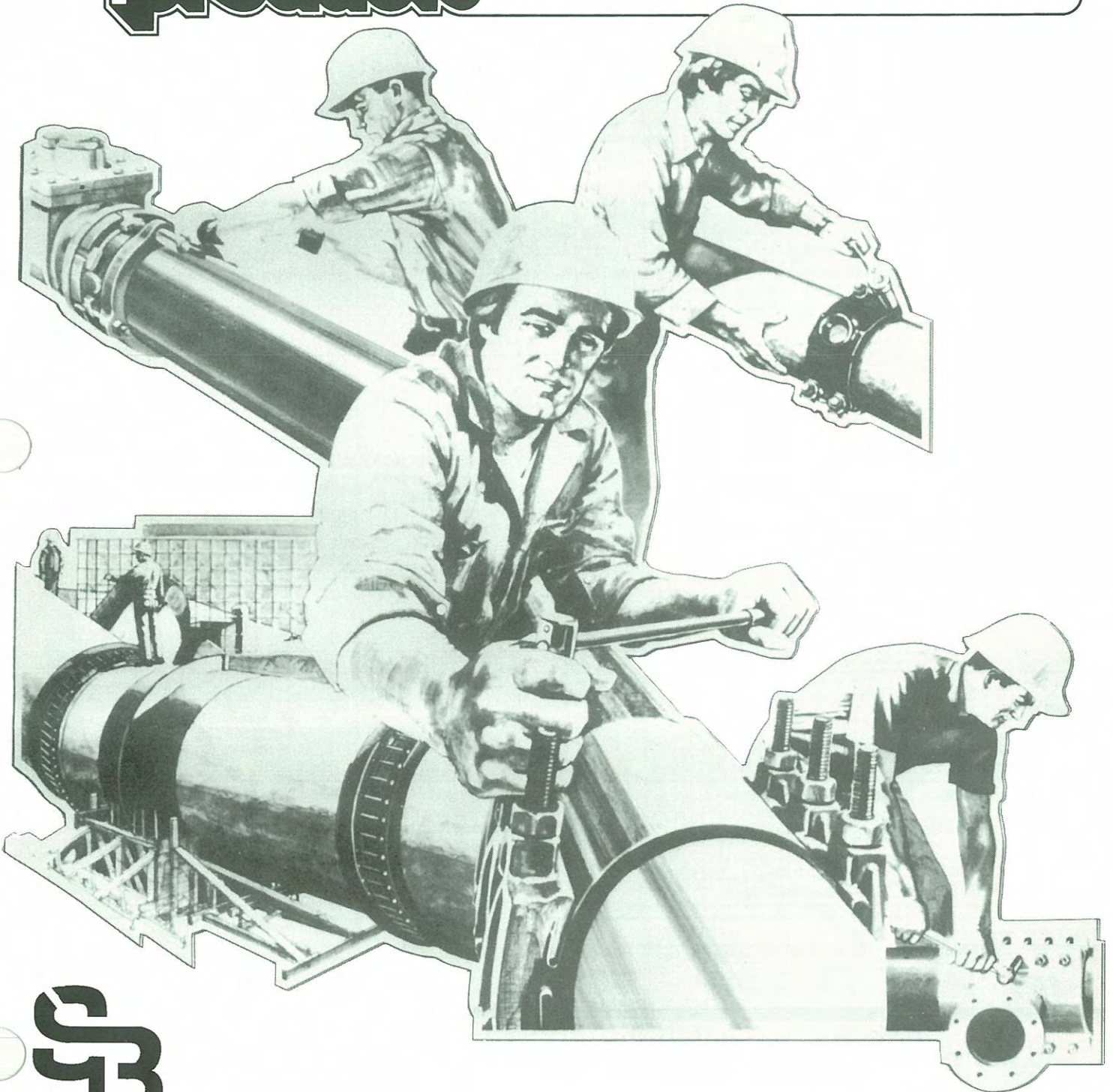






















Clamp and Coupling products

application and selection guide



Repairing Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	221 Low Pressure Full Circle® Clamp (CC-200)	Complete Breaks, Splits, and Holes in Pipe	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	2" thru 14"	50 PSI
	226 Full Circle® Clamp (CC-200)	Complete Breaks, Splits, and Holes in Pipe	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	2" thru 14"	Up to 300 PSI
	229 Collar Leak Clamp (CC-200)	Leaking Plastic Solvent Weld Belled End Pipe Joints	PVC ¹ -- Class 160 PVC Solvent Weld Bells	1" thru 8"	150 PSI
	227 Super Range Full Circle® Clamp	Complete Breaks, Splits, and Holes in Pipe	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	3" thru 12"	Up to 150 PSI
	228 Full Circle® Clamp (CC-200)			14" and larger	
	238 Tapped Full Circle® Clamp	Leaks at Service Outlet	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	3" thru 8"	Up to 300 PSI
	239 Super Range Tapped Full Circle® Clamp (CC-200)	Leaks at Service Outlet	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	4" thru 12"	Up to 200 PSI
	244 Full Circle® Redi-Clamp®	Pin Hole Leaks & Punctures	Steel Copper	1/2" thru 2"	Up to 150 PSI
	247 Cast Stainless Lug, Full Circle® Redi-Clamp®				
	245 Redi-Clamp®	Pin Hole Leaks, Punctures and Splits in Pipe		1/2" thru 2" 1/2" thru 12"	Up to 450 PSI
	248 Cast Stainless Lug, Redi-Clamp®				
	246 Pipe Repair Clamp (CC-240)			10" and larger	
	256 Cast Stainless Steel Lug, Full Circle® Clamp	Corrosive Environments	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	2" thru 12"	Up to 300 PSI
	257 Super Range Cast Stainless Steel Lug, Full Circle® Clamp (CC-200)			4" thru 12"	Up to 200 PSI
	261 All Stainless Steel Full Circle® Clamp	Complete Breaks, Splits, and Holes in Pipe	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	2" thru 12"	Up to 150 PSI
	262 Super Range All Stainless Steel Full Circle® Clamp			3" thru 12"	
	263 All Stainless Steel Full Circle® Clamp (CC-200)			12" and larger	
	264 All Stainless Steel Tapped Full Circle® Clamp	Leaks at Service Outlet	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	3" thru 8"	Up to 150 PSI
	265 All Stainless Steel Super Range Tapped Full Circle® Clamp (CC-200)			4" thru 12"	
	269 All Stainless Steel, Full Circle® Collar Leak Clamp (CC 200)	Leaking Plastic Solvent Weld Belled End Pipe Joints	PVC ¹ -- Class 160 PVC Solvent Weld Bells	2" thru 8"	150 PSI
	274 Bell Joint Leak Clamp (CC 274)	Leaking Bell Joints	Cast Iron, Rubber Ring and Caulk Joint	2" thru 36"	150 PSI

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions.

Suitable anchorage must be provided when pipe movement may occur.










Note: Grade 60 gasket--212°F.

Refer to appropriate product catalog for further details.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.









Repairing Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	331 Repair Service Saddle (CC-300)	Leaks at Service Outlet	Cast Iron, & Asbestos Cement	4" thru 12"	Up to 300 PSI
	437 Cast Cut-In Coupling (CC-411)	Cracked Bell Joints Couplings	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	2" thru 12"	250 PSI
	411 Steel Coupling (CC-411)	Replace Split or Excessively Damaged Pipe	All Types	1/2" and larger	150 PSI
	441 Cast Coupling (CC-441)			2" thru 16"	
	441 Cast Coupling Limited Range (CC-441LR)			4" thru 12"	
	442 12" Long Sleeves 7" Long Sleeves			4" thru 16" 4" thru 8"	
	525 Compression Coupling (CC-525)	Replace Split or Excessively Damaged Small Diameter Pipe	Steel, PVC ¹ , Copper	1/2" thru 2"	150 PSI**
	912 Cast Flanged Coupling Adapter	Replace Cracked Pipe or Spool Flanges	All Types	3" thru 12"	Up to 175 PSI
	913 Steel Flanged Coupling Adapter (CC-900)			3" and larger	Up to 150 PSI + According to Design

Joining Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	411 Steel Coupling (CC-411)	Joining Plain-End Pipe of Same Outside Diameters	All Types	1/2" and larger	Up to 1500 PSI
	441 Cast Coupling (CC-441)			2" thru 16"	250 PSI
	441 Cast Coupling Limited Range (CC-441LR)			4" thru 12"	
	461 Quantum™ Coupling			2" thru 12"	
	413 Steel Transition Coupling (CC-411)	Joining Pipe of Different Outside Diameters	Steel, PVC ¹ , Concrete Steel Cylinder, Large Pipe	2" and larger	150 PSI
	441 Cast Coupling (CC-441)			2" thru 16"	250 PSI
	461 Quantum™ Coupling			2" thru 12"	250 PSI
	416 Steel Insulating Coupling (CC-411)	Joining Pipe Insulating One from the Other	Steel, Cast Iron,	2" and larger	150 PSI

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions.

Suitable anchorage must be provided when pipe movement may occur.













Note: Grade 60 gasket--212°F.

**Higher pressure possible depending on application. Refer to appropriate product catalog for further details.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.

Joining Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	415 Steel Reducing Coupling (CC-411)	Joining Pipe of Different Outside Diameters	Steel, PVC ¹ , Cast Iron, Asbestos Cement, Concrete Steel Cylinder Other	1/2" and larger	Up to 1500 PSI
	R441 Cast Reducing Coupling (CC-441)			2" thru 8"	250 PSI
	525 Compression Coupling (CC-500)	Joining Small Diameter Pipe	Steel, PVC ¹ , Copper	1/2" thru 2"	150 PSI**
	611 Single End Expansion Joint (CC-611)	Absorbing Concentrated Pipe Movement	Steel, Cast Iron	3" and larger	150 PSI + According to Design
	612 Double End Expansion Joint (CC-611)				
	912 Cast Flanged Coupling Adapter (CC-900)	Joining Plain-End Pipe to Flanged Valves and Fittings	Steel, Cast Iron, Asbestos Cement,	3" thru 12"	Up to 175 PSI
	913 Steel Flanged Coupling Adapter (CC-900)		Steel, Cast Iron, Large Pipe	3" and larger	150 PSI + According to Design
	914 Reducing Flanged Coupling Adapter (CC-900)		Reducing Sizes of All Types of Pipe	3" and larger	150 PSI + According to Design
	926 Meter Coupling (CC-900)	Joining Plain-End Pipe to Oval Flanged Water Meters Joining Plain-End Pipe to Flanged Valves and Fittings	Steel, PVC ¹ , Copper Pipe	1 1/2" thru 2"	175 PSI
	932 Insulating Cast Flanged Coupling Adapter (CC-900)		Steel, Cast Iron	3" thru 12"	175 PSI
	933 Insulating Steel Flanged Coupling Adapter (CC-900)		Steel, Cast Iron, Large Pipe	3" and larger	150 PSI + According to Design
	971 Dismantling Joint Non-restraint Joint	Valve, Pump, Meter and other flanged fitting installations	Steel, Ductile Iron	2" and larger	150 PSI + According to Design
	972 Dismantling Joint Heavy Duty: Restraint Joint	Valve, Pump, Meter and other flanged fitting installations	Steel, Ductile Iron	2" and larger	150 PSI + According to Design
	975 Dismantling Joint Restraint Joint	Valve, Pump, Meter and other flanged fitting installations	Steel, Ductile Iron	2" and larger	150 PSI + According to Design

***For service in corrosive environments

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions. Suitable anchorage must be provided when pipe movement may occur.

Note: Grade 60 gasket--212°F.

**Higher pressure possible depending on application.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.

Refer to appropriate product catalog for further details.

Tapping Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	238 Tapped Full Circle® Clamp	Outlet Sizes 3/4" thru 2"	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	3" thru 8"	Up to 300 PSI
	239 Super Range Tapped Full Circle® Clamp (CC-200)			4" thru 12"	Up to 200 PSI
	264 All Stainless Steel, Tapped Full Circle® Clamp	Leaks at Service Outlet	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	3" thru 8"	Up to 150 PSI
	265 All Stainless Steel Super Range Tapped Full Circle® Clamp (CC-200)			4" thru 12"	
	311 Single Strap Malleable Iron Saddle (CC-300)	Outlet Sizes 3/4" thru 2"	Steel, Cast Iron, Asbestos Cement	1" thru 12"	300 PSI
	313 Double Strap Malleable Iron Saddle (CC-300)	3/4" thru 4"		1/4" thru 16"	
	315 Single Strap, Flexi-Blue™ Epoxy Coated Iron Service Saddle with wide Stainless Steel Straps	Outlet Sizes 5/8" thru 2"	Steel, Cast Iron, Asbestos Cement, PVC ¹	1" thru 14"	300 PSI
	317*** Double Strap Saddle w/Flexi-Blue Coating & Stainless Steel Strap (CC-300)	Outlet Sizes 5/8" thru 4"	Steel, Cast Iron, Asbestos Cement, PVC ¹ & Other	1 1/4" thru 16"	300 PSI
	319 Double Bale Iron Service Saddle FM Approved for Fire Sprinkler Service	Outlet Sizes 5/8" thru 4"	Steel, Cast Iron	1 1/4" thru 14"	300 PSI
	331 Repair Service Saddle (CC-300)	Outlet Sizes 5/8" thru 2"	Cast Iron, and Asbestos Cement	4" thru 12"	300 PSI
	371*** All Stainless Steel Single Bolt Service Saddle	Outlet Sizes 1/2" thru 2"	PVC ¹	4" thru 12"	150 PSI
	372*** All Stainless Steel Double Bolt Service Saddle				
	362 Double Strap Saddle w/ opt. Stainless Steel Straps	Outlet Sizes 3/4" thru 2"	Concrete Steel Cylinder	6" thru 36"	300 PSI
	366 Triple Strap Saddle w/opt. Stainless Steel Straps (cc 300)		Large Pipe	18" and 40"	300 PSI
	321*** Single Strap Bronze Saddle	Outlet Sizes 3/4" thru 2"	Cast Iron and Asbestos Cement	2" thru 12"	300 PSI
	323*** Double Strap Bronze Saddle	3/4" thru 2"		3" thru 20"	

*** For service in corrosive environments.

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions. Suitable anchorage must be provided when pipe movement may occur.

Note: Grade 60 gasket--212°F.







**Higher pressure possible depending on application.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.

Refer to appropriate product catalog for further details.


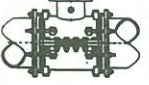



Tapping Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	362 Saddle (CC300)	Outlet Sizes 3/4" thru 2"	Concrete Steel Cylinder	6" thru 36"	300 PSI
	366 Saddle (CC-300)		Large Pipe	18" thru 40"	
	357 Flexi-Blue™ Epoxy Coated w/Wide Stainless Steel Straps (CC300)	Outlet Sizes 3" & 4" IPS	Steel, PVC ¹ , Cast Iron	6" thru 12"	150 PSI
	391*** Bronze Service Saddle w/Stainless Steel Strap	Outlet Sizes 3/4" thru 1"	PVC ¹	2" thru 8"	200 PSI
	393*** Bronze Service Saddle w/Stainless Steel Strap	3/4" thru 2"	PVC ¹	4" thru 12"	200 PSI
	397 Ductile w/Flexi-Blue™ Epoxy Coating & Stainless Steel Straps	3/4" thru 2"	PVC ¹	2" and 12"	200 PSI

Tapping Sleeve

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	622 Tapping Sleeve with Flexi-Blue™ Epoxy Coating Optional: Stainless Steel for Corrosive Environments (CC-620)	Reducing Size-on- Size Flanged Outlets 4" and larger Available with threaded outlets-3/4" thru 6"	Steel, Cast Iron, Asbestos Cement, PVC ¹ , Other	4" and larger Reducing and Size-on-Size	150 PSI + Depending on Flange
	623 Carbon Steel Mechanical Joint with Flexi-Blue™ epoxy coating (cc 620)	Reducing Size-on- Size Flanged Outlets 4" and larger	Steel, Cast Iron, Asbestos Cement, PVC ¹ , & Other	4" and larger Reducing and Size-on-Size	150 PSI + Depending on Flange
	625 Tapping Sleeve (CC 620)	Reducing Flanged Outlets	Concrete Steel Cylinder	12" and larger Reducing Sizes Only	150 PSI + Depending on Flange & Pipe Diameter
	662 Stainless Steel Tapping Sleeve with epoxy coating Carbon Steel Flange	Reducing Size-on- Size Flanged Outlets	Steel, Cast Iron, Asbestos Cement, PVC ¹ , & Other	4" thru 24"	Up tp 200 PSI Depending on Flange & Pipe Diameter
	663 All Stainless Steel Tapping Sleeve (CC 620)	4", 6", 8", 10", 12" Outlets			
	664 Stainless Steel Tapping Sleeve with Epoxy Coated Carbon Steel Flange	Reducing & Size- on-Size Flanged	Steel, Cast Iron, Asbestos Cement, PVC ¹ , & Others	6" thru 24"	Up to 200 PSI Depending on Flange & Pipe Diameter
	665 All Stainless Steel Tapping Sleeve (CC-660)	4", 6", 8" 10", 12" Outlets			

*** For service in corrosive environments.

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions.

Suitable anchorage must be provided when pipe movement may occur.


Note: Grade 60 gasket--212°F.

**Higher pressure possible depending on application.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.

Casing Spacer

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	880 Casing Spacer, Stainless Carbon Steel Polyethylene	Support and Insulate Carrier Pipe Inside Casing	Steel, Ductile, Iron, PVC ¹ , Polyethyl- ene & other appli- cations	4" thru 12" Larger sizes available upon request	N/A

Restraining Pipe

Product Bulletin Numbers in Parentheses

Product	Product Number and Type	Application	Type of Pipe	For Pipe Sizes	Working Pressure*
	981 Joint Restraints (CC-980)	Restraining M.J. Fittings	PVC ¹ DI Steel	4" thru 12"	150 PSI
	982 Joint Restraints (CC-980)	Restraining Bell Joints & Couplings	PVC ¹ DI Steel	4" thru 12"	150 PSI

*** For service in corrosive environments.

*Pressure is dependent on Pipe Size, Extent of Pipe Damage and Service Conditions.

Suitable anchorage must be provided when pipe movement may occur.

Note: Grade 60 gasket-212°F.

**Higher pressure possible depending on application.

¹ Wall Thickness Ratings must be provided before ordering for proper selection and proper application.

There are **Smith-Blair® Clamp & Coupling Products** available to join, tap, repair and restrain all types and sizes of pipe. This guide lists the most common applications, product recommendations, safe working pressures and temperatures. For specific recommendations, special applications or applications involving pressures or temperatures in excess of general recommendations listed here, consult your **Smith-Blair® Distributor or Smith-Blair® Sales Representative**.

Note: Please refer to the “**Products for High Density Polyethylene Pipe**” application guide for applications involving HDPE Pipe.

Pipe Outside Diameter Guide

IMPORTANT: This Pipe O.D. Guide is furnished for your convenience and is based on the latest pipe standards and information supplied by pipe manufacturers. Due to occasional

changes in outside diameters by pipe manufacturers, the pipe O.D. or circumference should always be checked and furnished when ordering fittings.

Nominal Pipe Size (Inches)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	15	16	18	20	24	30
Copper Tubing (C.T.S.)	.63	.88	1.13	1.38	1.63	2.13	2.63	3.13	4.13	5.13	6.13										
Steel Pipe-Schedule 40	.84	1.05	1.32	1.66	1.90	2.38	2.88	3.50	4.50	5.56	6.63	8.63	10.75	12.75	14.00		16.00	18.00	20.00	24.00	30.00
Plastic Pipe--(P.V.C.)--STD.			1.32		1.90	2.38	2.88	3.50	4.50		6.63	8.63	10.75	12.75							
Plastic Pipe--(P.V.C.)--C.I. Size									4.80		6.90	9.05	11.10	13.20							
PVC Sewer Pipe									4.22	5.64	6.28	8.40	10.50	12.50		15.30		18.70		24.80	
Polyethylene Pipe I.P.S.*		1.05	1.32	1.66	1.90	2.38		3.50	4.50	5.56	6.63	8.63	10.75	12.75	14.00		16.00	18.00	20.00	24.00	30.00
Polyethylene Pipe D.I. Size									4.80		6.90	9.05	11.10	13.20			17.40	19.50	21.60	25.80	
Plastic Irrigation Pipe (PIP)									4.13		6.14	8.16	10.20	12.24		15.30					

*P.E. Tubing can be C.T.S.

Cast Iron Pipe

Class 100-250 AWWA Centrifugally Cast								3.96	4.80		6.90	9.05	11.10	13.20	15.30		17.40	19.50	21.60	25.80	32.00
Class A AWWA Pit Cast						2.50		3.80	4.80		6.90	9.05	11.10	13.20	15.30		17.40	19.50	21.60	25.80	31.74
Class B AWWA Pit Cast								3.96	5.00		7.10	9.05	11.10	13.20	15.30		17.40	19.50	21.60	25.80	32.00
Class C-D AWWA Pit Cast								3.96	5.00		7.10	9.30	11.40	13.50	15.65		17.80	19.92	22.06	26.32	32.40
Soil Pipe						2.30		3.30	4.30	5.30	6.30	8.40	10.50	12.50		15.62					

Asbestos-Cement Pipe

Class 100

Machined End								3.74	4.64		6.91	9.11	11.24*	13.44*	15.07		17.15	19.90	22.12	26.48	33.12
Fluid-Tite Rough Barrel								3.93	5.05		7.16	9.32	11.46	13.70	15.36		17.50				
Flintite Rough Barrel								3.94	4.90		7.13	9.33	11.30	13.42	15.45		17.60				
Ring-Tite Rough Barrel								3.95	4.92		7.19	9.39	11.47	13.74	15.51		17.65	20.44	22.68	27.12	33.80
Permafex Rough Barrel									4.84		7.15	9.35	11.47	13.74	15.55		17.55				
Minimum Standard Rough Barrel									4.79		7.05	9.22	11.25	13.37	15.36		17.50	20.44	22.50	27.17	
Maximum Standard Rough Barrel									5.26		7.40	9.57	11.77	14.04	15.80		17.94				

Class 150

Machined End								3.84	4.81		6.91	9.11	11.66	13.92	16.22		18.46	20.94	23.28	27.96	35.0
Fluid-Tite Rough Barrel								4.03	5.14		7.12	9.32	11.85	14.11	16.41		18.65				
Flintite Rough Barrel								4.04	5.01		7.13	9.33	11.88	14.14	16.48		18.72				
Ring-Tite Rough Barrel								4.13	5.07		7.17	9.37	11.92	14.18	16.48		18.72	21.30	23.64	28.32	35.42
Permafex Rough Barrel									5.00		7.20	9.40	11.92	14.20	16.50		18.75				
Minimum Standard Rough Barrel									4.97		7.07	9.27	11.82	14.08	16.38		18.62	21.20	23.54	28.22	
Maximum Standard Rough Barrel									5.32		7.37	9.62	12.12	14.38	16.73		18.97				

Class 200

Machined End								3.84	4.81		6.91	9.11	11.66	13.92	16.22		18.46	22.18	24.66	29.62	37.06
Fluid-Tite Rough Barrel								4.18	5.32		7.36	9.46	11.88	14.11	16.44		18.74				
Flintite Rough Barrel								4.17	5.32		7.26	9.44	11.88	14.14	16.53		18.84				
Ring-Tite Rough Barrel								4.17	5.33		7.32	9.50	11.92	14.18	16.55		18.90	22.54	25.02	29.98	37.48
Permafex Rough Barrel									5.32		7.26	9.50	11.95	14.20	16.55		18.90				
Minimum Standard Rough Barrel									5.22		7.26	9.39	11.77	14.03	16.44		18.74				
Maximum Standard Rough Barrel									5.57		7.60	9.79	12.12	14.38	16.88		19.19				
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	15	16	18	20	24	30

*Flintite M.E. is 10.89 for 10" and 12.99 for 12" sizes.

Please refer to the manufacturers data supplied at time of pipe installation or measure the pipe O.D. or circumference prior to the ordering of fittings.

Sales and Manufacturing Facility

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Certain types of pipe may require special preparation prior to installation of these products. Please contact Smith-Blair® engineers concerning any application questions.