ANSI B16.9 CS Concentric Reducer Butt Welding Pipe Fitting

Our Product Introduction

Basic Information

- Place of Origin: CHINA
- Brand Name: DEYE
- Certification: ISO9001:2015 PED
- Model Number: PF-CR-06
- Minimum Order Quantity: 1PCS
- Price: USD0.58-USD100 for seamless fittings
- Packaging Details: Fumigation-Free wooden cases / Pallets
- Delivery Time: 30 days for normal orders
- Payment Terms: L/C, T/T, D/P
- Supply Ability: 200tons each month

Product Specification

- MOQ: 1 Piece
- Surface Treatment: Sand Blasting, Anti-rust Paint, Oil Coating, Etc.
- Application: Petroleum, Chemical, Power, Gas, Metallurgy, Shipbuilding, Construction, Etc.
- Standard: ASME, ANSI, JIS, DIN, EN, ISO, GB
- Payment Term: T/T, L/C,
- Size: 1/2”-48”
- Certificate: ISO, API, CE, Etc.
- Package: Wooden Cases, Wooden Pallet, Etc.
- Highlight: **B16.9 cs concentric reducer**, **ANSI cs concentric reducer**, **1/2" carbon steel pipe and fittings**

Product Description

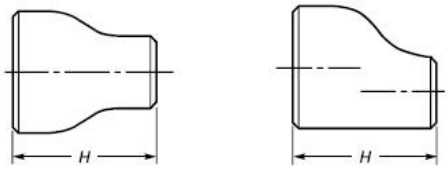
pipefittings concentric reducers as per ANSI B16.9

Concentric Reducer is one type of Pipefititngs as per ASME B16.9 specification applied in industrial construction pipelines.
it is used to reduce the flow size of the pipe from the bigger to smaller one. There are two kinds of reducers- concentric reducer
and eccentric reducer. Reducer The former one is in the shape of a cone used for gradual reducing of the size of the pipe.
The latter one has its one edge facing the mouth of the connecting pipe reducing the chances of air accumulation.

Product Information

Product Name	Concentric Reducers and Eccentric Reducers ANSI B16.9 Butt-Welding Pipe Fitting
Types	Con. Reducers, Ecc. reducers, Y tees, caps, Stub Ends, Long and short lap joint stub ends LR Elbows, SR Elbow, 180deg Returns, Bends, Reducing Elbow, straight Tee, Equal Tee,
Size	seamless con. reducers from 1/2″ 24″, ERW / Welded concentric reducers (1/2″ 72″)
Wall Thickness	SCH20,SCH30,STD,SCH40,SCH60,XS,SCH80,SCH100,SCH120,SCH140 ,SCH160,XXS, DIN, SGP JIS thickness
Mat. Standard	ASTMA234,ASTM A420,ASTM A312, ANSI B16.9/B16.28/B16.25,ASME B16.9, JIS B2311-1997/2312, JIS B2311/B2312, DIN 2605-1/2617/2615, GB 12459-99,EN Standard etc.
Material Grade	Carbon steel material grade: A234 WPB, WP5, WP6, WP9,WP11,WP12, WP22, A420WPL6, WPL8, WP91 12CrMo, 15Cr5Mo, 1Cr5Mo, 12Cr1MoV , WPHY 42, WPHY 46, WPHY 52, WPH 60, WPHY 65 & WPHY 70 ST37.0,ST35.8,ST37.2,ST35.4/8,ST42,ST45,ST52,ST52.4 STP G38,STP G42,STPT42,STB42,STS42,STPT49,STS49 Stainless Steel304, 304L, 304H. 316, 316L, 316H, 321, 347, 347H, Duplex SS 2507, DSS2205, UNS31803 UNS32750 1.4301,1.4306, 1.4401, 1.4435, 1.4406, 1.4404, 1.4462, 1.4410, 1.4501
Surface	Black painting,varnish paint, anti rust oil, hot galvanized, cold galvanized, 3PE,etc.
Transport Package	Plastic film,wooden cases ,wooden pallet,or as per customers' requests

Techinical datas



Con. reducers as per ASME B16.9 Butt welding Fittings

Nominal Pipe Size (NPS)	Outside Diameter at Bevel		End-to-End, H	Nominal Pipe Size (NPS)	Outside Diameter at Bevel		End-to-End,H
	Large End	Small End			Large End	Small End	
3/4x1/2	26.7	21.3	38	5X4	141.3	114.3	127
3/4x3/8	26.7	17.3	38	5x3-1/2	141.3	101.6	127
1x3/4	33.4	26.7	51	5X3	141.3	88.9	127
1x1/2	33.4	21.3	51	5 x2-1/2	141.3	73.0	127
1-1/4x1	42.2	33.4	51	5X2	141.3	60.3	127
1-1/4x3/4	42.2	26.7	51	6X5	168.3	141.3	140
1-1/4x1/2	42.2	21.3	51	6X4	168.3	114.3	140
1-1/2x1-1/4	48.3	42.2	64	6 x3-1/2	168.3	101.6	140
1-1/2x1	48.3	33.4	64	6x3	168.3	88.9	140
1-1/2x3/4	48.3	26.7	64	6x2-1/2	168.3	73.0	140
1-1/2x1/2	48.3	21.3	64	8x6	219.1	168.3	152
2 X 1-1/2	60.3	48.3	76	8X5	219.1	141.3	152
2 X 1-1/4	60.3	42.2	76	8X4	219.1	114.3	152
2X1	60.3	33.4	76	8x3-1/2	219.1	101.6	152
2 X3/4	60.3	26.7	76	10 X 8	273.0	219.1	178
2-1/2X2	73.0	60.3	89	10 x 6	273.0	168.3	178

2-1/2X1-1/2	73.0	48.3	89	10 x 5	273.0	141.3	178
2-1/2X1-1/4	73.0	42.2	89	10 x 4	273.0	114.3	178
2-1/2 X 1	73.0	33.4	89	12 x 10	323.8	273.0	203
3 X 2-1/2	88.9	73.0	89	12 x 8	323.8	219.1	203
3x2	88.9	60.3	89	12 x 6	323.8	168.3	203
3 x 1-1/2	88.9	48.3	89	12 x 5	323.8	141.3	203
3 x 1-1/4	88.9	42.2	89	14 x 12	355.6	323.8	330
3-1/2 x 3	101.6	88.9	102	14 X 10	355.6	273.0	330
3-1/2 x 2-1/2	101.6	73.0	102	14 X 8	355.6	219.1	330
3-1/2 X 2	101.6	60.3	102	14 x 6	355.6	168.3	330
3-1/2 x 1-1/2	101.6	48.3	102	16 x 14	406.4	355.6	356
3-1/2 x 1-1/4	101.6	42.2	102	16 x 12	406.4	323.8	356
4 x 3-1/2	114.3	101.6	102	16 x 10	406.4	273.0	356
4X3	114.3	88.9	102	16 x 8	406.4	219.1	356
4 X 2-1/2	114.3	73.0	102	18 x 16	457	406.4	381
4X2	114.3	60.3	102	18 x 14	457	355.6	381
4 x1-1/2	114.3	48.3	102	18 x 12	457	323.8	381
				18 x 10	457	273.0	381

Nominal Pipe Size (NPS)	Outside Diameter at Bevel		End-to-End, H	Nominal Pipe Size (NPS)	Outside Diameter at Bevel		End-to-End, H
	Large End	Small End			Large End	Small End	
20 X 18	508	457.0	508	36 x 34	914	864	610
20 X 16	508	406.4	508	36 x 32	914	813	610
20 x 14	508	355.6	508	36 x 30	914	762	610
20 x 12	508	323.8	508	36 x 26	914	660	610
				36 x 24	914	610	610
22 X 20	559	508.0	508				
22 X 18	559	457.0	508	38 x 36	965	914	610
22 x 16	559	406.4	508	38 x 34	965	864	610
22 X 14	559	355.4	508	38 X 32	965	813	610
				38 x 30	965	762	610
				38 X 28	965	711	610
24 X 22	610	559.0	508	38 x 26	965	660	610
24 X 20	610	508.0	508				
24 x 18	610	457.0	508	40 x 38	1 016	965	610
24 X 16	610	406.4	508	40 x 36	1 016	914	610
				40 X 34	1 016	864	610
26 x 24	660	610.0	610	40 X 32	1 016	813	610
26 X 22	660	559.0	610	40 x 30	1 016	762	610
26 X 20	660	508.0	610				
26 X 18	660	457.0	610	42 X 40	1 067	1 016	610
				42 X 38	1 067	965	610
28 X 26	711	660.0	610	42 x 36	1 067	914	610
28 X 24	711	610.0	610	42 X 34	1 067	864	610
28 x 20	711	508.0	610	42 X 32	1 067	813	610
28 X 18	711	457.0	610	42 X 30	1 067	762	610
30 X 28	762	711.0	610	44 X 42	1 118	1 067	610
30 X 26	762	660.0	610	44 X 40	1 118	1 016	610
30 X 24	762	610.0	610	44 X 38	1 118	965	610
30 X 20	762	508.0	610	44 X 36	1 118	914	610
32 X 30	813	762.0	610	46 X 44	1 168	1 118	711
32 X 28	813	711.0	610	46 X 42	1 168	1 067	711
32 x 26	813	660.0	610	46 x 40	1 168	1 016	711
32 x 24	813	610.0	610	46 x 38	1 168	965	711
34 x 32	864	813.0	610	48 x 46	1 219	1 168	711
34 X 30	864	762.0	610	48 X 44	1 219	1 118	711
34 x 26	864	660.0	610	48 x 42	1 219	1 067	711
34 x 24	864	610.0	610	48 x 40	1 219	1 016	711

Thickness List for pipefittings ANSI B16.9

NPS	Outside Dimeter	Different thickness with tolerance of +-12.5%									
		Sch20	Sch30	STD	**Sch40**	Sch60	**XS**	**Sch80**	Schl20	Sch160	**XXS**
1/8	10. 3	——	——	1. 73	1. 73	——	2. 41	2. 41	——	——	——

1/4	13. 7	—	—	2. 24	2. 24	—	3. 02	3. 02	—	—	—
3/8	17. 1	—	—	2. 31	2. 31	—	3. 20	3. 20	—	—	—
1/2	21. 3	——	——	2. 77	2. 77	——	3. 73	3. 73	——	4. 78	7. 47
3/4	26. 7	——	——	2. 87	2. 87	——	3. 91	3. 91	——	5. 56	7. 82
1	33.4	—	—	3. 38	3. 38	—	4. 55	4. 55	—	6. 35	9. 09
1 1/4	42. 2	—	—	3. 56	3. 56	—	4. 85	4. 85	—	6. 35	9. 70
1 1/2	48. 3	——	——	3. 68	3. 68	——	5. 08	5. 08	——	7. 14	10. 15
2	60. 3	——	——	3. 91	3. 91	——	5. 54	5. 54	——	8. 74	11. 07
2 1/2	73. 0	—	—	5. 16	5. 16	—	7. 01	7.01	—	9. 53	14. 02
3	88. 9	—	—	5. 49	5. 49	—	7. 62	7. 62	—	11. 13	15. 24
3 1/2	101. 6	——	——	5. 74	5. 74	——	8. 08	8. 08	——	——	——
4	114. 3	——	——	6.02	6. 02	——	8. 56	8. 56	11. 13	13. 49	17. 12
5	141. 3	—	—	6. 55	6. 55	—	9. 53	9. 53	12. 70	15. 88	19. 05
6	168. 3	—	—	7. 11	7. 11	—	10. 97	10. 97	14. 27	18. 26	21.95
8	219. 1	6. 35	7. 04	8. 18	8. 18	10. 31	12. 70	12. 70	18. 26	23. 01	22.23
10	273. 1	6. 35	7. 80	9. 27	9.27	12. 70	12. 70	15. 09	21. 44	28. 58	25. 40
12	323.9	6. 35	8. 38	9. 53	10. 31	14. 27	12. 70	17. 48	25. 40	33. 32	25. 40
14	355. 6	7. 92	9. 53	9. 53	11. 13	15. 09	12. 70	19. 05	27. 79	35. 71	—
16	406. 4	7. 92	9. 53	9. 53	12. 70	16. 66	12. 70	21. 44	30. 96	40. 49	——
18	457. 2	7. 92	11. 13	9. 53	14. 27	19. 05	12. 70	23. 83	34. 96	45. 24	——
20	508. 0	9. 53	12. 70	9. 53	15. 09	20. 62	12. 70	26. 19	38. 10	50. 01	—
22	558. 8	9. 53	12. 70	9. 53	—	22. 23	12. 70	28. 58	41. 28	53. 98	—
24	609. 6	9. 53	14. 27	9. 53	17. 48	24. 61	12. 70	30. 96	46. 02	59. 54	——
26	660.4	12. 70	——	9. 53	——	——	12. 70	——	——	——	——
28	711.2	12. 70	15. 88	9. 53	—	—	12. 70	—	—	—	—
30	762. 0	12. 70	15. 88	9. 53	—	—	12. 70	—	—	—	—
32	812. 8	12. 70	15. 88	9. 53	17. 48	——	12. 70	——	——	——	——
34	863. 6	12. 70	15. 88	9. 53	17. 48	——	12. 70	——	——	——	——
36	914. 4	12. 70	15. 88	9. 53	17. 48	—	12. 70	—	—	—	—
38	965.2	—	—	9. 53	—	—	12. 70	—	—	—	—
40	1016. 0	——	——	9. 53	——	——	12. 70	——	——	——	——
42	1066. 8	——	——	9. 53	——	——	12. 70	——	——	——	——
44	1117. 6	—	—	9. 53	—	—	12. 70	—	—	—	—
46	1168.4	—	—	9. 53	—	—	12. 70	—	—	—	—
48	1219. 2	—	—	9. 53	—	—	12. 70	—	—	—	—

The carbon steel material specificastion we can supply

Grade and Material	C	Mn	P	S	Silicon	Chromium	Molybdenum	Nickel	Copper	Others
WPB[B,C,D,E,F] 0.30 max		0.29–1.06	0.05	0.058	0.10 min	0.40 max	0.15 max	0.40 max	0.40 max	Vanadium 0.08 max
WPC[C,D,E,F] 0.35 max		0.29–1.06	0.05	0.058	0.10 min	0.40 max	0.15 max	0.40 max	0.40 max	Vanadium 0.08 max
WP1	0.28 max	0.30–0.90	0.045	0.045	0.10–0.50	. . .	0.44–0.65			. . .
WP12 CL1,	0.05–0.20	0.30–0.80	0.045	0.045	0.60 max	0.80–1.25	0.44–0.65			. . .
WP12 CL2										...
WP11 CL1	0.05–0.15	0.30–0.60	0.03	0.03	0.50–1.00	1.00–1.50	0.44–0.65			. . .
WP11 CL2,	0.05–0.20	0.30–0.80	0.04	0.04	0.50–1.00	1.00–1.50	0.44–0.65			. . .
WP11 CL3										...
WP22 CL1,	0.05–0.15	0.30–0.60	0.04	0.04	0.50 max	1.90–2.60	0.87–1.13			. . .
WP22 CL3										...
WP5 CL1,	0.15 max	0.30–0.60	0.04	0.03	0.50 max	4.0–6.0	0.44–0.65			. . .
WP5 CL3										...
WP9 CL1,	0.15 max	0.30–0.60	0.03	0.03	1.00 max	8.0–10.0	0.90–1.10			. . .
WP9 CL3 WPR	0.20 max	0.40–1.06	0.045	0.05	. . .	. . .	. . .	1.60–2.24	0.75–1.25	. . .
WP91	0.08–0.12	0.30–0.60	0.02	0.01	0.20–0.50	8.0–9.5	0.85–1.05	0.40 max	. . .	Vanadium 0.18–0.25
										Columbium 0.06–0.10
										Nitrogen 0.03–0.07
										Aluminum 0.04 max

WP911	0.09–0.13	0.30–0.60	0.02	0.01	0.10–0.50	8.5–9.5	0.90–1.10	0.40 max	. . .	Vanadium 0.18–0.25
										Columbium 0.060–0.10
										Nitrogen 0.04–0.09
										Aluminum 0.04 max
										Boron 0.0003–0.006
										Tungsten 0.90–1.10

A When fittings are of welded construction, the grade and marking symbol shown above shall be supplemented by letter "W".
B Fittings made from bar or plate may have 0.35 max carbon.
C Fittings made from forgings may have 0.35 max carbon and 0.35 max silicon with no minimum.
D For each reduction of 0.01 % below the specified carbon maximum, an increase of 0.06 % manganese above the specified maximum will be permitted, up to a maximum of 1.35 %.
E The sum of Copper, Nickel, Chromium, and Molybdenum shall not exceed 1.00 %.
F The sum of Chromium and Molybdenum shall not exceed 0.32 %.

Tensile Requirements

		WPC,		WP11 CL1,		WP11 CL3,			
Grade and Marking Symbol	WPB	WP11 CL2,	WP1	WP22 CL1,	WPR	WP22 CL3	WP91	WP911	WP12 CL1
		WP12 CL2		WP5 CL1		WP5 CL3			
				WP9 CL1		WP9 CL3			
Tensile strength, range ksi [MPa]	60–85	70–95	55–80	60–85	63–88	75–100	85–110	90–120	60–85
	[415–585]	[485–655]	[380–550]	[415–585]	[435–605]	[520–690]	[585–760]	[620–840]	[415–585]
Yield strength, min, ksi [MPa]	35 [240]	40 [275]	30 [205]	30 [205]	46 [315]	45 [310]	60 [415]	64 [440]	32 [220]
(0.2 % offset or 0.5 % extension-under-load)									

Production Process

Elbow Marking process and reequipment

ELBOW Shaper Machining

Tee form Process and equipment

Reducer Form process and equipment

Sand blasted process and equipment

Beveling Process

Painting Shop

Package For shipment

Reference Standards

ASME B16.9 Specification for Butt Welded Fittings
ASME B16.9 specification is designed for butt welded fittings applied in industrial construction pipelines. Including elbow, tee, cross, cap, reducer, and etc.

Standard Scope
The standard includes specifications of NPS 1/2 to NPS 48 (DN15-DN1200) factory-made wrought butt-welded pipe fittings overall dimensions, tolerances ratings, test methods and markings.

Special Fittings
Special fittings here refer to special sizes, forms and tolerances that agreed between buyer and manufacturer.

Fabricated Fittings
Fabricated laterals and other fittings by circumferential or intersection welds are considered pipe fabrication could not apply this standard.

Units under ASME B16.9 shall be stated in both SI (Metric) and U.S. Customary units. Designation for size is NPS.

Reference Standards
It is not considered practical to identify the specific edition of each standard and specification in the individual references. A product made comply with a prior edition of referenced standards and in all other respects conforming to this standard will be considered complied.

ASME B16.5: Pipe Flanges and Flanged Fittings: NPS 1⁄2 Through NPS 24 Metric/Inch Standard
ASME B16.25: For Buttwelding Ends
ASME B31: Code for Pressure Piping
ASME B31.3: Process Piping
ASME B36.10M, Welded and Seamless Wrought Steel Pipe
ASME B36.19M, Stainless Steel Pipe
ASME Boiler and Pressure Vessel Code
ASTM A234/A234M-17, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
ASTM A403/A403M-16, Specification for Wrought Austenitic Stainless Steel Piping Fittings
ASTM A420/A420M-16, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for LowTemperature Service
ASTM A815/A815M-14e1, Specification for Wrought Ferritic, Ferritic/Austenitic and Martensitic Stainless Steel Piping Fittings
ASTM A960/A960M-16a, Specification for Common Requirements for Wrought Steel Piping Fittings
ASTM E29-13, Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications
ASTM B361-16, ASTM B363-14, ASTM B366/B366M-17: For other material metals. (Aluminum, Titanium, Nickel, and alloy).

FAQ/ Customer Question and Answers

Q: Customer asked for butt weld fittings in A105:
A: Most common carbon steel buttweld fitting material is A234WPB. It is equivalent to A105 flanges, however there is no such thing as an A105 or A106 butt weld fitting. A106 Gr.B is for pipe grade. The A234WPB fittings are made from A106GR.B pipes. A105 is a material from Bar forged to be High pressure Fittings or Flange

Q: Customer requests “Normalized” butt weld fittings:
A: This is also a misconception since flanges are available in A105 and A105 N, where N stands for normalized. However, there is no such thing as A234WPBN. Manufactures normalize their butt weld fittings was considered that normalized heat treating process was done, Especially for the elbows and Tees Customer needing “normalized” butt weld fittings should request WPL6 fittings which are high yield and are normalized as a standard procedure.

Q; Customer forgets to mention welded or seamless butt weld fitting:
A: Butt weld fittings are available in both welded and seamless configuration. A seamless butt weld carbon steel or stainless-steel fitting is made of seamless pipe and is generally more expensive. Seamless pipe fittings are NOT common in sizes bigger than 12”. Welded pipe fittings are made of ERW welded carbon steel or stainless-steel pipe. They are available in sizes ½” to 72” and are more affordable than seamless fittings.

: What is a 3R or 3D elbow pipe fitting?
A: First, the terms 3R or 3D are used synonymously. A 3R butt weld elbow has a bending radius that is 3 times the nominal pipe size. A 3R elbow is equal to 3D Elbows

Our Service

1. Technical support
2. Raw Material Quality control.
3. Inspection during the production time.
4. Final Test includes Surface, Dimension, PT Test, RT test, ultrasonic Test
5. Test Report each shipment
4. Flexible Delivery terms. EXW FOB CIF CFR DDP DDU
5. Flexible payment Ways: LC. TT. DP
6. Customized Package includes Logo. Cases Dimension.
7. 18 months quality Guarantee time.
9. Free replacement by air if any error founded
10. 24 hours to Feedback your questions

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