO160	151.00	153.00	3.90	8
ISO-CRO-200	ISO-CRO-200-NB	ISO200	210.00	213.00	3.90	8
ISO-CRO-250	ISO-CRO-250-NB	ISO250	256.00	261.00	3.90	8
ISO-CRO-320	ISO-CRO-320-NB	ISO320	311.15	316.48	5.50	14
ISO-CRO-400	ISO-CRO-400-NB	ISO400	392.93	398.02	5.50	14



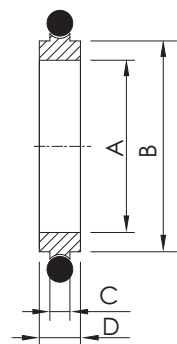
ISO CENTERING RINGS with O-RINGS, ALUMINUM

*Centering Ring Material: Aluminum

*O-Ring Material: FKM / NBR



Part Number (FKM)	Part Number (NBR)	Size	A	B	C	D
ISO-CRO-63-AL	ISO-CRO-63-AL-NB	ISO63	68.00	70.00	3.90	8
ISO-CRO-80-AL	ISO-CRO-80-AL-NB	ISO80	81.00	83.00	3.90	8
ISO-CRO-100-AL	ISO-CRO-100-AL-NB	ISO100	100.00	102.00	3.90	8
ISO-CRO-160-AL	ISO-CRO-160-AL-NB	ISO160	151.00	153.00	3.90	8
ISO-CRO-200-AL	ISO-CRO-200-AL-NB	ISO200	210.00	213.00	3.90	8
ISO-CRO-250-AL	ISO-CRO-250-AL-NB	ISO250	256.00	261.00	3.90	8
ISO-CRO-320-AL	ISO-CRO-320-AL-NB	ISO320	311.15	316.48	5.50	14
ISO-CRO-400-AL	ISO-CRO-400-AL-NB	ISO400	392.93	398.02	5.50	14



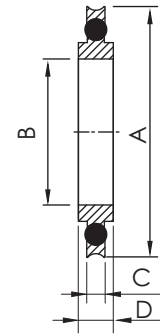
ISO Hardware & Seals

ISO CENTERING RINGS with O-RINGS and SPACERS

- *Centering Ring Material: SS 304/ Aluminum
- *O-Ring Material: FKM
- *Spacer Material: Aluminum



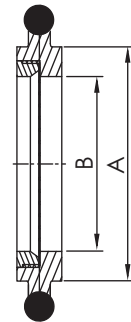
Part Number (SS 304)	Part Number (Aluminum)	Size	A	B	C	D
ISO-CROS-63	ISO-CROS-63-AL	ISO63	94.00	68.00	3.90	8
ISO-CROS-80	ISO-CROS-80-AL	ISO80	109.00	81.00	3.90	8
ISO-CROS-100	ISO-CROS-100-AL	ISO100	128.00	100.00	3.90	8
ISO-CROS-160	ISO-CROS-160-AL	ISO160	179.00	151.00	3.90	8
ISO-CROS-200	ISO-CROS-200-AL	ISO200	239.00	210.00	3.90	8
ISO-CROS-250	ISO-CROS-250-AL	ISO250	287.00	256.00	3.90	8
ISO-CROS-320	ISO-CROS-320-AL	ISO320	346.33	311.15	5.50	14
ISO-CROS-400	ISO-CROS-400-AL	ISO400	428.80	392.93	5.50	14



- *Note: SS 316L or Aluminum Material Available on Request.
- *Note: FFKM O-Ring Material Available on Request.

ISO SCREENED CENTERING RINGS with O-RINGS

- *Centering Ring Material: SS 304
- *70 Mesh Screen
- *Screen Material: SS 304



Part Number	Size	A	B
ISO-CROSC-63	ISO63	69.60	62.00
ISO-CROSC-80	ISO80	82.60	72.90
ISO-CROSC-100	ISO100	102.00	92.00
ISO-CROSC-160	ISO160	153.00	139.70

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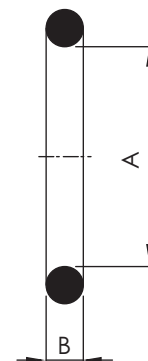
ISO Hardware & Seals

ISO REPLACEMENT O-RINGS

*Material: FKM / NBR



Part Number(FKM)	Part Number(NBR)	Size	A	B
ISO-RO-63	ISO-RO-63-NB	ISO63	72.39	5.33
ISO-RO-80	ISO-RO-80-NB	ISO80	85.09	5.33
ISO-RO-100	ISO-RO-100-NB	ISO100	104.14	5.33
ISO-RO-160	ISO-RO-160-NB	ISO160	151.77	5.33
ISO-RO-200	ISO-RO-200-NB	ISO200	215.27	5.33
ISO-RO-250	ISO-RO-250-NB	ISO250	266.07	5.33
ISO-RO-320	ISO-RO-320-NB	ISO320	316.87	6.99
ISO-RO-400	ISO-RO-400-NB	ISO400	393.07	6.99



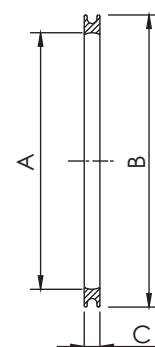
*Note: FFKM O-Ring Material Available on Request.

ISO SPACER RINGS

*Material: Aluminum



Part Number	Size	A	B	C
ISO-OR-63	ISO63	85.40	92.60	3.75
ISO-OR-80	ISO80	98.70	107.80	3.75
ISO-OR-100	ISO100	116.40	125.60	3.75
ISO-OR-160	ISO160	167.80	177.00	3.75
ISO-OR-200	ISO200	227.80	237.00	3.75
ISO-OR-250	ISO250	275.40	284.60	3.75
ISO-OR-320	ISO320	335.50	344.00	5.59
ISO-OR-400	ISO400	420.30	428.80	5.59



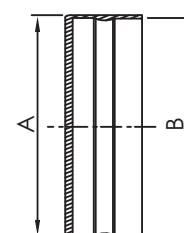
ISO
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ISO-K FLANGE PLASTIC CAP

*Material: PE



Part Number	Size	A	B
ISOK-PC-63	ISO63	97.8	95.0
ISOK-PC-80	ISO80	113.0	110.0
ISOK-PC-100	ISO100	133.0	130.0
ISOK-PC-160	ISO160	183.0	180.0
ISOK-PC-200	ISO200	242.0	240.0
ISOK-PC-250	ISO250	293.4	290.0
ISOK-PC-320	ISO320	373.9	370.5
ISOK-PC-400	ISO400	454.2	450.8
ISOK-PC-500	ISO500	553.9	550.5



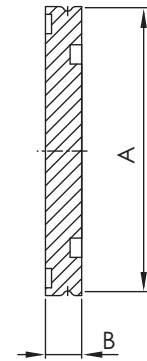
ISO Flanges

ISO-K BLANK FLANGES

*Material: SS 304L



Part Number	Size	A	B
ISOK-BL-63	ISO63	95.00	11.90
ISOK-BL-80	ISO80	110.00	11.90
ISOK-BL-100	ISO100	130.00	11.90
ISOK-BL-160	ISO160	180.00	11.90
ISOK-BL-200	ISO200	240.00	12.00
ISOK-BL-250	ISO250	290.00	12.00
ISOK-BL-320	ISO320	370.00	17.00
ISOK-BL-400	ISO400	450.09	17.00
ISOK-BL-500	ISO500	549.91	17.00
ISOK-BL-630	ISO630	690.12	22.10

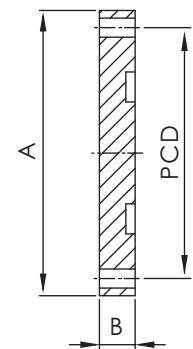


ISO-F BLANK FLANGES

*Material: SS 304L



Part Number	Size	A	B	Bolt Holes	PCD
ISOF-BL-63	ISO63	130.00	11.90	4	110.00
ISOF-BL-80	ISO80	145.00	11.90	8	125.00
ISOF-BL-100	ISO100	165.00	11.90	8	145.00
ISOF-BL-160	ISO160	225.00	16.00	8	200.00
ISOF-BL-200	ISO200	285.00	16.00	12	260.00
ISOF-BL-250	ISO250	335.00	16.00	12	310.00
ISOF-BL-320	ISO320	425.00	20.00	12	395.00
ISOF-BL-400	ISO400	510.03	20.07	16	480.06
ISOF-BL-500	ISO500	610.11	20.07	16	579.88
ISOF-BL-630	ISO630	750.06	23.88	20	720.09



*Note: SS 316L or Aluminum Material Available on Request.

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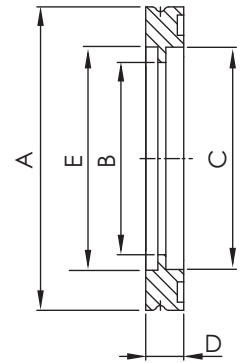
ISO Flanges



ISO-K BORED FLANGES

*Material: SS 304L

Part Number	Size	Nominal Tube OD	A	B	C	D	E
ISOK-BF-63	ISO63	2.5"	95.00	60.20	63.80	11.90	70.10
ISOK-BF-80	ISO80	3"	110.00	72.90	76.50	11.90	83.00
ISOK-BF-100	ISO100	4"	130.00	98.30	101.90	11.90	102.70
ISOK-BF-160	ISO160	6"	180.00	149.10	152.90	11.90	153.00
ISOK-BF-200	ISO200	8"	240.00	197.10	203.70	11.90	213.20
ISOK-BF-250	ISO250	10"	290.00	247.70	254.50	11.90	261.00
ISOK-BF-320	ISO320	12"	370.00	296.82	305.56	17.02	318.01
ISOK-BF-320-1	ISO320	12.75"	370.00	318.00	324.40	17.00	318.00
ISOK-BF-400	ISO400	16"	450.09	396.75	406.91	17.02	400.00
ISOK-BF-500	ISO500	20"	549.91	498.35	508.51	17.02	500.99
ISOK-BF-630	ISO630	24"	690.12	604.77	610.11	22.10	651.00



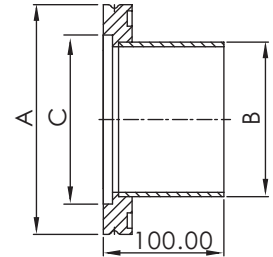
ISO-K HALF NIPPLES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B	C
ISOK-HN-63	ISO63	95.00	63.50	70.00
ISOK-HN-80	ISO80	110.00	76.20	83.00
ISOK-HN-100	ISO100	130.00	101.60	102.00
ISOK-HN-160	ISO160	180.00	152.40	153.00
ISOK-HN-200	ISO200	240.00	203.20	213.00
ISOK-HN-250	ISO250	290.00	254.00	261.00
ISOK-HN-320	ISO320	370.00	324.00	318.00



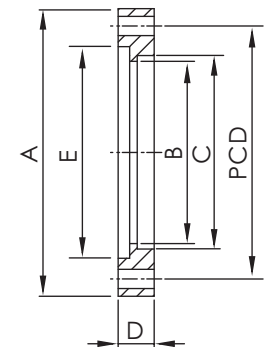
ISO
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ISO-F BORED FLANGES

*Material: SS 304L



Part Number	Size	A	B	C	D	E	PCD
ISOF-BF-63	ISO63	130.00	61.90	63.80	11.90	70.00	110.00
ISOF-BF-80	ISO80	145.00	74.60	76.50	11.90	83.00	125.00
ISOF-BF-100	ISO100	165.10	99.30	101.92	11.90	102.00	145.00
ISOF-BF-160	ISO160	225.00	149.20	152.90	16.00	153.00	200.00
ISOF-BF-200	ISO200	285.00	200.00	203.70	16.00	213.00	260.00
ISOF-BF-250	ISO250	335.00	250.80	254.50	16.00	261.00	310.00
ISOF-BF-320	ISO320	425.00	318.00	324.40	20.00	318.00	395.00
ISOF-BF-400	ISO400	510.03	396.75	406.91	20.07	400.00	480.06
ISOF-BF-500	ISO500	610.11	498.35	508.51	20.07	500.99	579.88
ISOF-BF-630	ISO630	750.06	604.77	610.11	23.88	610.10	720.09



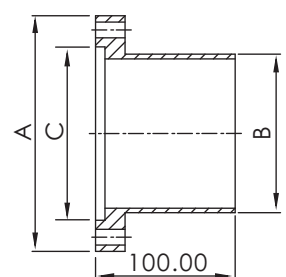
ISO-F HALF NIPPLES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B	C
ISOF-HN-63	ISO63	130.00	63.50	70.00
ISOF-HN-80	ISO80	145.00	76.20	83.00
ISOF-HN-100	ISO100	165.10	101.60	102.00
ISOF-HN-160	ISO160	225.00	152.40	153.00
ISOF-HN-200	ISO200	285.00	203.20	213.00
ISOF-HN-250	ISO250	335.00	254.00	261.00
ISOF-HN-320	ISO320	425.00	324.00	318.00



*Note: SS 316L or Aluminum Material Available on Request.

ISO Fittings

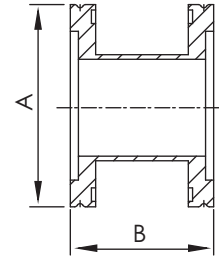
ISO-K FULL NIPPLES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-FN-63	ISO63	ISO63	165.10
ISOK-FN-63-1	ISO63	ISO63	175.80
ISOK-FN-80	ISO80	ISO80	196.10
ISOK-FN-80-1	ISO80	ISO80	177.80
ISOK-FN-100	ISO100	ISO100	209.80
ISOK-FN-100-1	ISO100	ISO100	215.90
ISOK-FN-160	ISO160	ISO160	273.30
ISOK-FN-160-1	ISO160	ISO160	275.80



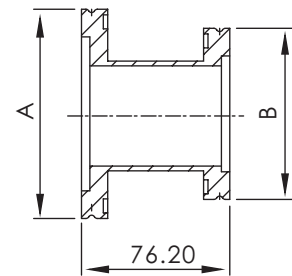
ISO-K STRAIGHT REDUCING NIPPLES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-SRN-80x63	ISO80x63	ISO80	ISO63
ISOK-SRN-100x63	ISO100x63	ISO100	ISO63
ISOK-SRN-100x80	ISO100x80	ISO100	ISO80
ISOK-SRN-160x63	ISO160x63	ISO160	ISO63
ISOK-SRN-160x80	ISO160x80	ISO160	ISO80
ISOK-SRN-160x100	ISO160x100	ISO160	ISO100



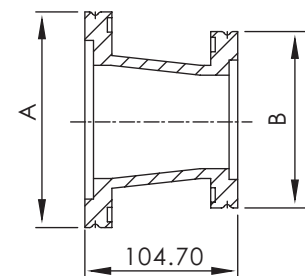
ISO-K CONICAL REDUCING NIPPLES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-CRN-80x63	ISO80x63	ISO80	ISO63
ISOK-CRN-100x63	ISO100x63	ISO100	ISO63
ISOK-CRN-100x80	ISO100x80	ISO100	ISO80



*Note: SS 316L Material Available on Request.

*Note: Polished and Electro- Polished Tube Finishes Available on Request.

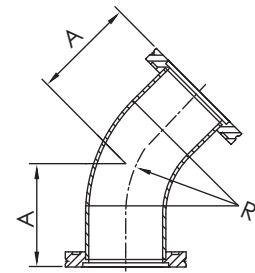
**ISO
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ISO Fittings

ISO-K 45° ELBOWS

*Material: SS 304L

*Tube Finish: Bead Blast

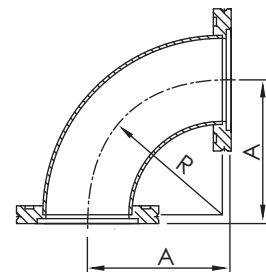


Part Number	Flange Size	A	R
ISOK-45EL-63	ISO63	82.30	95.25
ISOK-45EL-80	ISO80	100.00	114.30
ISOK-45EL-100	ISO100	128.50	152.40

ISO-K 90° ELBOWS

*Material: SS 304L

*Tube Finish: Bead Blast

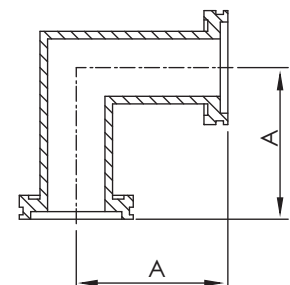


Part Number	Flange Size	A	R
ISOK-90EL-63	ISO63	101.60	95.25
ISOK-90EL-80	ISO80	120.60	114.30
ISOK-90EL-100	ISO100	158.70	152.40

ISO-K 90° MITERED ELBOWS

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A
ISOK-90MEL-63	ISO63	82.60
ISOK-90MEL-63-1	ISO63	87.93
ISOK-90MEL-80	ISO80	88.90
ISOK-90MEL-80-1	ISO80	108.00
ISOK-90MEL-100	ISO100	104.90
ISOK-90MEL-100-1	ISO100	108.00
ISOK-90MEL-160	ISO160	138.00
ISOK-90MEL-160-1	ISO160	160.20

*Note: SS 316L Material Available on Request.

*Note: Polished and Electro- Polished Tube Finishes Available on Request.

ISO
NW

ISO Fittings

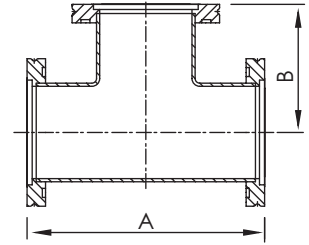
ISO-K EQUAL TEES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-ET-63	ISO63	165.00	82.50
ISOK-ET-63-1	ISO63	176.00	88.00
ISOK-ET-80	ISO80	177.80	88.90
ISOK-ET-80-1	ISO80	196.00	98.00
ISOK-ET-100	ISO100	209.40	104.70
ISOK-ET-100-1	ISO100	216.00	108.00
ISOK-ET-160	ISO160	266.60	133.30



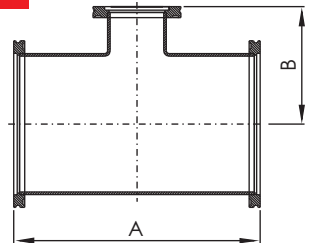
ISO-K REDUCING TEES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-RT-80x63	ISO80/ISO63	177.70	88.90
ISOK-RT-100x63	ISO100/ISO63	209.70	101.60
ISOK-RT-100x80	ISO100/ISO80	209.70	101.60
ISOK-RT-160x63	ISO160/ISO63	266.60	126.90
ISOK-RT-160x80	ISO160/ISO80	266.60	126.90
ISOK-RT-160x100	ISO160/ISO100	266.60	130.30



**ISO
NW**

*Note: SS 316L Material Available on Request.

*Note: Polished and Electro- Polished Tube Finishes Available on Request.

ISO Fittings

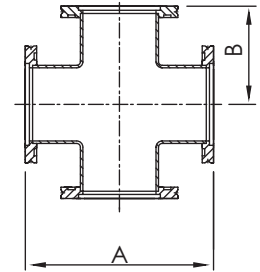
ISO-K 4-WAY CROSSES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-4C-63	ISO63	165.00	82.50
ISOK-4C-80	ISO80	177.80	88.90
ISOK-4C-80-1	ISO80	196.00	98.00
ISOK-4C-100	ISO100	209.40	104.70
ISOK-4C-100-1	ISO100	216.00	108.00
ISOK-4C-160	ISO160	266.60	133.30



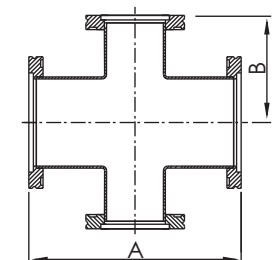
ISO-K 4-WAY REDUCING CROSSES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-4RC-80x63	ISO80/ISO63	177.70	88.85
ISOK-4RC-100x63	ISO100/ISO63	209.70	101.55
ISOK-4RC-100x80	ISO100/ISO80	209.70	101.55
ISOK-4RC-160x63	ISO160/ISO63	266.60	126.95
ISOK-4RC-160x80	ISO160/ISO80	266.60	126.95
ISOK-4RC-160x100	ISO160/ISO100	266.60	130.25



*Note: SS 316L Material Available on Request.

*Note: Polished and Electro- Polished Tube Finishes Available on Request.

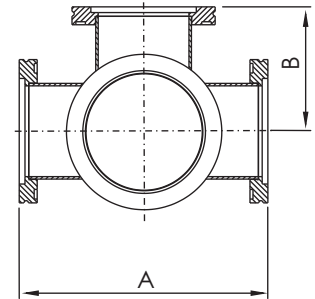
ISO
NW

ISO Fittings

ISO-K 5-WAY CROSSES

*Material: SS 304L

*Tube Finish: Bead Blast

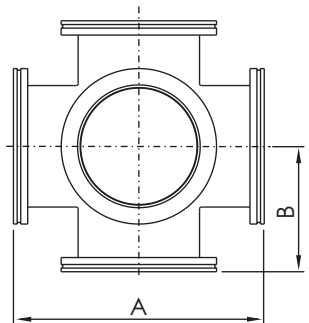


Part Number	Flange Size	A	B
ISOK-5C-63	ISO63	165.00	82.50
ISOK-5C-80	ISO80	177.80	88.90
ISOK-5C-100	ISO100	209.80	104.90
ISOK-5C-160	ISO160	266.60	133.30

ISO-K 6-WAY CROSSES

*Material: SS 304L

*Tube Finish: Bead Blast



Part Number	Flange Size	A	B
ISOK-6C-63	ISO63	165.00	82.50
ISOK-6C-80	ISO80	177.80	88.90
ISOK-6C-100	ISO100	209.80	104.90
ISOK-6C-160	ISO160	266.60	133.30

**ISO
NW**

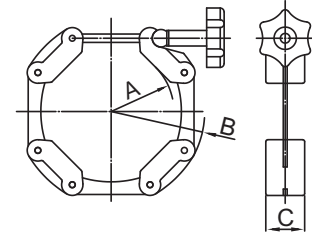
*Note: SS 316L Material Available on Request.

*Note: Polished and Electro- Polished Tube Finishes Available on Request.

NW Hardware & Seals

NW CHAIN CLAMPS TYPE 1

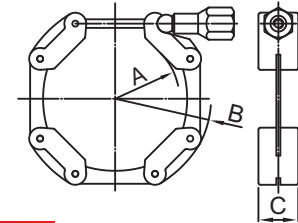
*Body Material: Aluminum
*Bolt Material: Plastic



Part Number	Size	A	B	C
NW-CC1-16	NW16	22.00	56.00	20.50
NW-CC1-25	NW25	32.00	66.00	20.50
NW-CC1-40	NW40	46.00	80.00	20.50
NW-CC1-50	NW50	69.00	100.00	20.50
NW-CC1-63	NW63	78.00	112.00	20.50

NW CHAIN CLAMPS TYPE 2

*Body Material: Aluminum
*Bolt Material: SS 304

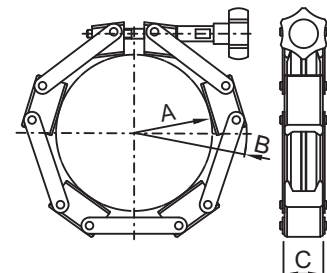


Part Number	Size	A	B	C
NW-CC2-16	NW16	22.00	56.00	20.50
NW-CC2-25	NW25	32.00	66.00	20.50
NW-CC2-40	NW40	46.00	80.00	20.50
NW-CC2-50	NW50	69.00	100.00	20.50
NW-CC2-63	NW63	78.00	112.00	20.50

**ISO
NW**

NW CHAIN CLAMPS TYPE 1

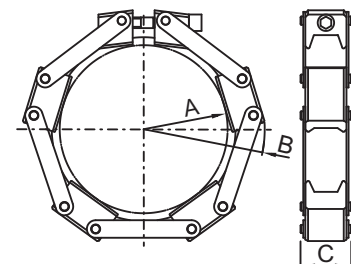
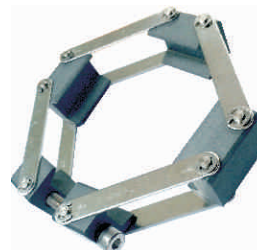
*Body Material: Aluminum
*Bolt Material: Plastic



Part Number	Size	A	B	C
NW-CC1-80	NW80	117.10	153.00	30.00
NW-CC1-100	NW100	136.50	171.68	30.00
NW-CC1-160	NW160	197.90	231.70	30.00

NW CHAIN CLAMPS TYPE 2

*Body Material: Aluminum
*Bolt Material: SS 304

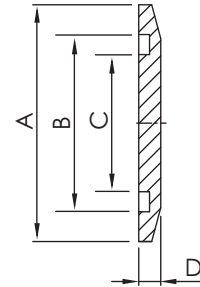


Part Number	Size	A	B	C
NW-CC2-80	NW80	100.00	165.00	38.00
NW-CC2-100	NW100	122.00	185.00	38.00
NW-CC2-160	NW160	174.00	235.00	38.00

NW Hardware & Seals

NW BLANK FLANGES

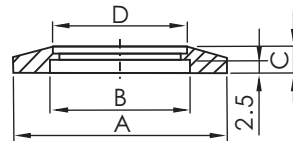
*Material: SS 304L



Part Number	Flange Size	A	B	C	D
NW-BL-63	NW63	87.00	70.20	64.00	5.00
NW-BL-80	NW80	114.00	83.00	73.00	11.00
NW-BL-100	NW100	134.00	102.00	92.00	11.00
NW-BL-160	NW160	190.00	153.20	143.00	11.00

NW BORED FLANGES

*Material: SS 304



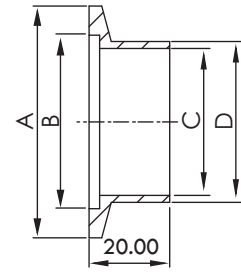
Part Number	Flange Size	A	B	C	D
NW-BF-63	NW 63	87.00	70.00	5.00	63.70
NW-BF-80	NW 80	114.00	83.00	11.00	76.40
NW-BF-100	NW 100	134.00	102.00	11.00	101.80
NW-BF-160	NW 160	190.00	153.00	11.00	152.90

ISO
NW

NW Hardware & Seals

NW BUTT WELD FLANGES

*Material: SS 304L



Part Number	Flange Size	A	B	C	D	Tube Size
NW-BWF-80	NW80	114.00	83.10	83.10	89.10	80A 10S
NW-BWF-80-1	NW80	114.00	83.10	84.90	89.10	80A 5S
NW-BWF-100	NW100	134.00	102.20	108.30	114.30	100A 10S
NW-BWF-100-1	NW100	134.00	102.20	110.10	114.30	100A 5S
NW-BWF-160	NW160	190.00	153.20	158.40	165.20	150A 10S
NW-BWF-160-1	NW160	190.00	153.20	159.60	165.20	150A 5S

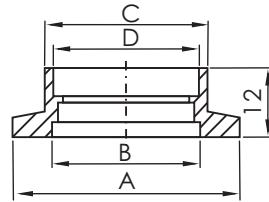


Figure 1

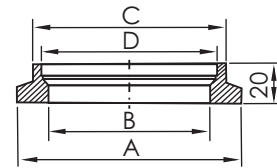
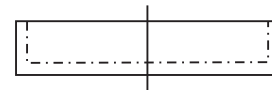


Figure 2

NW SOCKET WELD FLANGES

*Material: SS 304

Part Number	Flange Size	A	B	C	D	Figure
NW-SWF-63	NW 63	87.00	70.00	67.50	63.70	1
NW-SWF-80	NW 80	114.00	83.00	98.00	89.50	2
NW-SWF-100	NW 100	134.00	102.00	118.00	114.50	2
NW-SWF-160	NW 160	190.00	153.00	174.00	165.50	2



NW FLANGE PLASTIC CAP

*Material: PE

Part Number	Flange Size
NW-PC-63	NW 63
NW-PC-80	NW 80
NW-PC-100	NW 100

ISO
NW