

ASME BPE

TUBES & FITTINGS



The environment, health and safety are critical topics in today's society and in order to protect and provide confidence to the life sciences, food and beverage consumers, a high level of professional knowledge and competence is required. With decades of experience in designing and manufacturing hygienic products, NOXTING has created and introduced the 'Ultra' sanitary product line with optimized and improved fluid processing as well as enhanced CIP cleaning capabilities specifically focussing on our clients product safety.

Our products are certified in accordance with all relevant and latest edition industry standards, such as ASME BPE, EN, BS, ANSI, DIN, 3A, ISO and many others. We use only the highest quality imported stainless steel with special emphasis on ferrite levels and corrosion resistance, in accordance with BS EN ISO 9001:2000

We use original sealing materials, such as EPDM, PTFE, TFM and various other polymers, supplied from top brand European manufacturers.

NOXTING is able to supply a wide and varied range of products in accordance with the following standards: DIN, ISO, BS and ASME BPE, plus we can provide products conforming to various other standards on demand and as required.



Generally, Clamp Liners, blanks and adapters are produced by CNC turning from stainless steel bar, in AISI 316L 1.4404 material. The material conforms typically to ASTM A182 and A276 and for specials requiring boiler grade material, these are produced from ASTM A479. Certification also references the NACE MR0175-03 standard in most cases. Generally low sulphur grades of stainless steel are used for good welding characteristics. Our standard range of clamp fittings covers sizes from 4 mm to 12" (300mm) and encompasses the following internationally recognised standards.

Standards

- ASME BPE-2002
- BS 4825 Part 3 / ISO 2037
- DIN 32676
- DIN 11864-3
- 3A Standard
- ISO 2852 and SMS 3017A
- SMS 3008
- ISO 1127 Schedule Pipe Size
- BS 6362 Schedule Pipe Size
- ASTM A312 Schedule Pipe

Materials

A wide range of non-standard material is also available for the Liners, adapters and blanks, in addition to the standard AISI 316L stainless steel. These include:

- AISI 316Ti Wn 1.4571
- AISI 316L (BN-2) Wn 1.4435 with low ferrite
- 6Mo materials & AL6-XN, 904L & 254 SMO
- Duplex alloys including SAF2507 UNS 32750
- Hastelloy C22 and C276
- Nickel Alloys such as Monel 400
- Titanium
- Nylon, ABS and Polypropylene Aluminium
- Aluminium

Surface Finish

The standard internal surface finish for clamp Liners is 0.8 - 1.0 μm Ra, with enhanced finishes of 0.38 μm Ra or better available on request. Electro-polishing is also available to order.

Certification

Material traceability is available with EN 10204 3.1 certificates on all clamp ferrules and blanks, while a certificate of conformity is offered for the clamps and seals.

Compatibility

Where the environment is deemed aggressive to either the seal or the clamp union, please provide details of the media and operating conditions including pressure and temperature. Our technical department will assist you in the selection of the most appropriate material and clamp system. See our technical information document for selection data relating to stainless steel and sealing materials.

ASME BPE 2014 – DT Range of Bioprocessing Fittings

NOXTING offer the full range of ASME BPE Bioprocessing Fittings in both SF1 and SF4 surface finishes. The standard provides a good manufacturing guide to the common installation problems and offers solutions and examples of what is considered to be acceptable and unacceptable for the design of modern Bio-Pharmaceutical installations. The standard also covers process vessel design, pump and valve selection and installation. The DT fittings are designed for orbital and automatic welding procedures and include, clamp ferrules, bends, tees, reducers, instrument tees and end caps. The DT fittings are offered in accordance with the range listed in the current 2014 standard, although for continuity we have chosen to keep to the original DT references specified in the original BPE standard, namely DT-7 to DT-30 as the industry is already familiar with these items. Standard DT fittings are offered to SF-1 surface finish at 0.51µM Ra Max for both tube and fittings, with SF-4 (0.38µM Ra Max) being available on special order. The welding tangents of all DT the fittings have a controlled sulphur content of between 0.005 and 0.017%. This range is meant to balance with the sulphur content usually found in tube and should leads to a more even welding process. Material certification is offered to EN10204 3.1 for all fittings and tube supplied to ASME BPE.

High purity raw materials

The product made of imported stainless steel with high purity ASTM 316L, BS EN ISO 9001:2000.

Element	C	Si	Mn	P	S	Cr	Ni	Mo
%	≤0.030	≤1.00	≤2.00	≤0.035	0.005 - 0.017	16.0 - 18.0	10.0-14.0	2.0-3.0

Product standard

UNS	Seamless pipe and Welding pipe	Forge Piece
S31603	ASTM A270 ASTM A270M	ASTM A743 EN 1.4409

Surface finishing

The original MP and EP surface treatment technology, inner surface roughness of BPE series from a 0.5 µm to Ra 0.375µm, outer surface roughness of BPE series always Ra 0.8 µm. The minimum value of electrolytic polishing can reach Ra 0.12.

Polishing Code	The inner surface (ID)			The outer surface (OD)			ASME BPE Surface processing code
	The maximum surface cleanliness Ra		Polishing method	The maximum surface cleanliness Ra		Polishing method	
	µ-in	µ-m		µ-in	µ-m		
HG	20	0.5	Mechanically Polished-MP	32	0.8	Mechanically Polished-MP	SF1
4G	15	0.375	Mechanically Polished-MP & Electro-polished-EP	32	0.8	Mechanically Polished-MP	SF4

CODING / not all codec combinations are available /

Code	A	1	3	2	2	0	0	8	0	0	0	2	4	2																																																																																													
Position	1	2	2	3	4	5	5	5	6	6	6	7	8	9																																																																																													
Position 1 > Product	A	Components				B	Valve				C	Spare parts																																																																																															
Position 2 > Type	0 0	Pipe				1 0	Clamp 13MHH3				2 0	Flange																																																																																															
	0 1	Bend 90°				1 1	Clamp TC				2 1	Tank Flange NA																																																																																															
	0 2	Bend 45°				1 2	Clamp 13MHP				2 2	Cross																																																																																															
	0 3	Tee				1 3	Clamp Ferrule				2 3	O-ring																																																																																															
	0 4	Tee reducer				1 4	Blind Clamp				2 4	Union																																																																																															
	0 5	Cocentric reducer				1 5	U Bend																																																																																																				
	0 6	Excentric reducer				1 6	Liner																																																																																																				
	0 7	Seal clamp				1 7	Male																																																																																																				
	0 8	Clamp 13MHH-O				1 8	Nut																																																																																																				
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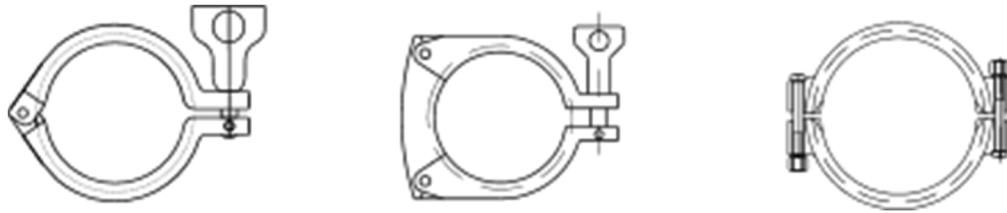
Size range of finished sanitary tubes

ISO			3A			DIN 11850 Series 2			DIN 11850 Series 1			DIN			ASME BPE			BS			GB		
NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T
															1/4"	6.35	0.89						
						DN 10	13	1.5	DN 10	12	1.0	DN 10	12	1.5	3/8"	9.53	0.89						
			1/2"	12.7	1.65	DN 15	19	1.5	DN 15	18	1.0	DN 15	18	1.5	1/2"	12.7	1.65	1/2"	12.7	1.6	1/2"	12.7	1.5
			3/4"	19.1	1.65	DN 20	23	1.5	DN 20	22	1.0	DN 20	22	1.5	3/4"	19.1	1.65	3/4"	19.1	1.6	3/4"	19.1	1.5
25	25.0	1.2	1"	25.4	1.65	DN 25	29	1.5	DN 25	28	1.0	DN 25	28	1.5	1"	25.4	1.65	1"	25.4	1.6	1"	25.4	1.5
32	31.8	1.2				DN 32	35	1.5	DN 32	34	1.0	DN 32	34	1.5				1 1/4"	31.8	1.6	1 1/4"	31.8	1.5
38	38.0	1.2	1 1/2"	38.1	1.65										1 1/2"	38.1	1.65	1 1/2"	38.1	1.6	1 1/2"	38.1	1.5
						DN 40	41	1.5	DN 40	40	1.0	DN 40	40	1.5									
51	51.0	1.2	2"	50.8	1.65	DN 50	53	1.5	DN 50	52	1.0	DN 50	52	1.5	2"	50.8	1.65	2"	50.8	1.6	2"	50.8	1.5
63	63.5	1.6	2 1/2"	63.5	1.65										2 1/2"	63.5	1.65	2 1/2"	63.5	1.6	2 1/2"	63.5	1.5
						DN 65	70	2													2 1/2"	63.5	2
76	76.1	1.6	3"	76.2	1.65										3"	76.2	1.65	3"	76.2	1.6	3"	76.2	1.5
						DN 80	85	2													3"	76.2	2
101	101.6	2	4"	101.6	2.11	DN 100	104	2							4"	101.6	2.11	4"	101.6	2	4"	101.6	2
104	104.0	2				DN 125	129	2													3 1/2"	88.9	2
																					4 1/2"	114.3	2
129	129.0	2	6"	152.4	2.77	DN 150	154	2							6"	152.4	2.77	6"	154	2			
204	204.0	2	8"	203.2	2.77	DN 200	204	2										8"	204	2			
																		10"	254	2			

Standard size DT-3-2 (ASME BPE)

Size	Tube O.D		Tube Wall Thickness		Centerline Radius (CLR), R	
Size, in	in.	mm	in.	mm	in.	mm
1/4"	0.250	63.5	0.035	0.89	0.563	14.30
3/8"	0.375	9.53	0.035	0.89	1.125	28.58
1/2"	0.500	12.70	0.065	1.65	1.125	28.58
3/4"	0.750	19.05	0.065	1.65	1.125	28.58
1"	1.000	25.40	0.065	1.65	1.500	38.10
1 1/2"	1.500	38.10	0.065	1.65	2.250	57.15
2"	2.000	50.80	0.065	1.65	3.000	76.20
2 1/2"	2.500	63.50	0.065	1.65	3.750	92.25
3"	3.000	76.20	0.065	1.65	4.500	114.30
4"	4.000	101.60	0.083	2.11	6.000	152.40
6"	6.000	152.40	0.109	2.77	9.000	228.60

Hygienic Clamp: Rated Internal Working Pressure



Nom.Size	13MHH Clamp				13MHH3 Clamp				13MHP Clamp			
	70°F / 21°C		250°F / 121°C		70°F / 21°C		250°F / 121°C		70°F / 21°C		250°F / 121°C	
	PSI	bar	PSI	bar	PSI	bar	PSI	bar	PSI	bar	PSI	bar
1/2" & 3/4"	1500	103	1200	83					1500	103	1200	83
1" & 1 1/2"	500	34	250	17	600	41	300	21	1500	103	1200	83
2"	450	31	250	17	550	38	275	19	1000	69	800	55
2 1/2 "	400	28	200	14	450	31	225	16	1000	69	800	55
3"	350	24	150	10	350	24	160	11	1000	69	800	55
4"	200	14	125	9	250	17	150	10	1000	69	800	55
5 "	175	12	100	7								
6 "	150	10	75	5								
8 "	100	7	50	3								
10 "	40	3	30	2								

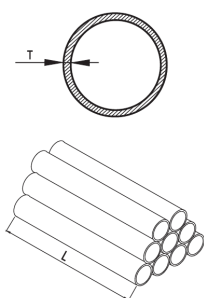
Material features of the union ring seal

	EPDM	NBR	Viton	Silicone	Teflon
Temperature Range	-48 ÷ 135°C -55 ÷ 275°F	-40 ÷ 120°C -40 ÷ 248°F	-29 ÷ 204°C -20 ÷ 400°F	-62 ÷ 232°C -80 ÷ 450°F	-40 ÷ 232°C -40 ÷ 450°F
Acid Resistance	Good-Excellent	Good	Good	Good	Good-Excellent
Alkali Resistance	Good -Excellent	Good	Poor-Good	Poor-Fair	Good -Excellent
Gasoline Resistance	Poor-Fair	Good-Excellent	Good -Excellent	Good	Good-Excellent
Diesel Resistance	Good	Good	Good-Excellent	Good	Good-Excellent
Abrasion Resistance	Good -Excellent	Good	Good	Good-Excellent	Good- Excellent
Compression Set	Fair	Good	Good-Excellent	Good-Excellent	Fair

Standard size and tolerance of DT-7-1 (ASME BPE)

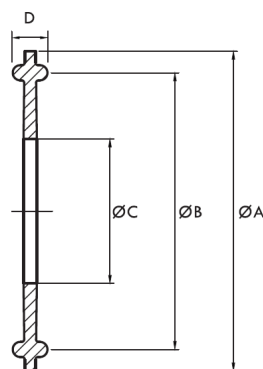
Size, in.	A		B		C		
	Dimension	Tolerance	Dimension	Tolerance	Dimension	Tolerance	Tolerance
Type A 1/4"	0.250	± 0.005	0.180	± 0.005	0.984	± 0.005	- 0.005
3/8"	0.375	± 0.005	0.305	± 0.005	0.984	± 0.005	- 0.005
1/2"	0.500	± 0.005	0.370	± 0.005	0.984	± 0.005	- 0.005
3/4"	0.750	± 0.005	0.620	± 0.005	0.984	± 0.005	- 0.005
Type B 1.0"	1.000	± 0.005	0.870	± 0.005	1.984	± 0.008	- 0.005
1.5"	1.500	± 0.008	1.370	± 0.005	1.984	± 0.008	- 0.005
2.0"	2.000	± 0.008	1.870	± 0.005	2.516	± 0.008	- 0.008
2.5"	2.500	± 0.010	2.370	± 0.005	3.047	± 0.008	- 0.008
3.0"	3.000	± 0.010	2.870	± 0.005	3.579	± 0.010	- 0.010
4.0"	4.000	± 0.015	3.834	± 0.005	4.682	± 0.015	- 0.015
6.0"	6.000	± 0.030	7.782	± 0.005	6.570	± 0.030	- 0.030

Tube



Size	L / mm /	T / in / mm /	Order No.
1/4"	6 100	0.035 / 0.89 /	A00020080002XX
3/8"	6 100	0.035 / 0.89 /	A00020100002XX
1/2"	6 100	0.065 / 1.65 /	A00020150002XX
3/4"	6 100	0.065 / 1.65 /	A00020200002XX
1"	6 100	0.065 / 1.65 /	A00020250002XX
1 1/2"	6 100	0.065 / 1.65 /	A00020400002XX
2"	6 100	0.065 / 1.65 /	A00020500002XX
2 1/2"	6 100	0.065 / 1.65 /	A00020650002XX
3"	6 100	0.065 / 1.65 /	A00020800002XX
4"	6 100	0.083 / 2.11 /	A00021000002XX
6"	6 100	0.109 / 2.77 /	A00021500002XX

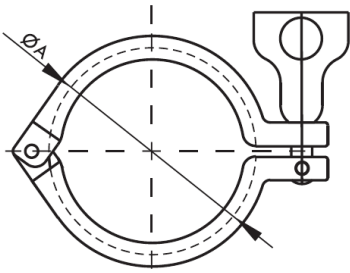
Gasket – Clamp / (Type B) Un-lipped DT-7-1 /



Size	A / in / mm /	B / in / mm /	C / in / mm /	Order No.
1/2"	0.866 / 22.0 /		0.374 / 9.5 /	A0702015000X00
3/4"	0.866 / 22.0 /		0.625 / 15.9 /	A0702020000X00
1"	1.984 / 50.4 /	1.718 / 43.6 /	0.901 / 22.9 /	A0702025000X00
1 1/2"	1.984 / 50.4 /	1.718 / 43.6 /	1.401 / 35.6 /	A0702040000X00
2"	2.516 / 63.9 /	2.218 / 56.3 /	2.374 / 60.3 /	A0702050000X00
2 1/2"	3.047 / 77.4 /	2.781 / 70.6 /	2.901 / 73.7 /	A0702065000X00
3"	3.579 / 90.9 /	3.281 / 83.3 /	3.874 / 98.4 /	A0702080000X00
4"	4.682 / 118.9 /	4.344 / 110.3 /	4.842 / 123.0 /	A0702100000X00
6"	6.570 / 166.9 /		5.838 / 148.3 /	A0702150000X00

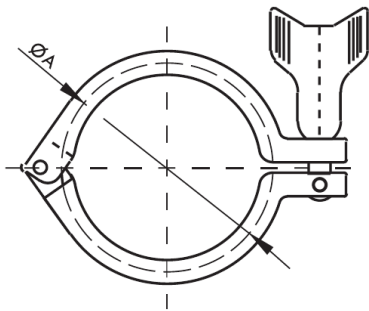
Order: X > E=EPDM, T=Teflon, P=PTFE, N=NBR, S=Silicone

Clamp 13 MHH-0



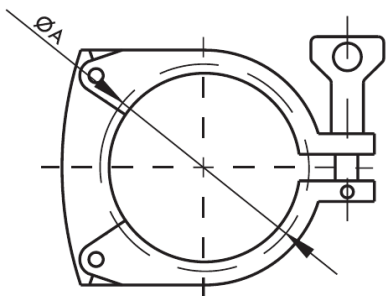
Size	A / mm /	Order No.
1/2"	28.6	A0800020000100
3/4"	28.6	A0800020000100
1"	53.9	A0800040000100
1 1/2"	53.9	A0800040000100
2"	67.4	A0800050000100
2 1/2"	80.9	A0800065000100
3"	94.4	A0800080000100
4"	122.4	A0800100000100
6"	170.4	A0800150000100
8"	221.2	A0800200000100
10"	272.0	A0800250000100

Clamp 13 MHH-T



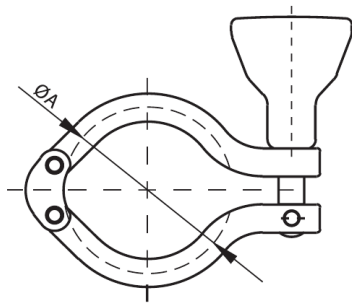
Size	A / mm /	Order No.
1/2"	28.6	A0900020000100
3/4"	28.6	A0900020000100
1"	53.9	A0900040000100
1 1/2"	53.9	A0900040000100
2"	67.4	A0900050000100
2 1/2"	80.9	A0900065000100
3"	94.4	A0900080000100
4"	122.4	A0900100000100
6"	170.4	A0900150000100
8"	221.2	A0900200000100
10"	272.0	A0900250000100

Clamp 13 MHH3



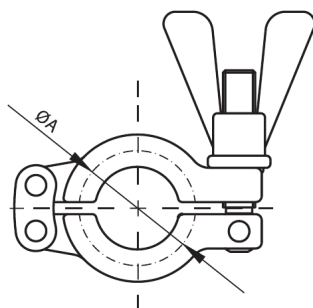
Size	A / mm /	Order No.
1"	53.9	A1000040000100
1 1/2"	53.9	A1000040000100
2"	67.4	A1000050000100
2 1/2"	80.9	A1000065000100
3"	94.4	A1000080000100
4"	122.4	A1000100000100

Clamp TC - T



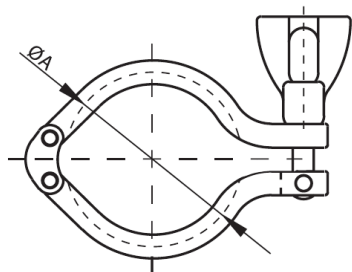
Size	A / mm /	Order No.
1"	53.9	A1100040000100
1 1/2"	53.9	A1100040000100
2"	67.4	A1100050000100
2 1/2"	80.9	A1100065000100
3"	94.4	A1100080000100
4"	122.4	A1100100000100

Clamp TC - V



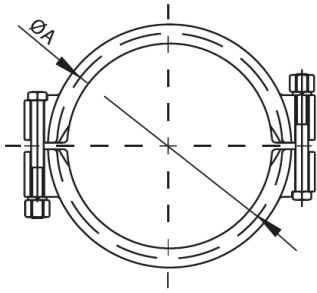
Size	A / mm /	Order No.
1/2"	28.0	A1110020000100
3/4"	28.0	A1110020000100
1"	53.9	A1110040000100
1 1/2"	53.9	A1110040000100
2"	67.4	A1110050000100
2 1/2"	80.9	A1110065000100
3"	94.4	A1110080000100
4"	122.0	A1110100000100

Clamp TC - X



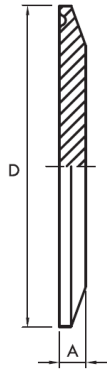
Size	A / mm /	Order No.
1"	53.9	A1120040000100
1 1/2"	53.9	A1120040000100
2"	67.4	A1120050000100
2 1/2"	80.9	A1120065000100
3"	94.4	A1120080000100
4"	122.4	A1120100000100

Clamp High Pressure / 13MHP /



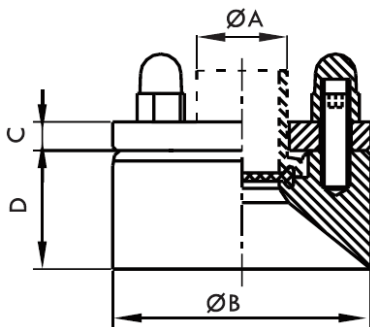
Size	A / mm /	Order No.
1/2"	28.6	A1200020000100
3/4"	28.6	A1200020000100
1"	52.0	A1200040000100
1 1/2"	52.0	A1200040000100
2"	65.5	A1200050000100
2 1/2"	79.0	A1200065000100
3"	92.5	A1200080000100
4"	158.8	A1200100000100
6"	170.4	A1200150000100

Clamp Blind / DT-31 (BPE 2009) DT-4.1.5-2 (BPE 2014) /



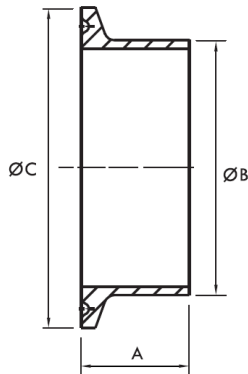
Size	A / in / mm /	B / in / mm /	Order No.
1/2"	0.187 / 4.7 /	0.984 / 25.0 /	A1400015000100
3/4"	0.187 / 4.7 /	0.984 / 25.0 /	A1400020000100
1"	0.250 / 6.4 /	1.984 / 50.4 /	A1400025000100
1 1/2"	0.250 / 6.4 /	1.984 / 50.4 /	A1400040000100
2"	0.250 / 6.4 /	2.516 / 63.9 /	A1400050000100
2 1/2"	0.250 / 6.4 /	3.047 / 77.5 /	A1400065000100
3"	0.250 / 6.4 /	3.579 / 90.9 /	A1400080000100
4"	0.312 / 7.9 /	4.682 / 119.0 /	A1400100000100
6"	0.437 / 11.1 /	6.570 / 166.9 /	A1400150000100

Tank Clamp Flange - Welded



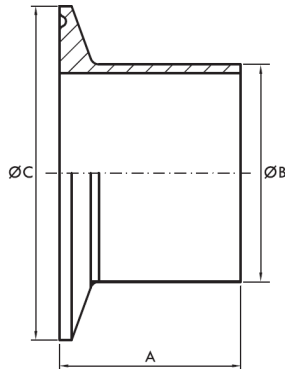
Size	B / mm /	C / mm /	D / mm /	Order No.
3/4"	2.145 / 54.5 /	0.236 / 6.0 /	0.984 / 25.0 /	A21000150002XX
1"	3.326 / 84.5 /	0.236 / 6.0 /	0.984 / 25.0 /	A21000250002XX
1 1/2"	3.326 / 84.5 /	0.236 / 6.0 /	0.984 / 25.0 /	A21000400002XX
2"	3.917 / 99.5 /	0.236 / 6.0 /	0.984 / 25.0 /	A21000500002XX
2 1/2"	4.409 / 112.0 /	0.394 / 10.0 /	1.496 / 38.0 /	A21000650002XX
3"	5.157 / 131.0 /	0.394 / 10.0 /	1.496 / 38.0 /	A21000800002XX

Clamp Liner Mini / BS Standard (4825 Part 3) DT-4.1.1-4 (BPE 2014) /



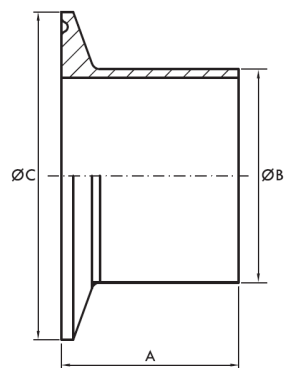
Size	A / in / mm /	B / in / mm /	C / in / mm /	Order No.
1/2"	0.500 / 12.7 /	0,500 / 12.7 /	0,984 / 25.0 /	A132201500002xx
3/4"	0.500 / 12.7 /	0,750 / 19.1 /	0,984 / 25.0 /	A132202000002xx
1"	0.500 / 12.7 /	1.000 / 25.4 /	1.984 / 50.4 /	A132202500002xx
1 1/2"	0.500 / 12.7 /	1.500 / 38.1 /	1.984 / 50.4 /	A132204000002xx
2"	0.500 / 12.7 /	2.000 / 50.8 /	2.516 / 63.9 /	A132205000002xx
2 1/2"	0.500 / 12.7 /	2.500 / 63.5 /	3.047 / 77.5 /	A132206500002xx
3"	0.500 / 12.7 /	3.000 / 76.2 /	3.579 / 90.9 /	A132208000002xx
4"	0.625 / 15.9 /	4.000 / 101.6 /	4.682 / 119 /	A132210000002xx

Clamp Liner Short / BS Standard (4825 Part 3) DT-4.1.1-4 (BPE 2014) /



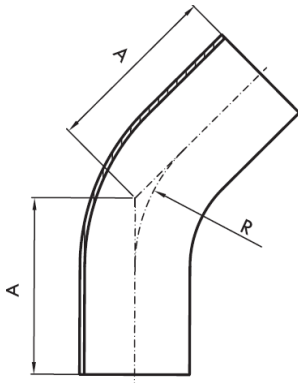
Size	A / in / mm /	B / in / mm /	C / in / mm /	Order No.
1/4"	1.130 / 28.7 /	0.250 / 6.35 /	0,984 / 25.0 /	A131200800002xx
3/8"	1.130 / 28.7 /	0.375 / 9.53 /	0,984 / 25.0 /	A131201000002xx
1/2"	1.130 / 28.7 /	0,500 / 12.7 /	0,984 / 25.0 /	A131201500002xx
3/4"	1.130 / 28.7 /	0,750 / 19.1 /	0,984 / 25.0 /	A131202000002xx
1"	1.130 / 28.7 /	1.000 / 25.4 /	1.984 / 50.4 /	A131202500002xx
1 1/2"	1.130 / 28.7 /	1.500 / 38.1 /	1.984 / 50.4 /	A131204000002xx
2"	1.130 / 28.7 /	2.000 / 50.8 /	2.516 / 63.9 /	A131205000002xx
2 1/2"	1.130 / 28.7 /	2.500 / 63.5 /	3.047 / 77.5 /	A131206500002xx
3"	1.130 / 28.7 /	3.000 / 76.2 /	3.579 / 90.9 /	A131208000002xx
4"	1.130 / 28.7 /	4.000 / 101.6 /	4.682 / 119 /	A131210000002xx
6"	1.500 / 38.1 /	6.000 / 152.4 /	6.570 / 166.9 /	A131215000002xx

Clamp Liner / BS Standard (4825 Part 3) DT-4.1.1-4 (BPE 2014) /



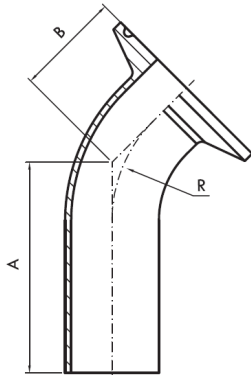
Size	A / in / mm /	B / in / mm /	C / in / mm /	Order No.
1/4"	1.750 / 44.5 /	0.250 / 6.35 /	0,984 / 25.0 /	A130200800002xx
3/8"	1.750 / 44.5 /	0.375 / 9.53 /	0,984 / 25.0 /	A130201000002xx
1/2"	1.750 / 44.5 /	0,500 / 12.7 /	0,984 / 25.0 /	A130201500002xx
3/4"	1.750 / 44.5 /	0,750 / 19.1 /	0,984 / 25.0 /	A130202000002xx
1"	1.750 / 44.5 /	1.000 / 25.4 /	1.984 / 50.4 /	A130202500002xx
1 1/2"	1.750 / 44.5 /	1.500 / 38.1 /	1.984 / 50.4 /	A130204000002xx
2"	2.250 / 57.2 /	2.000 / 50.8 /	2.516 / 63.9 /	A130205000002xx
2 1/2"	2.250 / 57.2 /	2.500 / 63.5 /	3.047 / 77.5 /	A130206500002xx
3"	2.250 / 57.2 /	3.000 / 76.2 /	3.579 / 90.9 /	A130208000002xx
4"	2.250 / 57.2 /	4.000 / 101.6 /	4.682 / 119.0 /	A130210000002xx
6"	3.000 / 76.2 /	6.000 / 152.4 /	6.570 / 166.9 /	A130215000002xx

Bend 45° – Welded / DT-8 (BPE 2009) DT-4.1.1-4 (BPE 2014) /



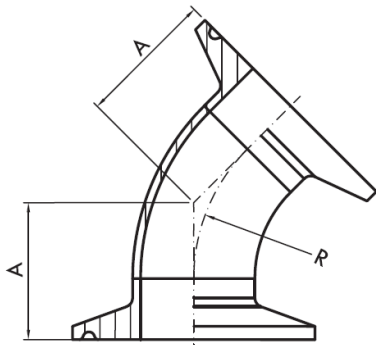
Size	A / in / mm /	R / in / mm /	Order No.
1/2"	2.250 / 57.2 /	1.125 / 28.6 /	A02020150002XX
3/4"	2.250 / 57.2 /	1.125 / 28.6 /	A02020200002XX
1"	2.250 / 57.2 /	1.500 / 38.1 /	A02020250002XX
1 1/2"	2.500 / 63.5 /	2.250 / 57.2 /	A02020400002XX
2"	3.000 / 76.2 /	3.000 / 76.2 /	A02020500002XX
2 1/2"	3.375 / 85.7 /	3.750 / 95.3 /	A02020650002XX
3"	3.625 / 92.1 /	4.500 / 114.3 /	A02020800002XX
4"	4.500 / 114.3 /	6.000 / 152.4 /	A02021000002XX
6"	6.250 / 158.8 /	9.000 / 228.6 /	A02021500002XX

Bend 45° - Weld/Clamp / DT-13 (BPE 2009) DT-4.1.1-5 (BPE 2014) /



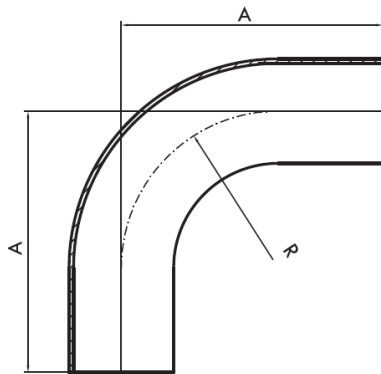
Size	A / in / mm /	R / in / mm /	B / in / mm /	Order No.
1/2"	2.250 / 57.2 /	1.125 / 28.6 /	1.000 / 25.4 /	A02120150002XX
3/4"	2.250 / 57.2 /	1.125 / 28.6 /	1.000 / 25.4 /	A02120200002XX
1"	2.250 / 57.2 /	1.500 / 38.1 /	1.125 / 28.6 /	A02120250002XX
1 1/2"	2.500 / 63.5 /	2.250 / 57.2 /	1.438 / 36.5 /	A02120400002XX
2"	3.000 / 76.2 /	3.000 / 76.2 /	1.750 / 44.5 /	A02120500002XX
2 1/2"	3.375 / 85.7 /	3.750 / 95.3 /	2.063 / 52.4 /	A02120650002XX
3"	3.625 / 92.1 /	4.500 / 114.3 /	2.375 / 60.3 /	A02120800002XX
4"	4.500 / 114.3 /	6.000 / 152.4 /	3.125 / 79.4 /	A02121000002XX
6.0"	6.250 / 158.8 /	9.000 / 228.6 /	5.250 / 133.4 /	A02121500002XX

Bend 45° - Clamp / DT-17 (BPE 2009) DT-4.1.1-6 (BPE 2014) /



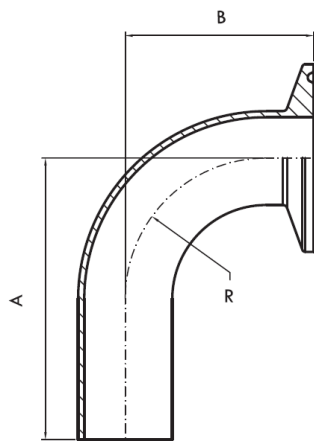
Size	A / in / mm /	R / in / mm /	Order No.
1/2"	2.250 / 57.2 /	1.125 / 28.6 /	A02220150002XX
3/4"	2.250 / 57.2 /	1.125 / 28.6 /	A02220200002XX
1"	2.250 / 57.2 /	1.500 / 38.1 /	A02220250002XX
1 1/2"	2.500 / 63.5 /	2.250 / 57.2 /	A02220400002XX
2"	3.000 / 76.2 /	3.000 / 76.2 /	A02220500002XX
2 1/2"	3.375 / 85.7 /	3.750 / 95.3 /	A02220650002XX
3"	3.625 / 92.1 /	4.500 / 114.3 /	A02220800002XX
4"	4.500 / 114.3 /	6.000 / 152.4 /	A02221000002XX
6.0"	6.250 / 158.8 /	9.000 / 228.6 /	A02221500002XX

Bend 90° - Welded / DT-8 (BPE 2009) DT-4.1.1-4 (BPE 2014) /



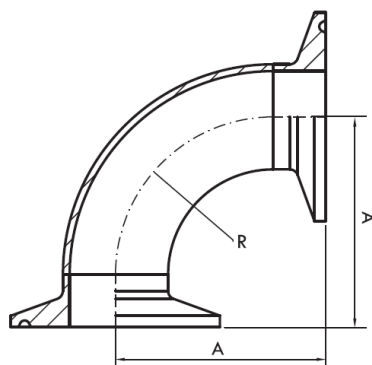
Size	A / in / mm /	R / in / mm /	Order No.
3/8"	2.625 / 66.7 /	1.125 / 28.6 /	A01020100002XX
1/2"	3.000 / 76.2 /	1.125 / 28.6 /	A01020150002XX
3/4"	3.000 / 76.2 /	1.125 / 28.6 /	A01020200002XX
1"	3.000 / 76.2 /	1.500 / 38.1 /	A01020250002XX
1 1/2"	3.750 / 95.3 /	2.250 / 57.2 /	A01020400002XX
2"	4.750 / 120.7 /	3.000 / 76.2 /	A01020500002XX
2 1/2"	5.500 / 139.7 /	3.750 / 95.3 /	A01020650002XX
3"	6.250 / 158.8 /	4.500 / 114.3 /	A01020800002XX
4"	8.000 / 203.2 /	6.000 / 152.4 /	A01021000002XX
6"	11.500 / 292.1 /	9.000 / 228.6 /	A01021500002XX

Bend 90° - Weld/Clamp / DT-13 (BPE 2009) DT-4.1.1-5 (BPE 2014) /



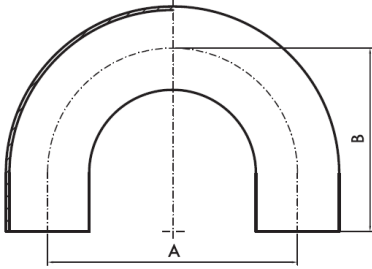
Size	A / in / mm /	R / in / mm /	B / in / mm /	Order No.
3/8"	2.625 / 66.7 /	1.125 / 28.6 /	1.625 / 41.3 /	A01120100002XX
1/2"	3.000 / 76.2 /	1.125 / 28.6 /	1.625 / 41.3 /	A01120150002XX
3/4"	3.000 / 76.2 /	1.125 / 28.6 /	1.625 / 41.3 /	A01120200002XX
1"	3.000 / 76.2 /	1.500 / 38.1 /	2.000 / 50.8 /	A01120250002XX
1 1/2"	3.750 / 95.3 /	2.250 / 57.2 /	2.750 / 69.9 /	A01120400002XX
2"	4.750 / 120.7 /	3.000 / 76.2 /	3.500 / 88.9 /	A01120500002XX
2 1/2"	5.500 / 139.7 /	3.750 / 95.3 /	4.250 / 108.0 /	A01120650002XX
3"	6.250 / 158.8 /	4.500 / 114.3 /	5.000 / 127.0 /	A01120800002XX
4"	8.000 / 203.2 /	6.000 / 152.4 /	6.625 / 168.3 /	A01121000002XX
6"	11.500 / 292.1 /	9.000 / 228.6 /	10.500 / 266.7 /	A01121500002XX

Bend 90° - Clamp / DT-17 (BPE 2009) DT-4.1.1-6 (BPE 2014) /



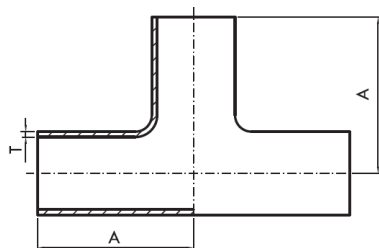
Size	A / in / mm /	R / in / mm /	Order No.
1/2"	1.625 / 41.3 /	1.125 / 28.6 /	A01220150002XX
3/4"	1.625 / 41.3 /	1.125 / 28.6 /	A01220200002XX
1"	2.000 / 50.8 /	1.500 / 38.1 /	A01220250002XX
1 1/2"	2.750 / 69.9 /	2.250 / 57.2 /	A01220400002XX
2"	3.500 / 88.9 /	3.000 / 76.2 /	A01220500002XX
2 1/2"	4.250 / 108.0 /	3.750 / 95.3 /	A01220650002XX
3"	5.000 / 127.0 /	4.500 / 114.3 /	A01220800002XX
4"	6.625 / 168.3 /	6.000 / 152.4 /	A01221000002XX
6"	10.500 / 266.7 /	9.000 / 228.6 /	A01221500002XX

Bend 180° - welded / DT-23 (BPE 2009) DT-4.1.1-7 (BPE 2014) /



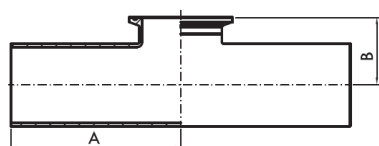
Size	A / in / mm /	B / in / mm /	Order No.
1/2 "	4.500 / 114.3 /	3.000 / 76.2 /	A15020150002XX
3/4 "	4.500 / 114.3 /	3.000 / 76.2 /	A15020200002XX
1 "	3.000 / 76.2 /	3.000 / 76.2 /	A15020250002XX
1 1/2 "	4.500 / 114.3 /	4.500 / 114.3 /	A15020400002XX
2 "	6.000 / 152.4 /	5.000 / 127.0 /	A15020500002XX
2 1/2 "	7.500 / 190.5 /	5.750 / 146.1 /	A15020650002XX
3 "	9.000 / 228.6 /	6.500 / 165.1 /	A15020800002XX
4 "	12.000 / 304.8 /	8.500 / 215.9 /	A15021000002XX
6 "	18.000 / 457.2 /	11.500 / 292.1 /	A15021500002XX

Tee / DT-9 (BPE 2009) DT-4.1.2-1 (BPE 2014) /



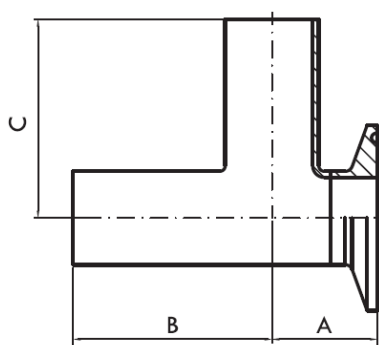
Size	A / in / mm /	Order No.
1/4 "	1.750 / 44.5 /	A03020080002XX
3/8 "	1.750 / 44.5 /	A03020100002XX
1/2 "	1.875 / 47.6 /	A03020150002XX
3/4 "	2.000 / 50.8 /	A03020200002XX
1 "	2.152 / 54.0 /	A03020250002XX
1 1/2 "	2.375 / 60.3 /	A03020400002XX
2 "	2.875 / 73.0 /	A03020500002XX
2 1/2 "	3.125 / 79.4 /	A03020650002XX
3 "	3.375 / 85.7 /	A03020800002XX
4 "	4.125 / 104.8 /	A03021000002XX
6 "	5.625 / 142.9 /	A03021500002XX

Tee – Weld/Clamp / DT-15 (BPE 2009) DT-4.1.2-2 (BPE 2014) /



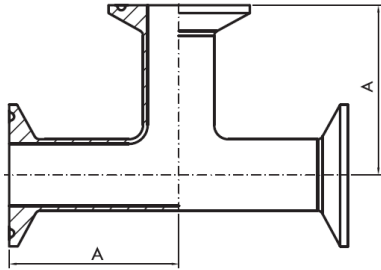
Size	A / in / mm /	B / in / mm /	Order No.
1/2 "	1.875 / 47.6 /	1.000 / 25.4 /	A03120150002XX
3/4 "	2.000 / 50.8 /	1.125 / 28.6 /	A03120200002XX
1 "	2.152 / 54.0 /	1.125 / 28.6 /	A03120250002XX
1 1/2 "	2.375 / 60.3 /	1.375 / 34.9 /	A03120400002XX
2 "	2.875 / 73.0 /	1.625 / 41.3 /	A03120500002XX
2 1/2 "	3.125 / 79.4 /	1.875 / 47.6 /	A03120650002XX
3 "	3.375 / 85.7 /	2.125 / 54.0 /	A03120800002XX
4 "	4.125 / 104.8 /	2.750 / 69.9 /	A03121000002XX
6 "	5.625 / 142.9 /	4.625 / 117.5 /	A03121500002XX

Tee Instrument - Welded/Clamp / DT-25 (BPE 2009) DT-4.1.2-3 (BPE 2014) /



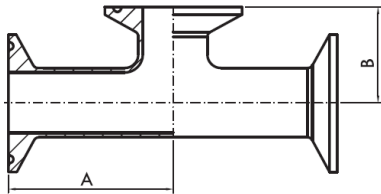
Size	A / in / mm /	B / in / mm /	C / in / mm /	Order No.
1/4 "	0.875 / 22.2 /	1.750 / 44.5 /	1.750 / 44.5 /	A03220080002XX
3/8 "	0.875 / 22.2 /	1.750 / 44.5 /	1.750 / 44.5 /	A03220100002XX
1/2 "	0.875 / 22.2 /	1.875 / 47.6 /	1.875 / 47.6 /	A03220150002XX
3/4 "	1.000 / 25.4 /	2.000 / 50.8 /	2.000 / 50.8 /	A03220200002XX
1 "	1.125 / 28.6 /	2.152 / 54.0 /	2.152 / 54.0 /	A03220250002XX
1 1/2 "	1.375 / 34.9 /	2.375 / 60.3 /	2.375 / 60.3 /	A03220400002XX
2 "	1.625 / 41.3 /	2.875 / 73.0 /	2.875 / 73.0 /	A03220500002XX
2 1/2 "	1.875 / 47.6 /	3.125 / 79.4 /	3.125 / 79.4 /	A03220650002XX
3 "	2.125 / 54.0 /	3.375 / 85.7 /	3.375 / 85.7 /	A03220800002XX
4 "	2.750 / 69.9 /	4.125 / 104.8 /	4.125 / 104.8 /	A03221000002XX
6 "	4.625 / 117.5 /	5.625 / 142.9 /	5.625 / 142.9 /	A03221500002XX

Tee - Clamp / DT-18 (BPE 2009) DT-4.1.2-4 (BPE 2014) /



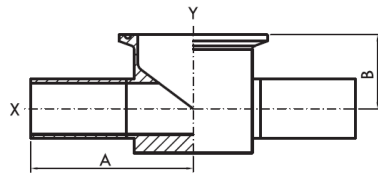
Size	A / in / mm /	Order No.
1/2 "	2.250 / 57.2 /	A03320150002XX
3/4 "	2.375 / 60.3 /	A03320200002XX
1 "	2.625 / 66.7 /	A03320250002XX
1 1/2 "	2.875 / 73.0 /	A03320400002XX
2 "	3.375 / 85.7 /	A03320500002XX
2 1/2 "	3.625 / 92.1 /	A03320650002XX
3 "	3.875 / 98.4 /	A03320800002XX
4 "	4.750 / 120.7 /	A03321000002XX
6 "	7.125 / 181.0 /	A03321500002XX

Tee Short - Clamp / DT-18 (BPE 2009) DT-4.1.2-5 (BPE 2014) /



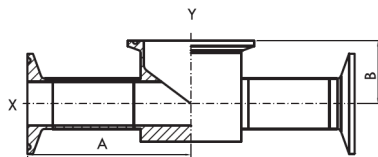
Size	A / in / mm /	B / in / mm /	Order No.
1/2 "	2.250 / 57.2 /	1.000 / 25.4 /	A03420150002XX
3/4 "	2.375 / 60.3 /	1.125 / 28.6 /	A03420200002XX
1 "	2.625 / 66.7 /	1.125 / 28.6 /	A03420250002XX
1 1/2 "	2.875 / 73.0 /	1.375 / 34.9 /	A03420400002XX
2 "	3.375 / 85.7 /	1.625 / 41.3 /	A03420500002XX
2 1/2 "	3.625 / 92.1 /	1.875 / 47.6 /	A03420650002XX
3 "	3.875 / 98.4 /	2.125 / 54.0 /	A03420800002XX
4 "	4.750 / 120.7 /	2.750 / 69.9 /	A03421000002XX
6 "	7.125 / 181.0 /	4.625 / 117.5 /	A03421500002XX

Tee Instrument - Welded/Clamp



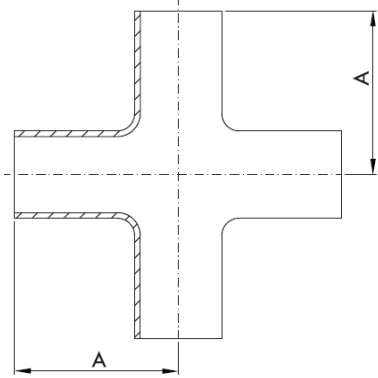
Size X	Size Y	A / in / mm /	B / in / mm /	Order No.
1/2 "	1 1/2 "	2.500 / 63.5 /	0.875 / 22.20 /	A04320150402XX
3/4 "	1 1/2 "	2.500 / 63.5 /	1.000 / 25.40 /	A04320200402XX
1 "	1 1/2 "	2.500 / 63.5 /	1.125 / 28.60 /	A04320250402XX
1 1/2 "	2 "	2.750 / 69.9 /	1.000 / 25.40 /	A04320150502XX
3/4 "	2 "	2.750 / 69.9 /	1.125 / 28.60 /	A04320400502XX
1 "	2 "	2.750 / 69.9 /	1.250 / 31.75 /	A04320250502XX
1 1/2 "	2 "	2.750 / 69.9 /	1.500 / 38.10 /	A04320400502XX

Tee Instrument - Clamp



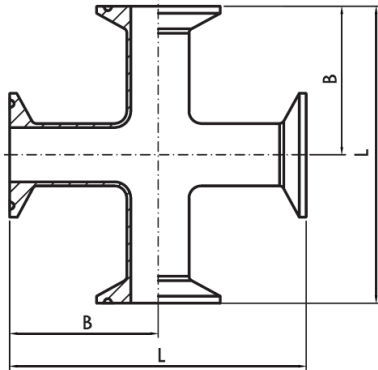
Size X	Size Y	A / in / mm /	B / in / mm /	Order No.
1/2 "	1 1/2 "	3.000 / 76.2 /	0.875 / 22.20 /	A04420150402XX
3/4 "	1 1/2 "	3.000 / 76.2 /	1.000 / 25.40 /	A04420200402XX
1 "	1 1/2 "	3.000 / 76.2 /	1.125 / 28.60 /	A04420250402XX
1 1/2 "	2 "	3.250 / 82.6 /	1.000 / 25.40 /	A04420150502XX
3/4 "	2 "	3.250 / 82.6 /	1.125 / 28.60 /	A04420400502XX
1 "	2 "	3.250 / 82.6 /	1.250 / 31.75 /	A04420250502XX
1 1/2 "	2 "	3.250 / 82.6 /	1.500 / 38.10 /	A04420400502XX

Cross - Welded



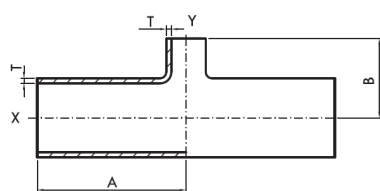
Size	A / in / mm /	Order No.
1/2 "	12.7 x 1.65	A22020150002XX
3/4 "	19.1 x 1.65	A22020200002XX
1 "	25.4 x 1.65	A22020250002XX
1 1/2 "	38.1 x 1.65	A22020400002XX
2 "	50.8 x 1.65	A22020500002XX
2 1/2 "	63.5 x 1.65	A22020650002XX
3 "	76.2 x 1.65	A22020800002XX
4 "	101.6 x 2.11	A22021000002XX
6 "	152.4 x 2.11	A22021500002XX

Cross - Clamp



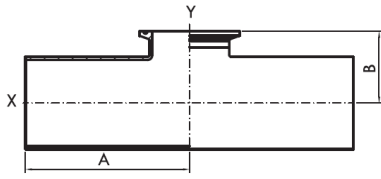
Size	A / in / mm /	Order No.
1/2 "	2.250 / 57.2 /	A22220150002XX
3/4 "	2.375 / 60.3 /	A22220200002XX
1 "	2.625 / 66.7 /	A22220250002XX
1 1/2 "	2.875 / 73.0 /	A22220400002XX
2 "	3.375 / 85.7 /	A22220500002XX
2 1/2 "	3.625 / 92.1 /	A22220650002XX
3 "	3.875 / 98.4 /	A22220800002XX
4 "	4.750 / 120.7 /	A22221000002XX

Tee Reducing – welded / DT-10 (BPE 2009) DT-4.1.2-6 (BPE 2014) /



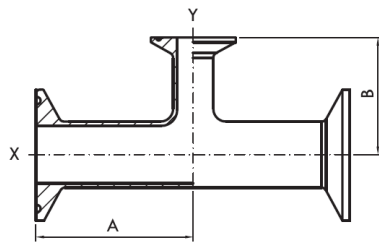
Size X	Size Y	A / in / mm /	B / in / mm /	Order No.
1/2 "	3/8 "	1.857 / 74.6 /	1.857 / 74.6 /	A04020150102XX
3/4 "	1/4 "	2.000 / 50.8 /	2.000 / 50.8 /	A04020200082XX
3/4 "	3/8 "	2.000 / 50.8 /	2.000 / 50.8 /	A04020200102XX
3/4 "	1/2 "	2.000 / 50.8 /	2.000 / 50.8 /	A04020200152XX
1 "	1/4 "	2.125 / 54.0 /	2.125 / 54.0 /	A04020250082XX
1 "	3/8 "	2.125 / 54.0 /	2.125 / 54.0 /	A04020250102XX
1 "	1/2 "	2.125 / 54.0 /	2.125 / 54.0 /	A04020250152XX
1 "	3/4 "	2.125 / 54.0 /	2.125 / 54.0 /	A04020250202XX
1 1/2 "	1/4 "	2.375 / 60.3 /	2.375 / 60.3 /	A04020400082XX
1 1/2 "	1/2 "	2.375 / 60.3 /	2.375 / 60.3 /	A04020400152XX
1 1/2 "	3/4 "	2.375 / 60.3 /	2.375 / 60.3 /	A04020400202XX
1 1/2 "	1 "	2.375 / 60.3 /	2.375 / 60.3 /	A04020400252XX
2 "	1/4 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500082XX
2 "	3/8 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500102XX
2 "	1/2 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500152XX
2 "	3/4 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500202XX
2 "	1 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500252XX
2 "	1 1/2 "	2.875 / 73.0 /	2.625 / 66.7 /	A04020500402XX
2 1/2 "	3/8 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650102XX
2 1/2 "	1/2 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650152XX
2 1/2 "	3/4 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650202XX
2 1/2 "	1 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650252XX
2 1/2 "	1 1/2 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650402XX
2 1/2 "	2 "	3.125 / 79.4 /	2.875 / 73.0 /	A04020650502XX
3 "	1/2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800152XX
3 "	3/4 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800202XX
3 "	1 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800252XX
3 "	1 1/2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800402XX
3 "	2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800502XX
3 "	2 1/2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04020800652XX
4 "	1/2 "	4.125 / 104.8 /	3.625 / 92.1 /	A04021000152XX
4 "	3/4 "	4.125 / 104.8 /	3.625 / 92.1 /	A04021000202XX
4 "	1 "	4.125 / 104.8 /	3.625 / 92.1 /	A04021000252XX
4 "	1 1/2 "	4.125 / 104.8 /	3.625 / 92.1 /	A04021000402XX
4 "	2 "	4.125 / 104.8 /	3.875 / 98.4 /	A04021000502XX
4 "	2 1/2 "	4.125 / 104.8 /	3.875 / 98.4 /	A04021000652XX
4 "	3 "	4.125 / 104.8 /	3.875 / 98.4 /	A04021000802XX
6 "	1 "	5.625 / 142.9 /	4.875 / 123.8 /	A04021500252XX
6 "	1 1/2 "	5.625 / 142.9 /	4.875 / 123.8 /	A04021500402XX
6 "	2 "	5.625 / 142.9 /	4.875 / 123.8 /	A04021500502XX
6 "	2 1/2 "	5.625 / 142.9 /	4.875 / 123.8 /	A04021500652XX
6 "	3 "	5.625 / 142.9 /	4.875 / 123.8 /	A04021500802XX
6 "	4 "	5.625 / 142.9 /	5.125 / 130.2 /	A04021501002XX

Tee Reducing – Welded/Clamp / DT-14 (BPE 2009) DT-4.1.2-7 (BPE 2014) /



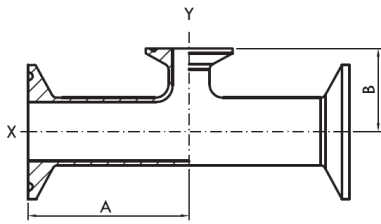
Size X	Size Y	A / in / mm /	B / in / mm /	Order No.
3/4 "	1/2 "	2.000 / 50.8 /	1.000 / 25.4 /	A04120200152XX
1 "	1/2 "	2.125 / 54.0 /	1.125 / 28.6 /	A04120250152XX
1 "	3/4 "	2.125 / 54.0 /	1.125 / 28.6 /	A04120250202XX
1 1/2 "	1/2 "	2.375 / 60.3 /	1.375 / 34.9 /	A04120400152XX
1 1/2 "	3/4 "	2.375 / 60.3 /	1.375 / 34.9 /	A04120400202XX
1 1/2 "	1 "	2.375 / 60.3 /	1.375 / 34.9 /	A04120400252XX
2 "	1/2 "	2.875 / 73.0 /	1.625 / 41.3 /	A04120500152XX
2 "	3/4 "	2.875 / 73.0 /	1.625 / 41.3 /	A04120500202XX
2 "	1 "	2.875 / 73.0 /	1.625 / 41.3 /	A04120500252XX
2 "	1 1/2 "	2.875 / 73.0 /	1.625 / 41.3 /	A04120500402XX
2 1/2 "	1/2 "	3.125 / 79.4 /	1.875 / 47.6 /	A04120650152XX
2 1/2 "	3/4 "	3.125 / 79.4 /	1.875 / 47.6 /	A04120650202XX
2 1/2 "	1 "	3.125 / 79.4 /	1.875 / 47.6 /	A04120650252XX
2 1/2 "	1 1/2 "	3.125 / 79.4 /	1.875 / 47.6 /	A04120650402XX
2 1/2 "	2 "	3.125 / 79.4 /	1.875 / 47.6 /	A04120650502XX
3 "	1/2 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800152XX
3 "	3/4 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800202XX
3 "	1 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800252XX
3 "	1 1/2 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800402XX
3 "	2 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800502XX
3 "	2 1/2 "	3.375 / 85.7 /	2.125 / 54.0 /	A04120800652XX
4 "	1/2 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000152XX
4 "	3/4 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000202XX
4 "	1 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000252XX
4 "	1 1/2 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000402XX
4 "	2 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000502XX
4 "	2 1/2 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000652XX
4 "	3 "	4.125 / 104.8 /	2.625 / 66.7 /	A04121000802XX
6 "	1 "	5.625 / 142.9 /	3.625 / 92.1 /	A04121500252XX
6 "	1 1/2 "	5.625 / 142.9 /	3.625 / 92.1 /	A04121500402XX
6 "	2 "	5.625 / 142.9 /	3.625 / 92.1 /	A04121500502XX
6 "	2 1/2 "	5.625 / 142.9 /	3.625 / 92.1 /	A04121500652XX
6 "	3 "	5.625 / 142.9 /	3.625 / 92.1 /	A04121500802XX
6 "	4 "	5.625 / 142.9 /	3.750 / 95.3 /	A04121501002XX

Tee Reducing - Clamp / DT-19 (BPE 2009) DT-4.1.2-8 (BPE 2014) /



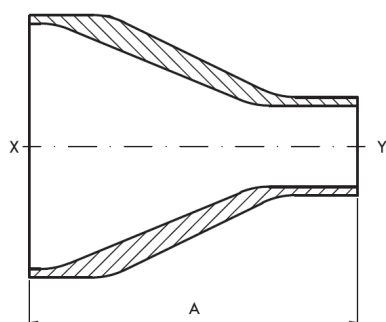
Size X	Size Y	A / in / mm /	B / in / mm /	Order No.
1/2 "	3/8 "	2.375 / 60.3 /	2.375 / 60.3 /	A04220150102XX
3/4 "	1/2 "	2.500 / 63.5 /	2.500 / 63.5 /	A04220200152XX
1 "	1/4 "	2.625 / 66.7 /	2.625 / 66.7 /	A04220250082XX
1 "	1/2 "	2.625 / 66.7 /	2.625 / 66.7 /	A04220250152XX
1 "	3/4 "	2.625 / 66.7 /	2.625 / 66.7 /	A04220250202XX
1 1/2 "	1/2 "	2.875 / 73.0 /	2.875 / 73.0 /	A04220400152XX
1 1/2 "	3/4 "	2.875 / 73.0 /	2.875 / 73.0 /	A04220400202XX
1 1/2 "	1 "	2.875 / 73.0 /	2.875 / 73.0 /	A04220400252XX
2 "	1/2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04220500152XX
2 "	3/4 "	3.375 / 85.7 /	3.125 / 79.4 /	A04220500202XX
2 "	1 "	3.375 / 85.7 /	3.125 / 79.4 /	A04220500252XX
2 "	1 1/2 "	3.375 / 85.7 /	3.125 / 79.4 /	A04220500402XX
2 1/2 "	1/2 "	3.375 / 85.7 /	3.375 / 85.7 /	A04220650152XX
2 1/2 "	3/4 "	3.375 / 85.7 /	3.375 / 85.7 /	A04220650202XX
2 1/2 "	1 "	3.375 / 85.7 /	3.375 / 85.7 /	A04220650252XX
2 1/2 "	1 1/2 "	3.375 / 85.7 /	3.375 / 85.7 /	A04220650402XX
2 1/2 "	2 "	3.625 / 92.1 /	3.375 / 85.7 /	A04220650502XX
3 "	1/2 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800152XX
3 "	3/4 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800202XX
3 "	1 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800252XX
3 "	1 1/2 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800402XX
3 "	2 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800502XX
3 "	2 1/2 "	3.875 / 98.4 /	3.625 / 92.1 /	A04220800652XX
4 "	1/2 "	4.750 / 120.7 /	4.125 / 104.5 /	A04221000152XX
4 "	3/4 "	4.750 / 120.7 /	4.125 / 104.5 /	A04221000202XX
4 "	1 "	4.750 / 120.7 /	4.125 / 104.5 /	A04221000252XX
4 "	1 1/2 "	4.750 / 120.7 /	4.125 / 104.5 /	A04221000402XX
4 "	2 "	4.750 / 120.7 /	4.375 / 111.5 /	A04221000502XX
4 "	2 1/2 "	4.750 / 120.7 /	4.375 / 111.5 /	A04221000652XX
4 "	3 "	4.750 / 120.7 /	4.375 / 111.5 /	A04221000802XX
6 "	3 "	7.125 / 181.0 /	5.375 / 136.5 /	A04221500802XX
6 "	4 "	7.125 / 181.0 /	5.750 / 146.1 /	A04221501002XX

Tee Reducing Short - Clamp / DT-20 (BPE 2009) DT-4.1.2-9 (BPE 2014) /



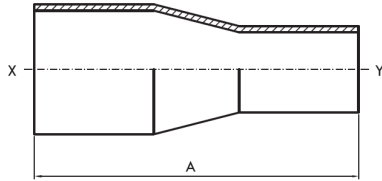
Size	A	A / in / mm /	B / in / mm /	Order No.
3/4 "	1/2 "	2.500 / 63.5 /	1.000 / 25.4 /	A04320200152XX
1 "	1/2 "	2.625 / 66.7 /	1.125 / 28.6 /	A04320250152XX
1 "	3/4 "	2.625 / 66.7 /	1.125 / 28.6 /	A04320250202XX
1 1/2 "	1/2 "	2.875 / 73.0 /	1.375 / 34.9 /	A04320400152XX
1 1/2 "	3/4 "	2.875 / 73.0 /	1.375 / 34.9 /	A04320400202XX
1 1/2 "	1 "	2.875 / 73.0 /	1.375 / 34.9 /	A04320400252XX
2 "	1/2 "	3.375 / 85.7 /	1.625 / 41.3 /	A04320500152XX
2 "	3/4 "	3.375 / 85.7 /	1.625 / 41.3 /	A04320500202XX
2 "	1 "	3.375 / 85.7 /	1.625 / 41.3 /	A04320500252XX
2 "	1 1/2 "	3.375 / 85.7 /	1.625 / 41.3 /	A04320500402XX
2 1/2 "	1/2 "	3.375 / 85.7 /	1.875 / 47.6 /	A04320650152XX
2 1/2 "	3/4 "	3.375 / 85.7 /	1.875 / 47.6 /	A04320650202XX
2 1/2 "	1 "	3.375 / 85.7 /	1.875 / 47.6 /	A04320650252XX
2 1/2 "	1 1/2 "	3.375 / 85.7 /	1.875 / 47.6 /	A04320650402XX
2 1/2 "	2 "	3.375 / 85.7 /	1.875 / 47.6 /	A04320650502XX
3 "	1/2 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800152XX
3 "	3/4 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800202XX
3 "	1 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800252XX
3 "	1 1/2 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800402XX
3 "	2 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800502XX
3 "	2 1/2 "	3.875 / 98.4 /	2.125 / 54.0 /	A04320800652XX
4 "	1/2 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000152XX
4 "	3/4 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000202XX
4 "	1 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000252XX
4 "	1 1/2 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000402XX
4 "	2 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000502XX
4 "	2 1/2 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000652XX
4 "	3 "	4.750 / 120.7 /	2.625 / 66.7 /	A04321000802XX
6 "	1/2 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500152XX
6 "	3/4 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500202XX
6 "	1 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500252XX
6 "	1 1/2 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500402XX
6 "	2 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500502XX
6 "	2 1/2 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500652XX
6 "	3 "	7.125 / 181.0 /	3.625 / 92.1 /	A04321500802XX
6 "	4 "	7.125 / 181.0 /	3.750 / 95.3 /	A04321501002XX

Concentric Reducer Short – Welded / DT-11 (BPE 2009) DT-4.1.3-1 (BPE 2014) /



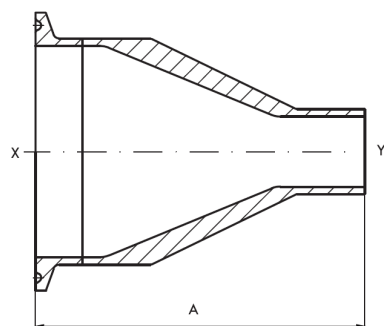
Size X	Size Y	A / in / mm /	Order No.
3/8"	1/4"	1.625 / 41.3 /	A05420100082XX
1/2"	1/4"	1.875 / 47.6 /	A05420150082XX
1/2"	3/8"	1.875 / 47.6 /	A05420150102XX
3/4"	3/8"	2.000 / 50.8 /	A05420200102XX
3/4"	1/2"	2.125 / 54.0 /	A05420200152XX
1"	3/8"	2.250 / 57.2 /	A05420250102XX
1"	1/2"	2.500 / 63.5 /	A05420250152XX
1"	3/4"	2.125 / 54.0 /	A05420250202XX
1 1/2"	3/8"	3.000 / 76.2 /	A05420400102XX
1 1/2"	1/2"	2.750 / 69.9 /	A05420400152XX
1 1/2"	3/4"	3.000 / 76.2 /	A05420400202XX
1 1/2"	1"	2.500 / 63.5 /	A05420400252XX
2"	1/2"	3.606 / 91.6 /	A05420500152XX
2"	3/4"	3.375 / 85.7 /	A05420500202XX
2"	1"	3.375 / 85.7 /	A05420500252XX
2"	1 1/2"	2.500 / 63.5 /	A05420500402XX
2 1/2"	1/2"	4.878 / 123.9 /	A05420650152XX
2 1/2"	3/4"	4.625 / 117.5 /	A05420650202XX
2 1/2"	1"	4.625 / 117.5 /	A05420650252XX
2 1/2"	1 1/2"	3.375 / 85.7 /	A05420650402XX
2 1/2"	2"	2.500 / 63.5 /	A05420650502XX
3"	1/2"	6.625 / 168.3 /	A05420800152XX
3"	3/4"	6.125 / 155.6 /	A05420800202XX
3"	1"	5.625 / 142.9 /	A05420800252XX
3"	1 1/2"	4.255 / 108.0 /	A05420800402XX
3"	2"	3.375 / 85.7 /	A05420800502XX
3"	2 1/2"	2.625 / 66.7 /	A05420800652XX
4"	1/2"	8.375 / 212.7 /	A05421000152XX
4"	3/4"	8.125 / 206.4 /	A05421000202XX
4"	1"	7.375 / 187.3 /	A05421000252XX
4"	1 1/2"	6.375 / 161.9 /	A05421000402XX
4"	2"	5.125 / 130.2 /	A05421000502XX
4"	2 1/2"	4.250 / 108.0 /	A05421000652XX
4"	3"	3.875 / 98.4 /	A05421000802XX
6"	3"	7.250 / 184.2 /	A05421500802XX
6"	4"	5.625 / 142.9 /	A05421501002XX

Concentric Reducer Long – Welded / DT-11 (BPE 2009) DT-4.1.3-1 (BPE 2014) /



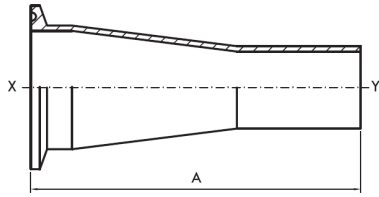
Size X	Size Y	A / in / mm /	Order No.
1/2 "	1/4 "	3.250 / 82.6 /	A05020150082XX
1/2 "	3/8 "	3.250 / 82.6 /	A05020150102XX
3/4 "	3/8 "	3.250 / 82.6 /	A05020200082XX
3/4 "	1/2 "	4.000 / 101.6 /	A05020200152XX
1 "	3/8 "	4.500 / 114.3 /	A05020250102XX
1 "	1/2 "	4.500 / 114.3 /	A05020250152XX
1 "	3/4 "	4.500 / 114.3 /	A05020250202XX
1 1/2 "	3/8 "	4.000 / 101.6 /	A05020400102XX
1 1/2 "	1/2 "	6.000 / 152.4 /	A05020400152XX
1 1/2 "	3/4 "	5.550 / 139.7 /	A05020400202XX
1 1/2 "	1 "	5.000 / 127.0 /	A05020400252XX
2 "	1/2 "	7.750 / 196.9 /	A05020500152XX
2 "	3/4 "	7.250 / 184.2 /	A05020500202XX
2 "	1 "	7.250 / 184.2 /	A05020500252XX
2 "	1 1/2 "	5.250 / 133.4 /	A05020500402XX
2 1/2 "	1/2 "	9.750 / 247.7 /	A05020650152XX
2 1/2 "	3/4 "	9.250 / 235.0 /	A05020650202XX
2 1/2 "	1 "	9.250 / 235.0 /	A05020650252XX
2 1/2 "	1 1/2 "	7.250 / 184.2 /	A05020650402XX
2 1/2 "	2 "	5.550 / 139.7 /	A05020650502XX
3 "	1/2 "	13.250 / 336.6 /	A05020800152XX
3 "	3/4 "	12.250 / 311.2 /	A05020800202XX
3 "	1 "	11.250 / 285.8 /	A05020800252XX
3 "	1 1/2 "	9.250 / 235.0 /	A05020800402XX
3 "	2 "	7.500 / 190.5 /	A05020800502XX
3 "	2 1/2 "	5.550 / 139.7 /	A05020800652XX
4 "	1/2 "	17.500 / 444.5 /	A05021000152XX
4 "	3/4 "	16.500 / 419.1 /	A05021000202XX
4 "	1 "	15.500 / 393.7 /	A05021000252XX
4 "	1 1/2 "	13.500 / 342.9 /	A05021000402XX
4 "	2 "	11.750 / 298.5 /	A05021000502XX
4 "	2 1/2 "	9.750 / 247.5 /	A05021000652XX
4 "	3 "	7.750 / 196.9 /	A05021000802XX
6 "	3 "	10.000 / 254.0 /	A05021500802XX
6 "	4 "	10.000 / 254.0 /	A05021501002XX

Concentric Reducer Short - Weld/Clamp / DT-26 (BPE 2009) DT-4.1.3-2 (BPE 2014) /



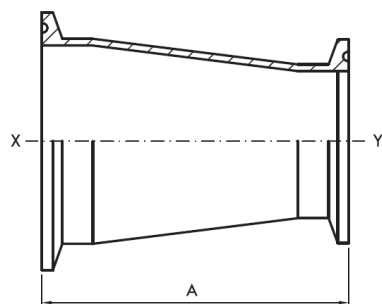
Size X	Size Y	A – in / mm /	Order No.
3/8"	1/4"	2.125 / 54.0 /	A05320100082XX
1/2"	1/4"	2.375 / 60.3 /	A05320150082XX
1/2"	3/8"	2.375 / 60.3 /	A05320150102XX
3/4"	3/8"	2.500 / 63.5 /	A05320200102XX
3/4"	1/2"	2.625 / 66.7 /	A05320200152XX
1"	3/8"	2.750 / 69.9 /	A05320250102XX
1"	1/2"	3.000 / 76.2 /	A05320250152XX
1"	3/4"	2.625 / 66.7 /	A05320250202XX
1 1/2"	3/8"	3.500 / 88.9 /	A05320400102XX
1 1/2"	1/2"	3.250 / 82.6 /	A05320400152XX
1 1/2"	3/4"	3.500 / 88.9 /	A05320400202XX
1 1/2"	1"	3.000 / 76.2 /	A05320400252XX
2"	1/2"	4.105 / 104.3 /	A05320500152XX
2"	3/4"	3.875 / 98.4 /	A05320500202XX
2"	1"	3.875 / 98.4 /	A05320500252XX
2"	1 1/2"	3.000 / 76.2 /	A05320500402XX
2 1/2"	1/2"	5.378 / 136.6 /	A05320650152XX
2 1/2"	3/4"	5.125 / 130.2 /	A05320650202XX
2 1/2"	1"	5.125 / 130.2 /	A05320650252XX
2 1/2"	1 1/2"	3.875 / 98.4 /	A05320650402XX
2 1/2"	2"	3.000 / 76.2 /	A05320650502XX
3"	1/2"	7.125 / 181.0 /	A05320800152XX
3"	3/4"	6.625 / 168.3 /	A05320800202XX
3"	1"	6.125 / 155.6 /	A05320800252XX
3"	1 1/2"	4.750 / 120.7 /	A05320800402XX
3"	2"	3.875 / 98.4 /	A05320800502XX
3"	2 1/2"	3.125 / 79.4 /	A05320800652XX
4"	1/2"	8.995 / 228.5 /	A05321000152XX
4"	3/4"	8.750 / 222.2 /	A05321000202XX
4"	1"	7.995 / 203.1 /	A05321000252XX
4"	1 1/2"	6.995 / 177.7 /	A05321000402XX
4"	2"	5.750 / 146.1 /	A05321000502XX
4"	2 1/2"	4.875 / 123.8 /	A05321000652XX
4"	3"	4.500 / 114.3 /	A05321000802XX
6"	3"	8.000 / 203.2 /	A05321500802XX
6"	4"	6.375 / 161.9 /	A05321501002XX

Concentric Reducer Long - Weld/Clamp / DT-26 (BPE 2009) DT-4.1.3-2 (BPE 2014) /



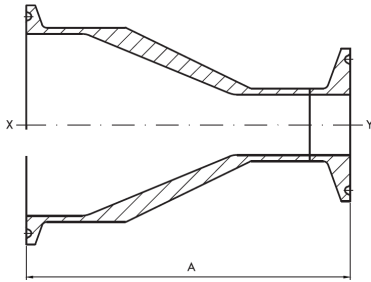
Size X	Size Y	A / in / mm /	Order No.
3/4 "	1/2 "	3.000 / 76.2 /	A05120200152XX
1 "	1/2 "	3.500 / 88.9 /	A05120250152XX
1 "	3/4 "	3.000 / 76.2 /	A05120250202XX
1 1/2 "	1/2 "	4.500 / 114.3 /	A05120400152XX
1 1/2 "	3/4 "	4.000 / 101.6 /	A05120400202XX
1 1/2 "	1 "	4.000 / 101.6 /	A05120400252XX
2 "	1/2 "	6.500 / 165.1 /	A05120500152XX
2 "	3/4 "	6.000 / 152.4 /	A05120500202XX
2 "	1 "	6.000 / 152.4 /	A05120500252XX
2 "	1 1/2 "	4.000 / 101.6 /	A05120500402XX
2 1/2 "	1 "	8.000 / 203.2 /	A05120650252XX
2 1/2 "	1 1/2 "	6.000 / 152.4 /	A05120650402XX
2 1/2 "	2 "	4.248 / 107.9 /	A05120650502XX
3 "	1 "	10.000 / 254.0 /	A05120800252XX
3 "	1 1/2 "	8.000 / 203.2 /	A05120800402XX
3 "	2 "	6.250 / 158.8 /	A05120800502XX
3 "	2 1/2 "	4.250 / 108.0 /	A05120800652XX
4 "	1 "	14.125 / 358.8 /	A05121000252XX
4 "	1 1/2 "	12.125 / 308.0 /	A05121000402XX
4 "	2 "	10.375 / 263.5 /	A05121000502XX
4 "	2 1/2 "	8.375 / 212.7 /	A05121000652XX
4 "	3 "	6.375 / 161.9 /	A05121000802XX
6 "	3 "	9.000 / 228.6 /	A05121500802XX
6 "	4 "	9.000 / 228.6 /	A05121501002XX

Concentric Reducer Short – Clamp / DT-21 (BPE 2009) DT-4.1.3-3 (BPE 2014) /



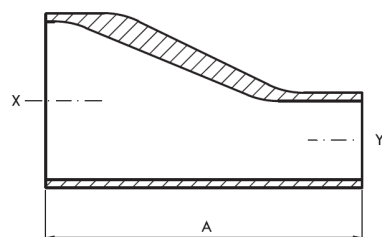
Size X	Size Y	A / in / mm /	Order No.
3/4"	1/2"	2.000 / 50.8 /	A05220200152XX
1"	1/2"	2.500 / 63.5 /	A05220250152XX
1"	3/4"	2.000 / 50.8 /	A05220250202XX
1 1/2"	1/2"	3.500 / 88.9 /	A05220400152XX
1 1/2"	3/4"	3.000 / 76.2 /	A05220400202XX
1 1/2"	1"	3.000 / 76.2 /	A05220400252XX
2"	1/2"	5.500 / 139.7 /	A05220500152XX
2"	3/4"	5.000 / 127.0 /	A05220500202XX
2"	1"	5.000 / 127.0 /	A05220500252XX
2"	1 1/2"	3.000 / 76.2 /	A05220500402XX
2 1/2"	1/2"	7.500 / 190.5 /	A05220650152XX
2 1/2"	3/4"	7.000 / 177.8 /	A05220650202XX
2 1/2"	1"	7.000 / 177.8 /	A05220650252XX
2 1/2"	1 1/2"	5.000 / 127.0 /	A05220650402XX
2 1/2"	2"	3.000 / 76.2 /	A05220650502XX
3"	1"	9.000 / 228.6 /	A05220800252XX
3"	1 1/2"	7.000 / 177.8 /	A05220800402XX
3"	2"	5.000 / 127.0 /	A05220800502XX
3"	2 1/2"	3.000 / 76.2 /	A05220800652XX
4"	1"	13.125 / 333.4 /	A05221000252XX
4"	1 1/2"	11.125 / 282.6 /	A05221000402XX
4"	2"	9.125 / 231.8 /	A05221000502XX
4"	2 1/2"	7.125 / 181.0 /	A05221000652XX
4"	3"	5.125 / 130.2 /	A05221000802XX
6"	3"	7.500 / 190.5 /	A05221500802XX
6"	4"	7.625 / 193.7 /	A05221501002XX

Concentric Reducer Short – Clamp / DT-21 (BPE 2009) DT-4.1.3-3 (BPE 2014) /



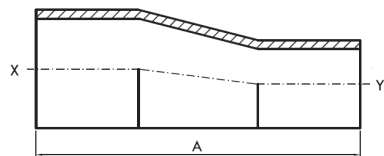
Size X	Size Y	A – in / mm /	Order No.
3/8"	1/4"	2.625 / 66.7 /	A05520100082XX
1/2"	1/4"	2.874 / 73.0 /	A05520150082XX
1/2"	3/8"	2.874 / 73.0 /	A05520150102XX
3/4"	3/8"	3.000 / 76.2 /	A05520200102XX
3/4"	1/2"	3.125 / 79.4 /	A05520200152XX
1"	3/8"	3.244 / 82.6 /	A05520250102XX
1"	1/2"	3.500 / 88.9 /	A05520250152XX
1"	3/4"	3.125 / 79.4 /	A05520250202XX
1 1/2"	3/8"	4.000 / 101.6 /	A05520400102XX
1 1/2"	1/2"	3.751 / 95.3 /	A05520400152XX
1 1/2"	3/4"	4.000 / 101.6 /	A05520400202XX
1 1/2"	1"	3.500 / 88.9 /	A05520400252XX
2"	1/2"	4.606 / 117.0 /	A05520500152XX
2"	3/4"	4.374 / 111.1 /	A05520500202XX
2"	1"	4.374 / 111.1 /	A05520500252XX
2"	1 1/2"	3.500 / 88.9 /	A05520500402XX
2 1/2"	1/2"	5.877 / 149.3 /	A05520650152XX
2 1/2"	3/4"	5.625 / 142.9 /	A05520650202XX
2 1/2"	1"	5.625 / 142.9 /	A05520650252XX
2 1/2"	1 1/2"	4.374 / 111.1 /	A05520650402XX
2 1/2"	2"	3.500 / 88.9 /	A05520650502XX
3"	1/2"	7.625 / 193.7 /	A05520800152XX
3"	3/4"	7.125 / 181.0 /	A05520800202XX
3"	1"	6.625 / 168.3 /	A05520800252XX
3"	1 1/2"	5.251 / 133.4 /	A05520800402XX
3"	2"	4.374 / 111.1 /	A05520800502XX
3"	2 1/2"	3.625 / 92.1 /	A05520800652XX
4"	1/2"	9.496 / 241.2 /	A05521000152XX
4"	3/4"	9.248 / 234.9 /	A05521000202XX
4"	1"	8.496 / 215.8 /	A05521000252XX
4"	1 1/2"	7.496 / 190.4 /	A05521000402XX
4"	2"	6.236 / 158.4 /	A05521000502XX
4"	2 1/2"	5.374 / 136.5 /	A05521000652XX
4"	3"	5.000 / 127 /	A05521000802XX
6"	3"	8.500 / 215.9 /	A05521500802XX
6"	4"	7.000 / 177.8 /	A05521501002XX

Eccentric Reducer Short - Welded / DT-11 (BPE 2009) DT-4.1.3-1 (BPE 2014) /



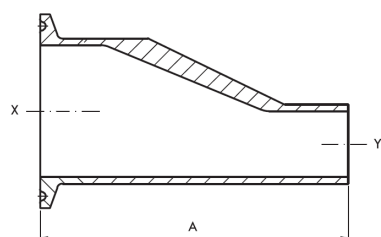
Size X	Size Y	A / in / mm /	Order No.
3/8"	1/4"	1.625 / 41.3 /	A06020100082XX
1/2"	1/4"	1.875 / 47.6 /	A06020150082XX
1/2"	3/8"	1.875 / 47.6 /	A06020150102XX
3/4"	3/8"	2.000 / 50.8 /	A06020200102XX
3/4"	1/2"	2.125 / 54.0 /	A06020200152XX
1"	3/8"	2.250 / 57.2 /	A06020250102XX
1"	1/2"	2.500 / 63.5 /	A06020250152XX
1"	3/4"	2.125 / 54.0 /	A06020250202XX
1 1/2"	3/8"	3.000 / 76.2 /	A06020400102XX
1 1/2"	1/2"	2.750 / 69.9 /	A06020400152XX
1 1/2"	3/4"	3.000 / 76.2 /	A06020400202XX
1 1/2"	1"	2.500 / 63.5 /	A06020400252XX
2"	1/2"	3.606 / 91.6 /	A06020500152XX
2"	3/4"	3.375 / 85.7 /	A06020500202XX
2"	1"	3.375 / 85.7 /	A06020500252XX
2"	1 1/2"	2.500 / 63.5 /	A06020500402XX
2 1/2"	1/2"	4.878 / 123.9 /	A06020650152XX
2 1/2"	3/4"	4.625 / 117.5 /	A06020650202XX
2 1/2"	1"	4.625 / 117.5 /	A06020650252XX
2 1/2"	1 1/2"	3.375 / 85.7 /	A06020650402XX
2 1/2"	2"	2.500 / 63.5 /	A06020650502XX
3"	1/2"	6.625 / 168.3 /	A06020800152XX
3"	3/4"	6.125 / 155.6 /	A06020800202XX
3"	1"	5.625 / 142.9 /	A06020800252XX
3"	1 1/2"	4.255 / 108.0 /	A06020800402XX
3"	2"	3.375 / 85.7 /	A06020800502XX
3"	2 1/2"	2.625 / 66.7 /	A06020800652XX
4"	1/2"	8.375 / 212.7 /	A06021000152XX
4"	3/4"	8.125 / 206.4 /	A06021000202XX
4"	1"	7.375 / 187.3 /	A06021000252XX
4"	1 1/2"	6.375 / 161.9 /	A06021000402XX
4"	2"	5.125 / 130.2 /	A06021000502XX
4"	2 1/2"	4.250 / 108.0 /	A06021000652XX
4"	3"	3.875 / 98.4 /	A06021000802XX
6"	3"	7.250 / 184.2 /	A06021500802XX
6"	4"	5.625 / 142.9 /	A06021501002XX

Eccentric Reducer Long - Welded / DT-11 (BPE 2009) DT-4.1.3-1 (BPE 2014) /



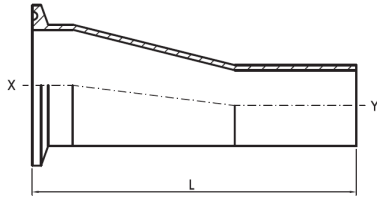
Size X	Size Y	A / in / mm /	Order No.
1/2 "	3/8 "	3.250 / 82.6 /	A06320150102XX
3/4 "	3/8 "	3.250 / 82.6 /	A06320200082XX
3/4 "	1/2 "	4.000 / 101.6 /	A06320200152XX
1 "	3/8 "	4.500 / 114.3 /	A06320250102XX
1 "	1/2 "	4.500 / 114.3 /	A06320250152XX
1 "	3/4 "	4.500 / 114.3 /	A06320250202XX
1 1/2 "	3/8 "	4.000 / 101.6 /	A06320400102XX
1 1/2 "	1/2 "	6.000 / 152.4 /	A06320400152XX
1 1/2 "	3/4 "	5.550 / 139.7 /	A06320400202XX
1 1/2 "	1 "	5.000 / 127.0 /	A06320400252XX
2 "	1/2 "	7.750 / 196.9 /	A06320500152XX
2 "	3/4 "	7.250 / 184.2 /	A06320500202XX
2 "	1 "	7.250 / 184.2 /	A06320500252XX
2 "	1 1/2 "	5.250 / 133.4 /	A06320500402XX
2 1/2 "	1/2 "	9.750 / 247.7 /	A06320650152XX
2 1/2 "	3/4 "	9.250 / 235.0 /	A06320650202XX
2 1/2 "	1 "	9.250 / 235.0 /	A06320650252XX
2 1/2 "	1 1/2 "	7.250 / 184.2 /	A06320650402XX
2 1/2 "	2 "	5.550 / 139.7 /	A06320650502XX
3 "	1/2 "	13.250 / 336.6 /	A06320800152XX
3 "	3/4 "	12.250 / 311.2 /	A06320800202XX
3 "	1 "	11.250 / 285.8 /	A06320800252XX
3 "	1 1/2 "	9.250 / 235.0 /	A06320800402XX
3 "	2 "	7.500 / 190.5 /	A06320800502XX
3 "	2 1/2 "	5.550 / 139.7 /	A06320800652XX
4 "	1/2 "	17.500 / 444.5 /	A06321000152XX
4 "	3/4 "	16.500 / 419.1 /	A06321000202XX
4 "	1 "	15.500 / 393.7 /	A06321000252XX
4 "	1 1/2 "	13.500 / 342.9 /	A06321000402XX
4 "	2 "	11.750 / 298.5 /	A06321000502XX
4 "	2 1/2 "	9.750 / 247.5 /	A06321000652XX
4 "	3 "	7.750 / 196.9 /	A06321000802XX
6 "	3 "	10.000 / 254.0 /	A06321500802XX
6 "	4 "	10.000 / 254.0 /	A06321501002XX

Eccentric Reducer Short - Weld/Clamp / DT-26 (BPE 2009) DT-4.1.3-2 (BPE 2014) /



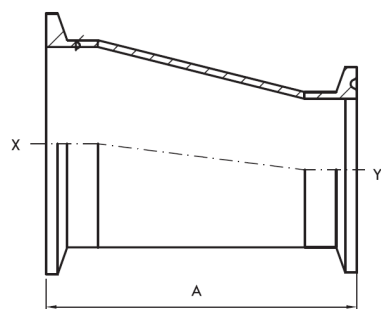
Size X	Size Y	A / in / mm /	Order No.
3/8 "	1/4 "	2.125 / 54.0 /	A06120100082XX
1/2 "	1/4 "	2.375 / 60.3 /	A06120150082XX
1/2 "	3/8 "	2.375 / 60.3 /	A06120150102XX
3/4 "	3/8 "	2.500 / 63.5 /	A06120200102XX
3/4 "	1/2 "	2.625 / 66.7 /	A06120200152XX
1 "	3/8 "	2.750 / 69.9 /	A06120250102XX
1 "	1/2 "	3.000 / 76.2 /	A06120250152XX
1 "	3/4 "	2.625 / 66.7 /	A06120250202XX
1 1/2 "	3/8 "	3.500 / 88.9 /	A06120400102XX
1 1/2 "	1/2 "	3.250 / 82.6 /	A06120400152XX
1 1/2 "	3/4 "	3.500 / 88.9 /	A06120400202XX
1 1/2 "	1 "	3.000 / 76.2 /	A06120400252XX
2 "	1/2 "	4.105 / 104.3 /	A06120500152XX
2 "	3/4 "	3.875 / 98.4 /	A06120500202XX
2 "	1 "	3.875 / 98.4 /	A06120500252XX
2 "	1 1/2 "	3.000 / 76.2 /	A06120500402XX
2 1/2 "	1/2 "	5.378 / 136.6 /	A06120650152XX
2 1/2 "	3/4 "	5.125 / 130.2 /	A06120650202XX
2 1/2 "	1 "	5.125 / 130.2 /	A06120650252XX
2 1/2 "	1 1/2 "	3.875 / 98.4 /	A06120650402XX
2 1/2 "	2 "	3.000 / 76.2 /	A06120650502XX
3 "	1/2 "	7.125 / 181.0 /	A06120800152XX
3 "	3/4 "	6.625 / 168.3 /	A06120800202XX
3 "	1 "	6.125 / 155.6 /	A06120800252XX
3 "	1 1/2 "	4.750 / 120.7 /	A06120800402XX
3 "	2 "	3.875 / 98.4 /	A06120800502XX
3 "	2 1/2 "	3.125 / 79.4 /	A06120800652XX
4 "	1/2 "	8.995 / 228.5 /	A06121000152XX
4 "	3/4 "	8.750 / 222.2 /	A06121000202XX
4 "	1 "	7.995 / 203.1 /	A06121000252XX
4 "	1 1/2 "	6.995 / 177.7 /	A06121000402XX
4 "	2 "	5.750 / 146.1 /	A06121000502XX
4 "	2 1/2 "	4.875 / 123.8 /	A06121000652XX
4 "	3 "	4.500 / 114.3 /	A06121000802XX
6 "	3 "	8.000 / 203.2 /	A06121500802XX
6 "	4 "	6.375 / 161.9 /	A06121501002XX

Eccentric Reducer Long - Weld/Clamp / DT-26 (BPE 2009) DT-4.1.3-2 (BPE 2014) /



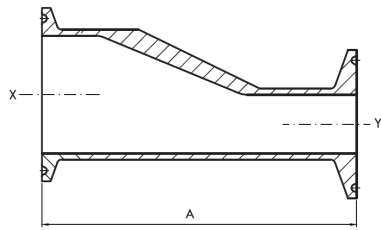
Size X	Size Y	A / in / mm /	Order No.
3/4"	1/2"	3.000 / 76.2 /	A05120200152XX
1"	1/2"	3.500 / 88.9 /	A05120250152XX
1"	3/4"	3.000 / 76.2 /	A05120250202XX
1 1/2"	1/2"	4.500 / 114.3 /	A05120400152XX
1 1/2"	3/4"	4.000 / 101.6 /	A05120400202XX
1 1/2"	1"	4.000 / 101.6 /	A05120400252XX
2"	1/2"	6.500 / 165.1 /	A05120500152XX
2"	3/4"	6.000 / 152.4 /	A05120500202XX
2"	1"	6.000 / 152.4 /	A05120500252XX
2"	1 1/2"	4.000 / 101.6 /	A05120500402XX
2 1/2"	1"	8.000 / 203.2 /	A05120650252XX
2 1/2"	1 1/2"	6.000 / 152.4 /	A05120650402XX
2 1/2"	2"	4.248 / 107.9 /	A05120650502XX
3"	1"	10.000 / 254.0 /	A05120800252XX
3"	1 1/2"	8.000 / 203.2 /	A05120800402XX
3"	2"	6.250 / 158.8 /	A05120800502XX
3"	2 1/2"	4.250 / 108.0 /	A05120800652XX
4"	1"	14.125 / 358.8 /	A05121000252XX
4"	1 1/2"	12.125 / 308.0 /	A05121000402XX
4"	2"	10.375 / 263.5 /	A05121000502XX
4"	2 1/2"	8.375 / 212.7 /	A05121000652XX
4"	3"	6.375 / 161.9 /	A05121000802XX
6"	3"	8.750 / 222.3 /	A05121500802XX
6"	4"	9.000 / 228.6 /	A05121501002XX

Eccentric Reducer Short - Clamp / DT-21 (BPE 2009) DT-4.1.3-3 (BPE 2014) /



Size X	Size Y	A / in / mm /	Order No.
3/4"	1/2"	2.000 / 50.8 /	A05220200152XX
1"	1/2"	2.500 / 63.5 /	A05220250152XX
1"	3/4"	2.000 / 50.8 /	A05220250202XX
1 1/2"	1/2"	3.500 / 88.9 /	A05220400152XX
1 1/2"	3/4"	3.000 / 76.2 /	A05220400202XX
1 1/2"	1"	3.000 / 76.2 /	A05220400252XX
2"	1/2"	5.500 / 139.7 /	A05220500152XX
2"	3/4"	5.000 / 127.0 /	A05220500202XX
2"	1"	5.000 / 127.0 /	A05220500252XX
2"	1 1/2"	3.000 / 76.2 /	A05220500402XX
2 1/2"	1/2"	7.500 / 190.5 /	A05220650152XX
2 1/2"	3/4"	7.000 / 177.8 /	A05220650202XX
2 1/2"	1"	7.000 / 177.8 /	A05220650252XX
2 1/2"	1 1/2"	5.000 / 127.0 /	A05220650402XX
2 1/2"	2"	3.000 / 76.2 /	A05220650502XX
3"	1"	9.000 / 228.6 /	A05220800252XX
3"	1 1/2"	7.000 / 177.8 /	A05220800402XX
3"	2"	5.000 / 127.0 /	A05220800502XX
3"	2 1/2"	3.000 / 76.2 /	A05220800652XX
4"	1"	13.125 / 333.4 /	A05221000252XX
4"	1 1/2"	11.125 / 282.6 /	A05221000402XX
4"	2"	9.125 / 231.8 /	A05221000502XX
4"	2 1/2"	7.125 / 181.0 /	A05221000652XX
4"	3"	5.125 / 130.2 /	A05221000802XX
6"	3"	7.625 / 193.7 /	A05221500802XX
6"	4"	7.625 / 193.7 /	A05221501002XX

Eccentric Reducer Long – Clamp / DT-21 (BPE 2009) DT-4.1.3-3 (BPE 2014) /



Size X	Size Y	A / in / mm /	Order No.
3/8"	1/4"	2.625 / 66.7 /	A06220100082XX
1/2"	1/4"	2.874 / 73.0 /	A06220150082XX
1/2"	3/8"	2.874 / 73.0 /	A06220150102XX
3/4"	3/8"	3.000 / 76.2 /	A06220200102XX
3/4"	1/2"	3.125 / 79.4 /	A06220200152XX
1"	3/8"	3.244 / 82.6 /	A06220250102XX
1"	1/2"	3.500 / 88.9 /	A06220250152XX
1"	3/4"	3.125 / 79.4 /	A06220250202XX
1 1/2"	3/8"	4.000 / 101.6 /	A06220400102XX
1 1/2"	1/2"	3.751 / 95.3 /	A06220400152XX
1 1/2"	3/4"	4.000 / 101.6 /	A06220400202XX
1 1/2"	1"	3.500 / 88.9 /	A06220400252XX
2"	1/2"	4.606 / 117.0 /	A06220500152XX
2"	3/4"	4.374 / 111.1 /	A06220500202XX
2"	1"	4.374 / 111.1 /	A06220500252XX
2"	1 1/2"	3.500 / 88.9 /	A06220500402XX
2 1/2"	1/2"	5.877 / 149.3 /	A06220650152XX
2 1/2"	3/4"	5.625 / 142.9 /	A06220650202XX
2 1/2"	1"	5.625 / 142.9 /	A06220650252XX
2 1/2"	1 1/2"	4.374 / 111.1 /	A06220650402XX
2 1/2"	2"	3.500 / 88.9 /	A06220650502XX
3"	1/2"	7.625 / 193.7 /	A06220800152XX
3"	3/4"	7.125 / 181.0 /	A06220800202XX
3"	1"	6.625 / 168.3 /	A06220800252XX
3"	1 1/2"	5.251 / 133.4 /	A06220800402XX
3"	2"	4.374 / 111.1 /	A06220800502XX
3"	2 1/2"	3.625 / 92.1 /	A06220800652XX
4"	1/2"	9.496 / 241.2 /	A06221000152XX
4"	3/4"	9.248 / 234.9 /	A06221000202XX
4"	1"	8.496 / 215.8 /	A06221000252XX
4"	1 1/2"	7.496 / 190.4 /	A06221000402XX
4"	2"	6.236 / 158.4 /	A06221000502XX
4"	2 1/2"	5.374 / 136.5 /	A06221000652XX
4"	3"	5.000 / 127 /	A06221000802XX
6"	3"	8.500 / 215.9 /	A06221500802XX
6"	4"	7.000 / 177.8 /	A06221501002XX



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