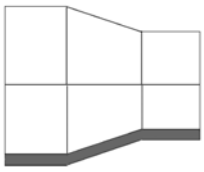
Concentric Reducer Design Information

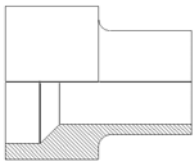
Concentric reducers provide an in-line conical transition between pressurized pipes of differing diameters. A reducer may be a single standard diameter change (i.e., 6" x 4") or a multiple diameter change (i.e., 8" x 2"). The pipes do not have a " brain" and do not recognize what the outside configuration of the reducer looks like. The pipe flow is only affected by the inside diameter conical transition configuration. Hence, the inside diameter conical transition can be axially moved and externally re-configured to provide for more economical reducer fittings as follows. **All three designs have the same ID flow shape, but the "Compact" and "Low Cost Compact" cost savings are passed onto you!**



Higher Cost Reducer

The **"Traditional"** reducer has three sections:

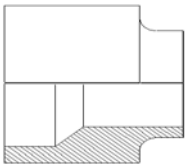
1. Large end to clamp for heat butt-fusion.
2. Conical transition section.
3. Small end to clamp for heat butt-fusion.



Economical "Compact" Reducer

The **"Compact"** reducer has two sections:

1. Large end to hold for heat butt-fusion.
2. Small end to hold for heat butt-fusion.
   Note: The same conical transition zone has been moved forward within the reducer.



"Low Cost Compact" Reducer

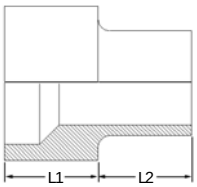
The **"Low Cost Compact"** reducer has one section. This reducer is held on the large end and heat-fused to the large pipe. The assembly is moved to the other fusion machine jaws and the small end is heat fused to the small pipe. Note: The same conical transition zone is kept within the fitting.

IPS Reducers

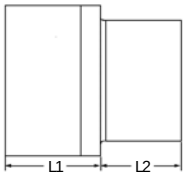
Pressure Rated for DR Ordered

(Dimensions in Inches)

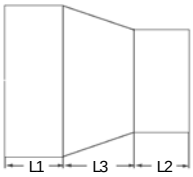
STYLE A
"compact"



STYLE B
"fabricated"



STYLE C
"traditional"



Nominal Size	Style	L_1	L_2	L_3	DR	Weight (lbs)
1-1/2 x 1-1/4	A	2.00	2.00	-	9-11	1
2 x 1	C	2.49	2.88	0.94	11	1
2 x 1-1/4	C	3.25	2.56	0.63	9-11	1
2 x 1-1/2	C	2.50	2.72	0.78	9-11	1
3 x 2	C	3.22	2.50	0.93	9-17	1
4 x 2	C	2.75	2.75	1.66	9-17	1
4 x 3	C	3.00	2.50	0.88	9-17	1
6 x 3	C	5.12	3.94	2.36	11-17	2
6 x 4	A	4.00	4.00	-	9-17	3
8 x 4	A*2	8.00	8.00	-	11-17	9
8 x 6	A	4.00	4.00	-	9-17	6
10 x 6	A	6.00	6.00	-	11-17	12
10 x 8	A	6.00	6.00	-	9-17	13
12 x 8	A	6.00	6.00	-	11-17	19
12 x 10	A	6.00	6.00	-	9-17	20
14 x 10	A	7.00	7.00	-	11-17	26
14 x 12	A	7.00	7.00	-	9-32.5	28
16 x 12	A	7.00	7.00	-	11-32.5	64
16 x 14	A	7.00	7.00	-	9-32.5	36
18 x 14	A	7.00	7.00	-	11-32.5	45
18 x 16	A	7.00	7.00	-	9-32.5	47
20 x 18	A	7.00	7.00	-	9-32.5	56
22 x 20	A	7.00	7.00	-	9-32.5	69
24 x 20	A	9.00	9.00	-	11-32.5	82
24 x 22	A	9.00	9.00	-	9-32.5	84

A*2 indicates two style A reducers joined using butt fusion.

Other sizes, styles, and DR's not listed are available - Call For Quick Quote

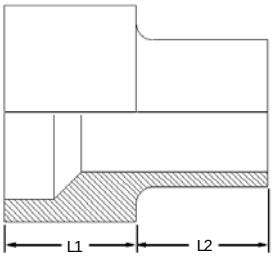
Sizes 24" and smaller meet AWWA C906 fitting requirements, sizes 26" and larger are quoted per fitting.

DIPS Reducers

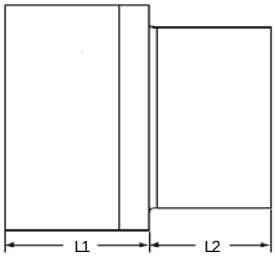
Ductile Iron Pipe Sizes

Pressure Rated for DR Ordered
(Dimensions in Inches)

STYLE A
"compact"



STYLE B
"fabricated"



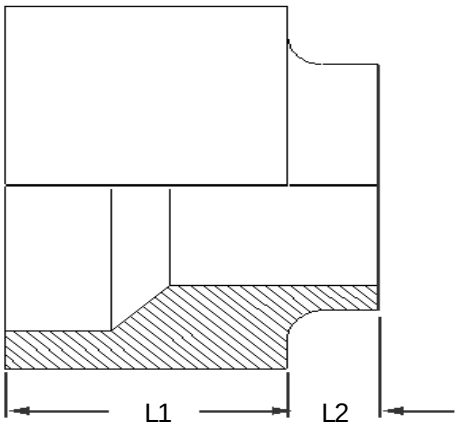
DIPS Nominal Size	Style	L_1	L_2	DR	Weight (lbs)
4 x 3	A	3.00	3.00	11-17	2
6 x 4	A	3.00	3.00	11-17	3
8 x 6	A	5.00	5.00	11-32.5	8
10 x 8	A	6.00	6.00	11-32.5	15
12 x 10	A	6.00	6.00	11-32.5	21
14 x 12	A	7.00	7.00	11-32.5	33
16 x 14	A	7.00	7.00	11-32.5	43
18 x 16	A	7.00	7.00	11-32.5	52
20 x 18	A	7.00	7.00	11-32.5	62
24 x 20	B	14.00	11.00	11-32.5	129

Other sizes, styles, and DR's not listed are available - Call For Quick Quote

Sizes 24" and smaller meet AWWA C906 fitting requirements, sizes 26" and larger are quoted per fitting.

IPS "Low Cost Compact" Reducers

Pressure Rated for DR Ordered



Note: Available in quantities of 15 or more only.

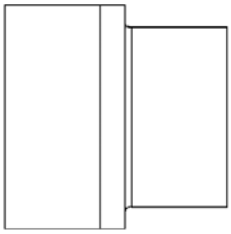
Nominal Size	L_1	L_2
8" x 6"	6"	2"
10" x 8"	6"	2"
12" x 10"	6"	2"
14" x 12"	7"	2"
16" x 14"	7"	2"
18" x 16"	7"	2"

Call For Quick Quote

NOTE:
- Clamp the reducer into the fusion machine using the large end only.
- Fuse one end to the pipeline first.
- Reposition the fused assembly in the fusion machine; re-clamp large OD.
- Fuse the other end to its matching size pipe.
- VIP: Insure the fusion machine inserts for both pipe diameters are available and will fit the on-site fusion machine.

Multi-Stage IPS or DIPS Concentric Reducers

Pressure Rated for DR Ordered



Full Length Option
(reducer center w/ pups)

Reducer Center Only
(may require stub end holder)

Multistage pipe reducers connect pipes of measurably different diameters. Instead of using a 12" x 10" fused to a 10" x 8" fused to an 8"x 10" reducer assembly, we fabricate a custom 12"x 6" reducer as a single component. This greatly saves on part cost and fusion cost! The following is a partial listing of our capabilities:

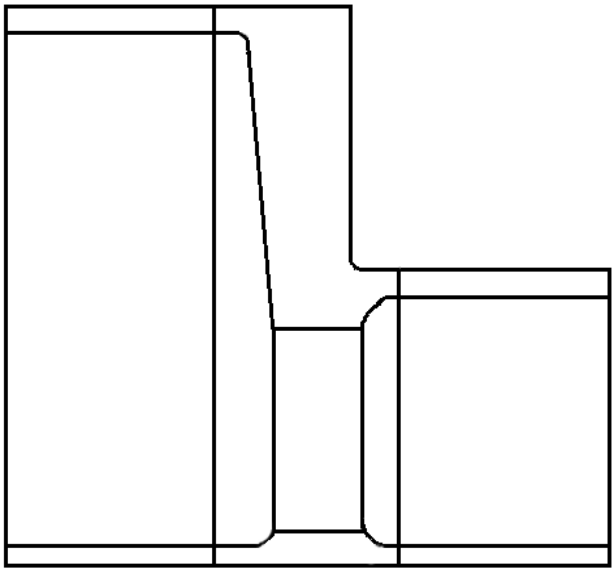
Call for a Quick-Quote

24" x 20"	24" x 18"	24" x 16"	24" x 14"	24" x 12"	24" x 10"	
24" x 8"	24" x 6"	24" x 4"	24" x 3"	24" x 2"		
22" x 18"	22" x 16"	22" x 14"	22" x 12"	22" x 10"	22" x 8"	
22" x 6"	22 x 4''	22" x 3"	22" x 2"			
20" x 16"	20" x 14"	20" x 12"	20" x 10"	20" x 8"	20" x 6"	
20"' x 4"	20" x 3"	20" x 2"				
18" x 14"	18" x 12"	18" x 10"	18" x 8''	18" x 6"	18" x 4"	
18" x 3"	18" x 2"					
16" x 12"	16" x 10"	16" x 8"	16" x 6"	16" x4"`	16" x 3"	16" x 2"
14"x10"	14" x 8"	14" x 6"	14" x 4"	14" x 3"	14" x 2"	
12" x 8"	12" x 6"	12" x 4''	12" x 3"	12" x 2"		
10" x 6"	10" x 4"	10" x 3"	10" x 2"			
8" x 4"	8" x 3"	8" x 2"				
6" x 3"	6" x 2"					
4" x 2"	4" x 1.5"	4" x 1"	4" x 3/4"			
3" x 1.5"	3" x 1"	3" x 3/4"				
2" x 1.5"	2" x 1"	2" x 3/4"				

For larger sizes and size combinations, call for a Quick Quote

IPS or DIPS Eccentric Reducers

Pressure ratings will vary depending on specifications



Many gravity flow and drainage pipelines require a uniform line and grade. To achieve this, the engineers and designers specify eccentric reducers. This keeps the pipe invert at the same level or slope along the pipeline length.

Based on the permutation and combination of possible diameters, eccentric reducers are quoted for each inquiry or project. These fittings are quite popular for gravity flow sewers with multiple lateral sewer inlets or outlets.

Call for a Quick Quote on your project needs.