



WELDABLE COMPONENTS





Weldable Components

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A&N Corporation

707 SW 19th Ave.
 Williston, FL 32696
 1(800) FLANGE1
 FAX (352) 528-3441
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Weldable COMPONENTS



Overview

A&N weldable components provide an extensive array of options for the assembly of your pumping lines, exhaust lines or custom vacuum components. A&N's weldable component product line includes tubing, conical reducers, elbows, tees, crosses, end caps and ball socket fittings. These components come in multiple sizes, lengths and designs to offer you the greatest flexibility in your system design while offering you the cost benefit of specifying standard product.

Tubing sizes are specified by their outer diameter measured in inches. The inner diameter is calculated by taking the outer diameter and subtracting 2 times the wall thickness. This measurement is approximate as tubing has no official specifications regarding tolerances for concentricity, ovality or parallelism.

All A&N vacuum components are shipped clean and packaged to arrive ready for high vacuum service.

Specifications	Features
<ul style="list-style-type: none"> • Sizes: 1/2" up to 10" outer diameter tubing • Leak rating <math>< 1 \times 10^{-9}</math> std. cc/s helium • Vacuum rated to UHV • Materials: <ul style="list-style-type: none"> - Standard: 304 stainless steel - Optional: 6061 aluminum • Temperature range: -200°C to 450°C 	<ul style="list-style-type: none"> • Pulled ports optimize vacuum performance • Full penetration welds for maximum cleanliness and crevice free weld joints • Customizable with any combination of A&N vacuum flanges • Shipped clean and packaged for vacuum service



Tubing - Stainless Steel

Materials:

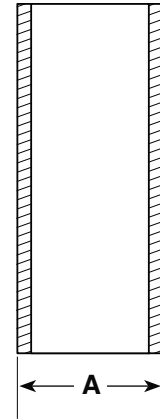
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Butt weld
- Designed to fit standard inch tubing O.D.'s
- Custom cut to your specified length
- Cleaned for vacuum use

Options: Call for price and delivery

- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D. A
0701155	050-ST	0.065	0.50
0701160	075-ST	0.065	0.75
0701165	100-ST	0.065	1.00
0701170	125-ST	0.065	1.25
0701175	150-ST	0.065	1.50
0701180	162-ST	0.065	1.63
0701185	175-ST	0.065	1.75
0701190	200-ST	0.065	2.00
0701195	250-ST	0.065	2.50
0701200	300-ST	0.065	3.00
0701205	400-ST	0.083	4.00
0701210	500-ST	0.083	5.00
0701215	600-ST	0.083	6.00
0701220	800-ST	0.120	8.00
0701225	1000-ST	0.120	10.00
0701230	1200-ST	0.120	12.00

Cut charges include the following services: set-up, cut, deburr, finishing and cleaning

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TUBE SIZE	CUT CHARGE
1/2" to 3"	\$ 15.00
4" to 12"	\$ 25.00
>12"	Quote



Ball Socket

Materials:

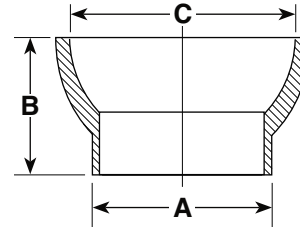
- 304 stainless steel

Product Notes

- Butt weld
- Designed to fit standard inch tubing O.D.'s

Options: Call for price and delivery

- Custom lengths



PART NUMBER	REFERENCE NUMBER	TUBE O.D. A	LENGTH B	SOCKET I.D. C
0700125	50/30BS	1.50	2.00	1.995
0700130	75/50BS	2.00	2.52	3.00
0700135	102/75BS	3.00	2.00	3.98

*ORDERING NOTE

Ball socket fittings with flange connections are available in Section 8 Hybrid Adapters



Ball Socket - Grooved

Materials:

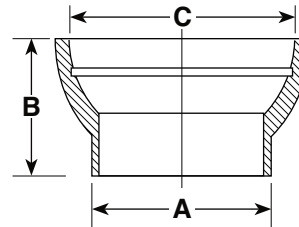
- 304 stainless steel

Product Notes

- Butt weld
- Designed to fit standard inch tubing O.D.'s

Options: Call for price and delivery

- Custom lengths



PART NUMBER	REFERENCE NUMBER	TUBE O.D. A	LENGTH B	SOCKET I.D. C	O-RING SIZE
0700140	50/30BS-G	1.50	2.00	1.995	2-224
0700145	75/50BS-G	2.00	2.52	3.00	2-232
0700150	102/75BS-G	3.00	2.00	3.98	2-240



Conical Reducers

Materials:

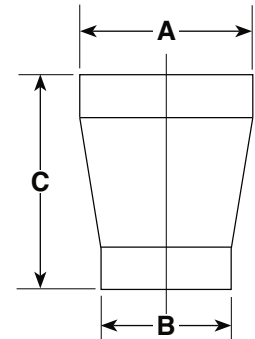
- Standard - 304 stainless steel

Product Notes

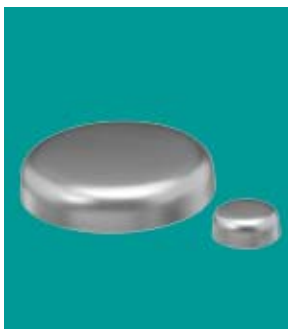
- Designed to fit standard inch tubing O.D.'s
- Connects different tubing O.D.'s

Options: Call for price and delivery

- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D. A	TUBE O.D. B	LENGTH C
0700155	100X075-WCR	0.065	1.00	0.75	1.38
0700160	150X075-WCR	0.065	1.50	0.75	2.38
0700165	150X100-WCR	0.065	1.50	1.00	2.38
0700170	200X100-WCR	0.065	2.00	1.00	2.38
0700175	200X150-WCR	0.065	2.00	1.50	2.38
0700180	250X150-WCR	0.065	2.50	1.50	2.38
0700185	250X200-WCR	0.065	2.50	2.00	2.38
0700190	300X150-WCR	0.065	3.00	1.50	3.63
0700195	300X200-WCR	0.065	3.00	2.00	3.63
0700200	300X250-WCR	0.065	3.00	2.50	3.63
0700205	400X200-WCR	0.065	4.00	2.00	3.63
0700210	400X250-WCR	0.083	4.00	2.50	3.63
0700215	400X300-WCR	0.083	4.00	3.00	3.63



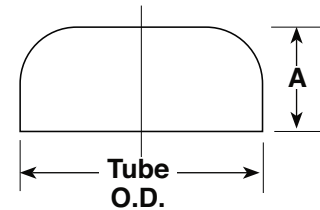
End Cap 304 Stainless Steel

Materials:

- Standard - 304 stainless steel

Product Notes

- Designed to fit standard inch tubing O.D.'s



PART NUMBER	REFERENCE NUMBER	TUBE O.D. A	LENGTH C
0700010	075-EC	0.75	0.31
0700015	100-EC	1.00	0.44
0700020	150-EC	1.50	0.56
0700025	200-EC	2.00	0.75
0700030	250-EC	2.50	1.00
0700035	300-EC	3.00	1.25
0700040	400-EC	4.00	1.50
0700045	600-EC	6.00	1.00

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End Cap Reducer

Materials:

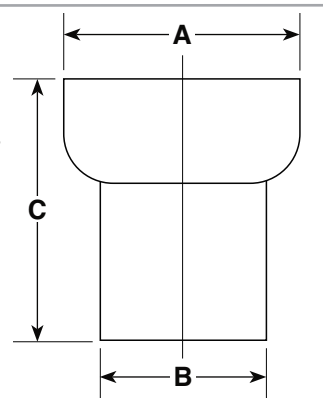
- Standard
- 304 stainless steel

Product Notes

- Designed to fit standard inch tubing O.D.'s
- Connects different tubing O.D.'s

Options: Call for price and delivery

- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	TUBE O. D. A	TUBE O. D. B	LENGTH C
0700050	075X050-ECR	0.75	0.50	2.38
0700055	100X050-ECR	1.00	0.50	2.38
0700060	100X075-ECR	1.00	0.75	2.38
0700065	150X050-ECR	1.50	0.50	2.38
0700070	150X075-ECR	1.50	0.75	2.38
0700075	150X100-ECR	1.50	1.00	2.38
0700080	200X150-ECR	2.00	1.50	2.38
0700085	250X200-ECR	2.50	2.00	2.38
0700090	300X150-ECR	3.00	1.50	3.62
0700095	300X200-ECR	3.00	2.00	3.62
0700100	300X250-ECR	3.00	2.50	3.62
0700105	400X200-ECR	4.00	2.00	3.62
0700110	400X300-ECR	4.00	3.00	3.62
0700115	600X400-ECR	6.00	4.00	3.62
0700120	800X600-ECR	8.00	6.00	3.62



45° Elbow

Materials:

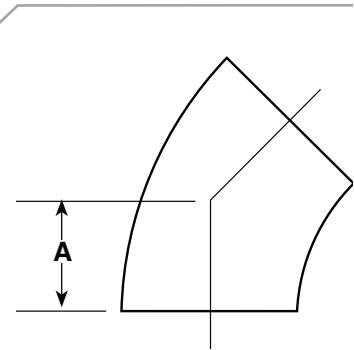
- Standard - 304 stainless steel

Product Notes

- Radius elbow design

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0700220	075-E45	0.065	0.75	0.46
0700225	100-E45	0.065	1.00	0.63
0700230	150-E45	0.065	1.50	0.94
0700235	200-E45	0.065	2.00	1.25
0700240	250-E45	0.065	2.50	1.56
0700245	300-E45	0.065	3.00	1.88
0700250	400-E45	0.083	4.00	2.50
0700255	600-E45	0.125	6.00	3.75

*** ORDERING NOTE**

For aluminum elbow fittings see 90° mitered elbows pg. 9.10



45° Elbow with Tangents

Materials:

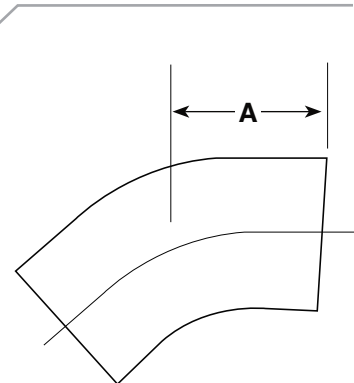
- Standard - 304 stainless steel

Product Notes

- Radius elbow design

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0700260	075-E45-T	0.065	0.75	0.76
0700265	100-E45-T	0.065	1.00	0.97
0700270	150-E45-T	0.065	1.50	1.53
0700275	200-E45-T	0.065	2.00	1.84
0700280	250-E45-T	0.065	2.50	3.00
0700285	300-E45-T	0.065	3.00	3.68
0700290	400-E45-T	0.083	4.00	4.78

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90° Elbow

Materials:

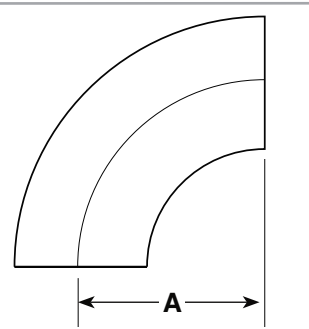
- Standard
- 304 stainless steel

Product Notes

- Radius elbow design

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0700405	050-E90	0.035	0.50	1.25
0700410	075-E90	0.065	0.75	1.00
0700415	075-E90-L	0.065	0.75	1.12
0700420	100-E90	0.065	1.00	1.50
0700430	150-E90	0.065	1.50	2.25
0700435	200-E90	0.065	2.00	3.00
0700440	250-E90	0.065	2.50	3.75
0700445	300-E90	0.065	3.00	4.50
0700450	400-E90	0.083	4.00	6.00
0700455	600-E90	0.109	6.00	9.00
0700460	800-E90	0.109	8.00	12.00
0700465	1000-E90	0.109	10.00	15.00



90° Elbow with Tangents

Materials:

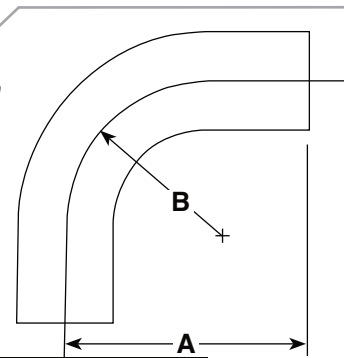
- Standard
- 304 stainless steel

Product Notes

- Radius elbow design

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



* ORDERING NOTE

For aluminum elbow fittings see 90° mitered elbows pg. 9.10

PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	A	B
0700470	075-E90-T	0.065	0.75	1.42	1.00
0700475	100-E90-T	0.065	1.00	1.82	1.50
0700480	150-E90-T	0.065	1.50	2.41	2.25
0700485	150-E90-TL	0.065	1.50	4.97	2.25
0700490	200-E90-T	0.065	2.00	4.06	3.00
0700495	200-E90-TL	0.065	2.00	5.36	3.00
0700500	250-E90-T	0.065	2.50	5.19	3.75
0700505	300-E90-T	0.065	3.00	6.31	4.50
0700510	400-E90-T	0.083	4.00	8.31	6.00



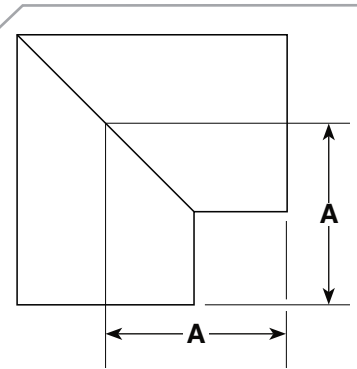
90° Elbow - Mitered

Materials:

- Standard
 - 304 stainless steel
- Alternative: Call for price and delivery
 - 6061 aluminum

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations
- Larger sizes



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D.	CENTERLINE A
0700310	075-E90-M	0.065	0.75	1.00
0700315	075-E90-ML	0.065	0.75	1.40
0700320	100-E90-M	0.065	1.00	1.80
0700325	100-E90-ML	0.065	1.00	1.88
0700330	150-E90-M	0.065	1.50	2.25
0700335	150-E90-ML	0.065	1.50	2.39
0700340	200-E90-M	0.065	2.00	2.59
0700345	200-E90-ML	0.065	2.00	2.98
0700350	250-E90-M	0.065	2.50	3.00
0700355	250-E90-ML	0.065	2.50	3.21
0700360	250-E90-MXL	0.065	2.50	3.75
0700365	300-E90-M	0.065	3.00	2.97
0700370	400-E90-M	0.083	4.00	3.88
0700375	400-E90-ML	0.083	4.00	4.87
0700380	500-E90-M	0.083	5.00	4.25
0700385	600-E90-M	0.083	6.00	5.00
0700390	600-E90-ML	0.083	6.00	6.06
0700395	800-E90-M	0.120	8.00	7.00
0700400	1000-E90-M	0.120	10.00	9.50

*ORDERING NOTE

For radius elbow fittings see pg. 9.8 - 9.9

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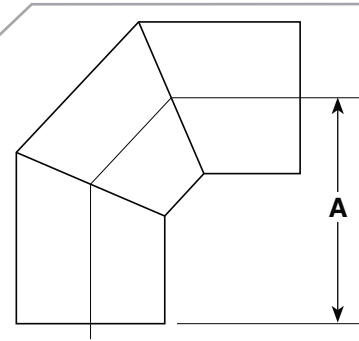
90° Elbow - Mitered High Conductance

Materials:

- Standard - 304 stainless steel
- Alternative: Call for price and delivery - 6061 aluminum

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D.	CENTERLINE A
0700295	600-E90-MHC	0.083	6.00	9.00
0700300	800-E90-MHC	0.120	8.00	12.00
0700305	1000-E90-MHC	0.125	10.00	15.00



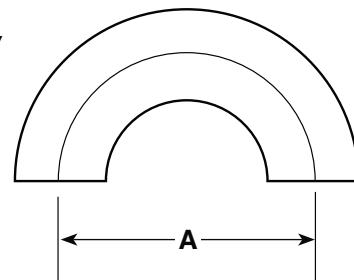
180° Returns

Materials:

- Standard - 304 stainless steel

Options: Call for price and delivery

- Custom Lengths
- Custom Flange Combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D.	CENTERLINE A
0700515	075-E180	0.065	0.75	2.25
0700520	100-E180	0.065	1.00	3.00
0700525	150-E180	0.065	1.50	4.50
0700530	200-E180	0.065	2.00	6.00



Tee

Materials:

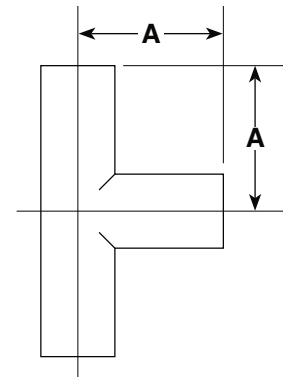
- Standard
 - 304 stainless steel
- Alternative: Call for price and delivery
 - 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O.D.	CENTERLINE A
0700555	050-T	0.049	0.50	0.75
0700560	075-T	0.035	0.75	1.00
0700565	075-T-L	0.065	0.75	1.40
0700570	100-T	0.065	1.00	1.80
0700575	100-T-L	0.065	1.00	1.88
0700580	150-T	0.065	1.50	2.25
0700585	150-T-L	0.065	1.50	2.39
0700590	150-T-XL	0.065	1.50	2.41
0700595	200-T	0.065	2.00	2.59
0700600	200-T-L	0.065	2.00	3.00
0700605	250-T	0.065	2.50	3.00
0700610	250-T-L	0.065	2.50	3.75
0700615	300-T	0.065	3.00	3.25
0700620	400-T	0.083	4.00	3.88
0700625	400-T-L	0.083	4.00	4.87
0700630	600-T	0.083	6.00	5.00
0700635	600-T-L	0.083	6.00	6.06
0700640	800-T	0.109	8.00	7.00
0700645	1000-T	0.109	10.00	9.50

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Tee - Reducer

Materials:

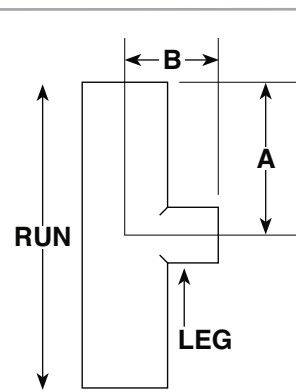
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance
- Reducing intersection for different tube sizes

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	RUN O.D.	LEG O.D.	A	B
0700650	100X050-RWT	1.00	0.50	1.88	1.00
0700655	100X075-RWT	1.00	0.75	1.88	1.12
0700660	150X050-RWT	1.50	0.50	2.25	1.25
0700665	150X075-RWT	1.50	0.75	2.25	1.38
0700670	150X100-RWT	1.50	1.00	2.25	2.13
0700680	200X075-RWT	2.00	0.75	3.00	1.63
0700683	200X100-RWT	2.00	1.00	3.00	2.38
0700685	200X150-RWT	2.00	1.50	3.00	2.50
0700690	250X150-RWT	2.50	1.50	3.00	2.75
0700695	250X200-RWT	2.50	2.00	3.00	3.25
0700700	300X150-RWT	3.00	1.50	3.25	3.00
0700705	300X200-RWT	3.00	2.00	3.25	3.50
0700710	300X250-RWT	3.00	2.50	3.25	3.25
0700715	400X150-RWT	4.00	1.50	3.88	3.50
0700720	400X200-RWT	4.00	2.00	3.88	4.00
0700725	400X250-RWT	4.00	2.50	3.88	3.75
0700730	400X300-RWT	4.00	3.00	3.88	3.75
0700735	500X400-RWT	5.00	4.00	4.25	4.38
0700740	600X150-RWT	6.00	1.50	5.00	4.50
0700745	600X200-RWT	6.00	2.00	5.00	5.00
0700750	600X250-RWT	6.00	2.50	5.00	4.75
0700755	600X400-RWT	6.00	4.00	5.00	4.88
0700760	600X500-RWT	6.00	5.00	5.00	4.75
0700765	800X600-RWT	8.00	6.00	7.00	6.00



Cross

Materials:

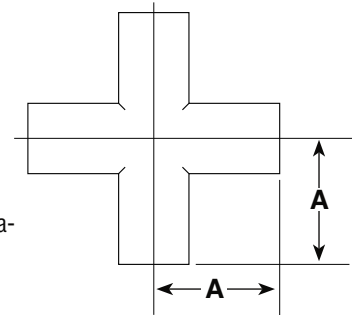
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0700770	050-X	0.049	0.50	0.75
0700775	075-X	0.035	0.75	1.00
0700780	075-X-L	0.065	0.75	1.40
0700785	100-X	0.065	1.00	1.80
0700790	100-X-L	0.065	1.00	1.88
0700795	150-X	0.065	1.50	2.25
0700800	150-X-L	0.065	1.50	2.39
0700805	200-X	0.065	2.00	2.59
0700810	200-X-L	0.065	2.00	3.00
0700815	250-X	0.065	2.50	3.00
0700820	250-X-L	0.065	2.50	3.75
0700825	300-X	0.065	3.00	3.25
0700830	400-X	0.083	4.00	3.88
0700835	400-X-L	0.083	4.00	4.87
0700840	600-X	0.083	6.00	5.00
0700845	600-X-L	0.083	6.00	6.06
0700850	800-X	0.120	8.00	7.00
0700855	1000-X	0.120	10.00	9.50

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Cross - Reducer

Materials:

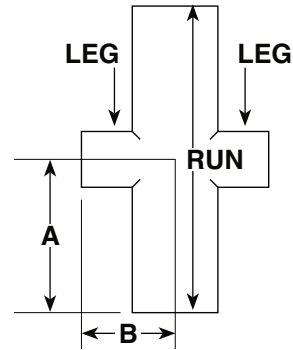
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance
- Reducing intersection for different tube sizes

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	RUN O.D.	LEG O.D.	A	B
0700860	100X050-RWX	1.00	0.50	1.88	1.00
0700865	100X075-RWX	1.00	0.75	1.88	1.12
0700870	150X050-RWX	1.50	0.50	2.25	1.25
0700875	150X075-RWX	1.50	0.75	2.25	1.38
0700880	150X100-RWX	1.50	1.00	2.25	2.13
0700890	200X075-RWX	2.00	0.75	3.00	1.63
0700894	200X100-RWX	2.00	1.00	3.00	2.38
0700895	200X150-RWX	2.00	1.50	3.00	2.50
0700900	250X150-RWX	2.50	1.50	3.00	2.75
0700905	250X200-RWX	2.50	2.00	3.00	3.25
0700910	300X150-RWX	3.00	1.50	3.25	3.00
0700915	300X200-RWX	3.00	2.00	3.25	3.50
0700920	300X250-RWX	3.00	2.50	3.25	3.25
0700925	400X150-RWX	4.00	1.50	3.88	3.50
0700930	400X200-RWX	4.00	2.00	3.88	4.00
0700935	400X250-RWX	4.00	2.50	3.88	3.75
0700940	400X300-RWX	4.00	3.00	3.88	3.75
0700945	500X400-RWX	5.00	4.00	4.25	4.38
0700950	600X150-RWX	6.00	1.50	5.00	4.50
0700955	600X200-RWX	6.00	2.00	5.00	5.00
0700960	600X250-RWX	6.00	2.50	5.00	4.75
0700965	600X300-RWX	6.00	3.00	5.00	4.75
0700970	600X400-RWX	6.00	4.00	5.00	4.88
0700975	600X500-RWX	6.00	5.00	5.00	4.75
0700980	800X600-RWX	8.00	6.00	7.00	6.00



5-Way Cross

Materials:

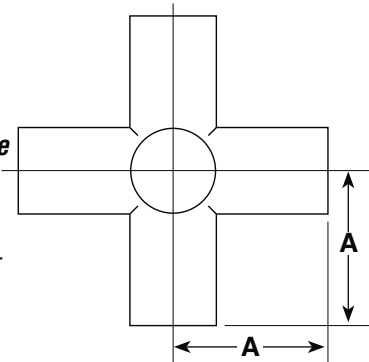
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0700985	075-5X	0.035	0.75	1.00
0700990	100-5X	0.065	1.00	1.88
0700995	150-5X	0.065	1.50	2.25
0701000	200-5X	0.065	2.00	3.00
0701005	250-5X	0.065	2.50	3.00
0701010	250-5X-L	0.065	2.50	3.75
0701015	300-5X	0.065	3.00	3.25
0701020	400-5X	0.083	4.00	3.88
0701025	400-5X-L	0.083	4.00	4.87
0701030	500-5X	0.083	5.00	4.25
0701035	600-5X	0.083	6.00	5.00
0701040	600-5X-L	0.083	6.00	6.06
0701045	800-5X	0.120	8.00	7.00
0701050	1000-5X	0.120	10.00	9.50

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6-Way Cross

Materials:

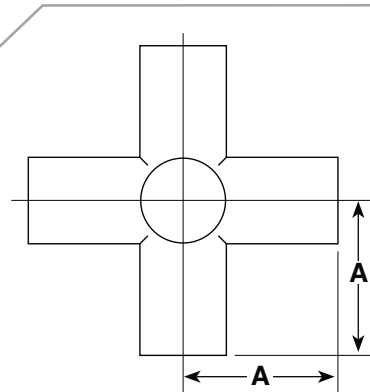
- Standard
- 304 stainless steel
- Alternative: Call for price and delivery
- 6061 aluminum

Product Notes

- Pulled ports optimize vacuum performance

Options: Call for price and delivery

- Custom lengths
- Custom flange combinations



PART NUMBER	REFERENCE NUMBER	WALL THICKNESS	TUBE O. D.	CENTERLINE A
0701055	075-6X	0.035	0.75	1.00
0701060	100-6X	0.065	1.00	1.88
0701065	150-6X	0.065	1.50	2.25
0701070	200-6X	0.065	2.00	3.00
0701075	250-6X	0.065	2.50	3.00
0701080	250-6X-L	0.065	2.50	3.75
0701085	300-6X	0.065	3.00	3.25
0701090	400-6X	0.083	4.00	3.88
0701095	400-6X-L	0.083	4.00	4.87
0701100	500-6X	0.083	5.00	4.25
0701105	600-6X	0.083	6.00	5.00
0701110	600-6X-L	0.083	6.00	6.06
0701115	800-6X	0.120	8.00	7.00
0701120	1000-6X	0.120	10.00	9.50

